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Music has to do with the feelings,” we are told. This expression “has to do” is a characteristically vague utterance of previous musical aesthetics. In what the connection between music and the feelings (specific feelings connected with specific pieces of music) might consist, according to what natural laws music might work, and according to what laws of art it may be shaped—about all this the very people who “have to do” with it leave us entirely in the dark.

Eduard Hanslick, *On the Musically Beautiful*

Only in music is the meaning of the form identical with the form itself. Here content and form are one—whatever that phrase means.

Carroll C. Pratt, *The Design of Music*

What is spatial and yet non-spatial, in motion and yet not in motion, meaningful and yet meaningless, sophisticated and yet primitive, universal and yet particular, voluptuous and yet austere, material and yet immaterial, religious and yet not religious?

Charles Nussbaum, *The Musical Representation*

INTRODUCTION

The excessive exaltation of musical emotion expressiveness as the quintessential human power has swamped and blurred the understanding of the inner mechanisms of how musical expressiveness happens and, ultimately, of what musical expressiveness may be. As it is known, Eduard Hanslick—the famous 19th Century musicologist and music critic—strongly reacted against the Romantic’s disproportionate praise of music on the basis of it being the vehicle that makes expressible the ineffable, the finest route emotion talks through, the art that, despite of it being abstract, is able to communicate concrete emotions to all humankind. Indeed, the mechanisms through which such wonderful powers may be endorsed by music are more than obscure, especially considering what we know about emotions and the difficulties music would face in referring to them. Even though I will argue in favor of musical expressiveness, I contend that Hanslick’s arguments against the relationship between music and the emotions are far from being ingenuous. However, while those arguments represent a serious challenge for musical expressiveness if it is going to be explained through emotions, they have also opened up a possibility for us to understand it in other terms: feelings or affections.

While Hanslick’s answer may have meant for him the closure of the possibility for music to be expressive at all, my claim is that such a negative consequence does not necessarily follow. However, his rejection does force us to acknowledge a problem in the approach commonly taken, to be more precise and to take a closer look to the diverse affective processes and mechanisms, to the historical musical practices, and to the philosophical arguments and approaches. I contend that all this may direct us to an enriched musical expressiveness theory that can account not only for musical expressiveness in general, but also for music’s subtle expressive power, the Achilles’ heel of most theories.

Let me make myself clear. Hanslick's challenge for understanding musical expressiveness as the expression, arousal or representation of emotions is mainly that emotions are intentional and such intentionality is lacking in musical experiences or representations (in the so called 'pure music').

The claim that emotions are intentional means that they are necessarily about something. Indeed, if they are either highly cognitive responses or even almost automatic responses to that something, they are responses to an event or a situation that seems to matter for the individual's wellbeing. However, this is not the case in music, for nothing in the music really represents an intentional object as found in common emotions¹, such as getting a promotion, breaking up a relationship, losing a beloved one, finding oneself surrounded by a threatening gang, bumping into a poisonous snake or the like. Moreover, this problem stands for the emotions the audience gets aroused with, but also for the emotions the composer or performer may feel, as well as for the emotions that could somehow be represented by music. Although no musical feature represents danger as the gang does, it still seems able to trigger fear in us. Moreover, we are told that the composer and performer express their emotions through music. Thus, foremost, the question we face is how this may happen, provided that intentionality is necessary for emotional processes, and it is lacking in musical representations, while the intentional object that constitute the composer's, performer's, and listener's emotions is not the music.

Furthermore, the musical case does not match with other necessary characteristics of emotions. The physiological reactions and action tendencies occurring in a 'musical emotional experience' are not the same than in common emotions; we do not really *flee* from the concert hall, unless we do it for other uninteresting reasons for the issue, as having to listen to a terrible performance or fearing running into an unwanted person we saw across the audience. Nonetheless, we actually have certain physiological reactions to music, such as goosebumps, along with certain action tendencies, such as dancing; but they are just not the same physiological reactions that we get in common emotions.

Hence, we have to decide between two options: On the one hand we could keep considering that our affective relationship with music is emotional in nature, even though it does not have necessary

¹ As we shall see, this claim is restricted to the interesting cases, since there are some uninteresting cases in which the intentional object can actually be found in music. An example of the latter would be a bad performance of a much liked musical piece, triggering anger in the audience.

components of emotions and does not unfold as regular emotions do. On the other hand, we could simply deny for music the possibility of being expressive of emotions. To follow the former path would mean that there are particular music-specific emotions that, nevertheless, do not work like the rest of the emotions (which would be theoretically unclean and suspiciously *ad hoc*); and the latter possibility would be also unwanted, mainly because it is counterintuitive and musical expressiveness seems to be worldwide accepted. The aim of this research is to offer an approach of musical expressiveness that could avoid such difficulties, and could account for musical expressive subtleness. I will propose a conceptualization of musical gestures as units of musical features that refer to aspects of the emotional processes, such as feelings (although not to the complete set of emotion's components).

Thus, in this research the first step taken in order to understand what musical expressiveness may be, is an enquiry on emotion theories. In effect, since the relationship between music and the emotions has been considered the basis on which music's expressiveness is grounded, a deeper insight on what the emotions are is in order, especially regarding the much touted intentionality that music fails to embrace. The questions we are going to be facing are: What are the emotions? Are emotions necessarily intentional? What are the roles of beliefs and physiological reactions in the emotional processes? Are emotions learned or rather innate dispositions? What is the relationship between motion and emotion? What are the components of an emotional process?

In the first chapter of this dissertation the reader will find a review and discussion on emotion theories and approaches. Very broadly speaking, the main debate on the subject has been happening between two approaches that privilege either the cognitive processes, or the physiological and evolutionistic traits of the emotions. However, we can say that the questions behind this opposition are rather whether emotions are in the mind or whether they depend on bodily reactions, whether they are controllable and volitional, or whether we are dominated by our body impulses and cannot help but getting emotional when we do. This longstanding opposition though, did not stand still, since nowadays cognitivists usually accept that the bodily disruptions have influence in emotional processes, while the more physiology-focused theories recognize emotions' intentionality. On the one hand, cognitivists claim that we have certain control over our emotions, since they depend not only on an intentional object, but also on an evaluation or belief about it. On the other hand, the more physiology-focused theories contend that emotions are rather (or mainly) bodily processes, such as the rise in heart rate, hormonal and neuronal

changes, along with action tendencies and gestures. Nevertheless, the role of the intentional object continues to be stressed in these theories as well, since an event or object from the individual's exploration of the environment is what 'triggers' the emotional response. Thus, be it through the body proper or through a complex cognitive calculation, intentionality seems to be necessary for emotional processes.

As the reader shall see, one of the elements of emotions that I will be stressing is precisely the first person perspective of them, their phenomenological dimension; namely, the feelings. Feelings have been disregarded in many emotion theories, presumably because they are not able to be included in an 'objective' approach, neither in measurable, nor propositional terms. My view in this respect is that they are just not eliminable from an emotions account, and that, moreover, they are what better helps explaining music's expressiveness.

There is an ancient way to refer to feelings with a hydraulic metaphor, according to which emotions behave like steam within us, and thus that they are able to be let out or to be repressed, under the danger of them building up pressure up to exploding. The hydraulic metaphor that considers that feelings behave like fluids within us has been around for centuries, and is still present in Freud's ideas. One of the most interesting examples of hydraulic explanations of feelings is the one that refers to the animal spirits. As I will be talking about in the first chapter, in Aquinas's and Descartes's works there is the idea that emotions—which are supposed to belong to the soul—had related bodily feelings. They thought that within the body there were 'animal spirits' (mixed with the blood) that were so tiny and subtle that they could enter the pineal gland and move in accordance with the soul's emotion, describing particular movements and comportments in the body that would then be felt as particular feelings related to determined emotions. Albeit it is clear that the animal spirits theory is not tenable anymore, it is relevant for our research in two ways. First, the appeal to feelings and their description (in phenomenological terms, of course) stands and reflects on the bodily dimension of the emotional experience, not merely in terms of measurable facts, but also in terms of first person experience. Second, Renaissance musicians used the feelings' descriptions from the animal spirits theory and tried to mimic them with musical features, a practice that gave rise to one of the most impressive techniques for composing expressive music during the Baroque era—actual musical gestures catalogues—of which I will be talking in the second chapter.w

For now, though, let me sketch out the path taken in the first chapter, as well as some of the conclusions that directed the rest of the research. Paramount, I consider that hard dualism between mind and body should be avoided in order to understand the inner mechanisms by which emotions happen. As I will be arguing, emotions are cognitive and physiological as well, while the line between these two instances cannot be drawn so easily, redounding to arbitrary boundaries that usually cancel further research by locking us up in paradoxes. There are evolved traits of emotions, which are mainly action tendencies and gestures, but probably also hard-wired appraisals that permit us instantly to react to meaningful situations, such as an apparent danger, and thus flight uninjured. Emotions, in this respect, are not that personal. We are not isolated with our own emotions of which only we know, since we, as humankind, share many features of our emotional processes. Indeed, it turns out that we are pretty good at recognizing others' emotions by the gestures they make, that we tend to act similarly, and that the appraisals by which we get emotional about something are fairly constant (that is what Lazarus called 'core relational themes').

Nevertheless, evolved features and acquired emotional roles interact. I take it that there is no theoretical reason to suggest that the evolved traits and the socially-constructed ones are not compatible. Certainly, we construct narratives of our emotional episodes, we narrate why we got angry (and rightly so) or how we fell in love, and this narrative endows certain sense to our emotional process and makes us feel rational and in control. Indeed, one of the quarrels one finds in this debate is that evolutionary theories are accused of proposing that we are not able to direct our emotions, and that we are rather machines, confined in our own bodily mechanisms. I do not see why this would necessarily be the case, especially if one takes a serious, strong evolutionary theory as a point of departure. Evolutionary traits interact with the acquired ones, since evolution is never done. Furthermore, there are a lot of unconscious processes underlying emotional episodes, making it more difficult to decide what was volitional and what wasn't, what was 'cognitive' and what wasn't. In fact, the appraisals involved in emotional processes might vary from quick and dirty, unconscious appraisals, to conscious and deeply meditated ones. Moreover, there are many physiological changes related to emotional processes of which we are just not aware. We do not consciously decide to secrete 'love hormones,' or the like. However, sometimes the physiological changes are felt, and so they become 'feelings,' for we get a phenomenological experience out of them. There is also a discussion about the nature of feelings, since some authors like Peter Goldie argued that feelings may be indeed about something (they may have 'borrowed intentionality'), albeit that something is not the physiological state itself [Goldie 2000].

Furthermore, we need to acknowledge that emotions are dynamic, not only because they happen in time, but because they are essentially processes that entail other processes that are in constant interplay. If we took one single moment of an emotional process, we would be trying to make sense of a movie with a single snapshot. Emotions involve an interaction of the individual and her environment; an appraisal of an event or situation as relevant for the individual's wellbeing; diverse physiological changes, including Autonomous Nervous System activity, action tendencies, and gesture-making; feelings, which are phenomenological readouts of the situation; categorization and behavior and coping process monitoring. These elements or components interact in a dynamic way, while they are not mere add-on components, but rather complex overlapped processes that are in continuous feedback. One of the benefits of this multifactorial model of emotions is that it diminishes the tension on the question about the efficient cause of emotions. Indeed, hard-wired appraisals and action tendencies actually continuously interact with the 'higher cognitions,' so that the situation may be reevaluated over and over. The behavior can be monitored, and to a certain extent it can be controlled, while the feelings inform a constant readout of the situation. Each aspect of the process has its own temporal trajectory, which also allows us to integrate the narrative tissue of the emotional experiences within the schema.

However, when we apply these conclusions on the nature of emotions to the musical case, we start noticing the discrepancies, either from the arousal, the expression, or the representation perspectives. There does not seem to be a correspondent intentional object, the physiological disruptions experienced with music are different from the related emotional episodes, and the monitoring processes are almost nonexistent. Nonetheless, there is a phenomenological dimension that they share, and that is why—I contend—people label their musical experiences as emotional experiences, albeit they may lack necessary components of emotional episodes.

Chapter 2 is dedicated to the different approaches to musical expressiveness. In Chapter 2.1 the reader will find a correlation between what we now know about the nature of emotions and the musical case, and I will be punctually following the conclusions of the preceding chapter, but now applying them to music. Some particular questions will start to pop out, such as whether musical emotional arousal is learned, or whether there are 'natural' musical elements with determined evolved emotional correlations. This question will lead us to wonder about what influence conventions and history have in us getting emotionally aroused by a musical piece. Also, it will be questioned what the relationship between the

emotion's dynamic character and the musical motion is, while, regarding the cognitive character of emotions, the uneasiness about the lack of an intentional object in musical experiences would persist to haunt us.

There have been given, of course, some answers to these questions from different theories of musical expressiveness. Chapter 2 is all about these different approaches and the insights we can gain from them. However, I will begin with an extremely important—and often neglected—approach; namely, the way musicians actually have dealt with the issue. The solutions musicians have given to the practical task of composing expressive music (and performing it expressively) turn out to be wonderfully rich and useful in practice, albeit sometimes not theoretically unflawed. Not every emotional experience with music depends on the work itself. An emotional reaction might depend on the place and occasion of the audition or on some ritual convention music is associated with. Furthermore, people might make personal associations that are, nevertheless, irrelevant for the work itself. However, there are some associations that have been historically building up for centuries ago that have shaped not only our affective associations with music, but also musical form itself.

Chapter 2.2, thus, is a historical, musicological enquiry. I restricted myself (more for reasons of length than of gusto) to revise briefly three historical periods: Ancient Greek music, Rhetorical music in the late Renaissance and Baroque periods, and the rise of the symphony in the Romantic aesthetics. The reason why I chose these periods is that I consider that the consequences and effects of these perspectives and practices have impregnated the way we experience and understand music to its core. They have been extremely influential. From the ethos theory of modes, the Greek mimesis theory, the Baroque musical gestures catalogues, to the tension between the exaltation of music as 'the language of the emotions,' and the claim that it is absolutely independent and 'pure,' there is plenty to debate about, but also so much to learn from.

Particularly, I want to emphasize the notion of musical mimesis in all three periods, for it is always present, and it will be useful to debate over the Resemblance theory (which I follow to a certain extent). Talking about ancient Greek music, mimesis was a guideline throughout the different periods and traditions' oppositions. While the Pythagoreans considered that music should resemble the perfection of mathematics, Plato, Aristotle, and Aristoxenus thought that some musical features conveyed a particular

ethos by means of imitating the character, the emotions' demeanor and associated actions through rhythm, melodic designs and harmony. All these ideas were gathered together and explained by Quintilianus, who explained that music resembles the movements of the soul, having also a correspondent effect in the listener's affections.

If the relationship between rhythms and gaits, along with the modes theory described by Quintilianus were already setting the ground for some music-affections associations, the enriched panorama of the Renaissance opened up the possibility for a very impressive effort to explain affections and to represent and arouse them with music during the Baroque era—the diverse musical gestures catalogues or *Figurenlehre*. Although not many people know about them (or acknowledge their heritage), these catalogues had a large influence not only in composing, but also in recognizing expressive music. It is interesting, though, that these musical gestures were based on resemblances musical features have with diverse affective phenomena, but mainly 'feelings.' Not much can be said about the resemblances musicians found between musical features and emotions *per se*, but a lot has been written on the musical imitation of movements related to a particular sensation. Based on that, I will present my own list of categories of imitations common in that time, hoping that it will shed light on the discussion over musical mimesis once we have considered the philosophical theories as well.

Finally, the discussion between formalists and romantics is unavoidable. Although it is a common place to start a philosophy of music essay by warning the reader that the following discussion would be rather on 'pure music' and not 'programmatic music,' I contend that such starting point is dangerous to say the least. The claim that 'pure music' is devoid of any 'extra musical' content is very problematic, and it forces us to establish a very arbitrary line between what is musical and what isn't. The debate about this can be found in Chapter 2.2.3, where we get to talk about the transition between Classicism and Romanticism, which apart from stressing the change of taste from vocal to instrumental music, exhibits the contradictory character of music—its 'emotionality' despite its lack of 'content'—praised as despicable by the former, and as its very finest power by the latter. The Romantic apotheosis of music depended on this contradictory character: music was supposed to be universally understandable, while exhibiting no content; abstract, while emotionally subtle. However, even though in the Romantic metaphysics the genius was the one figure that came to rescue this insolvable riddle, the truth is that music continued to use the devices

developed for Baroque ‘programmatic, vocal music,’ which presumably had already built strong (albeit unrecognized) associations for instrumental music.

The rest of Chapter 2 is dedicated to the main philosophical theories of musical expressiveness: the Expression, the Arousal, and the Resemblance theories. Chapter 2.3 focuses on the Expression and the Arousal theories, while Chapter 2.4 is dedicated to the Resemblance theory. To analyze the issue in an orderly way, let us follow the philosophical perspectives, according to which there are three ways of approaching the question of musical expressiveness. Indeed, if music’s expressiveness is to be explained through emotions, it must firstly be clarified whose emotions are the relevant ones, whether the composer’s, the performer’s, or the audience’s, while it can also be argued that the emotions are rather represented in musical features. These different answers correspond to the three main philosophical approaches of musical expressiveness: the expression, the arousal, and the resemblance theories. According to a general formulation of the expression theory, music is expressive insofar as the composer or/and the performer experience an emotion that they cathartically express in the music they compose or perform; for the arousal theory, instead, the relevant emotion is the one that the audience is aroused to in response to the music. These two approaches face the same core difficulty; namely, that the emotion is felt by a person that is external to the music, while the relationship between this person’s emotion and the music is not a necessary one. Thus, it is a serious challenge to explain *music’s* expressiveness by means of an external and contingent fact (namely, that another person experiences an emotion), which furthermore does not present a necessary relationship with actual musical features. Of course, there have been several arguments stated in the attempt to make these approaches plausible despite this challenge, and I will be discussing them in Chapters 2.3 and 2.4.

The third option (and the one that is my point of departure) is to focus on the characteristics music actually has and the way those characteristics might become expressive of affective phenomena. That is to consider that no one’s emotions make music expressive, but rather that the appearance of the emotion—be it emotional behavior or emotional gestures—is what music presents by resembling that appearance in musical features as expressive qualities. This last approach, which I am going to be referring to as the Resemblance theory, is focused on the characteristics music itself has and that have a resemblance relationship with affective phenomena.

The Resemblance theory claims that in order for music to be expressive no one actually needs to experience an emotion, for it is sufficient that the music presents the appearances of the emotion. Foreseeably, one of the main quarrels against the Resemblance Theory is that it seems to neglect the actual affective reactions people have toward music, be it as audience or from the side of the creative process. However, it must be noticed that, even though the affective reactions of people are not denied, it is a different question to ask about what constitutes music's expressiveness than to ask about why people get affectively aroused by music or how it is that the composer expresses her emotions with the music she makes. The questions might very well be related, but the last two are relevant only insofar as they show a necessary bond between people's emotions and the musical features. In fact, the causal relationships between the composer's emotions and intentions, the music, and the emotion aroused in the listener are not denied, for what is actually challenged is the claim that these causal relationships represent constituent parthoods of music's expressiveness as well. Bouwsma's sardonic maxim saying that "sadness is to the music rather like the redness to the apple, than it is like the burp to the cider" makes this point blatantly clear.

As it has been said, according to the traditional expression approach, the emotion that is considered relevant for music's expressiveness is the composer's (or the performer's); thence, it appeals to the recognition of the author's expressive intentions, since they are what makes music expressive. A hard expression account would require the author's sincerity, meaning that she has to genuinely experience an emotion in order to musically express it. However, this version of the theory faces the challenge of either explaining why happy composers can create sad music (for example), or accepting that the musical piece did not express the composer's emotion, nor any other emotion by its own. I revise Robin G. Collingwood's theory of artistic expression, and then a more recent version of the expression approach applied to music: Jenefer Robinson's theory.

Robinson adheres to Edward T. Cone's musical analysis, according to which the listener imagines a persona (or many personas) undergoing the emotions that the music describes.¹ The discussion about the difficulties that the persona theory faces can be found in Chapter 2.3.1. However, for now I can advance that, while I am a huge fan of Cone's musical analysis, I am not a follower of the Persona theory as Robinson proposes it, for I think that it fails to establish a necessary connection between the listener's imagination

¹ A persona theory is also found in Levinson's writings [Levinson 2005].

and the music itself. I consider, though, that a successful musical theory from the realms of philosophy should recover great musical intuitions (such as Cone's, among others) and not pretend to put forward a theory merely from the armchair.

Next, I analyze the Arousal theory, according to which music is expressive in virtue of the affective response the listener gets, meaning that in order to hear music as expressive of a particular emotion, listeners must feel the emotion that music is supposed to express. The main problem with the Arousal theory so stated seems to be that in order for a listener to respond appropriately to the music, she must discern the emotion expressed therein. The listener's response depends upon the emotion expressed, and thus the expressiveness of the music cannot depend upon that response. Derek Matravers's version of the theory differs from the traditional one in that it claims that music does not arouse the listeners with emotions, but rather with feelings that we later on categorize as pertaining to a particular emotion. I agree with Matravers in that music does not arouse the listeners with fully-fledged emotions, but merely with feelings; however, I take that the latter categorization with emotion labels is not really necessary (although the argumentation for this will have to wait until Chapter 3). Regarding both, the expression and the arousal, I claim that people's emotional bonds with music might very well have a causal relationship with music's expressive qualities. However, for music to be expressive (of emotions or other affective phenomena), it is not necessary that any person (be it composer, performer, or listener) actually feels the emotion at that very moment.

I will rather follow the path of the expressive qualities set of theories, of which I will present the Resemblance theory. The expressive qualities approaches consider that music might have expressive features that are independent (although not causally isolated) from the emotions the composer, the performer, or the listener experience. Stephen Davies and Peter Kivy formulated the Resemblance theory independently. However, I will mostly stick to Davies's formulation of it, since I find it clearer and stronger. For the Resemblance theory—also dubbed by Davies as 'appearance emotionalism'—music presents the appearances of emotions as expressive qualities. That is to say that there are certain emotional appearances (or gestures) that can be resembled by musical features. Music's expressiveness depends on it having those expressive qualities, and in that sense, it is objective; yet, its recognition is also response-dependent, as other properties like color may be. Thus, music resembles aspects of emotions, such as behaviors and pace. Furthermore, in case such behaviors are characteristic of a particular emotion like

happiness, we would be entitled to say that music is, say, happy. The heavy task is to explain how we relate musical patterns of sounds and movement with emotions, and to provide evidence that whatever musical features provided, we actually can pass from them to the emotion referred to in a consistent way.

I contend that the Resemblance theory has taken an important leap in understanding musical expressiveness, because it intends to explain it by means of the music itself. It tries to find the wires through which music might be related to emotions, instead of explaining it through external people's emotions, or covering up the explanatory gaps by exalting music's supposedly exceptional expressive powers (and ascribing these powers to the musical genius). I claim that it has been successful in so doing to an extent. As I see it, the problem is that the theory has to focus on the resemblance musical features might have to recognizable emotion gestures without resorting to the emotion's intentionality. Why is this so? Given that music cannot embrace intentionality, the theory has to appeal to the gestures that are sufficiently recognizable as characteristic of particular emotions. Unfortunately, though, the recognizable emotion gestures from audible cues are not enough to account for the complete set of emotions, and even less so for music's subtle expressiveness. Thus, although the resemblance theory can successfully account for general emotions such as happiness and sadness, other emotions such as jealousy and pride obviously fall out of the scope of what can be explained with the theory. But let us make a break here: When we refer to music's subtle expressiveness, do we really mean that it has to express higher-cognitive emotions or is it something else? What does this subtleness really amount to?

One of the main suggestions I will be making is that emotions are not the primary affective attitude toward music. If we are to explain music's expressiveness according to a resemblance theory, that theory should be extended to include feelings. Because of the lack of intentionality in music and the dearth of universal emotional gestures to explain the subtlety of music's expressive power, explaining this expressiveness by making recourse to music's relationships with emotions is bound to face challenges. I will argue that, even though the movements in music associated with musical expressiveness might not necessarily be associated with emotions, they might very well be associated with certain feelings of the movement itself.

The main resemblance found between music and emotions is movement. Indeed, while music has not been very successful in resembling visual data, such as landscapes, it is incredibly suited to resemble

movements, achieving a great deal of subtlety in that respect. Thus, the argument would be like this: The musical piece presents certain movement patterns (representative of, say, sadness); therefore, there is a sense in which we could say that the musical piece is sad. However, this argument, as an enthymeme based on signs, seems to have one unstated premise. This inexplicit premise would presumably secure the bond between those movements as representative symptoms of an emotional state, with the music. Thus, as it occurs in the enthymeme ‘Jamie is sick, she has a cough,’ we have something like ‘this musical phrase is sad, it has these (paradigmatic) movement patterns.’ The major premise of the following syllogism would be the one elided:

Everything that has these movement patterns is sad

This musical phrase presents those movement patterns

This musical phrase is sad

Nevertheless, the unstated major premise is very problematic and we cannot afford to simply assume it. Complicating things, a relatively recent thread of discussions has also challenged the relationship between music and movement (the minor premise). Chapter 3 is about setting the grounds for proposing a concept of musical gestures that could serve to explain music’s expressive subtlety. Chapter 3.1 is a defense of the applicability of spatial and movement terms to music. Chapter 3.2 is about the relationship between musical movements and emotions. Finally, Chapter 3.3 is where I propose my characterization of musical gestures, departing from a simulation theory based on resemblance.

However complicated, I do believe that movement is the cue to understanding musical expressiveness, and that is why I begin with an analysis of the relationship between music and motion. Psychologist and musicologist Carroll Pratt famously said that music sounds the way emotions feel, while justifying this claim by maintaining that both, music and emotions, share their dynamic character. However, Pratt did not provide a satisfactory explanation of this claim, and because of this, his position—which I consider was essentially on the right track—was just brushed aside. Susanne Langer also proposed that music and the emotions share the same form. However, something similar happened with Langer’s theory than with Pratt’s: the weight of the proof is on them and it is just lacking. Thus, on the detractor side, philosophers Malcolm Budd and Roger Scruton had an interesting discussion on elucidating whether music could in fact embrace movement or not, given that movement involves a spatial dimension that is not provided in the (temporal) musical case. Although I do not closely follow this path of research in this

dissertation, I merely indicate that I would not want to accept that the spatial and motion references are nothing but metaphors. This is not a reticence born from any scorn toward metaphors, but from the fact that metaphors are concepts applied to different semantic fields, while I want to suggest that musical motion is not a concept, but a percept. That is to say that we do not only use spatial and motion terms in order to understand music and talk about it, but rather, that we perceive it with spatial and motion properties prior to categorization. Of course, this specific point would need its dissertation by its own, and I am not in a position to delve deeper into it.

However, we could try to approach this from a different perspective; namely, Charles Nussbaum's phylogenetic explanation. Nussbaum explains that the human auditory system evolved from the lateral line in fish, which serves fish in orientation and locating objects in space, since the diverse hairs that work as receptacles of vibrations 'map' them in the fish's body length. According to Nussbaum, the human mechanism that transduces vibrations into sounds is evolutionarily tied up with the tactile sense, so that when we transduce vibrations into sounds, we have an original mixed sensation between the tactile and the auditory. If this phylogenetic lucubration were right, then at least the spatial and motion terms we recurrently use in music would not merely be conventional terms we use to refer to it, but rather the way we perceive it.

Chapter 3.2 is, I think, where the main intuitions of my proposal finally come together. First, provided that there is indeed a close relationship between our perception of sounds and of movement (which serves us to underpin our minor premise; namely, that a musical phrase presents certain movement patterns), the next step to be taken is to analyze the major premise (whether there is a necessary correlation between movement patterns and emotions in particular). First, we shall examine if it is tenable at all and, if it is, to what extent. Thus, considering the analysis made in Chapter 1 about the emotions, I contend that movements alone are not sufficient for us to establish a one to one correlation with emotion categories. Emotions are much more complex processes than feelings are, and if we were to consider feelings of movement alone, we would be lacking other elements that help referring to an emotion in particular. Thence, if we cannot suppose a necessary link between particular feelings and emotions, we firstly need to clarify what other kind of relationship exists between the movements that music presents, and affective phenomena. Next, we will analyze how it is that the listener, having at her disposal mere sounds, can actually have an affective experience.

Again, my general claim regarding the first issue is that it is mainly feelings of movement that we are dealing with in the musical case, and that they are not sufficient to point to a particular emotion. In addition, categorizing feelings with broader emotion terms would dispose of all the expressive subtlety that movement can explain. What is music expressive of? My answer would be that it is mainly of the experience of movements, call them 'movement-feelings.' That is why I refer to what music is expressive of with the general term of 'affective phenomena,' instead of 'emotions.' In fact, in Chapter 3.3 I go on to analyze what components of emotions music is actually capable of resembling, and I ponder that, in some cases, if some of those resembled components work together, they can secure a correlation with an emotion category (however, those cases are the least).

In any case, the story needs to be sculpted. This is the argumentation path I followed in order to propose my concept of musical gestures: Music presents expressive qualities that are related to movements by means of resemblance. Those properties would be something like floating, descending, or sudden accelerating. Movements like those are what musicians carefully knit like filigree, resulting in patterns that endow great subtlety in expressiveness and that are not able to be captured with general emotion categories such as 'sad' or 'happy.' However, that is precisely the issue, for we cannot pass from a movement like sudden accelerating to the reference to a particular emotion (and what emotion would that be).

Let us say that a musical piece or, to restrict ourselves to a smaller unit, a musical phrase, presents certain sound patterns that could be understood as a sonic landscape. Although it could be argued that a landscape is spatial, while the music is rather a matter of time, we should not be worried, since what is resembled is rather the exploration of that landscape as a launched guided exploration of a given environment. This kind of sonic landscape would be understandable if we concede that our sound experience is already haptic, a mixed experience between the tactile and the auditory. Thus, the listener explores it and, as happens in every exploration, some expectations are generated (like what it is going to feel like if we suddenly lose ground and find ourselves falling in an abyss). Maybe we cannot successfully resemble with music the ground (and its grass and so forth), nor the abyss, but we can certainly resemble a stable sensation like the one the ground affords, followed by the sudden loss of it and the fall.

Gibson's notion of 'affordances' will help us here. The main idea is that perception is dependent on motor capacities and exploration of the world, rather than on a single-moment-perception that generates an inner static model of the world. The notion of affordances refers to the properties of the environment that matter in a particular way to the organism, depending on its particular body, needs and possibilities of exploration. The organism expects certain outcomes of its exploration because of its past experience of similar situations, and also prepares action tendencies to respond appropriately. Now then, in certain narrow sense, when we listen to a musical piece, we do not literally explore an environment, for we do not literally move our bodies through it. However, we can say that we explore that sonic environment rather in an offline sort of way.

Indeed, the discovery of mirror neurons in the last ten years has opened up a new route of explanation of a large set of phenomena, among which we can count musical understanding. As it is known, mirror neurons are related to motor plans for performing an action, but they also fire when the individual is merely witnessing another individual performing. The observer offline simulates the action plan for performing the intentional action that she is merely witnessing, while the feelings related to such action plan are fired as well. And so, while listening to music, the listener simulates the action plans that would be necessary for exploring the musical scenario, triggering also the related feelings.

It is important to acknowledge that the musical piece already sets the layouts to be explored. Hence, it is not the case that the listener only experiences whatever her inventiveness allows her to, although the experience she has also depends on her expertise in that musical tradition. Indeed, affordances depend on the individual and not only on the environment as objective properties, since they develop with the experience of similar situations. Therefore, this applied to the musical scenario exploration would implicate that if the listener lacks expertise, she would probably miss many of the expectations with which the composer plays to create particular patterns.

Musical pieces have certain objective characteristics that the listener more or less successfully recovers (even unconsciously), such as its structure, and other non-hierarchical characteristics like timbre and melodic movement. The musical piece urges the listener to implement the appropriate action plans to explore along the musical layouts. That is why I take these musical features to work as indexes and not merely as icons as in the traditional Resemblance theory. Indeed, even though expressive properties belong

to the music, so to speak, they are also response-dependent, while the response demanded is not merely that of recognizing emotion features in the music, but rather that of exploring along the musical scenario and offline implementing the action plans required for its exploration.

That being said, we can justify that musical movement is indeed related to feelings. It is important to make clear, though, that this relationship with feelings does not mean we are committed to an arousal theory. The claim that musical expressive features work as indexes establishes an invitation for action on the behalf of the listener. However, if the listener decides not to play along, the musical piece does not lose its expressiveness, since it relies rather on its own features.

Now then, once it is established that musical movement can and is indeed related to feelings, the following step would be to secure a necessary link between feelings and emotions. Nevertheless, as I mentioned before, this cannot be made. To support my perspective, I rely on primatologist and ethologist Frans de Waal's Russian doll model for empathy. According to him, there is a sort of inner simulation mechanism that he calls 'perception-action mechanism' (PAM), which underpins other more complex mechanisms such as emotional contagion and empathy. We may 'catch' someone else's emotion, or we may truly feel empathy toward her; however, for those processes to happen, we have to add on cognitive layers, including Theory of Mind, and self-other differentiation. At the PAM level, though, there is only an offline simulation of the plans of the perceived action. I contend that this is the highest level we can account for in musical affective experiences.

The PAM simulation level permits us to underpin the relationship between musical movements with the related feelings, but it is not enough for us to attribute to the music or any other imagined persona actual mental states that would be required to talk about empathy. That is good enough, however. We do not need to explain music's expressiveness with more complex processes than the ones that actually happen, and we do not need to categorize its expressive features in bigger emotion drawers. We need to find the precise conceptual tools that allow us to explain music's expressive subtlety. Those concepts are: 'feelings' rather than 'emotions,' and 'simulation' rather than empathy, expression, or recognition. Even though it could be thought that we are explaining less, we are actually explaining more, since this change allows us to clarify musical expressiveness without forcing the concepts' definitions, going against what we know about emotional processes, or narrowing too much music's expressive power.

Chapter 3.3 presents my characterization of musical gestures. Although I will not develop this concept here, I can advance that I take musical gestures to be musical indexes composed by features that resemble any of the diverse emotional process' components, but mainly feelings; that are perceived as units with sense, and so they are like temporal gestalts. Furthermore, I contend that the musical gesture's unit is secured by the unity of the action it refers to and that the listener offline simulates. I consider that the conception of musical gestures as I propose it is of great help in explaining music's expressive subtlety without referring to the intentionality that is needed to determine any emotion, while being consistent with both the most accepted emotion theories and actual musical practices and traditions. Moreover, it takes as touchstone the most salient quality of music; i.e., its motion resemblance. Again, this motion is to be explored in a haptic way, referring to rhythmic, melodic and intervallic traits, but also to other sorts of features like harmonic density, texture, and stability.

1. EMOTION THEORIES



Corporal exploration: *Ausencia 3*

(monotype, acrylic and ink on paper)

Ruth M. Pamatz

1. EMOTION THEORIES

Emotions constitute an extremely important part of our existence. They determine our interest in our own lives; thus, it is no wonder that there have been several attempts to explain emotions from different perspectives. Not only philosophical, but psychological, biological, and neurological approaches have had great insights about what emotions are and how they work. Hence, it would not be useful for a contemporary philosophical approach to ignore their different contributions and, yet, it is still a very difficult task to explain them all here in proper depth. Nevertheless, their importance is salient in order to shed light on these questions: Are emotions something that happen to us or, rather, something that we do? Which reactions are emotions, which of them are not? Are emotions the result of evolutionary history? What is the relationship between the physiological changes that occur during an emotional episode and our 'mental emotional state'? Are emotions in the mind or in the body? Are emotions discrete entities? All these fascinating questions are relevant when attempting to explain musical expressiveness as well, for I will be suggesting a theory of musical gestures that will need to recover many of the features outlined by these different emotion theories.

1.1 GHOSTS IN THE MACHINE: FEELINGS AND THE HYDRAULIC METAPHOR

Probably our first, intuitive answer to the question of what emotions are is that emotions are feelings. But this is rather an answer that raises more questions. In effect, when we talk about our feelings, it seems to us that we cannot be wrong, for our feelings apparently bear the most direct information and, yet, we hesitate when we are impelled to explain our feelings to others. "Feeling" is not an interchangeable concept, neither with "emotion," nor with "passion." "Feeling" refers to the phenomenological level of any experience; that is to say, to the qualitative subjective character of the experience (*quale*), also referred by many psychologists and philosophers as "affect" or "affection." "Passion," instead, focuses the attention on a passive quality that is attributed to the experience. In this sense, "passion" would be something that

we suffer, something in which we don't have an active role. On the other hand, the term "emotion" has a very interesting etymology: it comes from the Latin "emotum," past perfect of the verb "emovere," which can also be analyzed as "ex-motum," meaning a movement originated from within and that gets somehow expelled.

Hence, if we are to say that emotions are feelings, we are apparently saying something quite undeniable. However, we are almost not explaining anything at all, for it is clear that not every subjective experience that we have is an emotional experience; i.e., not everything that we *feel* is an emotion. Furthermore, to say that emotions are feelings would suggest that the subjective character of the experience is the only component of the emotion; and that is, of course, something that should be analyzed carefully before, since it has very strong—and not so desirable—consequences. Another further difficulty in claiming that emotions are feelings is that it would be very difficult to say anything about them that could also be applied generally. For indeed, from a subjective perspective all that can be offered is a detailed description of how a sensation is experienced by the individual, and this carries a certain confidence in the correspondence of her own phenomenological experience to those of others¹. In consequence, as Joseph

¹ This is better discussed within a well-known debate in Philosophy of Mind. Thomas Nagel in "How is it like to be a bat?" suggests that when we are explaining an experience, even if a complete physical explanation upon a theme is given, the subjective perspective is always lacking in it. He ponders that this subjective character of the experience cannot be reduced, neither to the functional, nor to the intentional states, as many analyses attempt to. "The reason is that every subjective phenomenon is essentially connected with a single point of view, and it seems inevitable that an objective, physical theory will abandon that point of view." [Nagel 1974, 435-436] This subjective, first-person point of view is the phenomenal consciousness, the qualitative substratum of the experience, without which to have an experience would only mean to have thoughts, physical events, and certain proneness to act in particular ways. The qualitative substratum, the *quale*, is the phenomenology of the experience; it is what it feels like to feel a particular sensation. Within this debate emerged another much refined branch of explanations called "functionalism." Classic functionalism argues in favor of a type-identity between a mental event and the system of its causal or functional roles [Block and Fodor 1972]. Nevertheless, functionalism faces two main counterarguments, namely, the possibility of *absent qualia*, and the possibility of *inverted spectrums*. The argument for the absent qualia objection consists in the possibility of the existence of two subjects with identical functional arrangements and equally excited by stimuli, but where, while one of them has an inner, phenomenological experience—*quale*—the other one experiences no *quale*, exhibiting only the same causal relationships as the other subject. The argument posits, within the functionalist approach, the possibility of having an automata which can possess propositional information and exhibit the appropriate responses and reactions to certain stimuli, but that has no phenomenological experience. On the other hand, the argument of the inverted spectrum considers the possibility of the existence of two functionally identical subjects whose visual spectrums are, nevertheless, inverted in regards to each other's. For example, the first subject would have the phenomenology of seeing red, whilst the second subject would experience the phenomenology of seeing green. However, there is no way in which an external observer could distinguish between them, nor is it possible for neither of these two individuals to acknowledge that they are experiencing the inverted spectrum in regard to each other. In order to answer to these objections, functionalism can proceed either by explaining that these two hypothetical cases are not really possible, or by demonstrating that even if they were possible, that fact would not constitute a relevant problem for functionalism. In the first thread of answers, Block and Fodor suggest that, even though the *absent qualia* and the *inverted spectrum* are logical possibilities, they are not nomological possibilities, considering

LeDoux notices, the behaviorist psychology during the first half of the 20th century thought it was simply useless to talk about the 'inner states of mind,' and, therefore, that the studies should focus exclusively on observable and objectively measurable facts, such as behaviors:

Being subjective and unobservable (except by introspection), consciousness could not, in the behaviorists' mind, be examined scientifically. Mental states came to be known pejoratively as "ghosts in the machine." [LeDoux 1996, 25]

It is common to call "hydraulic metaphor" any reference to certain fluids within the body that are taken to be responsible for our emotional behavior in a mechanistic way. In folk psychology, these fluids are supposed to function in that precise way, as fluids, and to be susceptible of physical principles as pressure, release, and the like. Hippocrates proposed a very early account of emotions that can be understood under the hydraulic metaphor; i.e., the theory of the four humors that explain the different personalities. The behavior of these four kinds of fluids within the body was supposed to be related to specific emotional dispositions: Phlegm was related to apathy, black bile to melancholy, yellow bile to anger and bad temper (biliousness), and blood to love and hope (sanguinity). This idea got transformed into the idea of *animal spirits* in the second century CE by Galen of Pergamum. He believed that the fundamental principle of life was *pneuma* (air or breath). Nevertheless, *pneuma* could take three forms: natural spirit, located in the liver, responsible for the nutrition; vital spirit, which was located in the heart and thought to be responsible for the blood regulation and bodily heat; and the most sublime of the three, the animal spirit, thought to be originated in the brain and to be responsible for the sensory perceptions and bodily movements. These

the laws of the actual world. Anyway, the possibility of absent qualia and the inverted spectrum indicates that the qualitative character of the phenomenal consciousness is not apprehensible in causal or functional terms. That is to say that if two different mental states can perform exactly the same functional role, there is an aspect of the mental that is not apprehensible in terms of its functional role. Another answer is Dennett's and Harman's eliminativism. They suggest that the very notion of *qualia* is excessively problematic and, ultimately, incoherent, and that is why they try to prove that *qualia* don't exist at all by reducing every content to intentional content [Dennett 1998, Harman 1982]. Harman affirms that there is only one kind of content of the experience: the intentional content; he disregards the difference between qualitative content and intentional content. "My point is that if an inverted spectrum is possible, then experiential contents that can be expressed in public language (for example, looking red) are not qualitative contents, but rather intentional contents [...] I will tendentiously describe the supposition that experiential contents can be expressed in public language such as looking red are qualitative contents as the fallacy of intentionalizing qualia." [Block 1990, 55-56] The remaining question is still whether the explanatory gap regarding sensations is able to be closed. I am inclined to believe it is not. The missing piece for an explanation to be complete would be that of the qualitative character of experience; and the attempt to reduce it to quantitative terms, albeit its usefulness, cannot explain what it is like to have a certain sensation.

forms of *pneuma*, Galen thought, were released into the blood and made possible the general functioning of the body.

But the first hydraulic explanation of emotions that I will consider is rather an attempt to explain *why* we experience an emotion *in the way* we experience it, along with a particular description of *how* it is to have that certain emotion. Thomas Aquinas' approach includes a sort of a mechanistic, physiological explanation of the phenomenology of emotions; but it is not exclusively a mechanistic, nor a phenomenological, or a cognitive explanation, for it intends to trace a relationship between all those 'elements' of emotions. The *Summa Theologiae* includes a large section in which Aquinas explains his exquisite account of the passions [I2ae 22-48]. Nevertheless, I don't intend to review Aquinas' theory as deeply as it certainly deserves, for it would take me too far afield to explore. Rather, I only want to underline the idea of "passions as motions" that is relevant to the following debate.

Coming from an Aristotelian tradition, Aquinas considered that the passions belong to the form/matter composite. Aquinas suggested—from the words of Damascene—that passions are "motions" of the sensitive appetite that entail certain bodily activity. This notion is of central importance for our own enquiry about the expressiveness of music, and I will come back to it by the end of this chapter. Aquinas followed the distinction between three kinds of motion made by Aristotle in the *Physics* [3.1, 202a11]: First, a motion with respect to quality (alteration); second, a motion with respect to quantity (increase or decrease); and finally, a motion with respect to place (locomotion). We should remark this distinction, for locomotion is not the only possible way to understand movement, and it is very important to consider the alteration of quality as a type of motion as well. Thus, the identification between passions and motions was not a mere metaphor for Aquinas. Now then, in which sense are the passions "motions"? The kind of motion that Aquinas attributed to the passions of the soul does not correspond to locomotion, whereas the motion as alteration in Aristotelian terms would be the more appropriate sense in which the term "motion" is used. Yet, "motion" as alteration of quality does not exhaust what Aquinas had in mind in defining what passions are, for he also holds that every appetitive motion of the soul which is properly called a passion is also accompanied by a bodily motion. Nevertheless, this can be explained recalling that, for Aquinas, there is not an absolute separation between soul and body, for they are fundamentally integrated, even though he still maintains a distinction between them. Therefore, although he considered that the events within the soul produce distinct bodily events, this connection should be understood as one of formal rather than of

efficient causality, where the formal element is an appetitive reaction and the material element a physical reaction. On this point, Anthony Kenny observes: “The medievals did not regard the philosophy of the emotions as a search for causal mechanisms. For Aquinas, the relation between an emotion and its bodily manifestations was not one of efficient causality. The increase in one’s blood pressure when one is angry is, according to him, neither a cause nor an effect of one’s anger; it is its *materia*.” [Kenny 1963, 16]

Aquinas explained the relationship between the soul event and the body event as a resemblance between the two in terms of motion: “Just as the formal aspect (*formale*) is the very motion of the appetitive power (*ipse motus appetitivae potentiae*), so is the bodily change (*transmutation corporalis*) the material aspect (material), of which one is proportioned to the other (*quorum unum alteri proportionatur*).” [ST. 1a2ae 44.1.co] Indeed, he claimed that what happens in the body (the local motion of vital spirits within the body) imitates what happens in the soul (the qualitative motion of sensitive appetite) according to its likeness, character, and similitude. Since, according to Aquinas, for every passion there is a formal and a material aspect, distinct events within the soul produce distinct bodily events. This is the way in which Aquinas explained the relationship between the passions of the soul and the somatic effect of each emotion; and thus, it won’t be inappropriate to claim that Aquinas’s account of passions requires an “embodied soul.” Just to cite an example of this relationship of motions, let’s recall Aquinas’s explanation of the effects of anger:

As we have seen, there is a proportion between the physical change which accompanies an emotion and the appetitive reaction. [...] Anger as an appetitive reaction is produced by an injury sustained and acting as a counter-irritant. The appetite’s strongest thrust is towards repulsing the injury and seeking vengeance; this is the origin of the tremendous force and vehemence of an angry reaction. Such a reaction is not one of withdrawal, for which cold would be appropriate, but one of advance, to which heat corresponds. / This is the basis on which an angry reaction results in a fervor in the blood and vital spirits around the heart, the instrument of the emotion. Another effect of the marked disturbance of the heart, characteristic of anger, is the signs in the external members of those who are angry. Gregorius says that *the heart that is inflamed with the stings of its own anger beats quick, the body trembles, the tongue stammers, the countenance is fired, the eyes blaze, familiar acquaintances are not recognized. The lips make a sound but one does not realize what one is saying.* / [...] There is a difference between the body heat produced in love and in anger. The fervor of love has a sweetness and gentleness about it; its object is cherished and agreeable and it is compared to the warmth of the air and the blood. So also those of a sanguine temper are more loving and there is a saying that love springs from the liver, which is where the blood originates. In contrast, the fervor of anger is bitter and destructive and seeks to punish an opponent. It is likened to the heat of fire and bile. [ST. 1a2ae. 48, 2]

Around four centuries later, Descartes also explained the way passions work using the idea of vital or animal spirits: “Finally, it is known that all these movements of the muscles, as well as all the senses, depend on nerves, which are like little filaments or little tubes which all come from the brain and which contain, just as it does, a certain very fine air or wind, called the animal spirits.” [Descartes 1649, I.7.30] And a bit further: “For what I name spirits here are nothing but bodies; their only property is just that they are bodies which are very small and which move very rapidly—just like the parts of the flame that emanates from a torch. So they do not stop anywhere, and to the extent that some of them enter the brain’s cavities, others leave through the pores in its substance; these pores guide them into nerves and thence into muscles, by means of which they move the body in all the different ways in which it can be moved.” [Descartes 1649, I.10.5] The main difference between Descartes’ account and Aquinas’ is precisely that Descartes considered that we should not attribute to the soul the capability of motion. Indeed, Descartes claimed that everything that we can see as possessed by inanimate bodies must be attributed to our body alone, for there would not be reason to think that such a characteristic belongs to the soul.

Thus, because we do not conceive the body to think in any way, we do right to believe that every kind of thought within us belongs to the soul. And because we have no doubt that there are inanimate bodies which can move in as many different ways as ours, or more, and which have as much heat, or more (experience shows this is [the case of] flame, which in itself has much more heat and motion than any of our members), we must believe that all the heat and all the movements which are in us, insofar as they do not depend on thought, belong to the body alone. [Descartes 1649, I.4.15-25]

The general idea of Descartes’ theory—which I will not discuss here in depth—is that these animal spirits are somehow connected to the soul, which is supposed to be located in the pineal gland. This sort of wind—the animal spirits—connects the emotions of the soul with the feelings of the body. So, Descartes defined passions as “perceptions or sensations or excitations of the soul which are referred to it in particular and which are caused, maintained, and strengthened by some movement of the spirits.” [Descartes 1649, I.27.10-15] He considered that passions are caused by the animal spirits in order to differentiate them from the volitions, which have their origin in the thought itself. Effectively, he thought that the passions take control of the individual at least to the extent in which the individual, while undergoing an emotion, seems incapable of thinking anything else. But the aspect of Descartes’ approach that I want to emphasize here is that these animal spirits are supposed to move in certain patterns according to each passion; and the

description of the spirits' movement does not only aim to be a description of the physiological changes that the individual undergoes while experiencing a passion, for it seems also, specially, a description of what those feelings *feel like*.

Sometimes, on the other hand, the body happened to lack sustenance, and that must have been what made the soul feel its first Sadness [...]. The same thing also made the heart's orifices contract, because they were only receiving a little blood, and made a very considerable portion of this blood come from the spleen, because it is, as it were, the last reservoir that serves to supply it to the heart when enough does not come from elsewhere. This is why the movements of the spirits and nerves that serve to contract the orifices of the heart in this way and to guide blood to it from the spleen always accompany Sadness. [Descartes 1649, II, 110, 410-415]

Certainly, it is at least reason for suspicion to recall nowadays a theory that claims the existence of animal spirits and that, according to the modern science, gives a rather inaccurate description of how the body operates. But the reason why I am focusing attention on the animal spirits' movement is that it describes the feeling or perception of the emotions in the body, and not only the 'anatomic' operation of the body. This theory also forces us to hold in our attention that one of the main problems that gave rise to the belief in 'animal spirits' is the apparent separation between soul and body, a debate that in our days would be stated in terms of mind and matter. So, do emotions belong to the mind or to the body? The animal spirits idea had enormous influence in the Western music during the Renaissance, and became the basis on which the musical expressiveness theorists and musicians based their compositions and shaped our musical tradition. If, as I shall argue later, the tradition and social determinations also have a say in our musical understanding and in our emotional lives, at least regarding musical expressiveness, Aquinas' and Descartes' theory might not be trivial after all.

More recently, Sigmund Freud used another kind of hydraulic metaphor to explain psychological events. In this case, Freud referred to a basic instinctual force or psychic energy of desire which he labelled "libido": "Libido is an expression taken from the theory of the emotions. We call by that name the energy, regarded as a quantitative magnitude (though not at present actually measurable), of those instincts which have to do with all that may be comprised under the word 'love'" [Freud 1922, 37]. Freud suggested that the very young child is entirely governed by her libido, but that she will gradually repress it through her experience in a cultural context. This pure libidinal, repressed drive is what Freud called the 'id.' The libidinal repression, though, is many times explained by Freud in hydraulic terms. The libido is generated within us pretty much like a boiler generates steam and, thus, generates pressure. If the libido has been sufficiently

repressed, the pressure generated will claim for release in one way or another. Therefore, libidinal pressure conveys the danger of overheating or explosion. Among the words that Freud used to refer to this libidinal compartment are “catharsis,” which can be understood as a way of emptying, “cathexis,” as a way of filling; and “sublimation,” as a way of channeling.

Robert Solomon considered that Freud’s hydraulic model is, nevertheless, not applicable to the whole spectrum of emotions, and that, while it is helpful and intuitive to understand anger, it is very forced and unnatural to understand happiness, for example. Furthermore, Solomon, echoing Sartre, believed that, in general, the hydraulic metaphor gives us a very mechanistic image of emotions that seems to work independently from the *self*. However, he also acknowledges this benefit of the hydraulic metaphor:

At least in the case of anger, the hydraulic metaphor describes something that we really experience. We think of ourselves as filling up with something and possibly even exploding. Do we experience these metaphors because they are accurate *descriptions of our feelings*? Or, rather, do we think and describe our feelings because we have these metaphors? [Solomon 2006, Lecture 11, 62]

Whatever the answer may be, what we can underline is that, while revising the hydraulic metaphors, it is commonly overlooked that they are not only flawed mechanical descriptions of some ‘imagined fluids,’ but that they are primarily *descriptions of the feelings* of our emotions.¹

¹ Freud himself said this about the mechanistic explanations of anxiety: “I do not claim that I can give you a complete solution; but you will certainly expect psycho-analysis to have attacked this problem too in a different manner from that adopted by academic medicine. Interest there centres upon the anatomical processes by which the anxiety condition comes about. We learn that the medulla oblongata is stimulated, and the patient is told that the oblongata is a wondrous and beautiful object; I well remember how much time and labour I devoted to the study of it years ago. But today I must say I know of nothing less important for the psychological comprehension of anxiety than a knowledge of the nerve-paths by which the excitations travel.” [Freud, 193-4]

1.2 EMOTION AS PHYSIOLOGICAL CHANGES

Can one fancy the state of rage, and picture no ebullition of it in the chest, no flushing of the face, no dilatation of the nostrils, no clenching of the teeth, no impulse to vigorous action, but in their stead limp muscles, calm breathing, and a placid face?

William James

Emotions are full of blood, sweat, and tears...

Joseph LeDoux

William James argued against the idea that emotions are only something that happens within our minds. In his article "What is an Emotion?" [1884], James strikingly suggested that the bodily disruptions experienced during an emotional episode are not the result of the emotion, but, on the contrary, that emotions are in themselves the result of the perception of the bodily disruptions.

Common sense says, we lose our fortune, are sorry and weep; we meet a bear, are frightened and run; we are insulted by a rival, are angry and strike. The hypothesis here to be defended says that this order of sequence is incorrect, that the one mental state is not immediately induced by the other, that the bodily manifestations must first be interposed between, and that the more rational statement is that we feel sorry because we cry, angry because we strike, afraid because we tremble, and not that we cry, strike, or tremble, because we are sorry, angry, or fearful, as the case may be. Without the bodily states following on the perception, the latter would be purely cognitive in form, pale, colourless, destitute of emotional warmth. [James 1884, 190]

James maintained that we would have nothing left that could constitute the emotion but a cold state of intellectual perception if we try to abstract from an emotional state all the feelings of its characteristic bodily symptoms. In spite of the subsequent criticisms, which pointed out that not every emotion has distinctive bodily expressions, James aimed to include in his explanation only the emotions that had

distinctive bodily patterns. But of course, it will have to be proven which emotions entail distinctive bodily changes, as well as the grounds to support that distinction.

On the other hand, Carl Lange reacted against a tradition of rationality that had dominated the studies of human mind and that considered that emotions were no proper subject of any serious, scientific research. Lange tried to provide reasons to think that the physiological reactions to emotions—which were considered mere accidental concomitants of the feelings—were in fact objective properties that can throw some light on the way emotions work. The results of his research also pointed out that emotions are feelings caused by the changes in physiological conditions.

If now, although no scientific definition of the affections can be given at the outset, I proceed, in this investigation from the traditional conceptions and the popular affections, and put the question in the following way: “What bodily manifestations accompany each of the affections?” I do so with full consciousness of the fact that the problem is hereby reversed, and that the starting point is anything but precise and scientific. [Lange 1885, 38]

William James and Carl Lange had enormous influence on psychologists during the 20th century and, since their respective theories appeared almost at the same time and support pretty much the same idea, their theories are best known as the James-Lange theory. Of course, the fact that they considered that emotions are mainly a matter of physiological affairs, rather than a matter of rational consciousness, gave rise to much debate that was not always as fruitful as one would expect; and so while following this debate, I want to insist that it is important to avoid the temptation of assuming a dualism between body and mind, as many have done.

Now then, an important antecedent of the research about emotions from a physiological perspective is *The Expression of Emotions in Man and Animals*, in which Darwin extended the theory of species evolution to the field of emotions. According to him, the emotional responses are automatic and, in a way, unconscious. Darwin considered that the emotion causes the conduct (both of which are supposed to be innate), and thus he formulated principles in order to explain the origin of the emotional behavior¹.

¹ First, the behavior can be the result of the intent of being released from unpleasant sensations, as well as of the intent of satisfying certain desires. Second, when some behaviors cannot be explained by the first principle, they can be the result of the antithesis of the movements required for the antithetical desire. Third, the emotional behavior can also be the physiological result of a body excitation during the emotional episode. [Darwin 1965. See also Griffiths 1997, 64-9]

Almost a century later, psychologist Paul Ekman [2004] considered that Darwin was right in his thesis about the evolved expressions of emotions, and followed this approach in his own research. He made cross-cultural field research in Papua New Guinea, Japan, Brazil, Argentina, Indonesia, the former Soviet Union, and the United States in order to study the association between gestures and emotions in different cultures. He found out that, for the most part, the gestures associated with certain emotions by occidental people were also associated as such by other non-Western cultures. The results showed many confluences in gesture making, gesture recognition and gesture association between the different cultures. These results support the idea that emotional gestures are not (at least not only) culturally learned by imitation and opened the debate up to the possibility of talking about basic, universal emotions.



Fig. 1: New Guinean's poses of emotion. [Ekman 2003, Emotions Revealed, 11-2]

However, Ekman's research does not only concern emotional behavior, but also emotional appraisals; i.e., the evaluation of certain events as relevant to survival. He considered that the evaluation of a situation has its grounds in evolutionary history, although he also contemplated different levels of appraisers that include social interaction and personal experiences. According to Ekman, emotions are primarily triggered by evolved, automatic evaluation mechanisms that he dubbed "auto-appraisers," and these mechanisms make possible a very quick response to the situation the individual faces. The auto-appraisers constitute an open database that contains diverse themes that have been relevant to human survival. These themes, however, are also modified by the different experiences that the individual deals with in the present situation and throughout her life; for indeed, over the course of our lives, we learn to interpret certain events in such a way as to frighten, anger, disgust, sadden, surprise or please us. And the information of these experiences is added to the universal antecedent events, expanding on what the auto-appraisers are alert to. [Ekman 2003, 24]

Our autoappraisers are powerful, scanning continuously, out of our conscious awareness, watching out for the themes and variations of the events that have been relevant to our survival. To use a computer metaphor, the automatic appraising mechanisms are searching our environment for anything that resembles what is stored in our *emotion alert database*, which is written in part by our biology, through natural selection, and in part by our individual experience. [Ekman 2003, 28]

Nevertheless, the auto-appraisers are not the only appraisal system that can trigger emotions in the individual. Ekman listed the different possible appraisers as follows: (1) auto-appraisers; (2) reflective appraisal; (3) memory of a past emotional experience; (4) imagination; (5) talking about a past emotional event; (6) empathy; (7) others instructing us about what to be emotional about; (8) violation of social norms; and (9) voluntarily assuming the appearance of emotion. [Ekman 2003, 37]

Ekman noticed that sadness, anger, surprise, fear, disgust, contempt, and happiness have specific behavioral expressions that are presumably universal, and this is the main reason why he considered them basic emotions. To justify this classification, he argued that the importance of emotional expressions is salient for the regulation of interpersonal relationships; for example, facial expressions are involved in the formation of attachments, and in the regulation of aggression. Nevertheless, basic emotions are also supposed to entail universal, specific physiological changes that prepare the individual to deal with fundamental life tasks. Presumably, anger, fear, disgust and sadness show distinctive patterns of autonomic nervous system (ANS) activity; and this constitutes an argument in favor of their universality and, of course, of the evolution theory of emotions against the social constructionist theory, which we will review later on. The hypothesis is that the ANS activity patterns evolved because they sub-serve other patterns of motor behavior. These patterns of motor behavior are meant to be adaptive for each of the emotions, since they prepare the organism for the different actions required. So, even though there is no evidence of emotion-specific ANS activity for surprise and enjoyment, Ekman thought that this fact can be due to the lack of relevance for survival of any motor pattern related to those emotions.

In addition to the emotion-specific physiological changes, the specific expression of emotions, and the auto-appraisers, Ekman also considered as distinctive characteristics of basic emotions the 'universal antecedent events,' which are common elements in the contexts in which emotions are found to occur. According to Ekman, universal antecedent events are likely to exist if emotions have evolved to deal with fundamental events and tasks. Of course, that does not mean that every single context in which an emotion takes place is the same for all people within or across cultures, but instead, that there are some constant

themes that are clearly related to each single emotion, as well as some variations that depend on social, historical, and personal experiences. For example, the loss of a significant other is usually an antecedent of sadness, but who a significant other is will differ from culture to culture and from person to person. This is, as we shall see, what Lazarus calls “core relational themes”¹ unique to the appraisal of each emotion [Ekman 1999, 53]. Hence, Ekman considered that each emotion is not a single affective state but rather a family of related states constituted by theme and variations. The characteristics unique to each family constitute the theme and are the product of evolution, while the variations are the product of individual differences.

Concurrently, in order to explain the diverse emotional mechanisms from a physiological approach, neuroscientist Joseph LeDoux has made further research on the neurological changes that occur while emotions are experienced [LeDoux1996]. As a result of his research he concluded, firstly, that there is nothing in the brain or mind that could be considered emotions; that there is no specific area—an emotional center within the brain—with particular emotional functions. Instead, “emotion” is for LeDoux only a convenient label to talk about certain aspects of the brain and its mind, which are very diversified and spread according to their different neuro-functional routes. Therefore, he considers that there is no single emotion system, but rather lots of them. LeDoux also maintains that emotions systems were evolved through evolutionary history and that they help animals and people to satisfy certain needs as biological imperatives. These emotions’ brain systems are supposed to accomplish the individual’s behavioral goals in the absence of robust awareness.

And absence of awareness is the rule of mental life, rather than the exception, throughout the animal kingdom. If we do not need conscious feelings to explain what we would call emotional behavior in some animals, then we do not need them to explain the same behavior in humans. Emotional responses are, for the most part, generated unconsciously. Freud was right on the mark when he described consciousness as the top of mental iceberg. [LeDoux 1996, 17]

LeDoux considers that feelings or affects are, of course, part of the emotional complex. However, he also maintains that feelings only constitute a part of an overall reaction that also includes physiological and behavioral responses that are no less important. Hence, for him, what we need to elucidate is rather the underlying system that generates emotions and not so much the conscious emotional state, since both, conscious feelings and behavioral reactions, are effects caused by the activity of an underlying system that

¹ See also De Sousa, 1987.

can unconsciously detect, say, danger. For LeDoux, though, emotions are something that happens to us, rather than something we will to occur.

[...] conscious feelings, like the feeling of being afraid or angry or happy or in love or disgusted, are in one sense no different from other states of consciousness, such as the awareness that the roundish, reddish object before you is an apple, that a sentence just heard was spoken in a particular foreign language, or that you've just solved a previously insoluble problem in mathematics. States of consciousness occur when the system responsible for awareness becomes privy to the activity occurring in unconscious processing systems. What differs between the state of being afraid and the state of perceiving red is not the system that represents the conscious content (fear or redness) but the systems that provide the inputs to the system of awareness. There is but one mechanism of consciousness and it can be occupied by mundane facts or highly charged emotions. [LeDoux 1996, 19]

In the same vein, neurologist Antonio Damasio suggests that certain aspects of the process of emotion and feeling are indispensable for rationality: emotion, feeling, and biological regulation all play a role in human reason. In his explanation of the way emotions operate within the brain, Damasio starts by pointing out that, indeed, emotions depend on several brain systems that work across many levels of neuronal organization, rather than on a single brain center. From my perspective though, one of his most important contributions is his claim that the essence of a feeling may be related to the direct perception of the body, rather than to a mental quality attached to a specific object. Furthermore—and contrasting with Descartes' approach—he maintains that there is no relevant separation between the mind and the body or, in his own words, "the mind is embodied, in the full sense of the term, not just embrained." [Damasio 1994, 118]

However, if emotions depend strongly on neuronal organization, one might wrongly assume that all emotional responses are wired in at birth. Hence, Damasio distinguishes between primary and secondary emotions in order to point out that some emotional reactions are innate, while others are acquired. Primary emotions are meant to be innate and preorganized and depend on the limbic system circuitry, the amygdala and the anterior cingulate. Secondary emotions, on the contrary, are meant to be acquired and require a separate brain allocation.

Damasio does not believe that we are innately wired to be afraid of, say, a bear. Instead, he considers that we may be wired to respond in a pre-organized way when we perceive certain features of stimuli in the world or in our bodies. For example, we might be wired in to respond in particular ways to a certain kind of motion, such as the reptile's, certain sounds, such as growls, or certain configurations of the body state, such as pains. These emotional responses accomplish some useful goals that are relevant to our survival, like avoiding a predator.

In effect, the mechanism of primary emotions is, for Damasio, the basic emotion mechanism. Nevertheless, he considers that, in humans at least, the emotional process does not stop with the bodily changes. The process continues with the awareness of the feeling of the emotion in connection to the object that excited it; and thus the mechanisms of secondary emotions begin when we experience those feelings in connection with particular objects and situations. However, the neural structures in the limbic system are not enough to support the process of secondary emotions, for they also require the operation of the prefrontal and somatosensory cortices. Damasio suggests that the process of secondary emotions begins with a cognitive evaluation of an event, and it continues with the response of different and complex neural networks of the prefrontal cortex. At the same time, automatically and involuntarily, the response of these neural networks is signaled to the amygdala and the anterior cingulate, which in turn, respond by activating the relevant changes in the viscera, the motor system, the endocrine and peptide systems, and in the brain itself.¹

Even though Damasio claims that the essence of emotion is a collection of changes in body state that are induced by nerve cell terminals, he also considers that there is more to emotion than this essence, for the emotional process continues with awareness of those bodily changes along with the evaluation of the situation that presumably elicited them. Thus, in conclusion, he considers that emotions entail the

¹ "1. The process begins with the conscious, deliberate considerations you entertain about a person or situation. [...]Some of the images you conjure up are nonverbal, while others are verbal [...]. The neural substrate for such images is a collection of separate topographically organized representations, occurring in varied early sensory cortices (visual, auditory, and others). Those representations are constructed under the guidance of dispositional representations held in distributed manner over a large number of higher-order-association cortices. / 2. At a nonconscious level, networks in the prefrontal cortex automatically and involuntarily respond to signals arising from the processing of the above images. This prefrontal response comes from dispositional representations that embody knowledge pertaining to how certain types of situations usually have been paired with certain emotional responses, in your individual experience. In other words, it comes from acquired rather than innate dispositional representations, although, as discussed previously, the acquired dispositions are obtained under the influence of dispositions that are innate. Although the relations between type of situation and emotion are, to a great extent, similar among individuals, unique, personal experience customizes the process for every individual. To summarize: The prefrontal, acquired dispositional representations needed for secondary emotions are a separate lot from the innate dispositional representations needed for primary emotions. But the former need the latter in order to express themselves. / 3. Nonconsciously, automatically and involuntarily, the response of the prefrontal dispositional representations described in the preceding paragraph is signaled to the amygdala and the anterior cingulate. Dispositional representations in the latter regions respond (a) by activating nuclei of the autonomic nervous system and signaling to the body via peripheral nerves, with the result that viscera are placed in the state most commonly associated with the type of triggering situation; (b) by dispatching signals to the motor system, so that the skeletal muscles complete the external picture of an emotion in facial expressions and body posture; (c) by activating the endocrine and peptide systems, whose chemical actions result in changes in body and brain states; and finally, (d) by activating, with particular patterns, the nonspecific neurotransmitter nuclei in brain stem and basal forebrain which then release their chemical messages in varied regions of the telencephalon [...]. This apparently exhausting collection of actions is a massive response; it is varied. It is aimed at the whole organism, and in a healthy person, it is a marvel of coordination." [Damasio 1994, 136-7]

combination of a mental evaluative process, simple or complex, with dispositional responses to that process, mostly toward the body proper, resulting in an emotional body state, but also toward the brain itself (neurotransmitter nuclei in brain stem), resulting in additional mental changes.

The terms “feeling” (or “affect”) and “emotion” are, in effect, many times used as equivalent as if they meant exactly the same. However, that is not the case for most of the researchers that I will be taking into consideration. In Damasio’s approach, for example, feeling is the experience of the perception of bodily changes. Nevertheless, not every feeling has its origin in an emotion. When emotions are conscious, they give rise to feelings because feelings are the experience of the perception of bodily changes; but not every conscious perception of bodily changes originates in emotions. This is how Damasio explains the distinction:

As body changes take place, you get to know about their existence and you can monitor their continuous evolution. You perceive changes in your body state and follow their unfolding over seconds and minutes. That process of continuous monitoring, that experience of what your body is doing while thoughts about specific contents roll by, is the essence of what I call feeling. If an emotion is a collection of changes in body state connected to particular mental images that have activated a specific brain system, the essence of feeling an emotion is the experience of such changes in juxtaposition to the mental images that initiated the cycle. In other words, a feeling depends on the juxtaposition of an image of the body proper to an image of something else, such as the visual image of a face or the auditory image of a melody. [Damasio 1994, 145]

The juxtaposed body state acts as a qualifier of a specific situation or object. However, the qualifier states may be unexpected and their psychological motivation may be unapparent or nonexistent. This relative autonomy of the neural machinery behind the emotions helps us understand why sometimes an emotion can be triggered even when we have no explainable reason for it, since there is a vast realm of nonconscious processes underlying any emotional process. According to Damasio, “a feeling about a particular object is based on the subjectivity of the perception of the object, the perception of the body state it engenders, and the perception of modified style and efficiency of the thought process as all of the above happens.” [Damasio 1994, 147-148]

The thesis defended by Damasio is, thus, that feelings regularly come from “readouts” of the body states. Another possibility, however, is that feelings can also be originated merely by the brain itself. This is a possibility that Damasio labels an “as-if loop”, and it helps explaining why certain feelings might not correspond with the actual body state, as in the phantom-limb condition. Nevertheless, Damasio considers this possibility as a secondary source of feelings, for if it were the only one—or the main one—feelings would be processed entirely within the brain, with a concomitant body state that would be parallel instead

of causative. An argument that supports that this is not the case is that emotions are not only induced by neural routes, but also by chemical routes; and even though the brain sector that induces the emotion may signal another sector of the brain, it is not likely to include the chemical component as well. Furthermore, Damasio argues that the brain cannot predict all the numerous variables of the body states that depend not only on neural organizations but also on chemical commands. If feelings were entirely processed within the brain, it would bring as a result a limited variety of feeling patterns that would not be modulated by the real-time conditions of the organism at any moment. Thus, “we would have no notion of the ever-changing modulation of affect that is a salient trait of our mind.” [Damasio 1994, 158]

I see feelings as having a truly privileged status. They are represented at many neural levels, including the neocortical, where they are the neuroanatomical and neurophysiological equals of whatever is appreciated by other sensory channels. But because of their inextricable ties to the body, they come first in development and retain a primacy that subtly pervades our mental life. Because the brain is the body’s captive audience, feelings are winners among equals. And since what comes first constitutes a frame of reference for what comes after, feelings have a say on how the rest of the brain and cognition go about their business. Their influence is immense. [Damasio 1994, 159-160]

Summarizing, Damasio considers that feelings let us be aware of our body, either attentively or faintly, but in any other respect they are as cognitive as any other perceptual image. These feelings are like glimpses of what is going on in our body, and they are juxtaposed to the images of other objects and situations (a characteristic that, by the way, makes them intentionally charged). And it is in this juxtaposition that the body images bestow the other images with the quality of goodness or badness, of pleasure or pain.

We have now ample reasons to suggest that our emotions are not only a matter of one’s own concern. We share with others not only many of the mechanisms that underlie our emotional reactions, but also most of our emotional appraisals, as an evolutionary endowment. There is convincing evidence that shows that emotions depend strongly on evolved traits of bodily changes of various sorts. Furthermore, the universality found in emotional gesture making also suggests that recognition of emotional gestures might be part of our hard-wired abilities; and this recognition might also trigger a further re-evaluation of the emotional processes; that is, it may also have a say in emotional appraisal, behavior, and coping. There are many unconscious bodily processes that have to do with the emotion elicitation and behavior. Hence, even if we should not identify emotions with bodily changes, we can still claim that bodily changes are a necessary part of the emotional process.

1.3 COGNITIVE APPROACHES

Philosophical problems are often far removed from practical life. But those raised by emotion are different, not least because human emotions seem to promise us reasons to think that we are neither beasts nor machines.

Ronald de Sousa

Cognitive approaches to the analysis of emotions emphasize the role of thought in emotions and, thus, that emotions are neither irrational, nor a-rational. Broadly speaking, a cognitive account of emotions can be found in the writings of philosophers Robert Solomon, Ronald de Sousa, Martha Nussbaum, and psychologists Richard Lazarus, Nico Frijda, and James Averill, among others, although we can find important roots in the writings of Aristotle, the Stoics, Spinoza, Hume, and Sartre.

The main claim held by this perspective against the physiological approach to emotions is that it is certainly a difficult task to differentiate between the diverse emotions if one is to take into account only the physiological disruptions, since certain cognitive activity is, in turn, responsible for this differentiation. In effect, some different emotions share the same physiological responses and, thus, if the only parameter that we are taking into consideration is that of the physiological responses or sensations, we would have no ground to assume that they are different emotions at all¹. On the other hand, some of the bodily changes

¹ Following the James-Lange theory, a large number of experiments were undertaken in search of the physiological differentiators of the emotions. One of the most quoted experiments is the one designed by Schachter and Singer [1962], in which 185 students were injected with epinephrine—adrenaline—or with a placebo. The students were told that they were injected with Suproxine, a supposed vitamin, and that the aim of the experiment was to test the consequences of the vitamin on their visual accuracy. The individuals were divided into four groups: one that had accurate information about the side effects that could be experienced by Suproxine (epinephrine), the second one was ignorant of those side effects, the third one was misinformed about the side effects, and the people of the fourth group were injected with a

associated with emotional states, such as increased heart rate, copious sweat, and strenuous breathing, can also be associated with diseases, exercise, or other physiological causes. On the same basis, it would also be difficult to stipulate a differentiation between some non-emotional physiological perturbations and proper emotions, for some emotions seem to show the same bodily responses as some diseases or bodily excitations. That is to suggest that emotions cannot be constituted entirely by physiological disruptions, since there is nothing in the generated sensations that could differentiate between them, or that could distinguish them from the effects of disease, exercise, etc.

But how does cognition operate in an emotional process? It is mainly a matter of the 'aboutness' or intentionality of the emotions. According to the cognitive approach, emotions are object-directed, that

saline solution as a placebo. After they were injected, the individuals were left with a stooge that supposedly was undertaking the same experiment. The stooge acted two different roles: the first one was as a euphoric person and the second one as an angry person. The results were that the individuals that were ignorant of the side effects and that interacted with the "angry person" tended to associate their physiological sensations—presumably caused by the epinephrine—with anger, whereas the individuals that interacted with the "euphoric person" tended to associate their physiological sensations with euphoria. The individuals that were injected with a placebo reported much less emotional reactions or no emotional states at all; and the individuals that had an accurate explanation for their physiological sensations didn't associate their sensations with any emotional state. The results showed, thus, that given the same state of epinephrine-induced sympathetic activation, it is possible to produce in the individuals, by cognitive manipulations, the very disparate states of euphoria and anger. "1. Given a state of physiological arousal for which an individual has no immediate explanation, he will label this state and describe his feelings in terms of the cognitions available to him. To the extent that cognitive factors are potent determiners of emotional states, it should be anticipated that precisely the same state of physiological arousal could be labelled "joy" or "fury" or "jealousy" or any of a great diversity of emotional labels depending on the cognitive aspects of the situation. 2. Given a state of physiological arousal for which an individual has a completely appropriate explanation, no evaluative needs will arise and the individual is unlikely to label his feelings in terms of the alternative cognitions available. 3. Given the same cognitive circumstances, the individual will react emotionally or describe his feelings as emotions only to the extent that he experiences a state of physiological arousal." [Schachter and Singer 1962, 298]. They concluded that it may indeed be the case that cognitive factors are major determiners of the emotional labels we apply to a common state of sympathetic arousal. Nevertheless, Jesse Prinz has critiqued the procedure of Schachter's and Singer's experiment, arguing that the conclusions that they have arrived to, are not necessarily the only explanation of the results found [Prinz 2004, 52, and Griffiths 1997, 81-83].

is, they have intentional objects toward which they are focused. This idea is particularly well stated by Sartre:

It is evident, in effect, that the man who is afraid is afraid of something. Even if it is a matter of one of those indefinite anxieties which one experiences in the dark, in a sinister and deserted passageway, etc., one is afraid of certain aspects of the night, of the world. And doubtless, all psychologists have noted that emotion is set in motion by a perception, a representation-signal, etc. But it seems that for them the emotion then withdraws from the object in order to be absorbed into itself. Not much reflection is needed to understand that, on the contrary, the emotion returns to the object at every moment and it's fed there. For example, flight in a state of fear is described as if the object were not, before anything else, a flight from a certain object, as if the object fled did not remain present in the flight itself, as its theme, its reason for being, that from which one flees. And how can one talk about anger, in which one strikes, injures, and threatens, without mentioning the person who represents the objective unity of these insults, threats, and blows? In short, the affected subject and the affective object are bound in an indissoluble synthesis. Emotion is a certain way of apprehending the world. [Sartre 1948, 51-2]

Sartre's reasoning leads us to consider that the environment in its relationship to the individual is not reducible to a mechanistic input. The intentional object or event has to be appraised in a particular way in order to constitute an emotional object, and that means that it has to be considered, say, dangerous, to trigger fear in the individual. Indeed, it is not only the intentional object, but also the appraisal that unleashes an emotional reaction. In this respect, Richard Lazarus argued that there is a distinctive 'core relational theme' for each emotion, which encompasses what the individual appraises as harms or benefits of a person-environment relationship. I transcribe a table of the core relational themes, since it will help illuminate many of the debates that are going to be undertaken in this dissertation [Lazarus 1991, 39, 122]:

Core Relational Themes for Each Emotion	
Anger	A demeaning offense against me and mine.
Anxiety	Facing uncertain, existential threat.
Fright	Facing an immediate, concrete, and overwhelming physical danger.
Guilt	Having transgressed a moral imperative.
Shame	Having failed to live up to an ego-ideal.
Sadness	Having experienced an irrevocable loss.

Envy	Wanting what someone else has.
Jealousy	Resenting a third party for loss or threat to another's affection.
Disgust	Taking in or being too close to an indigestible object or idea (metaphorically speaking).
Happiness	Making reasonable progress toward the realization of a goal.
Pride	Enhancement of one's ego-identity by taking credit for a valued object or achievement, either our own or that of someone or group with whom we identify.
Relief	A distressing goal-incongruent condition that has changed for the better or gone away.
Hope	Fearing the worst but yearning for better.
Love	Desiring or participating in affection, usually but not necessarily reciprocated.
Compassion	Being moved by another's suffering and wanting to help.

Thus, if we take anger as an example, we could say that a person feels angry when she recognizes that an offense has taken place, either toward her or toward someone she cares about. Therefore, the individual has already made an appraisal of the event that, according to a cognitive perspective, will not only trigger anger but also intrinsically constitute it. Of course, there are other beliefs going on, since the very appraisal of an event as, say, offensive, entails a large set of beliefs that lead the individual to consider what constitutes an offense. Moreover, most of the cognitive approaches also emphasize that in an emotional process the individual also appraises the importance of the event for the pursuit of her goals, her well-being or flourishing. Indeed, a trivial offense would barely entail an emotional reaction, while it would constitute a big issue if the individual considers the event extremely important to the pursuit of her goals. The bigger the importance we attribute to the event, the bigger our emotional reaction gets. This object-directedness of the emotions is, therefore, closely tied to a complex cognitive activity involving the evaluation of an event, not only regarding what has happened and how the individual is considering that event but also regarding the appraisal of the importance that the event has in the individual's life.

However, there has not been much agreement on what this cognitive activity entails when referring to emotions. Even though these theories claim that emotions are cognitive processes, they do not

necessarily claim—as the Stoics did—that they are conscious or deliberative judgments. In effect, if emotions were in fact constituted by judgments, we may ask what kind of judgments would be involved, for it is not intuitively obvious that we are always making a complex judgment—a propositional one—while undergoing an emotion.

Martha Nussbaum claims that emotions always involve thought of an object combined with thought of the object's salience or importance. However, she does not think that these thoughts involve complicated calculations, deliberations, or even reflexive self-awareness, but, rather, only that the individual receives and processes information [Nussbaum 2001, 25]. For Robert Solomon [2006], emotions are engagements with the world, that is to say, emotions strongly depend on evaluations of events that take place in the individual's environment and, therefore, emotions are strategies for dealing with the world, rather than purely something that happens to the individual in a passive fashion.

Solomon at first identified emotions with propositional judgments of what the emotion is about, since the judgments involved in an emotion were not merely causes of the emotion, but the emotion *per se* [Solomon 1984]. Nevertheless, in his later perspective, Solomon did not deny that emotions entail physiological and neurological changes, along with certain feelings, yet he still focused on the intentionality of the emotions as their distinctive character. Solomon considered emotions as a subset of the wider class of feelings, given that emotions, in addition to feelings, entail also evaluations, action tendencies, and engagements with the world; in fact, he took feelings as the entire set of consciousness, whereas he considered emotions as a particular set of it [Solomon 2006, 2007].

Solomon and Lazarus also argued that the judgments that are involved in the emotional process need not be very refined, since, in the case of emotions, judgments can happen in a very vague, unconscious way. Solomon also held that emotions are enormously complex and that, therefore, they cannot be considered discrete entities related to single judgments. Hence, with regard to the appraisals involved in the emotions, he considered that these can happen on many different levels. These range from a very conscious, highly cognitive level, descending to a basic level of kinesthetic judgments or bodily appraisals, which are also considered by Solomon as intelligent responses of the body.

For any cognitive approach to emotions, the role that thoughts play in an emotional process is considered of great importance, not only for an emotion to be triggered or differentiated but also as an essential component of the emotion itself. Yet, behind this lack of agreement regarding which sort of cognitive activity is involved in an emotional process, lies the intuition that emotions are not cold, deliberative mental states, but rather, hot states that have more to do with our physiological reactions, with our feelings, and with our 'animal side,' than with rational judgments. In effect, as Jenefer Robinson says, "I can judge that I am in an awkward situation without being embarrassed: I might be amused or depressed, or simply unmoved and dispassionate about the situation. Similarly, I can judge that I have suffered a loss without being sad, sorrowful, or grieved." [Robinson 2005, 14] In his attempt to differentiate emotions from other non-cognitive states that are usually linked to an emotional experience, Lazarus, for example, took feelings as reflexes, and insisted that they should not be considered emotions:

A number of reactions that have sometimes been considered emotions are best regarded as innate reflexes, including startle, which is akin to the orienting reflex, and curiosity, in that it could be treated as a pre-emotion, along with pleasure, pain, and distaste. These are not themselves emotions, but they may set the stage for an emotion when they are followed by an appraisal or analysis of the significance for personal well-being of what is taking place in the person-environment relationship. Feelings, too, are best regarded as built-in sensorimotor reflexes, though the word is often used as an equivalent to emotion. [Lazarus 1991, 84]

Solomon and Lazarus accepted the idea that emotions are complex entities that combine cognitive, adaptive, feeling, behavior, social, and physiological processes. Nevertheless, for Martha Nussbaum the non-cognitive elements are not necessary conditions for an emotional process. The three possible roles that thoughts may play in the emotional processes are (a) constituent parts, (b) necessary conditions, or (c) sufficient conditions. In effect, she argues in favor of a cognitive approach to emotions that does not merely consider thoughts as a necessary condition in causal terms, but that consider thoughts to be constituents of the emotions themselves. That is to say, thoughts constitute emotions in an internal and not only in an external way. Also, she does not consider non-cognitive elements as constitutive of emotions in the same way, even though she accepts that they usually accompany emotions. Nussbaum considers that "a claim of necessity does not entail a claim of constituent parthood, since the beliefs might be necessary as external causes of something that in its own nature does not contain belief" [Nussbaum 2001, 34]. Similarly, she does not regard bodily changes as constitutive of the emotion, for she argues that even if none of the relevant bodily excitations were present, if a person holds the relevant beliefs toward an object or a situation, one could not deny that she is experiencing an emotional process of, say, grief.

Moreover, Nussbaum denies the universality of the relationship between certain bodily sensations and certain emotions, as well as the plausibility of talking about this kind of universal relationship between phenomenological feelings or affects with certain emotions.

We should certainly grant that all human experiences are embodied, and thus realized in some kind of material process. In that sense, human emotions are all bodily processes. But the question is, are there any bodily states or processes that are constantly correlated with our experiences of emotion, in such a way that we will want to put that particular bodily state into the definition of a given emotion-type? [Nussbaum 2001, 58]

Against the idea that emotions are mental states opposed to the external world, the cognitive approaches held by Solomon, Lazarus, and de Sousa consider that the intentionality of the emotions should not be understood as a relationship between the inner and the external world. By arguing in favor of a non-dualistic perspective, which Lazarus called a 'relational perspective', and Solomon, borrowing from Heidegger, dubbed 'being-in-the-world,' Solomon and Lazarus played down the lack of connection between the emotional mental states and the perception of the bodily perturbations. Anyway, the attempt was to understand emotions as a relationship between the individual and her environment and, thus, to understand the thought that constitutes emotions as intrinsically linked to the body, and thereby as transcending subject-object dualism. [Solomon 2006, Lazarus 1991, 12]. Lazarus strongly argued in favor of a view which is neither exogenic nor endogenic, i.e., a view that considers a continuous negotiation between the inner and the outer forces.

In the 1960s and 1970s, some psychologists began to recognize that the behavioristic, exogenic outlook drew on an epistemology that was unfriendly to the study of emotion. However, a totally endogenic outlook would be equally unfriendly—and surely in error, too—because it would leave out the social and physical environment in the process of emotion generation. [Lazarus 1991, 12]

In the same vein, and in order to analyze the emotional processes, it is worth mentioning the distinction that Lazarus put forth between observable and non-observable variables in the emotional processes, as well as their distinct types. Lazarus considered that there are four classes of observable variables relevant to emotion: (1) Actions, such as attack, facial expressions, or gestures (which can be volitional or not); (2) physiological reactions, such as autonomic nervous system activity and its end-organ effects, or brain activity; (3) what people say about their emotions; and (4) environmental events and contexts, including the social, cultural and physical events under which an emotion occurs. Lazarus considered that none of these molecular phenomena of emotion are emotional *per se*, because all serve other non-emotional

functions. In his classification, there are also five classes of non-observable variables relevant to emotions: (1) Action tendencies, which are non-observables because they refer to private impulses that may or may not be acted out or even recognized; (2) subjective emotional experiences (affects or feelings); (3) person-environment relationships; (4) coping processes; and (5) appraisal processes [Lazarus, 1991, 59]). Although the main emphasis for a cognitive approach such as Lazarus' is, of course, the appraisal process, it is important to remind ourselves that these appraisals always stand in an intricate relationship with the environment, and that this relationship cannot be reduced to an input-output scheme.

Cognitivist theories face several criticisms. The first one is that if we are to consider that it is necessary that emotions entail propositional content, we would deny that animals or little children lacking language are capable of having emotions at all. Furthermore, as I mentioned before, we also hold the intuition that not every emotional episode involves complex reasoning, even if, sometimes, complex reasoning can be involved. In response to this first criticism, Solomon, Lazarus, de Sousa, and Nussbaum argue in favor of an 'emotional intelligence' that does not necessarily entail propositionally expressed thought, but that can include unconscious, pre-linguistic, and even bodily levels of cognitive activity.

Regarding the intentionality of emotions, the next criticism that a cognitivist approach must face is that it seems that not every emotion is directed toward an object or involves beliefs about an object. Anxiety provides a counterexample to this idea. Indeed, anxiety seems to be an emotion that lacks a concrete intentional object and, thus, a concrete belief about that object. Concerning anxiety, Solomon notices that it does not seem to engage with the world, or if it does, it does so in a very vague, uninformed way. As Freud said, anxiety is a fear that has been dissociated from the relevant information. Hence, a cognitivist theorist may answer that anxiety does have an intentional object, albeit a vague or an unconscious one.

The next difficulty that a cognitive approach is urged to explain is the case of phobias. In a phobic episode, an individual may hold the belief that, say, 'that spider is not dangerous at all', and yet, feel a strong fear toward it. That would suggest that the content of the belief is not always consistent with the emotion triggered. But if emotions are to be constituted by beliefs, the fear emotion involved in a phobic episode should change if the thought that constitutes it changes, and that seems not to be the case.

Despite the strength of the counterexample of phobias, the cognitivist theorist may consider them, as Solomon does, merely a fascinating exception [Solomon 2006]. I am inclined to consider that phobias can also be explained by appealing to certain unconscious beliefs. This is plausible given that emotions do not entail only one simple belief, but instead, many beliefs combined to form a grid of thoughts that may not necessarily be conscious or consistent. That, of course, does not prove that phobias lack content or relevant beliefs. It merely points out that the links between the relevant thoughts might be very complex.

Cognitive approaches to emotion connect the appraisal of an event to the flourishing of the individual's goals or general well-being. That seems hard to deny. However, since most of the authors that hold this perspective also consider unconscious cognitive activity and quick bodily reactions as *quick and dirty* cognitive appraisal mechanisms, it might be possible to bond the insights of such a perspective with the results that neurological approaches and evolutionary biology have provided, and leave aside the great separation of passion and reason that has been maintained for many centuries as a common belief.

1.4 DEMOLISHING THE BARRIER BETWEEN NATURE AND NURTURE

Emotions, I argue, are constellation-like, not galaxy-like. Their identity as complex entities is relative to explanatory schemes that rely on social meaning and interpretation.

Naomi Scheman

One of the most important contributions of LeDoux and Damasio is the research that has proven that if body perception is impaired, emotions wane, and *vice versa*. That gives some support to the physiological approach. Furthermore, according to Damasio, the limbic system, which is supposed to be the part of the brain responsible for the emotional reactions, is interconnected with the prefrontal cortex, which is supposed to be responsible for the acquired knowledge the individual has. Nevertheless, the prefrontal cortex is in itself a mechanism that is overlapped on the action pattern governed by the primary limbic system which, in turn, signals the hypothalamus on the peripheral actions that have to be taken as a response to the given stimuli. That suggests that emotions should not be considered either cognitive or physiological, because they involve, at least in this sense, always both aspects. According to Damasio, the prefrontal cortex may involve more conscious, deliberate thoughts about the situations that constitute the emotion, but it always takes the limbic-hypothalamus path in order to generate the reaction that is also a fundamental part of the emotional process. Furthermore, the fewer synapses involved in an appraisal mechanism, the faster and more efficient the reaction is, and the more synapses required to signal the hypothalamus, the slower and less powerful the reaction is. We could say, thus, that the signals that involve fewer synapses can be taken as hard-wired by evolution, while the more complicated routes required by the prefrontal cortex processes, are a product of experiential acquisition. That makes perfect sense, though, since the individual does not have to wait until being conscious about a given stimulus that entails, say, great danger, in order to react with fear and, along with it, to exhibit the relevant fixed action-patterns that would allow her to survive.

To say that emotion appraisals are cognitive but not physiological would imply a separation between the limbic system and the prefrontal cortex that does not exist as such. To set the difference

between the ‘two kinds’ of appraisal mechanisms in terms of consciousness and unconsciousness would deepen the difficulties of an explanation instead of allowing us to understand more. Fortunately, none of the cognitive theorists that we are taking into consideration defend the idea that the relevant thoughts that constitute an emotion must be necessarily conscious. As we have seen, they even concede that the appraisal of the situation can take place at a non-conscious level. However, it is then controversial that they classify reactions such as startles or surprise as merely mechanistic reactions or reflexes, and not as proper emotions. In effect, for a cognitivist theorist, every emotion must entail an appraisal of a situation as relevant to the individual’s flourishing or survival. Since startle, disgust, or surprise don’t seem to be processed in the same way—seemingly an active, voluntarily way—many of the theorists decided not to consider them as proper emotions [Lazarus 1982]. Nevertheless, this might seem to be only a matter of a priori definition, as Griffiths has pointed out:

Another interesting parallel between cognitivists in psychology and propositional attitude theorists in philosophy is a tendency to use a priori arguments for their view. Lazarus is prone to stipulate that cases that don't involve his preferred form of cognition can't count as emotion. [...] Once these definitional disputes have been put to one side the real issue in psychology is the degree to which the information processing responsible for emotional response is sub-served by the same mechanisms as those which lead to longer-term, planned action. Do we react with disgust because we think something is disgusting, or are the processes that lead to this thought (and thus to voluntary action) distinct from the processes which lead to the emotional response? [Griffiths 1997, 26]

Anyway, from a physiological perspective, it still remains to explain many emotions that cannot be explained by the affect programs studied by Ekman. Indeed, while experiencing secondary emotions (or higher cognitive emotions), such as guilt, envy, or jealousy, the individual does not seem to display a stereotypical pattern of physiological effects and, additionally, these emotions seem to be related more with long-term, planned actions, rather than with transient episodes. One possibility is to consider all the different higher cognitive emotions as a combination of basic emotions. Nonetheless, Griffiths is not satisfied with this solution, because he considers that “blending several reflexlike responses does not produce something more cognitively involved.” [Griffiths 1997, 102] And he also takes it that Damasio’s consideration that higher emotions need the limbic system mechanism to express themselves also leads to a difficulty, since higher cognitive activity does not need to trigger affect program responses in order *to be counted* as emotional.

Griffiths acknowledges that Damasio's attempt was to reconcile the higher-cognitive emotions with the basic emotions, also considered mere reactions because of their "thoughtless" and physiological nature. As we have seen, by studying the brain connections between the prefrontal cortex and the limbic system, and claiming that the higher cognitive activity actually needs the limbic system and hypothalamus mechanisms, Damasio seeks to show that the apparent separation between higher cognitions and physiological reactions is not sustainable without any question. Nevertheless, Griffiths' critique of Damasio's and the psychological evolutionism accounts primarily focuses on their misunderstandings of what the terms "universal" and "innate" entail.

First of all, the fact that some reactions are hard-wired at birth does not entail necessarily that they are universal traits, in the sense that every person shall have them as a common species trait. Griffiths notices that evolved traits can be either polymorphic or monomorphic. An example of a polymorphic evolved trait would be eye color. Despite being an innate trait, what color your eyes are is not a common trait for every individual within human species; i.e., it is not universal. In the same vein, Griffiths considers that the fact that emotions are the result of evolution and require innate mechanisms does not allow us to conclude that these traits are also monomorphic. There is no basis to suppose that, and the evolutionary theory actually does not presuppose that such traits must be monomorphic. One may think that if a trait is to be evolved, it may be present *in the same way* in all individuals within a species, but that it is not necessarily the case. And because of this misconception, the differences and variations had to be explained *only* by the acquisition of traits through experience and complex environmental inputs. According to Griffiths, secondary emotions were needlessly expelled from the realm of human nature on the basis that they are not universal.

In the second place, Griffiths argues for a clearer distinction between the different moments of any emotional process, since from any general patterns found in the autonomic nervous system (ANS) activity, we cannot conclude universality in the input side of the process as well. Indeed, finding generalities in certain parts of the emotional physiological process is not enough reason to suppose a generality in the cause of any other part of the process. In this case, his argumentation suggests that even if there are general patterns in the way the physiological emotional processes work in humans, we cannot infer from that that the 'appraisers' are general as well. Therefore, he also discourages us from falling into the fallacy of evolutionary plausibility explanations. In effect, we can always find a *just-so-story* to explain the usefulness

of any given trait, but that would not constitute a proof of evolution, or a proper explanation of the causal situation that made the trait emerge. In any case, what seems to be needed is a theory that can explain the variations in the emotional responses and appraisals, as well as the physiological and evolutionary mechanisms found by neuroscientists.

The debate between the cognitive and physiological approaches has been eroding the boundaries between them, and it has become quite difficult to suggest a perspective that is not situated somewhere inbetween. But this, of course, needs to be clarified. As we have seen, most of the cognitivist theorists have conceded that the cognitive appraisal that constitutes an emotion may be an unconscious one, or even a physiological one. However, it is to be pointed out that it is not very clear what we should understand by “cognitive” in all these cases. The propositional-attitude theorists would say that cognitions depend on a thought with propositional form, but most of the authors that we have been studying go beyond the propositional restrictions. Does cognition entail consciousness, then? Apparently not. On the other hand, the neuroscientific approaches have described the functioning of some parts of the brain that are relevant to emotions, but the supposedly separated brain parts for the higher cognitive emotions and the basic emotions are in fact working together in a very intricate fashion. The prefrontal cortex, responsible for the acquired emotional reactions, is actually working overlapped on the more ancient structures. It does not take the most efficient path to reach the task, though. It works by building over what was already there, but it continues building. How are we to say that evolution is done, that natural changes are over? That would imply that any further variations due to the adaptation of the human species in a changing environment are part of the evolutionary path, or maybe that they are artificial and unnatural. It seems complicated, even ridiculous, but we would have to ask, then, when did the human species' evolution end. Furthermore, if human evolution is to be considered over, then, regarding the emotions, we would have to elucidate where we are going to place the nature-boundary line in the brain processes, in our action patterns, and in our emotional appraisals as well. Because if reflexes such as startle or surprise are not considered emotions since they are not triggered by ‘cognitive appraisals,’ we are allowed to ask, then, what is it to be understood by a cognitive-physiological appraisal? The distinction between a cognitive-physiological appraisal and a pure physiological reaction seems hopelessly a very artificial one, at least from a neuroscientific perspective.

Moreover, the appeal for cognitive unconscious appraisals might be a valid one, but it still leaves a big part of the process unexplained, since it apparently only introduces a black box that delivers some

rational emotional reactions, but which 'rationality' is not present for the individual's awareness. That is to say that it might be the correct answer, for consciousness is definitely not present in most of the brain commands, so to speak, but nevertheless, 'unconsciousness' seems a very vague concept that in this case does not really help us explaining any further. Indeed, the appraisal regulation of our heart beat rate, breathing, homeostatic processes, etc., are processes that are both, controlled by the brain, and unconscious. But, of course, when we are talking about unconscious emotional appraisals, we are rather referring to something different, seemingly, a more complex appraisal process that could include something like thoughts. But the mere indication of their unconscious character does not explain what these cognitive unconscious appraisals are, or how they work. Nonetheless, we should point out that whatever the unconscious cognitive appraisals are, they cannot be reduced only to unaware neurological appraisal processes.

On the other hand, we have to hold a richer perspective of evolution and recognize the essential historicity of evolutionary explanations. The good news is that recent evolutionary perspectives do intend to explain the role of environmental, historical contingency in inheritance, as well as the stochastic factors that may also determine different outcomes, instead of proposing a stiff, closed 'natural state.' This perspective would also allow us to consider some social constructionist proposals within an evolutionary account of emotions.

Broadly speaking, we can say that a social constructionist theory of emotions challenges the idea that emotions depend on universal, physiological, evolutionary, and innate traits. In effect, a social constructionist theory focuses on the variations of emotion elicitation and behavior, and concludes that these variations must be only the result of cultural variations, since the physiological explanations—they presume—would tie us up to exhibit cross-culturally the same emotional triggering, repertoire, and behavioral patterns. And, since the latter is presumably not the case, they conclude that emotional evolutionary heritage must be a flawed explanation.

This notion of evolutionary accounts is not accurate, though. But, in order to understand the important contributions that a social constructionist point of view has to offer, let me recall James Averill's theory. Psychologist Averill departs from a cognitivist point of view, for which the appraisal is a judgment about the intentional object; however, he also considers that the appraisal process is an aspect of an

emotional *syndrome* or role (not only its cause). According to Averill, the appraised object is already dependent on the observer for it is a meaning—a cognitive construction—imposed by him on the environment, and all this is part of a role or syndrome that the individual enacts while undergoing an emotion.

Revenge for wrongdoing is part of what we mean by anger; resentment over the good fortune of another is part of what we mean by envy, and so forth. In order to “discover” the object of an emotion, we therefore need to examine the meaning of the emotional concept. And the meaning of an emotional concept, like that of any concept, is primarily a matter of social convention. [Averill 1980, 311]

Averill considers that emotions are transitory social roles; that is to say that they are socially constituted syndromes. As I have just mentioned, these syndromes include as a fundamental part the appraisals of the situations the individual faces. However, perhaps one of the most interesting features of Averill's account is that he claims that the individual perceives these syndromes as passions, rather than as actions. This is an important difference between a cognitive approach such as Solomon's, on the one hand, and Averill's social constructionism, on the other, and we will recall this difference later on.

According to Averill, the individual enacts an emotional role, so to speak, but that role must be first understood; that is, the individual must understand its internal rules, its requirements, and its general plot. This emphasizes the idea that the cognitive activity the individual makes includes the understanding of certain rules that govern the relationship between the individual and another person or persons. Averill points out the importance of recalling the meaning of such relationships and their salience for understanding any emotional process. Indeed, the individual must be able to view his own behavior from the perspective of others, since the emotion is to be grounded in a certain enacting of a socially prescribed role. Thus, the individual must take into account the expectations of the cultural group she belongs to and respond in a manner that conforms to those expectations. Therefore, the experience of emotion involves an interpretation of the individual's own behavior, so that it follows her understanding of the connective tissue of the different social roles. Averill considers that this is a skill that people acquire through experience simultaneously with ego development, for emotions are related in a very strong way to the *self*. However, he acknowledges that there are differences in individuals' emotional reactivity, which have been typically explained through the concept of 'personality traits.' Averill considers, nevertheless, that these differences are better understood as capacities or abilities to enact an emotional role. The benefit of such a point of

view, Averill thinks, is that it forces us to consider the functional significance of emotions within a social context.

Another point of interest about constructionism is its criticism of the 'basic emotions' notion insofar as the reduced number of basic emotions challenges our very intuitive idea of having a large variety of emotions in our emotional repertoire. From a constructivist point of view, however, there are as many emotions as the societies can shape; i.e., an infinite number. Regarding the physiological dimension of emotions, Averill claims that emotional syndromes include culturally as well as biologically based elements in an 'overlapping' fashion, where any given emotion may be related to more than one biological system, and any given biological system may be related to more than one emotion.

Consider, for example, romantic love (which includes elements of attachment as well as reproductive behavior on the biological level) and hope (which has a little relationship to any biological system). In what sense are these emotions any less fundamental than, say, startle or fear? Of course, one may define a fundamental emotion in terms of a biological system. But then, with few exceptions, the defined emotion would not correspond to any actually existing emotional syndrome. [Averill 1980, 328]

Moreover, through reinforcement and internalization of the social norms, an individual may acquire very compelling response tendencies that she experiences as beyond control, and this might explain why, in the case of emotional roles, the individual's proneness to enact a role is experienced rather in a passive, unconscious fashion, even though it is constituted by a cognitive process. And that is why Averill maintains that in order to understand emotions, one should observe them under the light of a sociocultural analysis: "The emotions are not remnants of previously serviceable habits, as Darwin maintained. Rather, they are presently serviceable, and one of the tasks of theory is to shed light on the functions that emotional syndromes now serve." [Averill 1980, 337]

To illustrate this point, it is remarkable that some cultures seem to have emotions that apparently depend strongly on their own sociocultural determinations. For example, for the Japanese, 'amae' is a gratifying emotion that implies relying too much on someone, as a child can rely on his parents, or to give up in certain circumstances, but which, in turn, is not well perceived by the community if the individual is an adult. The Germans experience what they call "Schadenfreude", which is a sort of happiness about other's misfortune or sorrow. Obviously, if there is no general physiological pattern to recognize higher-

cognitive emotions, it is certainly more difficult to find a general physiological pattern for these culture-specific emotions. [Solomon 2006; Griffiths 1997]

Griffiths claims that even if it were possible to share cross-culturally the same physiological and cognitive conditions for an emotion, it would appear very different, because the other social factors with which the individual interacts would differ as well. But social constructionists, rather than claiming that the same emotion has different effects in different persons or cultures, claim that it is the emotion that changes.

Social constructionism, thus, brings into the center of attention the suggestion that the cultural elements, such as social roles contribute in the construction of a particular emotion. However, it also suggests that the emotional roles are not transparent to the individual that experiences them, so that we cannot fully rely on what she has to say about her own emotions: Neither the individual, nor the society acknowledge what is actually happening, for they represent the emotional behavior as outside the control of the individual and as an inevitable response to the circumstances.

As I have mentioned before, Solomon considered that emotions are rather actions than passions, that there is the possibility for the individual to modify her emotional arousal and behavior, for the very constituent of an emotion is the cognitive appraisal that she makes on a particular circumstance. Griffiths, thus, refuses to consider Solomon's cognitive approach as a social constructionist theory in the same sense as Averill's:

There is a fundamental tension in the work of Solomon and other authors who have come to constructionism from the old propositional attitude theory. These authors have spent their careers denouncing the "cultural myth" that emotions are irrational, involuntary, and natural. They have claimed that when properly understood, emotion terms refer to judgments about the world, which are voluntary and subject to rational and moral standards. These same theorists now want to embrace the view that emotions are created and constituted by cultural myth making! [Griffiths 1997, 148-9]

Anyway, apart from this particular debate between social constructionists and cognitivists regarding emotions, the idea that I want to rescue from their contributions, is that the social environment, its norms, and constrictions, play a very important role in the construction of our emotional life as well. Furthermore, the idea that we also have certain display rules governing when it is rational, correct, or allowed to be, say,

angry, might warn us from overlooking the salience of not only the cognitive content of emotions, but also of their social dimension. Griffiths's suggestion is that the 'psychological phenotypes' are constructed through the interaction of biological and cultural resources, along with some hard-to-classify resources such as the experiences of play. He labels his theory a "developmental systems approach," for any of these resources may mutate in a way that leads to a heritable change in the next generation. He suggests that, indeed, emotional phenotypes may vary cross-culturally due to the incorporation of different extra-genetic resources within the system.

We can conclude from all this that we have to reject the absolute separation between nature and nurture and, therefore, the idea that emotional phenomena should be explained either by biological, evolutionary processes, or by cultural constructions. The lack of absolute cross-cultural universality, or the variations between individuals, should not be *prima facie* an irresolvable problem for an evolutionary explanation of emotions, since (a) there is no strong reason to suppose that evolved features *must* be monomorphic, (b) cultural and individual variations are also included in a developmental system model, and (c) there is no need to suppose that an evolved trait must be already present at birth and cannot need further social interactions to be constructed or sustained.

Emotional phenomena should be grouped together at various levels of generality in a way that reflects patterns of descent. This system of classification will extend from very broad homologies ranging across species to very narrow homologies ranging across human populations. These narrow homologies will reflect recent events of human microevolution, such as changes in "cultural" elements of the developmental system. A nested, genealogical classification of this sort will allow the formulation of whatever evolutionary explanations are available. An evolutionary explanation is one that explains the possession of a trait by certain individuals as a result of its inheritance from a common ancestor and suggests that the form of that trait can be illuminated by considering the historical process that produced it. [Griffiths 1997, 160]

I suggest to follow the developmental system under which Griffiths conceives innateness, for it allows us to understand that emotional evolved traits are heterogeneously constructed, and that therefore, a trait might have an evolutionary explanation and, at the same time, be susceptible of variation.

On the other hand, philosopher Jesse Prinz [2004] has recently suggested another way to understand the interrelation between an evolutionary account of emotions, and a cognitive-appraisal account, and has put forth very accurate criticisms for the existing hybrid theories between the

physiological and the cognitive. Thus, even though Prinz is known for his defense of the James-Lange theory—insofar as he claims that emotions are perceptions of patterned changes in the body—he also concedes that certain appraisal of the situation is needed.

James and Lange had little to say about what emotions represent. Their bodily theory gives the impression that emotions are primarily in the business of telling us how about our blood pressure, muscle tension, and vasculature. This makes little sense of the role that emotions play in decision making and action. We run when we are afraid. Why? It's certainly not because our hearts are racing. Fear makes us run because fear *represents* danger. [Prinz 2004, 13]

The idea that Prinz defends is, though, that the appraisal mechanisms depend on the bodily functioning, and not in cognitive judgments, whereas many researchers consider that these appraisals can only be accounted for within a cognitive approach. Hence, while Prinz accepts that the emotion is the perception of the bodily changes, he points out that the emotion is not *about* the bodily changes, for they represent 'matters of concern.'

In sum, I think emotions are perceptions of bodily changes that represent such things as dangers, losses, and offenses, because they are set up to be set off by such things. I call this the embodied appraisal theory. Emotions are embodied because they are perceptions of bodily changes, and they are appraisals because they represent matters of concern. [Prinz 2004, 14]

Thus, Prinz argues that emotions are intrinsically both, somatic and semantic. However, he does not consider that the best way to construct a 'hybrid theory' is just to concede that some emotions are evolved (namely, the basic emotions), while others are the product of cultural learning (the higher-cognitive ones). He proposes, then, that all the emotions are structurally alike and that they should be regarded in a unified theory. I don't think he is strictly right, although I sympathize with the intention behind his suggestion. The reason for my concern is certainly not that I regard as successful the separation between cognitive and non-cognitive emotions. What I have in mind is, rather, that recent neuroscientific research tends to favor a heterogenic account of emotions; because, among other reasons, there is not a single route for every emotion and its processes within the brain, but, instead, many different routes and mechanisms—and certainly not only two. But before I continue this argumentation, let's take a look at the reasons Prinz gives to support the necessity of a unified theory of emotions.

In the first place, Prinz considers that all emotions are typically accompanied by expressive behavior and bodily responses. Prinz claims that the hypothesis that the higher-cognitive emotions don't have

universally-related bodily patterns is not a conclusive fact, for it lacks enough research, and it could turn out to be false. But among the bodily responses, we can specially notice that all emotions seem to involve overlapping brain structures. This means that emotions are neither easily distinguishable by the brain structures that govern them, nor by the complexity of the cognition involved in the triggering: “Hybrid theories cannot easily explain the fact that our emotion terms cut across highly cognitive and highly noncognitive episodes. Anger can be stirred up by a glare or by a chain of high-level moral reasoning. Fear can be triggered by a sudden loss of support, or by reading the latest election returns. Does this mean we should distinguish two forms of fear and two forms of anger? [...] One and the same emotion can be elicited in numerous ways, both simple and complex.” [Prinz 2004, 8-9] Furthermore, Prinz rightly points out that if we are going to make a distinction between the evolved emotions and the socially constructed ones, we need to decide which are which. But certainly, both, social constructionism and evolutionary theories, are trying to explain the same set of emotions, which proves that it is not clear which emotions are cultural and which of them are biological; and “[i]f the boundary is unclear, the major motive for adopting a hybrid view is lost.” [Prinz 2004, 9]

However, I won’t consider Prinz’s further arguments against the evolutionary theory of emotions, since he is attacking a weak account of evolution, which supposes that the evolved traits must be monomorphic and universally held, that they must be already present (and developed) at birth, or that they cannot be culturally shaped as well. As we have seen, these are not necessary assumptions of a strong evolutionary theory of emotions. On the other hand, I won’t consider Prinz’s arguments against cognitive approaches either. The reason is analogous. While we can say that the cognitive theory came from the ‘propositional attitude’ approach, it is also true that, recently, the cognitive theorists have held a much more compatible perspective which is not married to the use of “cognition” in the sense of propositional judgments.

Nonetheless, I think Prinz is right in arguing that we shouldn’t consider as a model a hybrid theory if it claims that emotions are the perception of physiological changes plus appraisal judgments. Indeed, in that case, the basic emotions would just consist in physiological reactions, while the higher-cognitive emotions would also entail the appraisal as a cognitive component. In this case, the difference between the two kinds of emotions would be a structural one. But, as we have discussed before, there is no strong reason to define which kind of appraisal we are going to consider as cognitive, and which kind as only

physiological. I would say, with J. Robinson, that “[c]ognitively complex emotions are triggered by the same non-cognitive appraisals as ‘primitive’ emotions, but they are succeeded by complex cognitive activity.” [Robinson 2005, 89] Anyway, given the aforementioned discussion, I consider that it is also not accurate to label physiological appraisals simply as ‘non-cognitive.’ The appraisals are embodied, then. But how can embodied appraisals be introduced within a theory?

Since Prinz claims that no judgments are required in the emotional processes, he needs to establish another way to understand the appraisals; i.e., he needs to establish a link between, say, dangers, and the perceived bodily responses. In order to do so, he argues that mental states represent by functional co-variation, not by description. So, a mental state represents danger if (a) it reliably occurs when danger occurs, and (b) it was acquired for that purpose.

Now suppose, with James and Lange, that fear is a perception of a patterned change in the body. If that change reliably arises when we are in danger, and if it was acquired for coping with danger, then the same can be said about our perception of that change. A perception of a patterned bodily response can represent danger in virtue of the fact that it has the function of serving as a danger detector. In other words, emotions are like smoke alarms. A tone in a smoke alarm represents fire because it is set up to be set off by fire. And perceptions of patterned changes in our body represent danger (and loss, and offense, etc.), because they are set up to be set off by danger (and loss, and offense, etc.). [Prinz 2004, 13]

I am not convinced by Prinz’ solution. First of all, he is subscribing to the James-Lange definition of emotions, in which emotions are the perception of the bodily changes and then he is adding the ‘embodied appraisal’ to that. I consider, however, that in order to understand the physiological dimension of the emotional processes, we should distinguish between these two kinds of physiological phenomena: the perception of the bodily responses, on the one hand, and the unawareness character of most of the physiological appraisals or functioning mechanisms, on the other. The unawareness of the physiological appraisals is not well taken into account in Prinz’s definition of emotions, for it focuses attention on the perceived bodily changes. Even though he also suggests that these perceptions can be conscious or unconscious, I take that perception and unconsciousness are incompatible terms, for perception is necessarily related to consciousness. My second concern with Prinz’s theory is that his functionalist account for intentionality requires that these patterned changes in our body were acquired with the purpose of signaling, say, danger; i.e., that they are calibrated with something like ‘elicitation files.’ This is an unprovable condition, though, and furthermore, how are we to know that the bodily patterns are elicited

to serve a specific purpose? Even though, say, in the case of fear we can say that its adaptive function is self-protection, in many other cases we run the risk of suggesting adaptive *just-so stories* that won't prove anything. Moreover, we should keep in mind that evolutionary traits are not teleological, meaning that they are not forward looking.

I agree with Prinz, though, in his complaint about the unclearness of the boundary between the evolved emotions and the socially constructed ones, and I myself find it very artificial. Nevertheless, that does not entail that all the emotions function in the same way, nor that they are all explainable in the same terms. But it is a slippery affair, because a general theory is always more suitable for explanations, while, at the same time, is also more prone to overlook important differences between the *explananda*. Nonetheless, I consider he is right in pointing out that the separation between basic and higher-cognitive emotions cannot just be explained due to a differentiation between the limbic system and the prefrontal cortex activities—as Damasio suggests.

We are not beasts, nor machines. Although, certainly, there are many mechanisms relevant to emotion elicitation, triggering, physiological perception, and coping of which we are not (at least not fully) aware and that are actually operating while we experience certain emotion. However, referring to the physiological dimension of emotions, if we look closer to the way organisms work and, particularly, to the evolved brain, we would see that it is not a closed system, that we are not completely trapped and stocked within the mechanisms of our own brain, of our own body. This “machine” is changing continuously: It mutates and it reasons. While the environment changes, mutations or adaptations take place, modifying the reasoning mechanisms as well. Thus, the answer to this riddle is not going to name a winner, neither between cognitivists and physiologists, nor between social constructionists and naturalists.

1.5 EMOTIONS AS PROCESSES AND THE FEELING OF THE PROCESS

Regardless the point of view from which we are approaching emotions, be it physiological, phenomenological, or cognitive, emotions seem to be dynamic processes. But how are we going to understand these processes? Peter Goldie (among Solomon, Nussbaum, and other philosophers) strongly emphasizes that to make an emotion intelligible we have to understand it within its narrative grid; for indeed, feelings are embedded in an emotion's narrative as part of the individual's life. As we have seen, for many researchers emotions are not discrete entities in the sense that they are not singular, separable episodes of the individual's existence. Rather, emotions are related to a complex narrative grid, which gives sense to the emotion in the context of the individual's life. For example, as Solomon has pointed out, one single emotion as love is not easily characterized as a pleasant sensation. Indeed, when we are in love, we make up stories about how we have met our beloved, we feel fear of losing her or jealousy in certain situations, as well as happiness in others, etc. Moreover, we do not feel all that as unconnected events or discrete emotions; rather, we feel all those emotional episodes within the tissue of our narration of our experience of being in love.

Comparing to geographical upheavals, Martha Nussbaum claims that emotions are 'upheavals of thought,' as focusing in the dynamicity of emotions and the thought processes. Nussbaum claims that cognition is not cool, detached, or static: "Reason here moves, embraces, refuses; it can move rapidly or slowly, it can move directly or with hesitation. [Nussbaum 2001, 45] I agree with her in that thought is rather dynamic and shows the motion characteristics. Although, since the way this might occur is not very clear yet, it might be appropriate to recall Aquinas and his Aristotelian way of understanding motion. Again, Aquinas claimed that, while undergoing an emotion the soul experiences motion. This motion, however, should be understood in terms of qualitative variation, rather than in locomotive or quantitative terms, a distinction that is also useful for Nussbaum's conception of the dynamicity of thought.

Of course, there is a huge difference between Aquinas's and Nussbaum's theories of emotions; namely, that Nussbaum considers that the only definitive trait of emotions is their cognitive character; and even though she tries to diminish the implications of such a claim by softening her concept of cognition

and by conceiving thought as dynamic and not necessarily conscious or propositional, she still puts all the 'emotional weight' on one side of the balance, i.e., the thought, while she neglects the physiological dimension of emotions. Nonetheless, for Aquinas, the animal spirits 'resemble' the soul's movement within the body. There is a locomotive movement of the spirits analogous to the soul's qualitative movement with which Aquinas intends to explain the way emotions are felt in the body. And, even though appealing to the animal or vital spirits' movement to explain why we feel emotions in the body is an inaccurate description in anatomic terms, we can certainly recognize that Aquinas took into consideration the main different elements within the emotional process; namely, the cognition, the physiology, and the feeling of emotion in terms of movement and not of static situations. Also, Aquinas focused on the main problem we keep facing centuries afterward: the relationship between mind and body. Indeed, if emotions are soul's events, how come we experience them in the body? If we are to talk about movement, how are we going to explain the dynamicity of the processes of the thought (or soul) if nothing is actually changing places in real space?

Thus, the ideas we now have to put together are these: There is a phenomenological event happening that corresponds to the emotional experience that is taking place. For Aquinas, this feeling is both, bodily feeling, and 'soul feeling,' so to speak. Moreover, he pondered that these are two aspects of the feeling that are dynamic, and that are not related through any efficient causality. Nussbaum, in turn, considers that the only constitutive element of emotions is thought. In effect, it is irrelevant for her whether there are bodily changes or not, as long as the relevant beliefs or thoughts are held. I strongly contend that she is not right in doing so. Furthermore, while she concedes that thought has irruptions and upheavals, I don't think that the phenomenological level of the experience is able to be captured in the mere 'movements of thought.' For, if we recall Damasio's research on feelings, we will remember that feelings primarily come from a 'readout' of the bodily states; since, otherwise (if feelings only originated within the brain) we would have a limited variety of feeling patterns in our repertoire, and feelings would not be modulated by real-time conditions of the organism at any moment. The consequence would be that the feeling would not be ever-changing as it actually is.

The first conclusion at which we arrive is that, concerning the dynamic character of emotions, we should do justice to its phenomenological, physiological, and its cognitive dimensions. With the intention of doing so, we will now revise the thesis suggested by Jenefer Robinson, since she also proposes that emotions are processes. In effect, she rejects the thesis that emotions are tantamount to judgments, since,

as we have seen, it is always possible to hold the relevant judgments and yet fail to exhibit the related emotion. Hence, Robinson considers that an emotional response necessarily involves a physiological dimension, but she does not reject either that certain appraisal of the situation is also needed. She subscribes to LeDoux's idea that the affective appraisal can happen beneath awareness and in a *quick and dirty* fashion, while a more refined cognitive monitoring of the process can happen afterward. This monitoring includes a possible reappraisal of the situation, but also the control of the behavioral response.

Generalizing from LeDoux's results, then, we can say that in the simplest, bare-bones case of an emotion process, there is (1) an initial *affective* appraisal of the situation that focuses attention on its significance to the organism and causes (2) physiological responses of various sorts—especially ANS activity and changes in the facial musculature—and motor responses, which get the organism dealing with the situation as very broadly appraised by the affective appraisal, and which gives way to (3) a further more discriminating *cognitive* appraisal or monitoring of the situation. In other words, emotion is not a thing or a response or a state or a disposition; it is a process, a sequence of events. An affective appraisal draws attention to something in the environment significant to me or mine and gets my body ready for appropriate action. Then immediately cognitive evaluation kicks in, checks the affective appraisal to see if it is appropriate, modifies autonomic activity, and monitors behavior. More complex cases of emotion in human beings might involve affective responses not to a perception but to a thought or belief, and the cognitive monitoring may be correspondingly sophisticated, but at the core of emotion will always be physiological responses caused by an automatic affective appraisal and followed by cognitive monitoring. [Robinson 2005, 59]

According to Robinson, the *quick and dirty* affective appraisal serves to focus attention on those things that matter to the individual and to appraise or evaluate them very broadly in terms of *how* they matter. But it is important to emphasize that the kind of process that she is talking about is not merely a process in which one concrete aspect comes after another has already finished. Instead, she argues that each aspect of the emotion process has its own temporal trajectory, and that there is continuous feedback from one aspect to the other. For example, the physiological reactions, such as adrenaline secretion, can have long-lasting effects even long after the original appraisal has proven to be false or not important. The feeling also mutates, describing different 'upheavals,' and the cognitive monitoring can appraise and reappraise several times the situation; while the situation may change continuously as well.

For example, physiological changes may help to fix my attention on something important in the environment: the loud sound that startles me makes my eyes blink and checks my breathing, so that I am alert to this sudden new event in my environment and my attention is focused upon it. If I am instinctively (non-cognitively) surprised or startled or enraged by some occurrence, subsequent cognitive appraisals may confirm or disconfirm the occurrence, and will in any case

modify my appraisal of it. ('It's just a firecracker,' or 'Somebody's got a gun!') In an emotional response, the non-cognitive appraisal produces both physiological changes and action tendencies, and both can be modified by subsequent cognitive appraisals and reappraisals. Moreover, actions taken in response to a non-cognitive appraisal, such as freezing in fear or tensing in anger, often alter the situation itself—perhaps the enemy retreats—and so indirectly modify my appraisal of the situation, and thus in turn affect my subsequent behavior. After responding instinctively by freezing or tensing, I may see that the situation is no longer threatening, so I relax. Feelings, too, which I have said little about, may function in conscious human beings to draw attention to one's physiological state or the evaluations one is making, or both. [Robinson 2005, 78]

For Robinson, the emotion process starts with a quick, rough 'affective appraisal,' which causes physiological responses. These physiological responses include action tendencies, ANS activity, and gesture making such as facial and vocal expressions; and everything is also followed by a cognitive monitoring of the behavior and of the situation. Since most of these elements happen without awareness, that explains why we experience emotions in a passive fashion. We now can see that the main difference between Nussbaum's approach and Robinson's is that, despite both of them considering that emotions are dynamic and, in that sense, processes, Robinson understands the process between the different aspects of the emotions (namely, physiological, affective, and cognitive), whereas Nussbaum considers that the dynamicity of emotions happens all within the thought itself. I do not deny that our thoughts are in constant movement, but I don't think we can attribute all the emotional weight to the thought alone.

Psychologists Klaus Scherer and Nico Frijda [2009] have proposed a similar, multi-factored theory of emotions dubbed 'Component Process Model' (CPM), which also focuses on the dynamic unfolding of an emotion. They define emotion as a "bounded episode in the life of an individual that is characterized as an emergent pattern of synchronization between changing states of different subsystems of the organism (the components of the emotion), preparing adaptive action tendencies to relevant events as defined by their behavioral meaning (as determined by recurrent appraisal processes) and thus having a powerful impact on behavior and experience." [Scherer and Coutinho 2013, 122] According to the CPM, the emotion is constituted by these components: (1) Appraisal: Emotions are elicited when a situation is evaluated as something relevant to the organism. This evaluation or appraisal operates with regard to multiple criteria, determining its relevance on the individual's needs, goals, values, and general well-being. The appraisals, though, may be of different sorts, from a very complex high-cognitive process, to an unconscious hard-wired, automatic elicitation. (2) Action readiness: Emotions prepare the organism to deal with important events in its life. That is to say, the appraisal generally has a motivational effect, changing the motivational state that existed before the event occurred. (3) Preparatory tuning of the somato-visceral and somatic

nervous systems: There will be cardiovascular and respiratory changes, as well as motor expressions in face, voice, and body. (4) Precedence bestowing: Emotions establish precedence for the control of future behavior and experience. Now then, there is also contemplated an integration area that, in case of being conscious, would constitute the feeling. This subjective experience integrates and centrally represents all information about the continuous changes of the components.

All of these components—appraisal results, action tendencies, somato-visceral changes, and motor expressions—are centrally represented and constantly fused in a multimodal integration area (with continuous updating as events and appraisals change). / Parts of this centrally integrated representation may then become conscious and subject to assignment to fuzzy emotion categories which may then lead to labelling with emotion words, expressions, or metaphors. [Scherer and Cotinho 2013, 122-3]

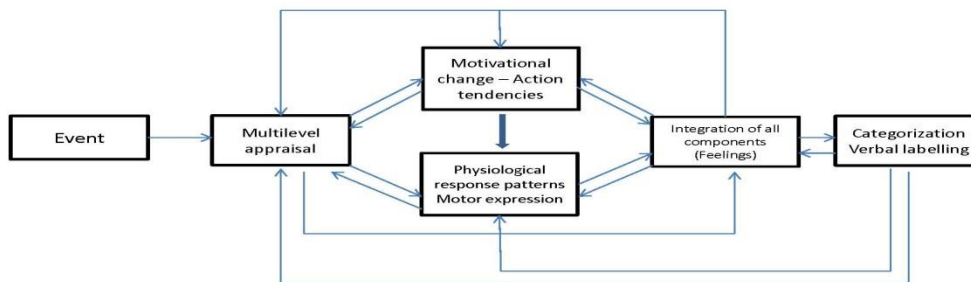


Fig. 2: The dynamic architecture of the Component Process Model. [Scherer and Cotinho 2013, 123 /Reproduced from *Cognition and Emotion*, 23(7), “The dynamic architecture of emotion: evidence for the component process model,” Klaus R. Scherer, pp. 1307-51, 2009, Taylor and Francis]

However, regarding the ‘feeling component,’ Peter Goldie also has something to say. For him, emotions are essentially intentional. But he also thinks that this intentionality has been placed wrongly, for it is normally conceived as a particular *thought* toward an object. Goldie argues, in contrast, that intentionality is not only understandable in terms of belief, and that it is certainly not the best way to approach emotional intentionality. In order to propose his alternative, he starts by criticizing the idea that emotions comprise

components that can be just added on. So that an emotion would be constituted by a relevant thought *plus* a physiological reaction (or vice versa), while sometimes the addition of a feeling is contemplated as well. Goldie considers that this has been a structural mistake. Indeed, since the theories available (cognitive or physiological) have been considering as sufficient condition of emotions either the cognitive element or the physiological one, the feeling seems to be just a non-necessary and problematic component. The problematic character of feeling is, of course, its first-person perspective, but Goldie claims that this first-person perspective cannot be overlooked if we are to analyze emotions, because there is an essential character of the emotion which is related to its belonging to an individual and to her perspective that cannot be summarized on an 'objective' point of view.

Many philosophers who discuss the intentionality of the emotions seek to capture the intentionality of the emotions in terms of beliefs, or beliefs and desires. I think that this is a mistake. It runs the risk of leaving feelings out of emotional experience, for these beliefs and desires could be feelingless, by which I mean they could be characterized, perhaps impersonally, without any reference to what it is like from the point of view or perspective of the person experiencing the emotion—the point of view from which feelings are ineliminable. [Goldie 2000, 19]

The solution that Goldie suggests is to consider that, regarding emotions, intentionality is bounded with the feeling from the very beginning. In effect, Goldie considers two different kinds of feelings: the bodily feelings and what he calls 'feeling towards.' The bodily feeling would be the perception of, say, a pain in the chest, but that is not directed towards any object: "... I am concerned with the *feeling* of bodily changes, not with the bodily changes themselves. That is to say, I am concerned with the phenomenology or the qualitative nature of our personal experience of these changes rather than with the impersonally observable, and quantitatively measurable, changes themselves" [Goldie 2000, 52]. Of course, there are many bodily changes which are not perceived or felt at all. The ones that are felt are those called 'bodily feelings.' However, Goldie considers that some of these bodily feelings can have what he calls 'borrowed intentionality.' In this case, the bodily feeling can come to be about the object of the emotion as in the following example:

[...] when we talk, taking James's own example, of a grieving person feeling a pang in the breastbone, we want to say that the pang is a pang for the one who is being grieved over; although it is undoubtedly a feeling of something bodily, and can be pointed to as being in the chestbone, what makes it a pang of grief, rather than any old pang in the breastbone, is surely that it has

been, as James says, ‘combined in consciousness’ with the object of the emotion.” [Goldie 2000, 55]

In contrast, the ‘feeling towards’ is an intentional feeling toward an object or situation. Goldie claims that not every feeling has to be a *bodily* feeling, or *about* the bodily change. He defines a ‘feeling towards’ as a thought with feeling directed to a particular object, and that is not a psychological phenomenon that can be reduced to an attitude such as belief or desire, given that it has a different content. The content of the feeling towards is, then, constituted by how the object is experienced as being a particular way or as having certain properties or features.

Goldie also considers that to make sense of an emotion involves more than just establishing the beliefs which supposedly ground it, for emotions entail necessarily ‘feeling towards’: You can have the belief that someone is, say, lovable, and yet not feel love at all. Albeit the idea that emotions are intentional is correct in that it is often through the consideration of the thoughts involved in an emotion that we come to acknowledge what emotion it is that we are experiencing, Goldie also suggests that the ‘add-on’ theorist cannot explain the phenomenological intentionality, for the intentionality is considered into a cognitive schema where feelings are already put aside.

Consider doing these things unemotionally: striking a blow; making love; seeking safety. Now consider, and contrast, acting when you act out of emotion: *angrily* striking the blow; making love *passionately*; *fearfully* running away. The phenomenology of such actions—what it is like for the agent—is fundamentally different in character. And an action done with feeling can be distinct in its phenomenology not just for the agent, but also for others involved directly or peripherally in the action; one just has to think what it is like to be made love to with feeling for this to be obvious: it is not like being made love to without feeling, plus feeling. Acting out of emotion is not acting without emotion (explained by feelingless beliefs and desires) plus some added-on ingredient or ingredients. Rather, when an action is done out of an emotion, the whole action, and the whole experience of the action, is fundamentally different. [Goldie 2000, 40]

Goldie argues that the difference he finds between a bodily feeling and a ‘feeling towards’ is the kind of difference between a head or toothache and feelings directed toward objects or situations in the world with which the individual engages. And the difference between a belief and a feeling towards is the phenomenological dimension that is not inferable from the belief itself. I am not completely convinced, however, insofar as the ‘feeling towards’ that Goldie talks about seems to be a feeling that does not come

from a 'readout' of any bodily state; although I am sympathetic with the consideration that the feeling toward is intentional insofar as it represents a bond between the individual and the object of her emotion, and that is not tantamount to other cognitive attitudes as judgments or beliefs. Contrasting with Scherer's proposal, for whom feelings are conscious representations from the central multimodal integration area of the information bestowed by the different components of the emotion, Goldie proposes that there are some feelings that don't depend on bodily readouts. However, it is a different thing to say that the feeling is not 'about' the bodily state, than to say that it does not come from it. Definitely, it is very important to overcome the tendency to separate the mind processes and the body processes, since this separation only brings us back to an untenable dualism, and both of them are so closely intertwined, that they appear indiscernible.

As a general conclusion, though, we shall say that emotions are dynamic, entailing a continuous re-triggering of the different aspects that compose the emotional processes in different directions. These different aspects of emotions can be simultaneous and the relations between them can be much more complex than it was normally thought. Furthermore, while I agree with Goldie in considering the feeling as an ineliminable aspect of the emotion, I do not think that it is a good strategy to separate it from the bodily processes. The reason is not that when referring to the bodily responses the research seems to be more 'objective' insofar it is measurable. Actually, I do not think that such a strategy would be accurate at all. Instead, my concern is that I consider that separating the bodily and the feeling dimensions in two different realms is just going to enclose us again in the mind-body dualism that has been proven not to be useful at all.

In fact, I suggest that this multi-factorial model of emotions actually diminishes the tension on the question about the efficient cause of emotions. Indeed, it does not concede primacy to the physiological aspect, the behavior, the cognition, the *quick and dirty* appraisal, the feeling, nor the ANS activity. Every aspect is expected to take place and to give continuous feedback to the other aspects and, in doing so, to continuously modify the given situation by suggesting a change in appraisal, ANS activity, motor system, cognitions, and feelings. That is to suggest that the hard-wired appraisals and action tendencies actually continuously interact with the 'higher cognitions,' so that the situation may be re-evaluated over and over; the behavior can be monitored, so that it can intend to be controlled, while the feelings inform of a constant readout of the perceived situation, which supposes a connection between the object and the body in its intentionality. Furthermore, it is also to be accentuated that each aspect of the process has its own

temporal trajectory, which also allows us to integrate the narrative tissue of the emotional experience within the schema. Effectively, the feelings and the thoughts should be understood as interconnected dynamic processes as well.

1.6 CONCLUSIONS

I want to start this section by pointing out that *feelings are ineliminable from a theory of emotions*, as Goldie has suggested. Nevertheless, I also consider that feelings cannot ever be regarded as separated from the body itself; that is to say that the “subjective perspective” or phenomenology of the emotion is interconnected with the bodily processes. Otherwise, if we start by separating them by such an impassable gap, we would be unable to unite them afterward. This claim finds some support in Damasio’s research. In effect, he has concluded that feelings come from a readout of the body state, but he also claims that while the bodily changes take place, there is a monitoring of them that is juxtaposed to the thoughts and the mental images that initiated the process. When this monitoring is consciously perceived, it constitutes a feeling: A feeling depends on the juxtaposition of an image of the body proper to an image of something else. *This also concedes a certain intentionality to the feeling itself*. Effectively, the feeling is intrinsically constituted by the image of the object towards which it is directed, the perception of the body state it generates, and the perception of the thought process. Of course, this is compatible with the theory suggested by Prinz, for he argues that the mental state is actually caused by the bodily disruptions. However, he also claims that this mental state, rather than being *about* these bodily disruptions, is about the little pieces of information which the mental state represents. In order to understand emotions, it is important to *avoid any dualism between mind and body*, for no ground is gained with such an approach. The so called ‘cognitive’ and ‘physiological’ processes can only be distinguished in very artificial terms. Regarding the evolutionary theory of emotions in its opposition to the social constructionism, we can conclude that both, *evolved traits and social constructions interact* as well. This is compatible with a strong theory of evolution, which includes mutations as heritable traits. The learning product of experience is also included into a developmental system, which permits us to consider that emotions can have certain hard-wired appraisals and action tendencies, while being also susceptible of change and higher-cognition processes.

On the other hand, *emotions have an evolutionary background*. Nonetheless, albeit the universality in the gesture making across cultures gives plausibility to the thesis of emotions’ evolution, it does not prove it any further. In effect, as we have seen, evolved traits need not necessarily be monomorphic.

Furthermore, universality in the emotional behavior such as gestures does not allow us to infer that the appraisal processes are evolved or universal as well (even though this may be the most plausible explanation). When trying to explain emotion in terms of evolution, it will be important to avoid the just-so-stories that seek to justify the existence of any given trait by finding some adaptationist reason according to which it was useful for the species to acquire that particular trait. In any case, evolution (or at least mutations) continues.

Focusing on the brain functioning, we can say that there is certainly an 'older part' of the brain—the limbic system—which, mostly without awareness of the individual, is responsible for many of the processes that trigger emotions, as well as the action tendencies in the ANS activity and the motor responses, by signaling the hypothalamus. However, mostly accompanied by awareness, the prefrontal cortex also interacts with it by monitoring and regulating the behavior and even re-appraising the situation. It works over the 'orders' that were already sent by the limbic system, though. That means that the effect of the activity of the prefrontal cortex overlaps the limbic system activity. An example outside of the limbic system or the emotions debate will help us here: In order to bend, say, the index finger of the right hand, one would think that such an order is somehow delivered to the finger by the cortex. That is not what happens, though. Instead, the pyramidal nervous system signals all the five fingers to bend, and then the extra-pyramidal system quickly sends another signal to the other four fingers and orders them to ignore the first signal sent by the pyramidal system. This is a totally inefficient mechanism, one would think. But apparently in evolution history, the need to bend all the fingers appeared first, whereas the need to move fingers independently came afterward. So, since the first system that controlled the mechanism of finger bending was already there, what followed was the superimposition of another system on top of the older one, which permits us now to get independent movement of the fingers. Indeed, the extra-pyramidal system was more recently evolved than the pyramidal system: Evolution is a tinkerer that constructs on what is already there. It is now clear that it does not make sense to claim that bending one finger is a cognitive activity, whereas moving five is a physiological reaction; and the same applies for emotions. Which signals are to be counted as cognitive processes and which as merely physiological?

There is no reason to suggest that if we have some evolved traits, that will make us necessarily machines or animals that only react as we are already 'programmed.' Nor does the system blocked from interacting with new experiences or with the social education in the development of emotional behavior in

the individual, and eventually mutate accordingly. Moreover, social constructionism was right in pointing out that we can learn to appraise a situation as, say, an insult, and then to get angry according to certain learned 'roles.' These learned roles, however, can be introduced into a cognitive account as part of the several judgments that constitute the grid of beliefs the individual holds and that make her evaluate a situation as, say, an insult. Furthermore, as we have seen, in order to highlight the relevance of these socially-constructed roles or judgments, we do not need to deny the existence of certain hard-wired appraisals and action tendencies. These judgments do not need to be conscious, though, for most of the processes happen below the 'line of awareness.' In effect, *there is a vast realm of unconscious processes underlying emotional episodes* that don't only include mechanistic processes, but also more sophisticated judgments. Nevertheless, *some of these emotional processes can become conscious and, to a certain extent, regulated.* Hence, while we can focus on the passive character of certain emotional processes, we can also acknowledge that the process may continue with a conscious reappraisal of the situation, of the emotion itself, and of the emotional behavior.

Emotions are dynamic because they are temporal processes that entail other processes and that do not necessarily end with the hard-wired appraisal and action tendencies. The situation may be re-appraised, the behavior monitored and, to some extent, controlled. Moreover, these diverse aspects give constant feedback to each other, which, in turn, will produce changes in the evaluation, action tendencies, behavior, and coping. And, as it has been said, everything is constantly integrated by the feeling. Indeed, not only emotions, but *feelings are also dynamic.* Nothing remains static, as Scherer's *multi-factorial theory of emotions* proposes. We are now in a better position to acknowledge that the saying 'emotions entail motion' is not merely a metaphor. Apparently, Aquinas was right in noticing that, regarding emotions, there is a locomotion that somehow corresponds to the soul's qualitative motion. Even though the problem with his explanation was the 'somehow,' we can now see that the feeling is not separated from the bodily sensations, even though they are not necessarily about them. But in order to suggest that feelings can be intentional, we do not need to stipulate that feelings can be independent from the body.

2. MUSICAL EXPRESSIVENESS



Corporal exploration: *Ausencia 2*

(monotype, acrylic, and ink on paper)

Ruth M. Pamatz

2. MUSICAL EXPRESSIVENESS

2.1 EMOTION THEORIES FOR A MUSICAL EXPRESSIVENESS ACCOUNT (TAKEAWAYS)

We should now draw some conclusions from the preceding chapter. First, I want to insist once again on the difference between emotions and feelings, since the fact that these terms are usually used interchangeably within the debate of emotions in their relationship with music might blur one of the main theses that I want to defend in this dissertation, namely, that musical expressiveness is not circumscribed to emotions, but that it is also extended to the realm of feelings. I take 'emotions' to be complex processes that include various other processes as intentionality, appraisals, action tendencies, physiological changes, monitoring, and feelings. I take 'feelings,' instead, to be phenomenological readouts of bodily and/or cognitive states of the individual. In an emotional process, the feeling is the phenomenological level of it; i.e., what it feels like to have certain emotion. It should be clear now that feelings are elements of emotions, but that not everything an individual feels (e.g., a pain in the foot) is necessarily part of an emotional process.

As we have seen, the discussion on what the emotions are is a vast one, but lately there has been a more general agreement in saying that emotions are processes that entail several elements: (a) an interaction between the individual and her environment, including the individual's thoughts and body; (b) an appraisal of an event or situation. In the so-called basic or primary emotions, the appraisal of the situation is supposed to belong to one of the "core relational themes" described by Lazarus and De Sousa (e.g. threats, losses, etc.) that might represent vital significance for the individual in order to survive. These appraisals might be of different levels of complexity, from an unconscious 'physiological' appraisal, to a very refined and conscious one; (c) the appraisal triggers other physiological reactions such as action tendencies, ANS activity, particular behaviours, and gesture making; (d) feelings, which are first person's experience, are her conscious readouts of the bodily state juxtaposed with the 'cognitive' images of what that state is about; (e) a continuous monitoring of the situation which may entail a re-evaluation of the situation that might

change the first appraisal and 'correct' the behaviour exhibited. It is also to be emphasized that this is not necessarily an ordered list, since all these elements interact with each other and are processes in themselves as well.

2.1.1 EMOTION EVOLUTIONARY TRAITS THAT ARE OBSERVABLE IN MUSIC

Once I have described the elements of an emotional process and the debates aforementioned about the nature of emotions, I will proceed by highlighting the features that are most relevant for an attempt to understand musical expressiveness. Let's begin by recalling that there is evidence that proves that some features of the emotions are innate, evolved, and show certain cross-cultural universality¹. The emotional features that were first studied are facial gestures and general emotional behaviour. As we have seen, Ekman's research showed that the facial expression related to particular emotions is a much more universal feature than was first thought. Thus, we recognize that someone is angry, afraid, or sad, due to the emotional behaviour she exhibits and particularly to the gestures she makes, and in this way (at least) we access someone else's emotional states. Although all this research might not seem related to music at first glance, Klaus Scherer, Marcel Zentner, among others, have followed this path to study the emotional gestures that seem to be more relevant to the musical case; particularly, those related to sound and movement.

For example, Klaus Scherer and his collaborators have run several experiments in order to study peoples' ability to infer emotion from vocal cues. In one of these experiments conducted in nine countries in Europe, the United States, and Asia on vocal emotion portrayals of anger, sadness, fear, joy, and neutral voice², they concluded that all four emotions were recognized cross-culturally with a much higher accuracy rate than expected by chance. However, it is interesting to notice that the recognition rates for anger, sadness, and fear (from 74% to 88%), were significantly higher than the recognition rate for joy (48%). Also, the recognition accuracy was lower in Indonesia (the one non-Western culture included in this experiment)

¹ We have already discussed that if a feature is universal, that does not necessarily imply that the feature is evolved. Also, even if a feature is evolved, it might not be necessarily universal, or completely developed at birth.

² Klaus Scherer, Rainer Banse, and Herald Wallbot 2001.

than in the Western countries, even though the sentences used were meaningless. In spite of the fact that they concluded that culture and language may influence the decoding process, the study suggests that there are similar inference rules from vocal expressions across cultures. Thus, it can be said that their results show parallel findings for voice expressions as those presented by Ekman on the universal recognition of facial expressions; i.e., we can cross-culturally ‘understand’ certain vocal gestures and accurately associate them with their related emotions [Scherer, et.al. 2001].

However, we should also note that not every emotion is as easily recognizable from the same kind of gestures. Joy is a difficult emotion to recognize from the voice, whereas it is the best recognized from facial expressions; anger is much better recognizable from vocal gestures, rather than from facial ones.¹ Another more recent study made by Disa A. Sauter, Frank Eisner, Paul Ekman, and Sophie K. Scott [2010] clearly shows that negative emotions are the best recognized cross-culturally from vocal utterances, whereas the positive ones need more culture-specific signals to be communicated. Nevertheless, in this study—where English and Himba people participated—it is suggested that the basic emotions (i.e., anger, fear, disgust, happiness, sadness, and surprise) are reliably identifiable from vocalizations produced by individuals from both groups without it being necessary that the producer and the listener share language or culture.

Nonetheless, one of the most important recent research projects on the relationship between music and the emotions from the realms of psychology changed the methodology from a deductive-experimental one to an inductive one.² That is, instead of trying to find the basic emotions in the musical emotional experiences and then try to show their universality, they came up with another different list of ‘affect states’³—including moods and emotions—based on what the people that participated in their experiments reported as the feelings they experienced while listening to music. The list of ‘affects’ began with a compilation of 515 terms, which were rated by the listeners in order of frequency until getting a

¹Scherer, Klaus R., Rainer Banse, Harald G. Wallbott, and Thomas Goldbeck. 1991. "Vocal Cues in Emotion Encoding and Decoding," *Motivation and Emotion* 15/2: 123-148.

²This project was hosted by the University of Geneva, Switzerland.

³I am not calling them ‘emotions’ because there is debate on whether the affects suggested fit the definition of emotions (which are much more complex), or whether they should be better characterized as ‘moods’ or simply as ‘feelings.’ However, the terminology Zentner utilizes does not differentiate finely between the affective phenomena.

model of nine primary emotion clusters and three higher-order factors.¹ In effect, this is an empirically derived classification of music-evoked ‘affects.’ In the left side of the table below [Zentner 2010, from Zentner, Grandjean, and Scherer 2008] we can see a refined list of feeling terms, in the middle their groupings into nine clusters based on a statistical data-reduction method (CFA), and in the right side the higher order groupings of the clusters. This model is called GEMS, named after the Geneva Emotional Music Scale, and its creators claim that it provides a much better approximation to what listeners feel in response to music than the basic-emotions model.

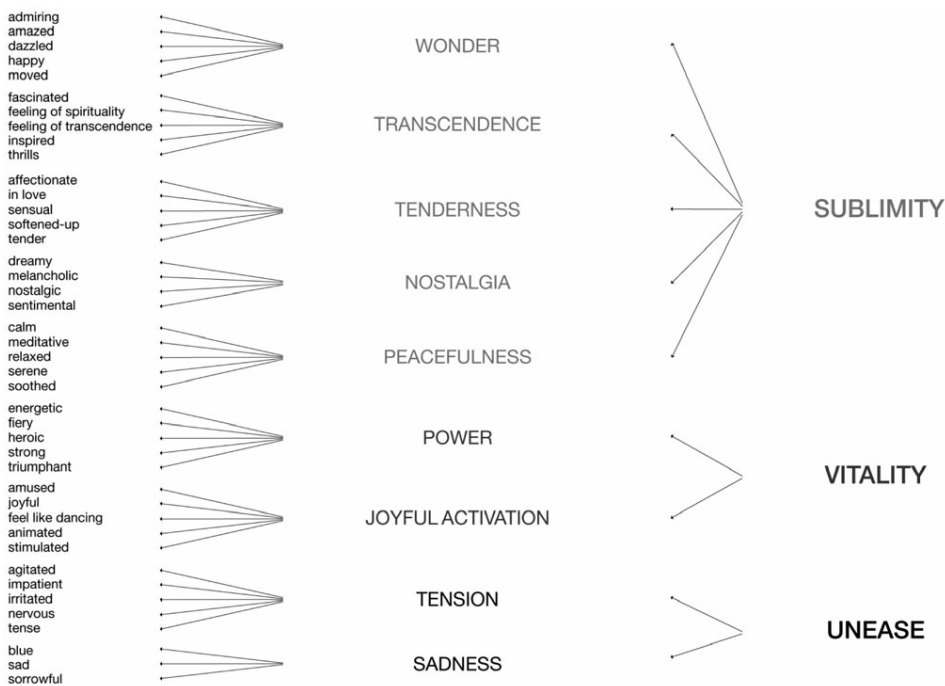


Fig. 1: The GEMS Model [Zentner 2010, 106]

¹ (1) Zentner and co-workers took as a point of departure the fact that all affect states, including emotions, moods and feelings, have become encoded in the human language and began compiling 515 affect terms. (2) Listeners were asked to rate the frequency with which they felt any of the affect states in response to their music of choice, which included classical, jazz, rock/pop, Latin American and techno genres. They only retained those labels rated as being at least occasionally aroused or expressed by any of the genres. Some of the labels that did not meet this criterion were eliminated (e.g., guilt, shame, jealousy, disgust, contempt, and embarrassment). This process gave rise to 66 terms relating to emotions which are presumably commonly felt in response to music. (3) Afterward, they measured the relative frequency of occurrence of these emotive states during a music festival that takes place in Geneva every June, the *Fete de la Musique*. (4) Zentner found that the most frequently reported emotions included ‘feeling moved’, ‘nostalgic’, ‘relaxed’, ‘enchanted’ and ‘tender’. ‘Admiring’ was the most frequently added term in the free-response spaces of their study. [Zentner 2010, 104]

As Jenefer Robinson and Robert Hatten notice [2012], it is quite interesting the way the list of the GEMS emotions goes beyond the basic emotions list, by including ‘emotions’ such as tenderness, nostalgia, and power. Indeed, Zentner also points out that everyday emotions differ from musically aroused ones, not only in frequency (e.g., they report that nostalgia occurs more frequently in response to music than it does in ordinary life), but also in quality (e.g., they call “joyful activation” the musical-aroused emotion that would be equivalent to joy, because they claim it is more related to rhythm and bodily movement than to a positive appraisal such as one’s promotion¹). Another important difference from the basic-emotions theory is that anger, fear, and disgust are considered atypical in the GEMS model, and even more so shame, guilt, embarrassment, and jealousy. Of course, it remains to debate whether the GEMS emotions are actually emotions or rather another kind of affections. We will come back to this issue later on. However, even though the experiments undertaken suggest much more than what I have already exposed here, the phenomenon that this approach is trying to understand is mainly that of the musical arousal of emotions, and we will say more about this when we go into more depth on the arousal theory of musical expressiveness.

At the moment, I just want to emphasize that (1) as it has been shown for facial expressions, some acoustic features are also universally recognizable as signalling some of the basic emotions; (2) the list of ‘emotions’ relevant for musical expressiveness might be somehow different, as the GEMS project suggests. Indeed, if we follow the physiologist account, at least to a certain extent, we are able to see that the ‘emotional gestures’ exhibited by music (physiological, albeit of the acoustic sort) may constitute an answer to at least a path of musical expressiveness insofar as we are not only able to recognize those gestures as emotion displays, but also that they might trigger a kind of physiological, quick and dirty appraisal that unleashes an emotional process. This relationship with acoustic emotional gestures has proven to be universal for some basic emotions, even though they are also modified and refined by every particular culture.

¹ “Thus, insofar as music-evoked joy is coupled with rhythmic entrainment from a very early age, it is distinct from joy in everyday life. There is no beat in the head of the department’s announcement of a professional promotion: the joy felt in response to this extramusical event lacks the movement or entrainment component which is an integral part of musically induced joy. We therefore chose to call this class of feelings ‘joyful activation’ rather than ‘joy’ pure and simple. / Joyful activation is compounded with ‘power’ to form a dimension at the next level, one we call ‘vitality’. We prefer ‘power’ to a term such as ‘energy’ so as to capture the flavour of ‘large’, ‘heroic’ or ‘triumphant’. When a passage is performed *maestoso*, it makes us feel *maestoso*: large and powerful.” [Zentner 2010, 7/108]

2.1.2 EMOTIONS ARE INTENTIONAL AND INVOLVE A COGNITIVE COMPONENT

Now then, continuing with the conclusions of the emotion theories that are relevant to understand musical expressiveness, I want to pay attention to the cognitive theories. What this account teaches us is primarily that emotions are not irrational, nor a-rational, for they respond to evaluations the individual makes about a certain situation that seems important to her. Emotions are thus, intentional. Furthermore, in order to emphasize the cognitive aspect of our emotions, we can recall that we also self-monitor our emotional behaviour, so that we are able to modify our demeanour and re-evaluate our first appraisals. However, even though we can say that the appraisal might also be an unconscious, physiological one, this conclusion presents a puzzle for the musical case, since in music there is no apparent intentional object or situation we are evaluating whatsoever.

The lack of intentionality is apparent and relevant in the three different kinds of approaches to the musical expressiveness analysis; namely, regarding the emotional expression, the emotional arousal, and the expressive qualities of music. First, regarding the expression of the artist, supposing that she is engaged in an emotional process, it is not clear that her emotional-intentional object is the music itself, for indeed, her emotion's intentional object is more likely to be something external to the music and that has more to do with her private life. Second, regarding the arousal of emotions in the listener, the music is not likely to be the intentional object of the listener's response either. We are not sad about the music when it moves us to sadness, for example. What is the intentional object we are evaluating and emotionally reacting to in musical experiences? In the musical case, it does not seem to be any intentional object relevant to any emotional reaction as described in the preceding chapter. At least, we can see that it does not work in the same way as regular emotional processes do, in which we are angry because we have been insulted or happy because something good happened to us. It does not seem to respond to the appraisals related to any core relational theme either (e.g., we are not really threatened, nor do we believe it or make-believe it). For instance, if we say that a certain tune makes us sad because it reminds us about a sad event that happened to us, we would not be allowed to say that the music itself is our intentional object. In effect, we will have an intentional object, which is the sad event that happened to us, but the tune would only be an associated event to it, not the intentional object itself. That kind of association is absolutely understandable, and happens very often indeed, but it does not constitute an answer to what it means for *music* to be expressive of emotions.

And third, regarding music itself, it is more than puzzling to trace in it the intentionality of the emotions that it supposedly expresses (at least in pure music cases¹). If this emotional expression were to be the case, it would be necessary to suggest a theory in which music somehow represented the emotion², but it is not obvious how this representation can embrace the intentional object as well. However, we will discuss this case in much more detail during the rest of this Chapter.

As mentioned at the beginning of this dissertation, the major argument against musical expressiveness that Hanslick put forth was the lack of intentionality in the musical case and that seems to be a necessary condition for any emotion to exist. And so, I want to keep this argument in mind over the next few pages in order to see whether we are able to propose a solution to it. Thus, even though we do not need to stay with extreme cognitivism in its dismissal of the physiological constituents of emotions, we are still facing the challenge that the lack of intentionality presents.

In any case, the issue about the lack of intentionality seems to be a double-edged sword, for it can work against musical expressiveness of course, but also as a counterexample to cognitive approaches of emotions³. As outlined before, cognitive theories of emotions face several counterexamples, such as phobias, moods, and anxiety. Most of them can be answered by claiming that the object toward which such emotions are directed can be general objects—such as ‘the world’ or ‘life’—and not necessarily particular ones. Also, it can be argued that the beliefs involved might not be conscious or might belong to different levels of complexity and awareness. However, it can simply be argued that whenever a so-called emotion lacks an intentional object or a relevant belief, it should not be considered an emotion at all.

Furthermore, our emotional reactions to fictions seem to constitute another counterexample to cognitive approaches of emotions, where we might get saddened by a situation that we are certain didn’t happen at all. As a response to these cases (the so-called ‘fiction paradox’), Kendall Walton [1990] has famously suggested that these emotions occur within a context of make-believe games. We can understand

¹ I will discuss the concept of ‘pure’ or ‘absolute’ music in the Section 2.2.3 of this Chapter. At the moment, with the term ‘pure music’ I am referring to music without lyrics or theatrical representation. In general, it is the kind of music that is not intending to represent any extra-musical content, as opposed to programmatic music.

² Only sentient beings can have emotions; therefore, the expressiveness of music has to be explained in an indirect way, for music itself is not a sentient being. To attribute emotions to music would be to commit the pathetic fallacy.

³ See Davies 1983, 2013. Davies suggests that the listeners’ affective responses to music might constitute a counterexample to cognitive approaches of emotions when these responses are of the mirroring kind, what he labels “emotional contagion.” I will analyse this case in Chapter 3.2.

that make-believe games actually operate within programmatic music, and thus that these make-beliefs explain our emotional responses to, say, the suicide of Madame Butterfly in Puccini's opera. However, the make-believe scenario does not help us to understand pure music's expressiveness. In effect, when referring to music without lyrics or theatrical representative performance of any sort, it is not clear at all that our emotional arousal is directed to any object. Thus, referring to the difficulties that a cognitive theory of emotions pose to a notion of musical expressiveness, Martha Nussbaum considers that the deflationary argument can be summarized as follows:

1. Music does not embody (or cause) linguistically formulable cognitive attitudes.
2. Linguistically formulable cognitive attitudes are necessary constituents of emotions.
3. Music cannot embody (or cause) emotions.

Then, she goes on to describe three different positions that may be adopted as a response to the former argument:

To put things very simply, Position A accepts premises 1 and 2, and therefore accepts the conclusion. Positions B and C begin from a denial of the conclusion, which they take to be self-evidently false, and therefore a reduction of the argument. Position B gets rid of premise 2, taking up a noncognitive view of emotion to explain how music can in fact contain emotions. Position C gets rid of premise 1, discovering in music a language-like structure out of which propositions can be formed; it is therefore able to retain a propositional-cognitive view of emotions while denying the conclusion. [Nussbaum 2001, 255-6]

However, I do not consider that a cognitive theory of emotions necessarily claims that emotions must be constituted by linguistically formulable cognitive attitudes (premise 1). Probably, the step that is tricky is the one that is taken for granted from the beginning; i.e., that a cognitive theory of emotions has to be set forth in linguistics. That is not necessarily the case, as we have shown when we analysed the cognitive theories of emotions. But anyway, the problem for musical expressiveness still stands in terms of intentionality, so that the argument could be modified as follows:

1. In music there is no intentional object toward which musical emotions could be directed.
2. Intentional objects are necessary constituents of emotions.
3. Music cannot embody (or cause) emotions.

The relevance of the cognitive approaches to the case of musical expressiveness, though, is that it forces us to face the core of the dilemma: How can music be expressive of emotions if it lacks an intentional object toward which our emotional reactions could be directed? Or then, are we prepared to admit that musical emotions are not of the same kind as the rest of the emotions? Are they not emotions after all? Do we all

just suffer a general bias when referring to our musical experiences as emotional? Or simply should we say that not all the emotions are object-directed and that those related to music belong to the sort of emotions that aren't?

2.1.3 WHAT IS 'NATURAL' AND WHAT IS CULTURE- OR HISTORY-DEPENDENT IN MUSICAL AFFECTIVE REACTIONS?

Now then, with respect to the debate on whether emotions are a product of biological dispositions or the result of multiple social learned interactions, we should now remember that there is not a strict separation between nature and nurture, i.e., there is not a clear boundary that differentiates the cognitive elements as opposed to the natural ones. There is no way to stipulate a priori that the emotional reactions are all determined and hard-wired at birth or, conversely, that all of them are learned. We now can say without hesitation that cultural and biological elements closely interact in the emotional processes. Likewise, physiological and cognitive elements both play important roles in our emotional processes and none of them can be dismissed.

Applying this to the case of musical expressiveness, it follows that we should not be afraid of considering a melding of both, natural and culturally-dependent elements in what comes to explain music's relationship with emotions. Indeed, we will see that many of the musical elements we will be talking about have been associated with emotions through cultural learning and, therefore, that they are culture-dependent. But we can also find other elements that might trigger a hard-wired emotional reaction and that have shown a certain universality (as referred to above with the experiments that Zentner and Scherer designed), such as sounds that resemble shouts or moans.

This interaction between 'biological' and 'cultural' elements might seem obvious at the moment, but it is interesting and surprising how it gets confusing while digging deeper in the debates about musical expressiveness. I will refer to a couple of examples that so show: the case of the supposed primacy of the first harmonics, and the debate over the 'innateness' of consonances and dissonances. Heinrich Schenker,

one of the most important theorists of music of the 20th Century, argued in favour of the consideration that our (Western) tonal system is the result of the application of the first division of the “natural” overtones¹. Let us follow his arguments at the moment, although I will criticize them later on:

It is true that in finding the tonal system the artist was not left by Nature as helpless as in discovering the motif. However, also in this respect, it would be erroneous to imagine Nature’s help to be as manifest and unambiguous as that afforded by her to the other arts. Nature’s help to music consisted of nothing but a hint, a counsel forever mute, whose perception and interpretation were fraught with the gravest difficulties. [...] This hint, then, was dropped by Nature in the form of the so-called “over-tone series.” This much-discussed phenomenon, which constitutes Nature’s only source for music to draw upon, is much more familiar to the instinct of the artist than to his consciousness. The artist’s practical action thus has a much deeper foundation than his theoretical understanding of it. [Schenker 1954, 20-1]

According to Schenker though, the reason why our tonal system has a very tight relationship with the *fifth* is because it is the most powerful pitch interval, since (apart from the octave) it corresponds to the first harmonic generated in the overtone series.

The first consequence to be drawn from our new approach is that the fifth, *g*, is more powerful than the third, *e*, as the former, resulting from the third division, precedes the latter, which results from the fifth division. It is not due to chance, therefore, but in accordance with Nature’s

¹ Just to explain a bit further this phenomenon, when a note is played the main note heard is the fundamental (the note itself), but there is also present a series of other ordered pitches above it called “overtones” or “harmonics” that are generated due to the complexity of the original wave. This is the sequence of overtones beginning from C:



Where 1:2 = octave; 2:3 = fifth; 3:4 = fourth; 4:5 = major third; 5:6 = minor third; 6:7 and 7:8 = two progressively diminishing intervals leading from the minor third to the next following interval, the major second; 8:9 = large major second; 9:10 = small major second; from 10:11 to 14:15 = five intervals, all smaller than 9:10, each one smaller than the preceding one, forming a transition to the next interval, the minor second; 15:16 = minor second, etc. [From Schenker 1954, 22]

Also, it should be noted that “harmonics” and “overtones” are not equivalent terms really. “Overtones” are simply frequencies higher than the fundamental frequency of a sound. The fundamental and the overtones together are called partials. Now then, an overtone can be a harmonic or an inharmonic partial. “Harmonics,” are partials whose frequencies are integer multiples of the fundamental (including the fundamental which is 1 times itself), whereas an “inharmonic” partial is a non-integer multiple of a fundamental frequency.

prescription, if the artist always has felt, and still feels, the perfect fifth to be more potent than the third. The fifth enjoys among the overtones, the right of primogeniture, so to speak. It constitutes for the artist a unit by which to measure what he hears. The fifth is, to use another metaphor, the yardstick of the composer. [Schenker 1954, 26]

So, it might well look as if we had a natural inclination to hear the *fifth* as a consonance because, apart from the *octave*, it is the first overtone generated. This apparently has a physical explanation, also for the *octave*, that has exactly double frequency of waves in comparison with the fundamental note. However, this is not a conclusive fact at all. In effect, the Western tempered system had adjusted the pitches of the (harmonic) intervals to make them, say, even, whereas the “natural” harmonic series’ pitch would be somewhat lower in comparison; i.e., the intervals of the natural harmonic series are smaller than the ones that the Western tempered system utilizes. That is to say that what Schenker called the “natural” power of the *fifth* is not that natural after all. Indeed, the *fifth* itself has been modified and now Westerners may react to it in a more automatic way due to (historical) internalization. This is a more sensible way to explain the situation, even though it also closes the possibility of explaining the straight forwardness of the *fifth* in terms of the natural overtones series.

This debate is parallel with the one that discusses whether consonances and dissonances are also products of Nature or merely the results of conventions. While Schenker considers that they are product of Nature, other musicians conversely, think that the consonances and dissonances that constitute our tonal system are merely the result of cultural constructions¹. They claim we hear a combination of sounds as consonant or dissonant only due to our habit². The debate would just stop there though, but the underlying importance of these claims (for us, at least) is that consonances and dissonances are relevant to establishing what combinations of sounds are pleasurable and what aren’t. Furthermore, this link between consonances-dissonances on the one hand and pleasure-displeasure on the other might have a say in the construction of musical expressiveness. Indeed, ‘consonance’ and ‘dissonance’ are commonly defined as pleasant and unpleasant combinations of pitches respectively. According to a “naturalist” such as Schenker,

¹ Paul Hindemith [1937, 85], Arnold Schoenberg [1975, 282], and Igor Stravinsky [1942, 34] have stated such opinions.

² For example, Arnold Schoenberg said in his *Opinion or Insight?* (1926): “‘The emancipation of the dissonance.’ That is to say, it came to be placed on an equal footing with the sounds regarded as consonances (in my *Harmonielehre* the explanation of this lies in the insight that consonance and dissonance differ not as opposites do, but only in point of degree... consonances are sounds closer to the fundamental, dissonances those farther away... their comprehensibility is graduated accordingly, since the nearer ones are easier to comprehend than those farther off).” [Schoenberg 1975]

these relations are not contingent at all¹. But what has to be underlined is that, despite the fact that it is possible that we have some hard-wired dispositions to hear certain combinations of sounds as consonant and, therefore, pleasant, that does not diminish the fact that these ‘rules’ are also shaped through the history of our musical tradition (and we shouldn’t be afraid of accepting that).

In any case, the heard consonances have a relationship with pleasant generated sensations, while dissonances are related to unpleasant ones. Indeed, the very concept of what consonances and dissonances are entails a combination between a phenomenological perception of a combination of sounds and the acoustical phenomenon. Of course, there have been attempts to elude the necessity of including the phenomenological dimension of the concepts of consonances and dissonances by referring only to the physical properties of the sounds. But, albeit this aim has been relatively successful in the neuroscientific approaches to acoustics and music, we can reply by saying that in such a case we might be talking about something else, since those very concepts mainly refer to the perception of the intervals’ sounds.² So, for example, *The Grove Music Dictionary* defines “consonance” as:

Acoustically, the sympathetic vibration of sound waves of different frequencies related as the ratios of small whole numbers; psychologically, a harmonious sounding together of two or more notes, that is with an ‘absence of roughness’, ‘relief of tonal tension’ or the like. Dissonance is then the antonym to consonance with corresponding criteria of ‘roughness’ or ‘tonal tension’, and the consonance–dissonance dimension admits of degrees of relative consonance based on either criterion. The ‘roughness’ criterion, however, implies a psychoacoustic judgment, whereas the notion of ‘relief of tonal tension’ depends upon a familiarity with the ‘language’ of Western

¹ Schenker’s claim has more recently found some resonance in a study made by Marcel Zentner and Jerome Kagan [1998], in which they exposed four months old babies to ‘consonant’ and ‘dissonant’ versions of a melody. It turned out that the babies could not only distinguish between them, but also exhibited behaviours that suggested their preference for consonances and their aversion for dissonances. The results reported by Zentner and Kagan were that infants are biologically prepared to treat consonance as perceptually more pleasing than dissonance. Nevertheless, the experiment methodology should be criticized because it presupposes what is consonant and what is dissonant, and because it is not clear that four months old babies were not exposed to cultural influence while they were in the womb.

² Aiming to relate the physical and the perceptual dimensions of dissonances, Herman Helmholtz [1954] explained that the sensation of “beating or roughness” that produce the quality of dissonance, is caused when two tones that are close but not identical in frequency are sounded together. As music psychologist Carol Krumhansl explains, the phenomenological dimension of the perception of roughness in dissonant intervals was intended to be reduced to measurable terms: “[Helmholz:] When complex tones with nonsimple frequency ratios are sounded simultaneously, a number of their harmonics will be in the range of frequency differences for which roughness occurs. [...] Plomp & Levelt 1965, Kameoka & Kuriyagawa 1969, and Hutchinson & Knopoff 1978, have replaced Helmholtz’s notion of beating or roughness with a more general concept of interference between component frequencies within what is known as the critical bandwidth (the frequency region over which sounds interact in producing sensations of loudness).” [Krumhansl 1990, 53]

tonal harmony. There is a further psychological use of the term to denote aesthetic preferences, the criterion generally used being ‘pleasantness’ or ‘unpleasantness’.

Dissonances are also associated with tension, whereas consonances with rest and release. That is why Carol Krumhansl [1990] has insisted on the fact that the very ideas of what is consonant or dissonant may vary if the sounds are played in isolation or in a musical context, and then, that they may also vary according to the style of music played, and depending on whether the sounds are played simultaneously or successively. It is not clear, however, whether people generated the tonal systems based on what they perceived consonant or dissonant, or rather that we hear consonances and dissonances only within a particular musical system, style, and within the particular context in which the intervals are sounded. Anyway, with regard to the relationships between dissonances with tension and consonances with release, people had generated different ‘arrangement systems’ that give different roles to the notes within a particular set of tones. Depending on these relationships also, there have been generated tonal systems that function as ‘gravitational systems’ with the centre in a particular note that will work as the fundamental tone of the organization. With respect to the fundamental note, then, the other notes can be considered consonances or dissonances and, therefore, generate an organized system.

Nevertheless, these considerations cannot by any means be universalized. Indeed, one cannot overlook the fact that some intervals were considered dissonances in a particular period of time, whereas they were consonances in another one. Examples of these are the *third* and the *fourth*, of course, since they were considered dissonances in the first Polyphony stages, while considered quite consonant within the subsequent Western major-minor tonal system. For example, a third would be considered consonant in any 19th Century aria, while constituting a dissonance in the context of a Magister Leoninus’s Organum Duplum. Furthermore, it is also interesting that not every culture shares the same tonal systems, or the subdivision of the octave, even though the perfect consonances (the *octave* and the *fifth*) are apparently universally maintained¹. For of course, the typicality of the perfect consonances across cultures has not implied the same tonal systems, or the consideration of the other intervals as consonances or dissonances.

¹ Krumhansl has made further research on the perception of consonances and dissonances cross-culturally, and supports the idea that the octave and the fifth are the only two intervals that might be considered consonances in a more cross-cultural basis: “Intervals considered consonant tend to predominate not only in Western music, but also in other musical cultures. For example, the octave is present in essentially all musical cultures—the only known exception being certain groups of Australian aborigines studied by C.J. Ellis [1965]. The interval of a fifth plays an especially important role in tonal-harmonic music and in Indian classical music, and also appears in Eastern pentatonic scales.” [Krumhansl 1990, 51]

However, the discussion about whether or not Western tonal systems have a natural origin has sometimes proven to be useless insofar as it claims that the construction of any tonal system is either natural or culturally constructed, but not both. It seems clear to me that both elements interact in this respect, and regarding the possible application of these considerations to a musical expressiveness context, this interaction would also be consistent with the conclusions we arrived at by the end of the past chapter, i.e., that our emotional experiences have innate elements, but that they are also nested in culturally-shaped rules and scripts. Therefore, we can suggest that some musical elements are emotionally experienced in a particular way because of evolved, hard-wired reactions but that, at the same time, social interactions and history also shape our perception of them. Indeed, since it is impossible to suggest that the perfect consonances (or any other property of the sounds) legitimate one tonal system over another, it is necessary to consider the multiple historical determinations that gave rise to the different tonal systems in every particular case, and for our particular inquiry, it would also be necessary to trace their associations with emotional factors. Since this would be a titanic job that exceeds the scopes of this dissertation, I will have to get along with the Western musical system perspective in most of the cases and examples.

2.1.4 EMOTIONS AND MUSIC ARE TEMPORAL PROCESSES

The idea that emotions are processes also gives us an insight into understanding music's relationship with emotions, since it won't be useful to take either emotions or music as if they were static. In effect, the most important thing that emotions and music have in common is that they are dynamic and cannot be reduced to a snapshot of a single static moment if one wants to understand them. As soon as one gets rid of their dynamic character, any comprehension of both phenomena vanishes as well. According to Martha Nussbaum's cognitive approach to emotions (and music), emotions are 'upheavals of thought', and she argues that thought—which composes emotions—shows the characteristics of motion. In the chapter she dedicates to show how a theory such as hers can explain the relationship between music and emotions,

Nussbaum borrows from the analysis of literature the idea that there is an implied author¹, who is neither the real-life author, nor the narrator, but the “voice or presence or sense of life that animates the work taken as a whole” [Nussbaum 2001, 252]. The idea that she will follow, then, is that just as in literature analysis there is the notion of an implied author, in music there is a notion of the ‘implied listener.’ She considers that music invites the listener to occupy the “point of view of the music.” “But the implied listener is also the real listener when the listener listens well, following the beckonings of the form with sufficient education and attunement” [Nussbaum 2001, 253]. The idea, then, is that there is a close link between the musical form that she claims ‘crystallizes’ the emotion (say, a burning pain) and the implied listener who is the one that experiences the emotion. As far as I understand her position, this crystallization is somehow mysterious (although she is not really bothered about this fact), but it is necessary in order to claim that the emotion the implied listener feels has something to do with the music after all. Moreover, one can attribute to the implied listener the cognitive attitudes that are necessary for emotions to happen (at least, according to a cognitive theory of emotions). Furthermore, the implied listener puts this ‘crystallization’ into movement again. Nussbaum claims that what is necessary to give an accurate account of musical expressiveness is to preserve “the cognitive and symbolic complexity of musical experience, while refusing to treat the music as a mere means to a cognition that is extramusical in nature.” [Nussbaum 2001, 265]

Furthermore, Nussbaum considers that even though a musical work cannot represent or contain concrete emotions (as some person’s particular sorrow), “its emotional content itself may be highly specific, and certainly in no way vague or vacuous.” The work captures, say, not simply a pain or a kind of sorrow, but a very specific one: *that* pain, the one crystallized in Vinteuil’s phrase, for example. Yet, the difficulty is that this step cannot just be assumed.

As discussed in the preceding Chapter, the cognitive approach of emotions put forth a counterargument against the physiological approach that claimed that the thought entailed in an emotional process (along with its particular intentional object) is what makes an emotion a specific one, so that it is impossible to determine an emotion only by its physiological features. Thus, it makes no sense to say that a person is feeling angry, if she doesn’t consider that an offense has taken place. Furthermore, to make such

¹ I will be analyzing a very similar account under the label “Persona Theory” in a subsequent section of this same Chapter. Also, I will be revisiting it in the second section of Chapter 3. A Persona Theory has been defended by Edward T. Cone, Jenefer Robinson, and Jerrold Levinson, among others.

a consideration the person has to hold a particular intentional object, so that there are no ‘general offenses,’ but rather, that she gets angry about a particular situation she evaluates as an offense.

That is the main distinction between moods and emotions according to many of the cognitivist researchers. Indeed, it is generally accepted that moods hold ‘general objects’ and that they may be very general. Thus, one can be ‘in a sad mood’ without having a particular reason (or at least not a conscious one). But if we say—as Nussbaum does—that music can hold general intentional objects, how does it manage to be very emotion-specific at the same time? Do we need, perhaps, to appeal to the definiteness of every single feeling? If so, how does this feeling ‘crystallize’ in a musical work? This is the step that Nussbaum takes for granted and that I think is the main riddle of musical expressiveness. Indeed, we don’t really want a set of rules, catalogues, or techniques of musical figures as musical crystallized emotions, but to leave it to the ‘mystery of art’ does not help either.

In a similar fashion as Nussbaum’s implied listener, Jenefer Robinson suggests that there is a ‘persona’ that is imagined by the listener, but also contained in the music, and that is, nevertheless, distinguishable from the listener herself. This persona, she argues, is the one that undergoes the emotions set forth by the temporal process that music implies, and the one that makes it possible to attribute to the music complex emotions. “A fictional or virtual agent whose emotions are expressed in the music, and that [...] can be experienced as expressing more *complex* emotions, such as hopefulness or resignation, as well as *blends* of emotion, and emotions that *develop and change* over time. A complex piece of music may have a composed expressive trajectory or musical “plot,” which dramatizes a psychological journey by a persona.” [Robinson and Hatten 2012, 71]

The ‘persona theory’ (which we will review in proper detail later on) has the advantage of bounding the static, architectonic features of composed music with the temporal experience of its performance and its listening. Moreover, it enables us to understand the emotions as intentional states, since the listener may feel sympathy or empathy to the situation she imagines the persona undergoes. Robinson considers that this persona has a close tie with the music itself, and that in this way there are emotions that are aesthetically warranted by the work. Nevertheless, a huge problem for this theory is, again, that this bond is not so easily demonstrated. In the first place, it is not true that we always imagine a persona while hearing

music, so that this fact could not explain why we *usually* experience music as emotionally expressive.¹ In the second place, the limits to the imagination of the listener are not clearly stated, for everything can be just an effect of the listener's inventiveness and it does not seem clear why Robinson argues that these emotions are aesthetically justified by the music itself.

However, the general idea we can take away from Nussbaum's and Robinson's accounts is that, just as emotions are processes that are in continuous movement, that develop, change, and that can blend or conflict with one another, so too musical works can also be understood as processes with the same characteristics. Indeed, the argument seems to suggest that music is like psychological states in its developmental form, and that these psychological states can be attributed to the music through the persona that, they argue, is implied in the music itself.

What remains to be discussed in this section is the possibility to consider feelings, as in the hydraulic metaphor models, in their relationship with music. It is precisely between Robinson's and Nussbaum's account that the discussion about feelings shows its relevance for our own inquiry. Since Nussbaum does not consider that the bodily reactions and disturbances are constituent parts of an emotional process, the process that she describes as emotional confines all the movements—all the upheavals—to the thought itself; i.e., all the disturbances and changes of an emotional process happen within the thought (and in her account the 'warmth' and 'urgency' that characterize emotions is due to the evaluation the individual makes about the relevance for her well-being).

In Robinson's view, in contrast, emotions are processes insofar as they entail different elements and events. In effect, according to her, an emotional process begins with an appraisal of a situation that is followed by physiological reactions, this process may become conscious and get re-appraised and interact with complex thoughts and beliefs. Moreover, every single element of an emotional process—she says—is also a temporal one: emotions are processes that entail processes. However, when it comes to explaining music as a dynamic process in its relationship with emotions, Robinson's proposal is more linked to Nussbaum's rather than to her own account of emotions. In effect, by arguing that the listener imagines a persona that undergoes the musical emotional process, she does not really seem to understand the emotional process as she has described it in her account of emotions; i.e., with the appraisal element, the

¹ Robinson argues that the only thing required is to suggest that this would be a richer way to listen to music and not necessarily the only one.

physiological reactions, ANS activity, thoughts and beliefs, feelings, and the coping and re-appraising elements. Instead, she circumscribes her account of musical expressiveness to a phenomenological level (that the listener adjudicates to the imagined persona) and that her own theory does not really consider.

That is why I think it is very important to consider the feelings as part of an explanation of musical expressiveness. Indeed, feelings constitute a key concept in what it takes to explain the relationship between motion and emotion that may later allow us to establish the connection between music and emotion. As Aquinas did, we can suggest that there is a relationship between the perception of the bodily motions and the 'inner motion of the soul' in an emotional process. We shall recall that Aquinas considered that there is a qualitative kind of motion that corresponds to the movement of the soul (and that we can ascribe either to the thought or to a phenomenological level of the experience), for he considered that this motion of the soul corresponds to the bodily motions of the vital and animal spirits. This idea might sound a little bit odd nowadays, but in terms of the descriptions of the bodily sensations we feel while experiencing particular emotions, it seems to be more than hot air. Moreover, the idea of the animal spirits has had a large influence in the history of music. Let me, then, take a brief look at some of the historical periods that I consider turning points in Western music and its relationship with emotions.

2.2 A BRIEF HISTORICAL ENQUIRY

My aim in this section is not only to show certain subjects of the historical periods that are relevant to the Western understanding of music. As well, I want to exhibit a weak point that the philosophy of music tends to repeat, and that has had important consequences for philosophical considerations concerning the relationship between music and emotions; that is, the assumption that music should be understood and studied apart from any additional 'extra-musical' content or, in other words, that music should be studied in its 'pure' form. Indeed, my claim is that music has been associated from antiquity (although my guess is that this was the case from the very beginning—it is certainly impossible to trace what was the case in prehistory) with all sorts of information and practices, such as rituals. Moreover, the constitution of the scales (i.e., the notes available or usable within a composition) and their utilization has been molded and constantly associated with emotions, moods, representations, cultural usages, and the like.

As it has been concluded in the past section that conventions are important in the association between some musical elements and determinate emotions or other affective states, at least a minimal research on the history of those conventions is required. Nevertheless, it is far beyond this research's scope to offer a complete historical overview of the musical practices in the Western tradition and, of course, it would be even more unachievable to offer a historical view of musical practices worldwide. But still, I am convinced that the operating conventions are essential for an account that aims to explain the relationship between music and the affective states, and also, that those operating conventions have a history. However, since the scope one can cover in such an attempt is very limited, I will have to get along with just some examples that I consider have explanatory power to make the point I am trying to claim.

Indeed, there have been some periods in the history of music that favored a formalist approach to music, while others took its 'extra-musical' content as its very essence. My point is that in this tricky debate, one should not take sides from the beginning. I will try to show that the investiture of 'pure music' as the pinnacle of all musical practices, along with the claim that it is actually 'pure,' is rather naïve. I consider that the history of music is of central importance in order to understand why we take certain features as expressive of emotions, and that the way we approach music is also inserted in a particular social role which

shapes—at least to a certain degree—our musical experiences. However, I will only briefly talk about some periods that I consider of particular determining power: The ancient Greek musical theory; Renaissance and Baroque periods: Petrarchism, Seconda Prattica, the foundations of the Opera, and rhetorical music; and the Romanticism as opposed Formalism during the 17-19th Centuries.

2.2.1 ANCIENT GREEK MUSIC

As I said, the harmoniai are like dominating intervals or surrounding notes, and these are like the movements and affections of the soul.

Quintilianus, *On Music*, II-14

It is commonly considered that Western musical culture has its basis in the Greek civilization. Albeit that claim might be accurate, its extent for the purposes we aim at in this section should be drawn a bit more carefully. Even though there is debate on whether Greece is geographically Western or not, its culture (in this case its musical legacy) is considered as such insofar as its influence was enormous during the Roman empire, made its way through the Middle Ages, and was re-discovered, re-interpreted, and re-incorporated in the Renaissance. But, of course, not every ancient Greek text on music followed the same course. And so, while I am not aiming to deny the importance of a deep enquiry into Greek music theory and practices, I will focus only on those texts that had significant influence on subsequent Western traditions (although they also had marked influence on Byzantine and Arabic musical writings). For, indeed, the point that I am trying to make is that some musical practices and theoretical claims created strong conventional bonds between certain musical forms and the emotions, which have shaped not only compositional practices, but also the way we emotionally react to them. Certainly, as Thomas Mathiesen notices¹, the significance of the Greek musical traditions goes beyond the genuine evidence of how exactly ancient Greek music was, since it also resides in the later writers' use and understanding of the texts.

Firstly, concerning the activities in which musical practices were present, we should notice that music pervaded all sorts of the ancient Greeks' activities, from sacred hymns, feasts, assemblies, wars, and funerals, to the most trivial manifestations, such as sailing songs, or children tunes. [*On Music*, II-4-57/58]

¹ Thomas Mathiesen is nowadays one of the most renowned researchers on Greek music. [See Mathiesen 2002 and 1999].

But talking about the theoretical treatments of music, Mathiesen distinguishes between three basic traditions of ancient Greek music theory: The Pythagorean, the Harmonicist, and the Aristoxenian traditions.

The Pythagorean tradition was mainly focused in number theory and the relationship between music and the cosmos. Moreover, this tradition was also committed to Platonism, so that it did not try to explain music through its vernacular practices in an inductive way, since it considered that actual musical manifestations were necessarily imperfect in comparison with the perfection of mathematics from which music was taken to be derived and that reflected the harmony of the cosmos. We know about the Pythagorean tradition firstly through the *Division of the Canon* (sometimes but erroneously attributed to Euclid—ca. 4th and 3rd centuries BCE) and Plato's *Republic*, the *Laws*, and *Timaeus*. Later, the tradition continued through Claudius Ptolemy (90-168 CE) and with the Neo-Platonists, through Porphyrius and Aristides Quintilianus (ca. 3rd and 4th centuries CE).

Plato was very influenced by Pythagoras's ideas concerning music so, for example, in *Timaeus* (34b-37c), Plato presents a detailed model for the creation of the universe embodying characteristic Pythagorean ratios, which produce a musical scale.¹ However, many of the ratios mentioned by Plato

¹ The ratios that Plato mentions in this section are those which compose the *tetractys* of the Pythagoreans:

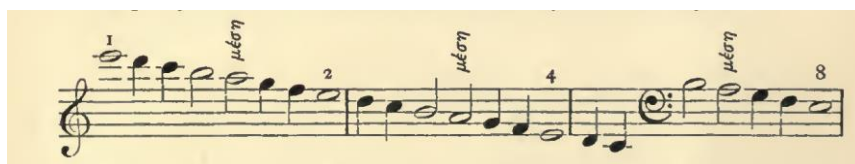
1
2 3
4 9
8 27

The sum of the first six numbers (1,2,3,4,8,9) equals the last, 27. The *tetractys* was considered special for many reasons, but in the case of music, because these numbers also compose the musical scale in terms of the proportions of the distances between the sounded intervals. Since the pitch of a musical note depends upon the rapidity with which a sounding body vibrates, we can express the intervals through the ratios or proportions of those frequencies to each other. These proportions were visible through the length of the strings required to make such and such sounds' intervals. Thus, the octave is expressed by the ratio 1:2, since to produce this interval it is required a string half the length as the original one. In the same fashion, the fifth will be expressed by 2:3; the fourth by 3:4; a whole tone by 8:9, a major sixth by 16:27; and the ratio 243:256 will express an interval that is almost a semitone. Now, the scale Plato is describing is presumably a scale from top to bottom. So, taking the Pythagorean means and following the directions of Plato in this section of the *Timaeus* to fill up the intervals, we shall have the next series (consider the small figures the ratio between each term and its successor):

appear in the *Division of the Canon* as well, which applies Pythagorean mathematics to derive musical notions of consonance and dissonance¹, along with other notions of Greek musical theory, such as the enharmonic tetrachord, the Immutable System, and the movable and the static notes. Interestingly enough, the Pythagoreans also identified and measured smaller intervals than the semitone, which were treated as ‘different sizes of semitones’ (the *limma* (256:243); the *apotome* (2,187:2,048), and other small subdivisions, such as 18:17). The appropriate size of the ‘semitone’ became a subject of controversy between the Pythagoreans and the Aristoxenians, since the latter considered that the Pythagorean theory of music was too far distanced from any possible musical practice (because the smaller the semitone is, the more difficult it is to produce it in perfect pitch).²

8:9	8:9	$\frac{243}{81}$	8:9	8:9	8:9	$\frac{243}{81}$	
1	$\frac{9}{8}$	$\frac{81}{64}$	$\frac{4}{3}$	$\frac{3}{2}$	$\frac{27}{16}$	$\frac{243}{128}$	2
8:9	8:9	$\frac{243}{81}$	8:9	8:9	8:9	$\frac{243}{81}$	
2	$\frac{9}{4}$	$\frac{81}{32}$	$\frac{8}{3}$	3	$\frac{27}{8}$	$\frac{243}{64}$	4
8:9	8:9	$\frac{243}{81}$	8:9	8:9	8:9	$\frac{243}{81}$	
4	$\frac{9}{2}$	$\frac{81}{16}$	$\frac{16}{3}$	6	$\frac{27}{4}$	$\frac{243}{32}$	8

Giving these intervals their musical value, we get the following scale :



The original notes of the tetractys are marked as semibreves, the means as minims, and the insertions of the ‘epogdoá’ (9/8) and ‘leimma’ (16/15) as crotchets. [*Timaeus*, 34b-37c, see specially the notes by Archer-Hind, from whom I have borrowed the images].

¹ As I said, it is debatable whether the consonances and dissonances can in fact be derived from physical facts or by mere mathematics, for those notions are also dependent on many other factors such as the operating social conventions, or the musical system or song a particular interval is to be found in, and of course, there is a phenomenological aspect of the very concept of consonances and dissonances that is not eliminable. Nevertheless, it was a very common idea, not only among the Greeks, but also throughout the Middle Ages, that consonances and dissonances were given by Nature. Furthermore, there is pan-cultural agreement to regard the octave and the fifth as consonances.

² On this subject Quintilianus writes: “There are various divisions of the ditone: first, into twenty-four twelfth parts; second, into dieses or eight fourth parts of a tone; third, into six third parts; and fourth, into four semitones, that is, eight dieses. In this way the ancients, too, constructed their scales, marking out each string in dieses. Now the smallest interval of the voice was called diesis because this is the point of the dissolution of the voice; the first interval by

However, in Plato's *Republic* the main interest seems to be the identification of the musical modes and rhythms that can have a positive or negative effect on human character due to certain resemblance or *mimesis* music presumably has to the latter (but that is not further explained). Plato talked about the diverse options a musician has to create melodies, and suggested constraining them only to the modes and rhythmic patterns that could imitate a manly behavior and that could generate the proper emotions and behaviors in the young. Following that reasoning, the Lydian and the Mixolydian modes were rejected from the republic because they were considered 'wailing modes,' inappropriate to forge a courageous character in the citizens. Furthermore, since the Ionian was taken as 'slack,' it was better dismissed, for it was considered more suitable for drunkenness, softness, and idleness, 'which are more proper for symposia than for guardians.' For the warriors' music, the only suitable modes were the Dorian and the Phrygian [*Republic*, III, 399 a-c].

Just leave that mode which would appropriately *imitate* the sounds and accents of a man who is courageous in warlike deeds and every violent work, and who in failure or when going to face wounds or death or falling into some other disaster, in the face of all these things stands up firmly and patiently against chance. And, again, leave another mode for a man who performs a peaceful deed, one that is not violent but voluntary [...]. These two modes—a violent one and a voluntary one, which will produce the finest imitation of the sounds of unfortunate and fortunate, moderate and courageous men—leave these. [*Republic*, III, 399 b-c]

In considering these modes, however, it is important to remember that the way the Middle Ages theorists interpreted the Greek scales, led them to misidentify them, so that the Gregorian modes, albeit sharing the names, do not refer to the same modes the Greeks were theorizing about. In any case, the intrinsic idea was that moderation, courage, liberality, etc. have all certain 'forms' that are imitated by certain musical patterns, be they rhythmic, harmonic, or melodic; also, that music that has a certain character's form would influence people so that they experienced emotions like it and, therefore, would also influence their ethos and character in accordance. [*Republic*, 402b]

On the other hand, the Harmonicists tried to bring together the Pythagorean mathematical principles and the musical practices. However, the Harmonicists are primarily known through Aristoxenus, who made a negative assessment of their theory, because he considered that they were still trying to

magnitude stretching the voice was called the tone; and the half of the tone—or what is loosely about equal to a tone, for they do not say that the tone is cut into equal parts as if this can truly be done equally—was called the semitone.” (*On Music*, I-7)

illustrate ideal mathematical pitches, rather than any genuine musical scale. Indeed, for Aristoxenus, music was more about continuity, logic, and 'synthesis,' than about mathematical points in musical space. From an Aristoxenian perspective, the Harmonicists should have developed an inductive musical scheme, rather than employing a reductive process of both Pythagorean mathematics and musical practices.

The Aristoxenian tradition is known through the fragmentary *Harmonic Elements* by Aristoxenus, and also by other later treatises by Bacchius, Ptolemy, and Quintilianus. Nevertheless, the later tradition based on Aristoxenus's ideas didn't share some of his philosophical interests, so that his theory came to be simplified. Roughly, we can sum up Aristoxenus's approach to music as follows: He considered a set of seven categories relevant to music: genera, intervals, notes, scales, tonoi, modulation, and melic composition. These categories were themselves framed by two additional categories: hearing and intellect on the one hand, and comprehension on the other.

For Aristoxenus a voice is articulate sound, a pitch is a position of the voice, and a note is a production of sound at a single relative ordered position within a musical composition, a *melos*. However, even though these distinctions between voice, pitch, and note are not as subtle in the later Aristoxenians, it is important to recall the emphasis Aristoxenus put on the consideration of the musical context in order to identify any element.

And so, with respect to the intervals, Aristoxenus considered that in order to be musical, the intervals should be arranged in a certain way; that is, that their utilization should follow what he calls 'synthesis,' i.e., the coherent musical arrangement of the sounds. The consonant intervals in his theory are the fourth, the fifth, the octave, the twelfth, and the double octave. He also distinguished between three genera of tetrachords: the enharmonic (also known as harmonia), the chromatic (also known as color), and the diatonic. The outer notes of a tetrachord were 'immovable' (with fixed positions), while the middle ones were 'movable' (varying the intervals), which created different *intonations*. And, accordingly, he emphasizes that the character of the genera is not perceivable within a static scale, but only within a dynamic progression of intervals that also changes if it is in an ascending or descending movement.

For Aristoxenus, the scales should always follow the nature of *melos*, of course. By combinations of tetrachords larger scales were formed, according to certain rules that also stipulate their possible

progressions and modulations. The seven octave species of scales have an obvious relationship to the *tonoi*, and are named after Greek ethnic names.¹

Although the section in which Aristoxenus wrote about *tonoi* and *harmoniai* has not survived, we can say that he associated the *tonoi* not only with the scales, but most importantly, also with positions of the voice. There are thirteen *tonoi* attributed to Aristoxenus, although Quintilianus noticed that the ‘younger theorists’ had incorporated two additional ones. Ptolemy, however, had a different and simplified schema of *tonoi*, which was based on the seven octave scale species that we have just mentioned. For their part, we can say that when Plato and Aristotle referred to the *harmoniai* as having an impact on human character, they were taking the notion ‘harmonia’ as a cluster of various musical elements, which included the type of scale, the range and the register of the voice, the characteristic rhythmic patterns, and the particular textual subjects associated. [Mathiesen 2002, 127]

The scalar modulation was based on the number of potential *mesai* within a scale that enable the possibility to shift from one *tonos* to another. With respect to the melic composition, Quintilianus underlined the importance of choosing the proper scale, position of the voice, genera, rhythm, and certainly the arrangement of notes. He also recognized three types of musical gestures or usages of the notes: sequence, succession, and repetition (and Cleonides added a fourth, prolongation), which would indicate the ethos of the composition. ‘Sequence’ was understood as a note followed by another, so that the melody appeared as moving upwards or downwards. ‘Succession’ was related to what in the modern musical theory is labelled as a ‘progression.’ i.e., a sequence of a pattern moving by parallel intervals. The main issue of musical repetition and prolongation was deciding which notes should be used more often than others, since, as we shall recall, the use of the particular notes designated a particular ethos.

¹ b-b’ (hypatehypaton-paramese): Mixolydian
c’-c’’ (parhypatehypaton-trite diezeugmenon): Lydian
d’-d’’ (lichanoshypaton-paranetediezeugmenon): Phrygian
e’-e’’ (hypate meson-netediezeugmenon): Dorian
f’-f’’ (parhypate meson-trite hyperbolaion): Hypolydian
g’-g’’ (lichanos meson-paranetehyperbolaion): Hypophrygian
a’-a’’ (messe-netehyperbolaion): Common, Locrian, and Hypodorian

Of them, Aristoxenus identified three types: Diastolic or elevating, Systaltic or depressing, and Hesychastic or soothing. The Diastolic ethos was supposed to express magnificence and heroism, characteristics that made this mode suitable for tragedies; the Systaltic was associated with depression, discouragement, and mourning, and also with lamentations and eroticism; and the Hesychastic ethos conveyed peacefulness, suitable for hymns.¹

In the *Poetics* and the *Politics*, Aristotle also maintained that music is a mode of imitation or representation (*mimesis*). Music, he claimed, can imitate character, emotions, and actions through its rhythm and ‘harmony.’ By this imitation, music is capable of influencing the character and the soul; and that this is so, Aristotle said, is proved by experience. But how does this happen? “Besides, when men hear imitations, even unaccompanied by melody and rhythm, *their feelings move in sympathy*. [...] Rhythm and melody supply imitations of anger and gentleness, and also of courage and temperance and of virtues and vices in general, which hardly fall short of the actual affections, as we know from our own experience, *for in listening to such strains our souls undergo a change*.” [Pol. 1340b] So, for Aristotle, the way music influences the soul seemed to be a matter of sympathy, a kind of resonance that our souls undergo while following the sounds’ strains.

¹ Here is the table of the Greek ethos classification associated to pitches made by Claude Palisca [Palisca 2013, 104].

Vocal region	Modes	Ethos	Genres	Emotions
Deep (hypatoide) [b-a]	Hypophrygian, Hypolydian, Hypodorian	Diastolic	Poetry	Majestic, peaceful, tranquil, virile
Middle (mesoide) [f'-c']	Dorian, Phrygian, Lydian	Hesychastic	Hymns, paens, eulogies; didactic, dithyrambic and heroic poetry	Calm, peaceful
Sharp (netoide) [c'-g']	Mixolydian, Hypermixolydian	Systaltic	Dirges, Lamentations, nomic	Humble, erotic, sorrowful, feminine

The change that the person undergoes is described as a change of ethos and, therefore, of character; or in other words, music has a character that it imprints on the listener. Thus, the reason why that happens, according to Aristotle, has to do with the resemblance music has to that ethos; and the mechanism was explained as a process of sympathy. Although we can acknowledge that this sympathy is rather an opaque concept and that it has not really been explained by Aristotle, the ‘sympathy theory’ has had a large influence in our musical tradition.¹

Also, there is another assumption underlying Aristotle’s notion of musical mimesis, which is that sounds can have a character—while the perceptions of the other senses can’t (e.g., flavors, colors). Aristotle explained this by saying that characters, emotions, and music, are all sorts of actions, and thus, sorts of movements. In other words, that music has character insofar as it is an imitation of the character’s movement.²

On the other hand, even in mere melodies there is an imitation of character, for the musical modes differ essentially from one another, and those who hear them are differently affected by each. Some of them make men sad and grave, like the so-called Mixolydian, others enfeeble the mind, like the relaxed harmonies, others, again, produce a moderate and settled temper, which appears to be the peculiar effect of the Dorian; the Phrygian inspires enthusiasm. [...] The same principles apply to the rhythms: some have a character of rest, others of motion, and of these latter again, some have a more vulgar, others a nobler movement. [*Politics*, 1340b]

In his treatise on music, Quintilianus offered us a much more complete idea of these principles. Like Aristotle, he also described music in terms of movement: “Music is a science of melos³ and of those things contingent to melos. Some define it as follows: “the theoretical and practical art of perfect and instrumental melos”; and others thus: “an art of the seemly in sounds and motions.” But we define it more fully and in accordance with our thesis: “knowledge of the seemly in bodies and motions.”” [Quintilianus, *On Music*, I-4] Several elements of his treatise are relevant to our analysis, and I will try to offer a condensed review of them. Firstly, the idea that the movement of music can be ascending or descending is already

¹Furthermore, in the later writings of Stephen Davies and Charles Nussbaum, along with the contributions of neuroscientists, this theory might be nowadays defended under a new light, considering the functioning of the mirror neurons and the ‘emotional contagion’ hypothesis that I will be talking about in Chapter 3.

²Henceforth, the idea of musical movement will become a leitmotiv for us, and I will be leaving the references to it just as traces that we will track and discuss after this review on certain periods of musical history comes to an end.

³Melos, in terms of Quintilianus, “is what is composed of harmonia, rhythm, and diction; it is the succession of notes dissimilar in high and low pitch. Melic composition is a constructive function of melos.” [*On Music*, I-12]

acknowledged in Quintilianus's treatise. Furthermore, the sharper frequencies were also associated with a higher position as compared to the lower ones [*On Music*, I-5].¹

He also embraced a theory of the mimesis between music and the passions, where the passions themselves were considered as derived from parts of the soul: "In the epithymetic part, the ancients saw that pleasure expands in the soul; in the thymic part, pain and its descendant, anger; and in the irrational part, divine suffusion. For each of these, there was a mode according treatments through music, gradually leading unknowing persons into a correct condition." [*On Music*, II-5-58] So, this resonance of the music's features in the soul was taken to be due to a certain imitation that music makes of the soul's movements, and that once instantiated in a musical piece, has its effects in the soul as well. Thus, one may fairly ask how this happens or, at least, one may ask for a large list of examples. Here are some of the examples offered by Quintilianus:

Moreover, of scales, the lower are suitable, so far as education is concerned, to the masculine part by nature and by ethos, since they are made harsh by much and vehement expulsion of the breath from below and show by the striking of more air—because of the width of the passages—both ferocity and gravity. The high scales are suitable to the feminine part, since by the striking of the air above and around the lips—because of the thinness of the passages—they are mournful and crying. The scales by consecutive notes so proceed through evenness and facility, and those by gapped notes are more harsh, are otherwise disturbed, and through instantaneous modulation into opposite positions perforce strain against the heart. [*On Music*, II-14-80/82]

Concerning rhythm little has been said so far, but its relationship with the character of the song, and therefore, with the passions, was not underestimated by the ancient Greeks. Plato suggested the utilization of only the feet that are "the rhythms of an orderly and courageous life," [*Republic*, 399d] and to compel the musical rhythm to follow the speech of a man that has lived such a life, and not the speech to follow whatever foot or tune the melody had. By contrast, Quintilianus offered a rather extended treatise on the usage of the rhythms in their relationship with ethos and the passions that can shed more light on the mimesis between music and the passions.

¹ This is interesting, since we can wonder whether the 'spatial' association of higher pitch with an upper representation than the lower pitches, is in fact an ancient association, or rather a new one. Furthermore, one may also question whether these associations are pancultural. For this I have no answer; but as far as I know, there is no counterexample for such a claim. The antiquity of such an association and its universality might be features that support the claim that it is product of evolution (although not sufficient conditions, of course).

Of rhythms, the more restful are those beginning from thesis¹, which restrain the heart at the outset; those beginning from arsis², which add a tapping to the sound, are agitated. Those having complete feet in periods are more naturally suited; those having short rests are more artless and petty, and those having longish rests are more magnificent. [*On Music*, II-15/82]

I find that this description of the effect of the distinct rhythms on people's dispositions goes quite easily in accordance with intuition. For, indeed, the rhythms that start with the lifting arsis do not seem to give the same stable sensation as those that begin with thetic accents. Quintilianus continued by saying that the rhythms compounded by short notes are 'faster and hotter' than those that are compounded by long notes, for these are rather restrained and slow, so that if one is to utilise feet with longer chronoi, a more 'quieting of the heart' would be the result. That is why, he claimed, the rhythms with short chronoi are used in war dances, those with the longest chronoi in sacred hymns, and the mixture of them in medial dances.

Therefore, among the motions of the pulse beats, those making the systoles correspond to the diastoles through such chronoi are the most healthful. It happened that those considered in sesquialteran ratio³ were more frenzied, as I said. Of these, the epibatos⁴ is more vibrant, disordering the soul with the double thesis and awakening the heart by the height and magnitude of the arsis. Of those that are in a duple relationship, the simple trochees⁵ and iambs⁶ exhibit speed and are hot and dancelike, while the orthioi⁷ and marked [trochees]⁸ advance honourably because they expand to the longest sounds. And such are the simple ratios of rhythm. [*On Music*, II-15/82-83]

And then Quintilianus continued by explaining the 'composite ratios,' which he claimed are the most affective and generate more agitation, since they are compounded in terms of inequality, and do not maintain the same order each time. In the ratios formed of more than two rhythms, the unevenness is much greater, which causes that the motions of the body increase as well: *they bring the heart into not a little disorder.*

¹ Say, the resting accents.

² Lifting or elevation.

³ The ratio 3:2.

⁴ That is, long thesis, long arsis, thesis of two longs, long arsis.

⁵ Long chronos followed by a short one: $\bar{1}\sim$

⁶ Short chronos followed by a long one: $\sim 1\bar{}$

⁷ The orthios consists of a tetraseme arsis and an octaseme thesis.

⁸ The marked trochee consists of an octaseme thesis and a tetraseme arsis.

Again, those remaining in one genus move the soul less, while those changing into other genera forcibly pull against the soul, coercing it to accompany each difference and to liken itself to the variety. Therefore, in the motions of the arteries, those preserving this same species and differing little with respect to the *chronoi* are agitated, certainly, but not dangerous, while those either varying exceedingly in *chronoi* or even changing the genera are both fearful and deadly. Certainly in the modes of walking one would discover that those stepping with goodly length and equally—after the fashion of the spondee—are orderly and manly in ethos, those with goodly length but unequally—after the fashion of the trochees or paeons—are hotter than is proper, those stepping equally but with quite little steps—after the fashion of the pyrrhic—are lowly and ignoble, and those with steps short, unequal, and near irrationality of rhythm are wholly free. Certainly, those who irregularly use these steps altogether did not compose their heart, but you will understand that they are deranged. [*On Music*, II-15/83-4]

And so, we can summarize the theory of rhythm's utilization as follows: The faster tempi are more active than the slower ones, and this makes the soul move accordingly; also, tripping rhythms stimulate actions and are more vehement, while the *chronoi* that have lots of notes tend to be flabby. The soul, according to Quintilianus, moves with the strings of the instruments or with the breath while singing or playing the flute. This movement can be harmonious and even, or uneven; and thus, the soul would move in that same ways, causing different effects in the character.

It is known that Sextus Empiricus (ca. 160–210 CE) was not a partisan of the aforementioned idea in which the movement of the soul follows the modes or the rhythms of the music, and that music reflects the harmony of the cosmos. In *Adversus Musicos*, he fiercely attacked the claim that *by nature* the mele excite the soul in specific ways through a kind of sympathy: “Just as the crash of thunder—as the followers of Empiricus say—does not signify a manifestation of a god (but to the common people and the superstitious it is supposed to be such) since when other bodies likewise strike one against another, a crash is similarly produced (just as when a millstone is turned round or hands clap), in the same manner, some of the mele of music are not by nature of one sort and others of another sort but are presumed so to be by us. The same melos is exciting to horses but in no way to men when they hear it in theatres – and to the horses, perhaps it is not exciting but disturbing.” [*Adv. Mus.* 15] Moreover, Sextus Empiricus considered that, if music has a power over the souls, it is not because it can restrain the hearts, but because it can distract them. Hence, he claimed that music cannot truly make much impact on the education and modelling of the soul, since from the moment music stops playing, the soul comes back from its distraction episode to its previous state. [*Adv. Mus.* 16]

But as an overview of the ancient Greek approach to music, we can say that the mimesis theory was, nevertheless, the most influential and extended idea to explain the influence music has on human character: From Pythagoras, who presumably maintained that music (an ideal music anyway) instantiated the mathematical harmony of the universe, following with Plato and Aristotle, who supported that music imitates the soul's affections, and, of course, culminating with Aristoxenus's and Quintilianus's treatises, which very finely constrained the usage of the musical elements to produce different effects in the soul and, therefore, to shape character accordingly. Anyway, by the end of the end of the 4th Century CE, the ancient Greek music tradition began to be blurred and forgotten. The next writers, such as Martianus Capella, Boethius, and Cassiodorus, relied on relatively late sources, such as Quintilianus. The time came for the Latin interpreters to transmit the information that became known in the Middle Ages.

2.2.2 MUSIC AND POETRY IN LATE RENAISSANCE AND EARLY BAROQUE

For if a text, whether by way of narrative imitation, deals with subjects that are cheerful or sad, grave or without gravity, and modest or lascivious, a choice of harmony and rhythm must be made in accordance with the nature of the subject matter contained in the text, in order that these things, combined with proportion, may result in music that is suited to the purpose.

Giuseffo Zarlino, *Le Istitutioni harmoniche*, IV

One of the most intriguing features of the music of the late Renaissance and Baroque periods is its relationship with Poetics and Rhetoric. Indeed, given this very salient characteristic of the music between the 16th and 18th Century, oboist and musicologist Bruce Haynes suggested the term “Rhetorical music” as an alternative to “Early music” [Haynes 2007, 8], for he considered that it is ‘such an eminent example of applied Rhetoric’ in a period in which the art of communication was the source of inspiration of most intellectuals and artists. He characterized Rhetorical music as mostly concerned with the evocation of emotions—the Affections, or Passions¹—as a music that is temporary, transient, disposable, which repertoire was constantly changing, and for which most probably the composer was also a performer herself.

Nevertheless, this relationship of music with Rhetoric might surprise us today, given that the Romantic aesthetic (to which we are closer) precisely praised music as the ‘expression of the inexpressible’ by no other means but by its formal forcefulness and, presumably, by having nothing to do with the world outside itself. Nonetheless, this perspective was not always prevalent or even common during the late

¹ *Affectus* is the Latin term for the Greek *pathos*, a complex term which, apart from referring to a gut feeling, also entailed a sense of a passive condition of the person. The Latin term, *affectus*, comes from *adficere*, meaning an affliction, an influence or affect working upon the individual. The Stoics considered that a mastery over the passions or affects was required. Nonetheless, during the Middle Ages, the Renaissance, and into the Baroque era, music was considered to have an ethical and conductive power over the affects. Also, the concepts *affectus* and *passion* were expanded to include both constructive and destructive passions, such as virtues and sins. [Bartel 1997, 31]

Renaissance and Baroque periods, since the link that music had with poetry and rhetoric was a lot more intricate than one would think. Indeed, this relationship between music on the one hand, and rhetoric and poetry on the other, established multiple conventions of musical expressiveness and musical gestures that were already deeply rooted by the time the Romantic revolution changed the parameters.

Though, it is worthwhile to enquire a bit further into the relationship between music and rhetoric in the late Renaissance and Baroque periods. As a very fast and rough panorama of it, we can begin by briefly talking about Petrarch and Petrarchism, the intellectual movement that came around two centuries after his death and that was named after him. The Italian poet Petrarch (1304-1374), also known as ‘the father of Humanism,’ had enormous influence during his time, but this influence would be greatly exceeded by the attention that the 16th Century poets would pay to him. His major works were *The Triumphs* and a collection of love songs in sonnet form dedicated to Laura de Noves and named the *Canzoniere*. It is this last book that later became endorsed as ‘the model’ for lyrical poetry.

Even though Petrarchism emerged as a modern literary movement, it also influenced other arts. Petrarch’s love poetry inspired poets, musicians, painters, and different audiences in Europe and beyond. There were two features of Petrarch’s *Canzoniere* which appealed to the musicians and became very important for their contributions. First, it presented a certain rhythmic and textural musicality, which suggested that the words were not only chosen for their meaning but also for their phonetic characteristics in relationship with the meaning conveyed. Second, it made use of a particular way of manipulating the deictic and mimetic expressions that gave rise to a special way to treat subjectivity in the poems.

Thus, musical Petrarchism accommodated these poems into madrigals. The madrigal was the most important secular musical genre in 16th Century Italy, which became—for the first time in history—the center of European music. A madrigal¹ was a polyphonic composition in which the lyrics of a short poem were very carefully captured in the music. The poems that were preferred for the madrigals were normally of higher poetry, mostly by Petrarch himself, but also by other Petrarchist poets, such as Pietro Bembo, Jacopo Sannazaro, Torquato Tasso, and Giovanni Battista Guarini.

As I have just mentioned, one of the features that made Petrarch’s *Canzoniere* particularly appealing for musicians was the ‘musicality’ that could be found in Petrarch’s sonic choices; but also

¹ The 16th Century madrigal and the madrigal of the *Trecento* have almost nothing to do with each other apart from the name. The madrigal of the *Trecento* was rather a strophic song with a ritornello.

important was the particular deictic and mimetic tissue that his poems presented. Just to draw very quickly on this last subject, let's say that when the poem presented an "I," the individual that was referred to by that term was not definitive once and forever. In effect, it could refer to the author himself, to the explicit narrator, to an implicit narrator, or to a particular character. Nonetheless, in Petrarch's sonnets, the "I" would not keep the same referent through the poem. So, when a poem had a narrative structure it was presented with a "you" (which Calcagno treats as an instance of mimesis), while when it intended to focus the attention in the present moment, in the particular space referred, and in the particular individual that is speaking, it was marked by "I" or words such as "here," or "now" (in Calcagno's terms, a deictic instance or 'focalizer'). Nevertheless, the "I" would work as a shifter of the subject that's speaking, just as if it were an empty place-holder that could be filled by multiple subjects.

Petrarchist musicians integrated this characteristic into their madrigals with a particular use of the parts or voices of the counterpoint. They experimented with the ways the self was constructed by identifying, say, the bass with the "I" that's speaking, a feature that would become very important in Baroque music. Therefore, the shifting voices and poetic narratives became a salient characteristic of musical Petrarchism. As an example of how this particular feature was put into practice in musical madrigals, let's briefly refer to Arcadelt's madrigal *Quando col dolce suono*:

[1] When with the sweet sound [2] the sweetest words join together [3] coming out between white pearls and fine rubies, [4] I marvel and say: how now I have [5] come to reach heaven, and my sun so close [6] I see and I hear high and divine words. [7] Oh wandering spirits, [8] if you had heard Pulisena [9] you would well say that you heard two sirens. [10] I, who I have seen her, swear to you that she is more beautiful and radiant than the sun.¹

¹Quando col dolce suono / S'accordon dolcissime parole / Ch'escon fra le bianche perle e I bei rubini, / Meravigliando dico: hor come sono / Venuto in ciel, che si dappresso il sol / Rimiro et odo accenti alti e divini. / O spiriti pellegrini, / S'udeste Pulisena / Direst ben d'udir doppia sirena. / Io che veduta l'ho, vi giura ch'ella / È più che il sol assai lucent e bella. Jacob Arcadelt, Primo libro di madrigal a 4 (Venice, 1539): Quando col dolce suono, mm 30-41. In: Calcagno, 113). The text is by Benedetto Varchi.

30

C [O] spir - ti o spir - ti pel - le - gri - ni, S'u - de - ste Pu - li - se -

A - ni, O spir - ti pel - le - gri - ni, S'u - de - ste Pu - li - se - na Di -

T - ni, O spir - ti pel - le - gri - ni, S'u - de - ste Pu - li - se - na Di -

B - ni, O spir - ti pel - le - gri - ni,

36

na Di - re - ste ben d'u - dir dop - pia si - re - na Io che ve - du - ta l'ho

re - ste ben, di - re - ste ben d'u - dir dop - pia si - re - na Io che ve - du - ta l'ho

re - ste ben d'u - dir dop - pia si - re - na dop - pia si - re - na Io che ve - du - ta l'ho

Io che ve - du - ta l'ho

Example 1: Arcadelt, *Quando col dolce suono*, in Jacob Arcadelt, *Primo libro di madrigal a 4* (Venice, 1539), from Calcagno 2012.

Following Calcagno's analysis, Arcadelt's strategy was to assign a "listening role" to the silent bass in the measures 34-39, where the text changes the deictic "I" to the narrative "you." In this passage of the text, it is suggested that the spirits are listening to Pulisena's voice. Thus, by the dropping out of the bass, Arcadelt gets the effect of highlighting Pulisena's name, "as if a beam of light were projected over her in the imagination of the listener." This "listening role" of the bass also allows a meta-discourse in which "we can imagine the bass putting the palm of his hand to his ear, gazing at his fellow singers, and indeed listening to them." [Calcagno 2012, 116]

Anyway, turning back to the other characteristic of Petrarch's poetry endorsed by musicians, i.e., the sonic features of the words, the influence of Cardinal Pietro Bembo should be mentioned. He wrote a very influential treatise, *Prose della volgar lingua* ["Discussions of the Vernacular Language" 1525], based

on Petrarch and Giovanni Bocaccio, where he noticed some Petrarchan rhythmic and phonetic choices that could be imitated by musicians.

In Petrarch's writings Bembo identified two opposed varieties of 'sentiments' that were conveyed in the poem not only through the meaning of the words but also through their sonic traits; i.e., the distance between the rhymes, the rhythms, the number of syllables within a verse, the accentuations, and the phonetic characteristics of the vowels and consonants. These two categories of 'êthê' were the pleasant ones and the severe ones. Grace, sweetness, charm, inventiveness, and playfulness were included in the pleasant category; while modesty, dignity, majesty, and magnificence were included in the severe category.

Thus, a Petrarchist musician would model a music collection after the *Canzoniere*. This happened quite often from Adrian Willaert up to Monteverdi, the two major pillars that frame musical Petrarchism. Adrian Willaert published a book in 1559 named *Musica Nova*, and the madrigal section of it consists of twenty-five sonnets, all but one by Petrarch. To quote one of the most famous examples of the way music was shaped following this Petrarchan model, let's recall Palisca's and Grout's analysis of Willaert's madrigal *Aspro core e selvaggio*, in which the lyrics say: "Harsh and savage heart, and a cruel will in a sweet, humble, and angelical figure." For the first verse, in which Petrarch talks about the roughness of Madonna Laura's heart (severe category), Willaert used the harshest consonances—the major sixths and major thirds, including parallel movement of major thirds—preferring complete tones and major thirds for the melodic movement. Instead, for the second verse, in which he describes the sweetness of her figure (pleasantness category), Willaert used the sweeter consonant sound of minor sixths and thirds, using accidental flats, shaping the melodic movement out of semitones (chromatism) and minor thirds, and simulating a ternary rhythm to adjust the music to the disposition of the accentuated syllables used by Petrarch. [Grout and Palisca 2001, 265-6]

5

A - spro co - ree sel - vag - gio, e cru - da vo - glia

A - spro co - ree sel - vag - gio, e cru - da vo - glia

A - spro co - ree sel - vag - gio, e cru - da vo - glia

54

10

- spro co - ree sel - vag - gio, e cru - da vo - glia

In dol - ce, hu - mi -

co - ree sel - vag - gio, e cru - da vo - glia

A - spro co - ree sel - vag - gio, e cru - da vo - glia

In dol - ce, hu - mi - le, an -

In dol - ce, hu - mi - le, an - ge - li -

In dol - ce, hu - mi - le, in -

15

20

In dol - ce, hu - mi - le, an - ge - li - ca fi - gu - ra,

- le, an - ge - li - ca fi - gu - ra, in dol - ce, hu - mi - le, an - ge - li - ca fi - gu -

In dol - ce, hu - mi - le, an - ge - li - ca fi - gu -

ge - li - ca fi - gu - ra, an - ge - li - ca fi -

ca fi - gu - ra, in dol - ce, hu - mi - le, an - ge - li - ca fi - gu -

dol - ce, hu - mi - le, an - ge - li - ca fi - gu - ra, an - ge - li - ca fi - gu -

Example 2: Adrian Willaert, "Aspro core e selvaggio", *Musica Nova* [Venice, 1559], *Opera omnia*, Vol. 13, Hermann Zenck and Walter Gerstenberg [American Institute of Musicology, 1966].

Although Willaert never wrote a treatise on musical theory, there are two treatises that appeared in the second half on the 16th Century written by Willaert's disciples: Zarlino and Vincentino. Gioseffo Zarlino was probably the most influential music theorist of the time, and wrote a treatise on the utilization of musical intervals and other elements, dealing especially with the musical evocation of the sentiments and affections that the texts describe.

When a composer wishes to express harshness, bitterness, and similar things, he will do best to arrange the parts of the composition so that they proceed with movements that are without the semitone, such as those of the whole tone and ditone. He should allow the major sixth and major

thirteenth, which by nature are somewhat harsh, to be heard above the lowest note of the *concertus*, and should use the suspension {*sincopa*} of the fourth or the eleventh above the lowest part, along with somewhat slow movements, among which the suspension of the seventh may also be used. But when a composer wishes to express effects of grief and sorrow, he should (observing the rules given) use movements which proceed through the semitone, the semitone, and similar intervals, often using minor sixths or minor thirteenths above the lowest note of the composition, these being by nature sweet and soft, especially when combined in the right way and with discretion and judgment. [Zarlino 1558, Chapter 32, 95]

Zarlino also observed that the accidental notes (those that do not belong to the mode, and that are marked by a sharp or a flat) are more languid and sweet, making them suitable for conveying ideas of grief and sorrow. On the other hand, he also observed that the natural notes (the ones that do belong to the mode) make the composition more virile and sonorous, conveying a sense of harshness. Indeed, the utilization of accidental notes became more and more present during this period in which musical expressiveness was the main aim at stake for composers, favoring the elicitation of emotions in the audience through the imitation of the words.

Nevertheless, to achieve the goal of composing 'very expressive' music, Zarlino's advice was not only concerned with the sound's intervals but also with the rhythmical features of the composition. In this respect, he claimed that rhythm should also follow the poems. Again, the rhythmic accommodation should consider the meaning of the words, the emotion conveyed by them, and their formal sonic properties. This is an example of his recommendations on rhythm:

As to the observance of rhythms, the primary consideration should be the subject matter contained in the text. If it is cheerful, one should proceed with powerful and fast movements, namely, with note values that convey swiftness of movement, such as the minim and the semiminim. But when the subject matter is tearful, one should proceed with slow and lingering movements. [Zarlino 1558, 95-6]

Consequently, music's relationship with lyrics changed radically during the late Renaissance period, insofar as the composers themselves considered that music should follow the lyrics and not the other way around. Therefore, the idea pursued was that in order to achieve the maximum of expressiveness, music should imitate the words, be it in terms of their meaning, in terms of their sonic properties, or in terms of their rhetorical arrangement: "Combining with some judgment the intervals of the major and minor consonances with the natural and accidental movements made by the parts, we shall succeed in imitating the words with a well-understood harmony." [Zarlino 1558, 95] This very idea became increasingly important up to Monteverdi (of whom I will be talking below), who called his music *seconda prattica* to differentiate it from the former (polyphonic) style that privileged music over the words.

Between 1573 and 1590 a group of intellectuals and artists met frequently in Giovanni Bardi's palace: the *Camerata Fiorentina*. Among its members we can count the poet Ottavio Rinuccini, the erudite on Greek culture Girolamo Mei, the musicians Vincenzo Galilei (father of the astronomer), Jacopo Peri, and Giulio Caccini. Mei's research on Greek culture had great influence on the group's other members and, as a result of their discussions, the Opera—a new artistic genre—would be created.¹ The idea was thus to recreate the forcefulness of Greek theater in terms of catharsis. Mei concluded that the music that the Greek theater involved had only one melody, be it as a *solo* or in chorus, and that the whole tragedy was originally sung. Therefore, they thought that that was precisely what should be done in order to achieve such intense emotional effects as those that were attributed to the Greek theater; that is, leave aside the complexities of polyphony in favor of a simple, but emotionally-shaped melody.

Vincenzo Galilei, Zarlino's disciple, claimed that it was impossible for polyphonic compositions to convey the emotional content of the texts. Indeed, he thought that the opposite movements of several voices singing different words and melodies simultaneously diminished the force of the one movement that would truly accommodate the words, conveying its emotional power. However, regarding the kind of imitation needed for this purpose, Galilei considered as puerile the 'musical description of the words,' such as the imitation of sighs that became very popular in the 16th Century madrigal [Grout and Palisca 2001, 369]. He thus moved forward into a new way of considering the relationship that music should have with words; i.e., the shaping of a melody to accentuate the natural inflections of the human voice while speaking. In effect, the new strategy was to model the singing voice on how would the human voice sounds while undergoing the emotions described by the text.

The first opera, *Dafne*, was written by three of the regulars of the *Camerata Fiorentina*: The composer Jacopo Peri, the aristocrat Jacopo Corsi, and the poet Ottavio Rinuccini. Unfortunately, of this first opera—which was performed in Florence in 1597—only a few fragments remain. Afterwards, in 1600, the opera *Euridice*, was composed by Peri and Caccini with a poem also by Rinuccini. Peri and Caccini²—

¹ In his treatise *Della compositura delle parole*, Mei refers to the Aristoxenian classification of vocal pitch movement into continuous (speech), diastematic (song), and intermediate (poetic recitation). This reference would resonate particularly in Peri's *recitativo*, as we shall see.

² Later on, in 1602, Caccini would publish his *Le nuove musiche* (The new music), a collection of strophic songs and madrigals composed considering very closely the text.

who were professional singers—held the idea that the melody should have an improvised bearing such as the one that sung poetry had, and thus, that the melody should be located somewhere in between the singing and the speaking voice. These considerations gave rise to the *stilo recitativo* or *recitative style*. Jacopo Peri wrote about his idea on the recitative style in the prologue to *Euridice*, in which he explains that he intended to imitate in song a speaking voice, realizing a heightened speech like that of the ancient tragedies [Palisca 1985, 427]:

I recognized likewise that in our speech certain sounds are intoned in such a way that a harmony can be built upon them, and in the course of speaking we pass through many that are not so intoned, until we reach another that permits a movement to a new consonance. Keeping in mind those manners and accents that serve us in our grief and joy and similar states, I made the bass move in time with these, faster or slower according to the affections. [...] I held [the bass] fixed through both dissonances and consonances until the voice of the speaker, having run through various notes, arrived at a syllable that, being intoned in ordinary speech, opened the way to a new harmony. [...] Thus (though I would not venture to assert that this was the singing style used by the Greeks and Romans in their plays), I believed it was the only style that our music could yield that would be suited to our speech. [Peri, *Le musiche sopra l'Euridice*, in Palisca 1985, 428-432]

Monteverdi coined the terms *prima prattica* and *seconda prattica* in order to distinguish his new music style from polyphony and Zarlino's counterpoint rules. By the former term, Monteverdi refers to the style in which music dominated the text, whereas by the latter he referred to his new practice in which the text guided music (though Zarlino also claimed that music should be composed following the text). It is also to be noted that the *seconda prattica* admits the use of dissonances that were not allowed by Zarlino's rules, all with the aim of more effectively adapting music to the 'emotional meaning' of the text. Nevertheless, one should notice that what Monteverdi understood by 'text' referred not only to the written material (or lyrics), but also to a performance; i.e., a speech that necessarily entailed an interaction between people. This particular feature—visible within his madrigals and operas—was inherited from Petrarchism (Calcagno 2012, 4). Indeed, Monteverdi's madrigals explored the boundaries between music and language in a very sophisticated fashion that was not as dogmatic as the view held by the participants of the *Camerata Fiorentina* against the use of counterpoint.

In 1607, Monteverdi's opera *Orfeo* was first performed. In this opera—which is considered a masterpiece because of the great deal of expressiveness that it achieves—Monteverdi developed the role of the narrator (mimetic role) and the 'focalizer' (deictic role). For example, the character of La Musica that

appears in the prologue is at the same time a narrator and a deictic character that often uses words that identify the precise moment of the performance and the character/performer.

On stage, the performer symbolically subsumes in herself all the other agents by projecting a self that is constantly shifting. The performer's "I" works as a catalyst of such identity-shifting, and is as elusive and mobile as the fleeting performance before our eyes. [Calcagno 2012, 4]

These constant changes between the deictic and mimetic instances played an important role in allowing the audience to get involved in the fictional world of the opera. However, it is important to consider that these features were all carefully and intricately intermingled. Indeed, La Musica as a character has her own ritornello that identifies her, along with other metaphorical elements, be it in the text or in the staging¹; e.g., La Musica makes some references (in the text and in the staging) to her origins as coming from water (*Dal mio Permesso amato a voi ne vegno*), where "water" was used as a metaphor for instrumental music, given its fluency and indeterminacy.

We can see that the relationship that music had with rhetoric and poetry was not only really close during the late Renaissance and early Baroque, but even more, that the very idea was that music itself should be shaped following the poems and rhetorical models. In effect, the intention was to mimetically model music after words in the ways that I very roughly described above; i.e., by imitating the prosodic features or the speech accents of the language itself, by imitating how a human voice would sound under the influence of an emotion, by following the rhetorical ordering and mechanisms in the structure of the music, by trying to resemble when possible with music the meaning of the words, by shaping the music as tonal analogue of how it feels to experience a particular emotion described by the text², and by establishing certain musical symbols.

However, this entanglement between music and language became even more complex during the German Baroque in its relation with musical expressiveness. In Germany, the rigorous application of rhetorical methodology to musical composition was particularly enthusiastic, and was coupled with a Lutheran theological framework that considered of central importance the exegesis of the Bible. This gave rise to various treatises on musical-rhetorical figures (*Figurenlehre*), along with a theory of the affects in

¹ This is perhaps the first appearance in history of music of something like a "Leitmotiv."

² Mostly by acknowledging the consonances, dissonances, and rhythmical choices that would better accommodate to particular feelings.

order to make them subject of musical imitation (Affektenlehre). However, given the differences between the various treatises on Figurenlehren, it is not possible to give a general, unified, and systematic Baroque doctrine of musical-rhetorical figures.

The issue, though, was to represent and arouse the proper affections in the listeners by means of the use and identification of musical expressive devices that were available through rhetorical mechanisms. Indeed, the idea was that the human temperament and passions could be somewhat controlled by music, if it was carefully designed to follow the ‘correct’ texts. This tendency led to what became known as the German *Musica Poetica*.¹ The music-poet, then, would compose music in a *Klang-rede* or musical oration. In order for a composition to be effective, though, it would have to successfully give expression to the text, as well as to its associated affections. Nevertheless, the composer was not left alone in this endeavor, for she had at her disposal a set of rhetorical principles and procedures that were gradually incorporated into musical practice.²

Johannes Nucius³ [*Musices poeticae sirve de compositione cantus*, 1613], for example, listed a set of words that could be musically expressed with the use of musical-rhetorical figures, and this list was somewhat similar to those presented by other German Baroque theorists⁴: “Affective words”: rejoicing,

¹ During the Renaissance, there was a shift in emphasis in the ‘seven liberal arts’ from the mathematical *quadrivium* to the linguistic *trivium*. Albeit during the Middle Ages music was part of the *quadrivium* (*musica theoretica*), as the *trivium* gained importance during the Humanism, the importance of the relationship between music and rhetoric was also heightened (*musica practica*). In this latter approach, the music’s ability to move the affections of people was the main aim at stake. However, some German Lutheran writers began to promote a third category, *musica poetica*, which was a combination of the mathematical truths of *musica theoretica* with the emphasis that the Renaissance gave to the text and the arousal of affects.

² The Figurenlehre or doctrine on the musical-rhetorical figures consisted in an incorporation of the division of the verbal discourse into *Inventio* (finding the argument), *Dispositio* (ordering the argument), *Decoratio* (style), *Memoria* (memory), and *Pronuntiatio* (delivery), with an aim of moving (*movere*), delighting (*delectare*), and instructing (*docere*). The theory of musical figures is mainly the systematic transformation of third part of the theory (*decoratio*) into musical equivalents.

³ Johannes Nucius (c.1556–1620) was a German theorist and composer with great influence of Orlando di Lasso. His treatise, *Musices poeticae*, deals mainly with the expressive compositional mechanisms in close relation to texts (Figurenlehre).

⁴ In order to give a panorama of the development of the Figurenlehren from the 16th to the 18th Centuries, here is a list of the theorists and composers and their treatises in chronological order: Gallus Dressler (*Praecepta musicae poeticae*, 1563); Joachim Burmeister (*Musica autoschediastike*, 1601; *Musica Poetica*, 1606); Johannes Lippius (*Synopsis musices*, 1612); Johannes Nucius (*Musices practicae*, 1613); J. Thuringus (*Opusculum bipartitum*, 1624); J.A. Herbst (*Musica moderna prattica*, 1643; *Musica poetica*, 1643); A. Kircher (*Musurgia universalis*, 1650); C. Bernhard (*Tractatus compositionis augmentatus*); J.G Ahle (*Musikalisches Frühlings, Sommer, Herbst und Winter Gespräche*, 1695-1701); T.V. Janovka (*Clavis ad thesaurum magnae artis musicae*, 1701); J.G. Whalter (*Praecepta der musicalischen composition*, 1708; *Musicalisches Lexicon*, 1732); M.J. Vogt (*Conclave thesauri magnae artis musicae*,

weeping, fearing, wailing, mourning, pleading, raging, laughing, pitying. “Words of motion and place”: standing, running, dancing, resting, leaping, lifting, lowering, ascending, descending, heaven, hell, mountain abyss, heights, etc. “Adverbs of time and number”: quickly, fast, soon, slowly, early, late, twice, thrice, four times, again, once more, often, rarely; and other words such as light, day, night, darkness. This list will shed light on the discussions on musical relationship with movement that I’ll be undertaking in the next chapter. In any case, composers and theorists like Herbst, Bernhard, and Vogt, encouraged the composer to emulate the painter by imitating the text images through the music. Now then, what are the musical-rhetorical figures? They are truly amazing catalogues of musical gestures used to arouse and refer to emotions, as well as to musically describe various things. I will next present some examples of musical-rhetorical figures. Nevertheless, as it is not my aim to present here a complete overview of the *Figurenlehren*, I will overlook their diverse classifications, presenting only some cases that would illustrate my further point on the musical expressiveness debate.

First, let’s mention the *exclamatio*. It consisted in a melodic ascending 6th jump, which was used for emphasizing or dramatizing. However, any jump, be it descendent or ascendant, would help to emphasize a name or a concept. On the other hand, the *interrogatio* or musical question was a melodic termination that consisted mostly of an ascending 2nd or any other interval. The *passus durisculus* consisted in continuous movement by ascending or descending semitones used to create tension. As an example of the descriptive figures, let’s mention the *anabasis*, an ascending interval movement that was supposed to imitate an actual movement upward. Indeed, if the text was referring to, say, a movement up to heaven, then the music should be shaped by the same type of intervallic movement. Another example is the *patopoeia*, a movement by semitones that do not belong to the scale, mode, or harmonic context. This movement was supposed to express fear or terror. Of course, we should also mention the *suspiratio*, which consisted in a melodic line gapped by silences as a musical description of sighs or pants. The *sinonimia* was a repetition of a phrase, but beginning on another note. It was called *auxesis* or *climax* when this repetition was made a 2nd higher than the original, and *gradation* when it was presented by a harmonic progression. The *antiteton* was a musical contrast used to express the simultaneity of opposed characters. It could be achieved by the use of opposed textures (e.g., tutti-solo, polyphony-homophony), variation in vocal registers, etc.

1719); Johann Mattheson (*Der vollkommene Capellmeister*, 1739); J.A. Scheibe (*Der critische Musikus*, 1745); M. Spiess (*Tractatus musicus compositorio-practicus*, 1745); J.N. Forkel (*Allgemeine Geschichte der Musik*, 1788-1801).

Johann Mattheson argued that the vital spirits describe a movement within us that can be resembled by music¹. Indeed, Mattheson adheres to the vital spirits theory of passions (not very long ago published by Descartes), according to which there are some very tiny airy corpuscles that are able to access the pineal gland and, therefore, the emotions of the soul. The vital spirits would move in accordance with the emotion of the soul and, thus, describe a particular movement in the body. The movements that the vital spirits were supposed to make within the body were carefully characterized and were presented as an explanation of both the physiological emotional mechanisms and the phenomenological dimension of the emotion. Thus, Mattheson argued that the musical gestures should be designed considering an intervallic resemblance to the movement that the vital spirits make during particular emotion episode. Albeit he bases his explanations on the resemblance music can have with the spirits' movements, the examples Mattheson mentions in *Der vollkommene Capellmeister* go quite easily in accordance with intuition and with the way emotions have been dealt with throughout the history of music. Just to mention some of them:

(56) Since for example joy is an **expansion** of our soul, thus it follows reasonably and naturally that I could best express this affect by **large** and expanded intervals./ (57) Whereas if one knows that sadness is a **contraction** of these subtle parts of our body, then it is easy to see that the **small** and **smallest** intervals are the most suitable for this passion./ (58) If we consider further that love is in fact essentially a **diffusion** of the spirits, then we will rightly conform to this in composing, and use similar relationships of sounds. / (59) Hope is an **elevation** of the soul or spirits; but despair is a depression of this: all of which are things which can very naturally be represented with sound, especially when the other circumstances (tempo in particular) contribute their part. And in this way one can form a sensitive concept of all the emotions and compose accordingly. / (77) Hope is a pleasant and soothing thing: it consists of a joyful longing which fills the spirit with a certain courage. Hence, this affect demands the loveliest use of the voice and the sweetest combination of sounds in the world, for which courageous longing serves as a spur as it were; yet so that even though the joy is only moderate, courage nevertheless enlivens and animates everything, which yields the best combination and uniting of sounds in composition. [Mattheson 1739, Part I, Chapter 3]

Thus, Mattheson offered the most complete and organized treatise on musical rhetoric, this time considering that the Cartesian idea that emotions present a particular form that has to do with the way we feel them due to the spirits' movement within our bodies. Thence, he claimed this is the 'emotional form' that music should reproduce with sound so that the listener might be able to recognize the emotion.

¹ It should be remembered that in 1649 Descartes's treatise *The Passions of the Soul* was published. In this work, as we have seen in the precedent chapter, Descartes defends the theory of the animal spirits.

Albeit the *Musica Poetica* dealt almost exclusively with vocal music, the musical-rhetorical figures were also incorporated into instrumental music. The consequence of this was that the expression of affections through the Figurenlehre gained efficacy by itself and gradually replaced the text's dominating role by the end of the 18th Century. Indeed, by the second half of the 18th Century, the focus on the text shifted to a focus on yes, the affective expression, but one that was now possible in purely instrumental music.

Now then, I want to underline the importance of the features of Renaissance and Baroque music that I have just presented in quite a rough way for our debate on musical expressiveness. Though, their relevance will be more apparent once I explain the resemblance theory proposed by Davies and Kivy in the next sections. Nevertheless, I will just list them in order to make them easily available for further comparison.

First, it must be said that a very important source of conventions on the relationship between music and our affective life was built upon the relationship that music had with rhetoric. These conventions did not finish with the 18th Century. On the contrary, the musical-rhetorical figures gained so much power, that they were now able to be applied to pure instrumental music, and most of them still operate nowadays. Even without words, these mechanisms were already so deeply grounded in people's habitual ways of listening and in the compositional tradition that their influence still resonates robustly now.

Second, the shift that occurred between the 16th and the 18th Centuries was not only quite drastic but it also has had a massive influence on Western musical practices in almost every musical genre up until now. I am talking about the constitution of the tonal system as we know it today, which was basically shaped by following the aim of the expression of the emotions. This tonal system gradually abandoned the Gregorian modes and favored the major and minor tonalities¹ that we are so acquainted with, along with its correlations with happy-sad emotions.

¹ The sources of this are not unified. We can mention the Council of Trent, which took place between 1545 and 1563. Between other non-musical issues treated, it prohibited polyphony, since it (given its complexity) did not allow the parishioners to understand the sacred texts. Also, the major and minor modes were preferred for the aim of simplification. In any case, it is sometimes attributed to Willaert the identification of the minor mode with the sorrowful, erotic, and languish affections, and the major mode to the more virile affections. The key here is rather the utilization of the minor third that is characteristic of the minor mode and the continuous use of semitones to reflect sorrow and the like, and the major third that is characteristic of the major mode to reflect the virile and happy affections, along with the avoidance of the semitone.

Third, the idea that music could be created following a mimetic principle was much extended in both the ancient Greek musical tradition on the one hand, and the Renaissance and Baroque eras on the other. Musical mimesis was understood as an imitation that music could make of diverse features directly or indirectly related to affective phenomena at different levels:

- a) An imitation of the sonic features of a particular language, such as accents or rhythms (e.g., musical Petrarchism, *Recitativo*).
- b) An imitation of rhetorical organization (e.g., formal structure of the musical piece).
- c) An imitation of rhetorical mechanisms or devices (e.g., the use of deictic and mimetic mechanisms in madrigals and operas).
- d) An imitation of the meaning of the words (e.g., the imitation of a “stone” by using a deep, grave note, or making an upwards movement while the text refers to “heaven”, or also, the imitation of a bird’s sing).
- e) An imitation of the emotional gestures that humans make while undergoing an emotional episode (e.g., the imitation of sighs, cries, or shouts, gaits; the *Recitativo*).
- f) An imitation of particular movements (e.g., suspension, elevation, upwards, downwards, etc.).
- g) An imitation of the phenomenological aspect of the emotions; i.e., how does it feel to have a particular emotion (e.g., Mattheson’s *Figurenlehre* regarding the way the vital spirits move within the body and, therefore, produce a particular experience of the emotion).

Fourth, the theory of the affections common during the 17th and 18th centuries was searching for the physiological mechanisms of action and reaction that could explain the passions of the soul. Thus, a description of the mechanisms through which we feel certain emotions in a particular way was offered (*Affektenlehre*). Indeed, even though these physiological mechanism descriptions are mistaken (insofar as no one can defend a vital-spirits theory today), the result was still a systematization of the descriptions of phenomenal aspects of the emotions (presumably shared by all humankind).

Fifth, the somewhat mysterious way in which the emotional expression in works of art was conceived during Romanticism (not only in music, but in the arts in general as it attributed this capacity to the genius of the artist) was not considered mysterious at all during the Renaissance and Baroque eras. In effect, based on the rationalization of the way emotions were produced, the Baroque composer had at her

disposal a large set of Figurenlehre or musical-rhetorical figures, along with other compositional rules (such as the use of the appropriate mode, tempo, or cadence) that were created to permit her to present emotions in the music and to arouse affections in the listeners.

However, by the beginnings of the 19th Century, personal experience of the emotions was considered of much higher importance than rational knowledge of them in order to create an 'expressive artwork.' Also, the role assigned to creativity began to be more important than the one assigned to the craftsmanship and the use of the rationalized devices that could generate affective reactions in the audiences.

Nevertheless, it is the issue of the next section to give a general view on the shifts that occurred during the Romantic 19th Century that situated 'pure music' as the pinnacle of musical expressions.

2.2.3 PAVING THE WAY TOWARD THE GRAND SYMPHONY: ABSOLUTE MUSIC AND IDEALISM

In a letter to his friend Leopold Kupelwieser in March of 1824, Franz Schubert wrote:

Of songs I have not written many new ones, but I have tried my hand at several instrumental works, for I wrote two quartets for violins, viola, and violoncello and an octet, and I want to write another quartet; in fact, I intend to pave my way towards a grand symphony in that manner. [Deutsch 1947, 339]

By the time Schubert wrote this, being able to compose a symphony that could compete with those of Master Beethoven was an endeavor that not many musicians even believed they could pursue. Indeed, it is indubitable that by the third decade of the 19th century, instrumental music was already considered of greater importance and value than vocal music, its expression *par excellence* being, of course, the symphony. However, this idea was developed relatively recently, say, during the last two decades of the 18th century and the first two decades of the 19th century.

In effect, during the first part of the 18th century, musicians that aspired to establish themselves as successful composers had to write an Opera, either in the Italian fashion or in the diverse national opera styles; the very necessity of every country having a national opera shows how important the genre was considered. This idea, though, would gradually change throughout the Enlightenment and toward the Romantic period up to the point of considering the symphony as the new goal to seek. Moreover, the way was being paved for the symphony to be invested with the highest powers and honors, not only among the arts, but also within the romantic metaphysical schema.

Thus, the issues that I want to address in this section are concerned with the philosophical causes and consequences of this particular change. In effect, the rise of the symphony in the aesthetic value scale converges, on the one hand, with the rise of German Idealism, and with momentous historical events such as the French Revolution, on the other. Both factors, I claim, played an important part in the wide consideration of instrumental music (and particularly the symphony) as the new paradigm of the arts. Consequently, a new concept was being created: the idea of absolute or pure music, as the music that does

not present a text, a program, or any reference¹ to the world outside the music itself. My claim, though, is that this concept (which seems very natural nowadays) lacks most of its significance when abstracted from the metaphysics of idealism that pertain to the Romantic era. Moreover, even within the frame of the Romantic philosophy, the exaltation of instrumental music as “pure music” often overlooks its debts to the associations that have been set up for centuries mainly through vocal music.

Even though absolute music has been appraised both as the most trivial content-lacking art and as the highest and finest expression of the spirit insofar as it is liberated from the chains of accompanying text, the primary question for me continues to be, rather, how “pure” pure music really is. It seems to me an incredible neglect of musical history and musical practice that philosophical research on music often departs from absolute or pure music, as if it was really content-free, associations-free, or even intelligible when abstracted from any frame, social activity, or the like. Nevertheless, the exclusion of all these factors under the “extra-musical” tag is a practice that has not been around for more than two and a half centuries, and thus, given the radical consequences it entails, I consider that it should not constitute our default point of departure for an analysis of musical expressiveness.

However, it is also true that the discussions about the relationship between music on the one hand and poetry, rhetoric, dance, or theater on the other, have been around for centuries, as we have seen in the past sections (for example, in the debates between the Pythagoreans and the Aristoxenians, or between the *Prima* and *Seconda Prattice*). Nonetheless, the way instrumental music was considered in the 19th century as Absolute music has its very particular aspects that strongly contrast with the treatment that instrumental music had during the Enlightenment.

Indeed, Immanuel Kant in the *Critique of Judgment* published in 1790, claimed that instrumental music should be regarded “more a matter of enjoyment than of culture” [*KU*, Part I §53, 328]. He considered that, since music cannot embrace concepts but only raw sensations, the agitations that it arouses in us are rather vacuous. He adhered to the theory of music according to which music is ‘the language of the affects’ that we talked about in the past section. Still, he did not concede any more important role to pure instrumental music than that conceded to a nice wallpaper, which might give us a temporarily pleasant sensation that nevertheless cannot entertain the mind afterward.

¹ Although it might be thought that pure music can, indeed, have expressive content, this is precisely part of the debate.

Its charm, so generally communicable, seems to rest on this: Every linguistic expression has in its context a tone appropriate to its meaning. This tone indicates, more or less, an affect of the speaker and in turn induces the same affect in the listener too, where it then conversely arouses the idea which in language we express in that tone. And just as modulation is, as it were, a universal language of sensations that every human being can understand, so the art of music employs this language all by itself in its full force, namely, as a language of the affects; in this way it communicates to everyone, according to the law of association, the aesthetic ideas that we naturally connect with such affects. But since these aesthetic ideas are not concepts, not determinate thoughts, the form of arrangement of these sensations (harmony and melody), which takes the place of the form of a language, only serves to express, by means of [the] proportioned attunement of the sensation, the aesthetic idea of a coherent whole of an unseizable wealth of thought, and to express it in conformity with a certain theme that is the prevalent affect in the piece. [Kant, *KU*, §53, 328-9]

Even though Kant conceded that music might be the ‘language of the affects,’ he also deemed it as naturally inferior to the language of reason, which music seemed to lack. According to him, music arouses us in a merely mechanistic way only through associations, for he held that music is incapable of conveying concepts without a text. Thus, following the criteria of the culture (or cultivation) that arts provide for the mind, Kant claimed that vocal music should surely be estimated superior to instrumental music, and that instrumental music should in turn be valued as the highest of the agreeable arts, or as the lowest of the fine arts [*KU*, §53, 329].

On the other hand, Jean-Jacques Rousseau, who was also a consummate musician, reacted against instrumental music arguing that its tendency to enhance the rules of harmony neglected the melody and, of course, speech. For him, language and music converge in their origins (Rousseau 1781), a fact that tied musical significance to the accent of the different languages. However, his position was that the ‘language of music,’ despite being vivid and strongly passionate, is still unable to express ideas because of its vagueness. In order for music to be expressive, though, he claimed that music must be imitative, and that this imitation can happen in music only by closely considering melody and speech. Thus, he deemed vocal music the only musical type capable of conveying any meaning, while the polyphony and harmony exalted in instrumental music were only a despicable gothic invention.

The main argument Rousseau offered against the value of instrumental music is very similar to the one stated by Hanslick and other formalists almost one century afterward, although seeking for different conclusions: Music cannot convey concepts or definite ideas, and these concepts seem somewhat

necessary for the emotions to happen in a definite way (or at least for the audience not to get lost in a thirty-something-minute-lasting work of music).

Just as the feelings that painting arouses in us are not all due to colors, so the dominion music has over our souls is not all the work of sounds. Beautiful colors, finely shaded, please the sight, but that pleasure is purely one of sensation. It is the design, it is the imitation, that endows these colors with life and soul, it is the passions which they express that succeed in moving our own, it is the objects which they represent that succeed in affecting us. [...] / Even if we were to calculate the ratios of sounds and the laws of harmony for a thousand years, how will this art ever be made an imitative art? Where is the principle of this supposed imitation, or what is harmony the sign, and what do these chords have in common with our passions? / Were the same question put about melody, the answer would come of itself: it is the reader's mind beforehand. Melody, by imitating the inflections of the voice, expresses complaints, cries of sadness or of joy, threats, and moans; all the vocal signs of the passions are within its scope. It imitates the accents of languages, and the turns of phrase appropriate in each idiom to certain movements of the soul; it not only imitates, it speaks, and its language, inarticulate but lively, ardent, passionate, has a hundred times more energy than speech itself. [Rousseau 1769, XIII-XIV]

The change in the perception of instrumental music from Kant's and Rousseau's dismissal to the Romantic exaltation of it is closely tangled with the development of the symphony. Now then, in what regards to the symphony's development, we should briefly mention that it evolved from the opera overture (which was often called 'symphony' as well) and that used to serve as an introduction for the operas, or as a "call for attention" so that the audience had time to relax and concentrate on the following drama. Eventually (around the 1720's) the overture evolved into an independent movement, but its importance was rather secondary until the beginnings of the 19th century, when an impressive change in its assessment took place, as we shall see. The Italian overture had a three-movement structure, fast-slow-fast (i.e., an allegro followed by a lyric andante or adagio, and a rhythmic dance as a finale), and we can find in this structure the roots of the classic sonata and the symphony as we find it commonly expressed in Haydn's, Mozart's, and Beethoven's compositions, which are usually pieces compounded by three or four movements with contrasting characters.

In the early classic period, a very important contribution to the history of music was flourishing, without which the rise to prominence of instrumental music would have been unthinkable: the simplification of the compositional structures or musical forms, along with very logical, transparent musical ideas that could be easily retained by the listener. This change, which might have come as a reaction to the

excesses and superfluity of the opera singers' demands, brought also as a result an instrumental music that had very recognizable structures as devices that could make it intelligible without the help of a text. Indeed, symphonic compositions not only demanded a different kind of attitude from the audience but also a simplified formal schema for the compositions as well.

In general, though, a classical symphony has the following structure: Its first movement includes the most serious and important subjects written in sonata-form; the second movement is usually calm and sweet, in contrast with the complications and seriousness of the first movement; the third movement, a dance, is generally shorter than the other three and is written in a simple, popular structure such as a minuet; and the finale—developed by Haydn by the 1760's—is a humorous allegro or presto.

Also, it is interesting to pay attention to the kind of audience the symphony had during its flourishing period. Haydn, for example, wrote most of his symphonies for the court of Prince Anton Esterhazy, a very magnificent and cultured sponsor who hosted private concerts in his palace very often. Thus, the audience the symphony had was initially incredibly closed, small, and private. After the prince's death, though, Haydn did not write as many symphonies, since he did not have as many commissions.

It is meaningful that, even though Haydn regarded the symphony as a serious composition and not only as a light entertainment, he did not mention any of his symphonies in a draft of his autobiography in 1776 for the Austrian Encyclopedia. Instead, he spoke about his major three operas, an oratorio, and a *Stabat Mater* version. He did not consider of any importance talking about his more than seventy symphonies written up to that point (a fact that should give us a hint about how underestimated instrumental music was in the 18th century, even by musicians themselves). Although instrumental music was regarded as capable of moving the passions, it also was considered too vague and imprecise to transcend mere arousal: Rousseau's and Kant's dismissal of instrumental music—and particularly the sonata—was very common during the 18th century.

Nevertheless, the kind of audiences the symphonies were played for changed gradually from an extremely closed audience in times of Haydn¹, to an extremely public one in times of Beethoven; from being the voice of the nobility, to being the voice of a rising bourgeoisie and, ultimately, the voice of a whole society in a gregarious sense. Indeed, the symphonies, and particularly those by Beethoven, would

¹ I am talking, of course, about the period Haydn worked for Prince Esterhazy, because Haydn's last 12 symphonies were commissioned by Salomon in London and would have had large audiences.

become regarded as the voice of German nationalism. The symphony's features that were exalted were precisely the simultaneous autonomy of the different voices and the harmony of the whole, and since these features were the same that were sought in a perfect society, the symphony became a perfect symbol for the ideal society. However, as musicologist Carl Dahlhaus pointed out, the change that was taking place went beyond personal preferences, forms and styles, for it was rather a change in the very concept of music and what it signified [Dahlhaus1989, 5].

For example, in 1813, E.T.A. Hoffmann wrote a review of Beethoven's Fifth Symphony that constitutes a sort of musical Romantic manifesto which enhances the symphony as the pinnacle of all arts and, furthermore, of culture itself. It shows clearly the Romantic change of perspective toward instrumental music as inserted in a metaphysical schema that considered that the aim of art was to grasp a glance of the Infinite, a glance of the Absolute. And thus, since the infinite does not admit strict characterizations, instrumental music's inability to express definite ideas became its most valuable strength, rather than its shameful weakness.

When we speak of music as an independent art, we should properly refer only to instrumental music which, scorning the assistance and association of another art, namely poetry, expresses that peculiar property which can be found in music only. It is the most romantic of all the arts, one might almost say the only really romantic art, for its sole object is the expression of the infinite. The lyre of Orpheus opens the doors of Orkus. Music discloses to man an unknown kingdom, a world having nothing in common with the external sensual world which surrounds him and in which he leaves behind him all definite feelings in order to abandon himself to an inexpressible longing. [Hoffmann 1813,127]

Hence, music's independence from words was now attributed to its ability to operate beyond them in order to accede to the Absolute and immeasurable. However, Hoffmann's essay represents one of the best known examples of an aesthetic that was shared by a series of writers such as Goethe, Novalis, Friedrich Schlegel, Wilhelm Heinrich Wackenroder, Ludwig Tieck, Jean Paul Richter, Arthur Schopenhauer, and Friedrich Schiller.

The idea of art's self-sufficiency was already present, though, in Karl Philipp Moritz's proclamation of *l'art pour l'art* in his writings between 1785 and 1789. From a general art theory that was primarily focused on poetry, the idea of an independent, self-sufficient art was transferred to instrumental music, which began to be praised as music freed from any "extra-musical" function. With this notion of music's self-sufficiency, music's relationship with poetry and the affects, so common and important during the 17th

and 18th centuries, became suspicious for Romantic aesthetics. Furthermore, since music's imitative powers were never so acute as to depict a particular situation without generating any doubt or debate about what a particular composition is a depiction of, composers' efforts to depict a program or an affect were now considered banal.

Have you even suspected this peculiar power of music, you pitiable instrumental composers who have taken such anxious pains to portray definite emotions, yes, even actual occurrences? How could you possibly conceive of using plastically that art which is just the opposite of sculpture? Your sunrises, your thunderstorms, your Batailles des trois Empereurs, etc., were nothing but ridiculous aberrations and have been deservedly punished by absolute oblivion. [Hoffmann 1813, 127]

Music, once considered the 'language of the emotions,' became the 'language beyond language,' a language that was supposedly able to achieve something marvelous, a reunion of the noumenal and the phenomenal: Such was the hefty task entrusted to instrumental music, and particularly, to the symphony. Let me, then, briefly explain how this was supposed to be accomplished in music according to the Romantic aesthetics.

The key perspectival change had to do with the nature of musical content and form. In the Baroque period, music's meaning, significance, and force were all referred to as the 'content' a particular piece of music had, along with the effectiveness of its reception; i.e., the reception of its message. Thus, the main debate took place in identifying where the content of music was, what content would that be, and how would it crystallize in musical form.

In effect, as we have mentioned in the past sections, musical compositions and performances were historically linked to different kinds of social uses, including the molding of people's characters (as in the Greek theory of ethos). Music was also seen as conveying certain meanings mainly through mimesis and associations, and its effectiveness in arousing the audience with certain passions was widely recognized. Thus, musical analyses referred primarily to the appropriateness of one particular content over another, to the different techniques to achieve certain associations, to the theories that may support one technique over another, and so forth. Nevertheless, the mimetic theory was not usually questioned, though the kinds of imitation proposed may have varied over time.

The Romantic aesthetic, in turn, began by profoundly doubting the mimetic theory of art and, specifically, of music. What are the grounds of this doubt? I contend that this hesitation toward mimesis was implicitly referring to a Platonic understanding of it. Indeed, “art” in the Platonic theory of mimesis stands at a second level of falsehood, since it depicts the phenomenal world, which is already an untrue reflection of the noumenal world; i.e., it is no more than the mere imitation of an appearance [*Rep.* X. 601c-602a; *Soph.* 265c-d]. That seems to suggest that the work of art would firstly stand in a relationship of imitation with the original, and furthermore, that its purpose is precisely that of imitating something, be it a landscape, a human body, affections, or a course of affairs. Since this imitation is never going to grasp the original, mimesis was thus accused of begetting deceptions.

The Romantic rejection of the mimetic theory comes more from a rejection of a stipulation of the imitation of an original as art’s purpose or goal, than from an actual remonstrance about the mimetic mechanisms that had been operating for centuries. In effect, the new high status of works of art would not be sustainable if such a mimetic ranking were still in use, for instead of the work of art being able to grasp the “truth” of the noumenal sphere, it would just stay as a second level copy with no hopes of becoming anything else but a deception device. Furthermore, the mimetic model was accused of fastening art to a fake purpose (that of imitating the original) that was not wanted anymore, and that music, less than any other art, could not fully accomplish.

However, we should not accept those criticisms on mimesis without further examination. For the sake of the argument, it should be firstly clarified what was the issue at stake in the Romantic criticism of the concept of mimesis in arts. If we depart from a general Romantic aesthetic theory that is already linked to a series of metaphysical conceptions such as those held by German idealists, it is no longer strange why mimesis was considered something that should be transcended. Indeed, for the most part, mimesis was taken to work against art’s freedom and self-sufficiency, since it would tie it to the phenomenal, instead of clearing its way to the noumenal.

Even though I do not intend to make a thorough review of German idealism’s aesthetics, it is nevertheless important to offer a general outlook of the arguments in order to clarify the criticisms held against mimetic accounts. Let’s begin our brief review with Friedrich Schiller’s position. Schiller suggested that, although the content of the emotions cannot be represented in any art, their form could certainly be [Bonds 2006]. Music, Schiller claimed, has no other object but the emotions’ form, and even though music does not embody emotional content, it works through imitations of the emotions’ form that are later

mediated by the listener's imagination. Indeed, Schiller's account acknowledges the mimetic mechanisms that were later neglected, and that in this case consist in the imitation of the emotions' form (which he does not explain any further).

Schelling's position toward music is that, out of all the arts, music is the most successful in formally accommodating the infinite into the finite, precisely because 'it is separated from the body' and it shows rhythm as mathematical form (Schelling 1989, 107). Rhythm, though, was considered by Schelling the primary form of music, since it is no less than the 'particular informing of unity into multiplicity, an informing that is itself encompassed as a particular unity.' While distinguishing three kinds of unities within music (rhythm, modulation, and melody), he gives us a quite severe assessment of what is now called "programmatic music."

We can also see already that if the three basic forms or categories of art are music, painting, and the plastic arts, then rhythm is the musical element within music, modulation is the element of painting (not to be confused with musical painting, which only a completely degenerate and sunken sense of taste can find good in music, such as that contemporary sensibility that finds edification in the bleating of the sheep in Haydn's creation music), and melody is the plastic element. [Schelling 1989, 112]

For indeed, according to Schelling—who considered himself in this respect a follower of Pythagoras—the role reserved for music is much higher than that of depicting nature, since it is *pure form* freed from the object or from matter. For him, art is not concerned with things themselves, but rather with their eternal essence; and so, music gains the highest range among the arts, since it portrays pure movement "by being carried by invisible, almost spiritual wings." [Schelling 1989, 114-6]

The forms of music are the forms of the eternal things insofar as they are viewed from the real perspective, for the real side of the eternal things is that side from which the infinite is formed into the finite. Yet this same informing of the infinite into the finite is also the form of music, and since the forms of art in general are the essential forms of things, the forms of music are necessarily the forms of things in themselves or of the ideas viewed completely from their real side of the eternal things insofar as the latter are viewed entirely from the perspective of their particularity. Furthermore, to the extent that the eternal things or the ideas are revealed from the real side within the cosmic bodies, the forms of music as the forms of ideas viewed concretely are also the forms of the being and life of the cosmic bodies as such; hence, music is nothing other than the perceived rhythm and the harmony of the visible universe itself. [Schelling 1989, 114-5]

Similarly, for Hegel, art is the sensible representation of the idea [of beauty]; i.e., it should *represent* the idea, rather than *imitate* the sensuous world. For indeed, he considered that the copy will always be inferior to the original, and that art should be concerned with creation, rather than with imitation.

Art liberates the true content of phenomena from the pure appearance and deception of this bad, transitory world, and gives them a higher actuality, born of the spirit. Thus, far from being mere pure appearance, a higher reality and truer existence is to be ascribed to the phenomena of art in comparison with [those of] ordinary reality. [Hegel 1975, 9]

According to Hegel, art tends to find an equilibrium between form and content, and so, he distinguished three stages of art according to its success in sensibly representing the idea: the symbolic, the classic, and the romantic stages. He considered that 'symbolic art' is concerned with a very close *imitation* of nature, and thus, that it presents a very limited notion of the ideal, of the Absolute. Therefore, symbolic art would remain as a frustrated attempt to accomplish the union between content and form. About 'classic art,' Hegel claimed that even though it presents an accomplished equilibrium between form and content, its decadence will come because of its tendency to anthropomorphism. In turn, 'romantic art' presents the most perfect notion of the Absolute, since it recognizes the insufficiency of its material means to represent the ideal. "In this way romantic art is the self-transcendence of art but within its own sphere and in the form of art itself." [Hegel 1975, 80] Consequently, though, none of the stages of art are taken by Hegel as enough to gain access to the Absolute, and that is the reason why he considers that art has to be transcended in favor of, firstly, religion and, ultimately, philosophy.

On the other hand, Arthur Schopenhauer considered that arts in general have an imitative, depictive nature, and that music in that regard would be of such nature as well, "only stronger, more rapid, more necessary and infallible" [Schopenhauer, *WWR*, I-III §52]. But there is something more to music. Indeed, he claimed that if music imitates the world, it is in a very obscure way, yet it is very striking and profound. Schopenhauer explained this double nature of music by considering that all the arts are indirect reflections of the Will, while music is rather a direct objectification of the Will itself. Schopenhauer recognized that this is a problematic statement, since it establishes that music is in a relationship of representation with that which cannot be directly represented: The Will.

The (Platonic) Ideas are adequate objectification of the will. To simulate the knowledge of these by depicting individual things (for works of art are themselves always such) is the aim of all the

other arts (and is possible with a corresponding change in the knowing subject). Hence all of them objectify the will only indirectly, in other words, by means of the Ideas. As our world is nothing but the phenomenon or appearance of the Ideas in plurality through entrance into the principium individuationis (the form of knowledge possible to the individual as such), music, since it passes over the Ideas, is also quite independent of the phenomenal world, positively ignores it, and, to a certain extent, could still exist even if there were no world at all, which cannot be said of the other arts. Thus music is as immediate an objectification and copy of the whole will as the world itself is, indeed as the Ideas are, the multiplied phenomenon of which constitutes the world of individual things. Therefore music is by no means like the other arts, namely a copy of the Ideas, but a copy of the will itself, the objectivity of which are the Ideas. For this reason the effect of music is so very much more powerful and penetrating than is that of the other arts, for these others speak only of the shadow, but music of the essence. [Schopenhauer *WWR* I-III-52, 256]

As I said, I do not intend to make a profuse analysis of the German idealist metaphysics and aesthetic theories, since it would definitely exceed the scope of this chapter. However, I do want to make two points regarding the criticisms it states of the concept of mimesis in the arts. First, the fact that there might be some imitation mechanisms operating in a particular work of art, does not imply that the imitation itself (of whatever feature is being imitated) is the goal of the piece, or the goal the artist pursued. It does not have to be so, though in some cases it might precisely be what the artist intended. Thus, I consider that the worries about art's self-sufficiency in regards to its purpose do not fairly follow from the utilization of mimetic mechanisms.

Second, I do not regard imitation as a closure of the possibility for creation. In effect, all sorts of imitation mechanisms might be used within a work of art, and yet, the result might open for us a brand new panorama. Mimesis does not really threaten art's self-sufficiency or its creative capacity, at least not without the metaphysical framework which proposes a dualism, a dualism that is expected to be resolved in the work of art, but that nevertheless also praises 'form' over 'matter.' It is the dismissal of matter that makes it shameful for art to resort to imitation.

In his book *Music as Thought*, musicologist Mark Evan Bonds acknowledges, though, that the rhetorical techniques, such as the Figurenlehren, still operate within Romantic compositions: "This is not to say that Beethoven's music—or the music of any other composer, for that matter—can ever operate wholly outside the framework of rhetoric. The Fifth Symphony is full of rhetorical devices and strategies that draw us into its web, and Beethoven uses essentially the same stock of techniques that composers had

been using for centuries: repetition, variation, contrast, interruption, silence, and so on. What has changed, however, is the listener's basic orientation toward these rhetorical techniques." [Bonds 2006, 36]

Also, as Bonds has pointed out in regard to the kind of listening expected, the idealist aesthetic assumed that the work of art is to be reconstructed in the spectator's mind by her imagination. Thus, given the premise of a free and absolute self, and the role conceded to imagination, idealism had no problem in integrating multiple interpretations of a given work of music. "The fact that an instrumental composition could generate widely differing accounts of its "content" was accepted as a consequence of the music's capacity to reflect a higher ideal. That this ideal might be only partially comprehensible was scarcely a fault of the medium itself" [Bonds 2006, 30] In contrast, the earlier aesthetic assumed that any doubt or discrepancy regarding musical content could only come as a consequence of the imperfection of the composition itself, along with music's inherent deficiencies as a depiction medium. Therefore, Bonds claims that the contrast in the two kinds of listening goes from a passive role of the listener under the rhetorical model to a more active role in the aesthetic of idealism.

Another feature that links the symphony and the spirit of Romanticism is the concept of the sublime, along with its imagery of foggy, dream-like images. For example, in the following passage of Hoffmann's analysis of the Fifth symphony, we can grasp the resonances of the concept of the sublime as we find it in Kant:

Beethoven's music stirs the mists of fear, of horror, of terror, of grief, and awakens that endless longing which is the very essence of romanticism. He is consequently a purely romantic composer, and is it not possible that for this very reason he is less successful in vocal music which does not surrender itself to the characterization of indefinite emotions but portrays effects specified by the words rather than those indefinite emotions experienced in the realm of infinite? [Hoffmann 1813, 128]

Indeed, the association between 'the sublime' and the symphony as a genre had gained popularity by the beginnings of the 19th century. The symphony was considered particularly suited for the expression of the sublime insofar as its lack of soloists, complex harmony, and profusion in the development segments generated a sensation of irregularity, of a certain indefinite massed force. In effect, the Romantic composers explored the limits of the harmony and assayed to write longer 'development periods' in which the melodic theme was decomposed and the harmony was unstable. The resolutions in the tonic and the

recapitulation of the theme were delayed for longer after the development sections, so that the tension created could be expanded until the very last moment.

The goal that art was supposed to pursue was no less than that of sharing with the rest of the world a glance of the Absolute, with which art was considered to have the most direct connection. Since the purpose art was expected to achieve was too high, and the mimetic mechanisms were rejected insofar as they were considered banal, the concept of the 'artistic genius' played an important role in Romantic aesthetics. In effect, 'the absolute', 'the infinite', or 'the spirit', are not concepts that accept mere operation rules, and thus, the analogies, symbolisms, and associations used so far in art were considered incapable of offering any advantage in representing the ideal. Therefore, the model of rhetorical composition in music, or any symbolic, technical artistic system in general, was dismissed as a mere mechanistic deception model that could achieve nothing but a second-hand imitation of the same trivial things of everyday life.

In the Romantic aesthetic, though, the genius was supposed to submerge herself in the deepest realms of her own subjectivity and, nevertheless, be able to transform such a particular experience into a universal feeling through the manipulation of a particular matter. She was supposed to model her particular subjectivity into a matter's shape—a particular form that, despite its particularity, represents an ideal form. In doing so, art was taken to gain access to the infinite, and in this way become universal. Indeed, a particular work of art was taken as essences crystallized in a particular formed matter. Also, even though it was considered that art demands an imaginative activity on behalf of the spectator, the 'understanding' of it was, in principle, achievable by everyone. The genius is the one who is capable of making such a journey and of accomplishing such an incredible task; that is, going from her particular experiences to the universal essences and crystallizing them into a particular form again, making it available for the whole society in which each of the spectators can, in principle, recognize themselves.

This is the framework in which the concept of 'absolute music' emerged. As is evident, it would not be enough to refer to 'absolute' or 'pure music,' simply as a term that refers to instrumental music, since it involves a whole set of metaphysical conceptions that rarely the debate nowadays if neglected. The use of the concept 'absolute music' is not innocent. It is also the reflection of the way a society in a determinate historical period changed its way of thinking about art, artists, and the very essence of music. As Arnold Schering has noticed, it was only after 1800 that the ghost of dualism pervaded music, and then we had to start wondering about which kind of music we were encountering, whether the 'absolute,' or the 'applied' one. Before that, he claimed, there was only a unified notion of music. [Schering 1951, 90]

The concept of 'absolute music' was actually set forth by Richard Wagner in his program for Beethoven's Ninth Symphony, in which he talked about the fourth movement as almost abandoning the limits of absolute music. Indeed, being a composer of symphonies was not an easy role after Beethoven, since many considered that it was impossible to surpass or even achieve what Beethoven had already accomplished. Thus, the genre was proclaimed to be finished.

Later on, though, in his *The Artwork of the future* [1849], Wagner used the term 'absolute music' to refer to the kind of music that is 'partial' and is separated from the 'total artwork'; i.e., the Wagnerian opera as an integration of music and drama. As we can see, the very concept of absolute music was used in a completely different way by Wagner. For him, absolute music's place should be taken over by the 'total artwork,' given that he considered that 'absolute music' is separated from its roots, from words, and from its performative and scenic nature. Indeed, Wagner claimed that Beethoven himself announced the end of 'absolute music' in the fourth movement of his Ninth Symphony, since he introduced the chorus singing Schiller's poem *An die Freude*¹.

The term 'absolute music' is commonly (and erroneously) attributed to Eduard Hanslick, though, because he became the most salient figure out of those who reacted against the excesses of the Romantic way of referring to music. Effectively, the enormous role attributed to music in the Romantic era, along with the poetic way that writers often used when talking about it, was taken with skepticism by critics in the mid-19th century. Hanslick is known as the godfather of musical formalists, for he claimed that we should distinguish what is specifically musical from what is an added or associated content of it that would be better referred to as 'extra-musical.' Music's essence, according to Hanslick, is nothing else but "tonally animated forms."

Thus, the separation between 'musical' and 'extra-musical' features started to be a common usage. The terms' choice is not innocent either, and insofar the later discussion between formalists and musical content theorists kept the terms, the debate was already assuming that anything that is not strictly speaking

¹ However, Karl Czerny, Beethoven's disciple, commented on Beethoven's regret about introducing a chorus in the fourth movement, so that he seriously considered rewriting the whole movement and making it completely instrumental. Also, it is interesting to mention Leonard Bernstein's famous performance of Beethoven's Ninth Symphony in Berlin in 1989, as the Berlin Wall was being cracked. In this historic performance, Bernstein conducted an orchestra constituted by musicians from the four countries that occupied Germany (the U.S., Russia, England, and France), and he changed the word "Freude" (joy) for "Freiheit" (freedom) in Schiller's poem, under the assumption that it was Schiller's original choice. However, as far as I know, this last fact has not been confirmed.

musical form should be considered—a priori—an extra-musical feature. Hence, although people argue that musical content is very important, insofar as they adopt the term ‘extra-musical,’ they are already condemning as outsiders all those features that they are trying to include in what is musical. For example, according to a formalist position, in an opera, the plot is not to be considered musical, nor the staging, nor any other feature that is not a ‘tonally shaped form.’ Only the ‘tonal form’ is ‘musical,’ or belongs to the music’s essence. We should then ask ourselves whether we are ready to consider a particular song’s lyrics as excluded from the song as a musical feature, or the musical practices as excluded from what is musical, or the composer’s ‘programmatic’ intentions as also extra-musical and, say, just consider that Mendelssohn’s *Midsummer night’s dream* is absolutely complete without the plot or the staging or the intentions Mendelssohn had to portray anything. All those features, according to a formalist view, should be simply taken as extra-musical features. Of course, our arousal with certain emotions is not to be considered part of the music, and, as Hanslick would say, the fact that music has emotional power does not entail that it conveys emotional content as well. This is the topic that is to be discussed in the next section.

2.3 EXPRESSING AND AROUSING

The account that considers that musical expressiveness is dependent on the listener's emotional reactions to music is better known as 'arousal theory.' On the other hand, the 'expression theory' can be taken as the perspective that considers that musical expressiveness is dependent upon the expression of the composer's or the performer's emotional states through the music they make. Both perspectives have in common that their claims are somewhat intuitive, and therefore, that they both have a large span of supporters. However, if one analyzes the inner debate a bit closer, the arguments turn out not to be straightforward after all.

It seems undeniable that music has a special power upon our emotional reactions, and that we specially appreciate it for that. In effect, the relative importance and pertinence of an enquiry about musical expressiveness and music's relationship to emotions seems to emanate from the implicit claim that such a relationship also builds musical value. However, to me, these are separate questions that might be related but that should be differentiated for the sake of clarity in the argumentation: one question has to do with musical value, while the other has to do with the mechanisms that operate in musical expressiveness. Indeed, one might analyze which is the role that our emotional reactions to music play in musical value, if any. For example, within certain frameworks, music might be considered a mere means for our emotional reactions, and therefore, a certain composition can be considered more or less successful insofar as it elicits the appropriate emotional responses in the audience. A similar account would consider a composition successful insofar as the composer or the performer successfully expressed their emotions through the music. Nevertheless, the answers that might be given to this kind of questions would depend on a broader conception of musical value, a debate that I will not be undertaking here.

In this research, I am rather concerned with the second question; that is, with the way the relationship between music and emotions works, or which mechanisms operate in it. For indeed, the main questions that we have been facing are whether it is legitimate to talk about musical expressiveness, what kind of relationship music has with emotions, and what options do we have for setting a relationship between music and the affective phenomena. But we have to realize that if musical expressiveness can be

defendable, and, say, a relationship between music and the emotions gets proved, that would not directly concede to it a special role within the musical value scale.

Thus, we can survey our options for characterizing musical relationship with emotions as follows: Either a direct relationship (as if the emotion belonged to the music itself) or an indirect relationship (where it is not claimed that the music has an emotion, but rather that it somehow represents the emotion)¹. A direct relationship between music and emotions in this sense would mean that it is the music itself that possesses the emotion, and therefore, it is obviously not the best way to explain musical expressiveness. Indeed, if emotions depend strongly on cognitive activity and physiological responses, they have to be held by sentient beings. Thus, since music is not a sentient being, music cannot have emotions, nor express them as if it were the emotion's subject.²

But on the other hand, characterizing the relationship as indirect comes with its own challenges. If the relationship between music and emotions that we are supposing is indirect, that would mean that it is either someone else that is undergoing the emotion, or that music represents the emotion. And so, in attempting to understand the relationship between music and emotions, we should begin by wondering whose emotions do we care about, whether the composer's, the performer's, the listener's, or none. Thus, there are mainly three perspectives to explain musical expressiveness from an indirect approach: An expression account (for which music would be expressive insofar as the composer or the performer expresses her emotions through the music she makes); an arousal account (according to which music is expressive in that it arouses the listeners with emotions); and the expressive qualities approach (for which music itself possesses expressive features that are related to emotions in such a way that it can represent emotions).

¹ This differentiation between direct and indirect relationship between music and emotions does not have anything to do with the straightforwardness of the emotional reactions elicited by the music. It does not mean that the direct relationship is faster than the indirect, or that the indirect involves a cognitive processing while the direct does not. Rather, it only makes a distinction of the possible approaches to the situation: the direct relationship, which would hold that the emotion is actually in the music, and the indirect relationship, which does not hold that the emotions are actually musical content in a literal sense. Instead, an indirect relationship kind of approach considers that the emotions are either felt by a person (the listener, the performer or the composer), or that they might be represented.

² For further discussion on this topic, see Monroe Beardsley (1981, 15-73).

In his influential book *On the Musically Beautiful*, Eduard Hanslick claimed that the emotions¹ are not the content of music. Even though I want to argue in favor of musical expressiveness, I consider that the grounds Hanslick used to argue against the relationship between emotions and music are quite accurate. Let us start by reviewing them.

Hanslick considered that emotions are not only dependent upon physiological conditions, but also upon ideas, judgments, and rational thought. But Hanslick's idea of emotions was far away from being ingenuous. His account is consistent with what became known as a 'cognitive approach' to the emotions, and what is highlighted by such an account, as we have seen, is the fact that emotions are intentional. There are, thus, some beliefs that are directed toward an object—the object of the emotion; and these beliefs are what make specific any emotion. So, just as the large tradition of cognitive approaches of emotions emphasizes the necessity of a defining belief in order to constitute an emotion, Hanslick considered that it is impossible to have an emotion of, say, love, without the representation of a beloved person, and so forth.

The feeling of hope cannot be separated from the representation of a future happy state which we compare with the present; melancholy compares past happiness with the present. These are entirely specific representations or concepts. Without them, without this cognitive apparatus, we cannot call the actual feeling "hope" or "melancholy"; it produces them for this purpose. If we take this away, all that remains is an unspecific stirring, perhaps the awareness of a general state of well-being or distress. [Hanslick 1986, 9]

The difficulty of understanding music in terms of emotions becomes apparent immediately, because there is no obvious intentional object in musical experience or, if so, the intentional object does not seem to be the music itself. We can, in effect, be saddened by the music, but we do not hold any particular belief towards it that could justify such an arousal. It is not toward the music that we become sad, proud, or angry. Hanslick's arguments against these forms of music's indirect relation to emotions focus on the lack of intentionality in the musical experiences, combined with a cognitive account of emotions, for which emotions are necessarily intentional. This is a reconstruction of Hanslick's arguments:

¹ The term Hanslick actually used is "feelings," but he utilized it as I use the term "emotions."

1. Against Arousal: There is no intentional object in pure music. Therefore, the listeners' emotional response is not about the music. Thus, their emotional arousal cannot constitute an account about the expressiveness *of* music.

2. Against Expressive qualities: Hanslick considered that there is no strong connection between the musical formal characteristics and emotions and, therefore, that the "expressive qualities" are irrelevant. That is because he considered that intentionality is absolutely necessary in order to constitute a specific emotion, and that the "expressive qualities" that music presents can be related to emotions only in a vague fashion if they are exhibited without the relevant belief that defines any emotion. Thus, since emotions are definite due to their intentionality and a relevant belief, it follows that the musically expressive qualities cannot refer to any *particular* emotion.

3. Against Expression: From the claim that there is no intentional object in music and, hence, no relevant belief toward which the emotion could be stated, plus the claim that there is not a strong connection between music and expressive qualities, it also follows that the composer cannot express emotion through the manipulation of sounds and silences.

Indeed, one of the most challenging problems for explaining musical expressiveness in terms of emotions is the lack of intentionality in musical 'emotional' experiences, since it seems to be a necessary condition for emotions to happen. However, even if it were the case that we have a belief toward music itself that could constitute the emotion we are aroused with, it still seems that our arousal cannot constitute musical content, because it is located outside music itself. In effect, in that case we would be explaining musical expressiveness in terms of something music essentially lacks: *our* emotional state. Moreover, musical expressiveness would be dependent on a person actually being emotionally aroused by the music, which means that if at any particular moment of the listening, the person is, say, distracted, and fails to be emotionally aroused, the music itself would lose its expressiveness. That seems to be a very counter-intuitive claim.

The same argument applies to the expression account, which focuses on the composer's or the performer's emotions. The expression account suggests that a person (namely, the composer or the performer) is actually feeling a certain emotion that gets expressed through the music by the manipulation

of the sound's and the silence's shape. In this case, however, it is still an external person who undergoes the emotion. As we see, that would define musical expressiveness in terms of an external person's emotional state that, after all, might or might not be present in regard to music that, nevertheless, we would still call expressive.

Nonetheless, when it comes to the emotional intentionality toward music, Hanslick seems to hit the target, and not only about musical emotional expression, but also about musical emotional responses, and the expressive qualities that music might exhibit. Notably, it is a parallel problem. In the case of the listener's response, she typically lacks the beliefs that would make the music the response's object, though it is to the music that she responds. Although some people believe that music itself is our intentional object during a musical emotional experience, at least for the interesting cases we can see that such possibility seems very unnatural and forced, given the way intentionality is understood in common emotions. So, for example, if we are angry, there is an object (a person or a situation) toward which we direct our anger. Moreover, we suppose that an offense has taken place, either toward us or toward someone we care about. It seems that you cannot get angry unless you have something or someone to get angry at, plus a belief that you have been offended. In the musical case, however, it is not obvious at all that we are actually angry *at the music*. We are not sad because we believe that we have suffered a terrible loss because of some musical features. And even though there are some unproblematic cases in which music can indeed be the intentional object of an emotional arousal, those cases do not have explanatory power. For example, I might get disappointed by a piece of the music because it is composed incompetently, or upset because the performer did not play it well. However, these are clearly cases that are not relevant in explaining music's expressiveness.

That constitutes pretty much Hanslick's argument against music's capacity for emotional expression and arousal, and its forcefulness derives to a great extent from the intentionality that pure music fails to embrace, and that emotions seem to require in the first place.

The main concern regarding the expression and the arousal theories is better expressed as follows: The composer's, the performer's, or the listener's emotions are not part of the music itself. If we are trying to define musical expressiveness, how would this definition be dependent upon something that is not part of what is being defined? It is not the aim to deny that music arouses emotions in the listeners, or that the

composers or the performers experience certain emotions that they relate to their musical creations. Nevertheless, this is exactly the relationship that should be explained.

I am perfectly comfortable in conceding that music has a causal relationship with emotions; namely, that the composer had certain intentions while modeling her composition, and thus, that she decided to utilize certain elements and arrangements in order to achieve her goals that might or not be of the emotional type. However, that does not mean that the listener's, the performer's, or the composer's emotions constitute intrinsically musical expressiveness. The relationship that seems to be possible between the composer's emotional states and her music is rather that of an efficient cause, but an efficient cause is definitely not a constituent parthood, and therefore, would not define musical expressiveness.

On the other hand, the listener's emotional arousal can also be explained with a causal relationship. Indeed, very often we feel emotionally aroused while listening to music, and it is not rare to hear arguments that support that music is expressive of emotions insofar as it arouses us, the listeners, with certain emotions. Though this is a fact that needs explanation, even if we directly concede it, it seems that the emotional arousal would at best prove another causal relationship between music and the listener's emotions, but not a constituent parthood as well.

Therefore, the counterargument against the arousal and expression theories would be the same, namely, that the bond between people's emotions and music is not a necessary one, while the causal role conceded to it is too weak to provide by itself a satisfactory answer to what it means for music itself to be expressive. Thus, the challenge for new formulations of these theories would be either to provide reasons to think that this bond between music and people's emotions is indeed necessary after all, or to support the claim that a necessary bond is not really needed.

I will dedicate the following section to review the expression and the arousal theories of art's expressiveness, and the next one to the theories that consider that musical expressiveness resides in certain characteristics that music itself has *aka* expressive qualities. Regarding the expression theories, I will take into consideration a general art expression theory (Collingwood's) and one more recent approach that focuses on the musical case (Robinson's). Regarding the arousal theory, I will stick to the more general and plausible formulation of it offered by Derek Matravers. I will then make a general review in order to

see whether these theories can overcome Hanslick's arguments regarding the musical case. Strictly speaking, we should examine whether the arousal and the expression theories are able to secure a necessary bond between people's emotional states and the music itself. Otherwise, the foundations for such accounts would remain undermined.

2.3.1 *THE EXPRESSION THEORY*

Aus meinen großen Schmerzen
Mach ich die kleinen Lieder;
Die heben ihr klingend Gefieder
Und flattern nach ihrem Herzen.

Heinrich Heine, *Buch der Lieder*

In regard to musical expressiveness, we tend to concede a special role to the composer's or the performer's emotional states, insofar as their emotional states presumably get expressed through the music. But how is this possible? This would suggest that the emotion that, let's say, the performer is experiencing, gets somehow crystallized in musical form, and that in this way it is expressed and transmitted. Another possibility (though a very weird one) would be to suggest that the emotion can somehow travel through music in the way electricity does through conductive materials. Again, we should remark that the questions about the mechanisms by which the composer's or the performer's emotions could be expressed through music, and the questions on the role that this expression might play in musical value, are different questions.

I am going to begin by briefly reviewing Collingwood's theory of the artist's emotional expression, which I will take as a version of what will henceforth be called the 'expression theory.' In his attempt to determine what art is, Collingwood was concerned with the differentiation of art from craft or mere *technē*. For him, art is not solely a matter of following a set of rules, techniques, or symbolisms in order to refer to an emotion, but rather a matter of 'expression.'

According to Collingwood, to express an emotion in art means something different from 'describing it' or, let's say, from referring to it. One first reason for this claim is that he considered that the artist does not know from the beginning what she wants to express; she does not even know the emotion she is feeling, for it is in the process of creating the artwork that she will elucidate her emotion. If that is so, the usage of such techniques, although possible, would be merely a matter of craftwork and not a matter of true artistic expression, since it would not be possible for the emotion to be truly embraced in a preexisting plan.

Of course, what we feel when we feel sad does not seem to be fully expressed by the word 'sad' or the phrase 'I feel sad,' and that is what Collingwood seems to refer to as 'describing or labeling the emotion,' rather than expressing it. Albeit I disagree with Collingwood's differentiations and choice of terms¹, at the moment it is important to highlight his claim that the emotions expressed in works of art are not general emotions, but rather very particular instances of them. It is not sadness in general; it is *that sadness* that *is felt* in such and such ways, and that, according to Collingwood, could only be instantiated in that particular formed matter that became the artwork. We will come back to this issue later on, since it is not clear what we mean by saying that an emotion is a general emotion or a particular one.

In Collingwood's view, the work of art is the result of a cognitive process by the artist, in which she clarifies an emotion that was rather diffuse to her at the beginning. However, the artwork is not a result of this cognitive process in a temporal way as well, since Collingwood considered that the emotion gets clarified through the manipulation of the matter; i.e., through the creation of different forms while creating the artwork, and not prior to its creation. For indeed, how could the artist aim to 'describe' an emotion that is not even clear to herself? Collingwood claimed that the mere description of the emotion would result in

¹ For example, it is unfortunate that he puts on the same level the 'description' of the emotion, with its labelling with a general word such as 'sad'. The negative conclusions toward a description of the emotions do not really follow from the 'emptiness' of the word as a label.

a hollow product, while true artistic expression would require the artist to be sincerely involved in a cognitive process in which her 'particular emotion' gets clarified.

Something was no doubt there before the poem came into being; there was, for example, a confused excitement in the poet's mind; but, as we have seen, this was not the raw material of the poem. And when the poem is written, there is nothing in it of which we can say, 'this is a matter which might have taken on a different form', or 'this is a form which might have realized in a different matter'. [Collingwood 1938, 24]

But Collingwood is nevertheless critical of some of the excesses of Romanticism, and so he did not claim that there is only raw inspiration and no skill or technique involved in the creation of an artwork. Instead, he went on to say that it does not follow from his observations that any work that has involved certain planning should be excluded from the realm of artworks, since even though technique is not a compulsory characteristic of artworks, it is a permissible one. [Collingwood 1938, 22]

A very respectable intuition of an expression theory such as Collingwood's is the one that refuses to treat artworks as mere means for an end, be it the arousal of the emotions in the audience, or otherwise.¹ I think this is an intuition that should be maintained, though it might be considered a matter of artistic value. Of course, that is not to say that the audiences would or should never be aroused by the artwork. Rather, what Collingwood claimed is that it is not the same as the case in which the artist expresses herself in such a way that the audience may relate to the work of art, than the case in which the main goal of the work is to arouse the audience, independently of the artist being moved at all:

¹ It could be seen that there is a relation between Collingwood's rejection of art as mere means for an end on the one hand, and Adorno's and Horkheimer's preoccupation about the instrumental reason applied to arts, which they call 'the culture industry' in their *Dialectic of Enlightenment* (1944). Indeed, Adorno and Horkheimer claimed that art under the logic of technology—the industry—is no longer the space for true expression, where the differences may occur and expand the experiences. Rather, the 'culture industry' turns artworks into generalized formulas that can be suited to accomplish certain goals such as the manipulation of people's feelings and ideas: "The culture industry has developed in conjunction with the predominance of the effect, the tangible performance, the technical detail, over the work, which once carried the idea and was liquidated with it. By emancipating itself, the detail had become refractory; from Romanticism to Expressionism it has rebelled as unbridled expression, as the agent of opposition, against organization. In music, the individual harmonic effect had obliterated awareness of the form as a whole; in painting the particular detail had obscured the overall composition; in the novel psychological penetration had blurred architecture. Through totality, the culture industry is putting an end to all that. Although operating only with effects, it subdues their unruliness and subordinates them to the formula which supplants the work." [Adorno and Horkheimer 2002, 99]

It follows from this that the expression of emotion, simply as expression, is not addressed to any particular audience. It is addressed primarily to the speaker himself, and secondarily to anyone who can understand. Here again, the speaker's attitude towards his audience is quite unlike that of a person desiring to arouse in his audience a certain emotion. [Collingwood: 1938, 111]

Just to clarify a little bit further the concept of expression in a theory such as Collingwood's, let me mention other distinctions he makes in order to figure out what expression is *not*. First, expression is not catharsis or mere pouring. Indeed, Collingwood pointed out that in a cathartic activity what happens is a purge of the emotion in order to get rid of it, while in expression the emotion is still present to the mind, but somewhat less disturbing insofar as it has been made conscious. Second, true expression is also different from a mere betrayal of the emotion. In effect, since expression implies a cognitive clarification of the emotion, true expression could not just happen unwillingly as mere symptoms of the emotion. For instance, if I cry because I feel sad, it would be said that my crying is not a true expression of my sadness, but only a symptom or a betrayal of it. In Collingwood's view, albeit we often refer to these symptoms as expressions, it would be rather an improper use of the term.

2.3.1.1 Contending the Expression Theory

In the second half of the 20th century, some harsh critiques of the Romantic expression theory saw the light: O. K. Bouwsma's [1950], John Hosper's [1955], and Alan Tormey's [1971], of which I am only going to focus on Tormey's. However, we can say that, as Stephen Davies puts it, the three of them criticize the supposition "that the expressiveness of a process is transmitted to the product having its origin in that process, that the expressiveness of an action is apparent in traces left by that action." [Davies 1994, 173]

According to Tormey, it is not the same thing to have, say, a sad expression, than to be an expression of sadness, given that an expression of an emotion cannot occur in the absence of the emotion, while the sadness-like behavior can indeed occur without sadness at all. Hence, Tormey suggests that in the case of mere exhibition of certain emotion appearances, it would be more appropriate to talk about *expressiveness*, instead of *expression*; that is, if a mask exhibits the characteristic gestures of, say, rage, we would be entitled to say that it is expressive of rage, but not that it is an actual expression of the emotion.

The main claim, though, is that the connection between a 'sad expression' and an 'expression of sadness' does not allow us to make an inference from the former to the latter. A cruel facial expression does not entail that the person is actually cruel or inclined to cruelty, nor that she is expressing her cruelty; and that is to suggest that the *X* expression does not logically imply an expression of *X* whatsoever. Nevertheless, this dissociation between the *X* expression and the expression of *X* enables us to project certain intentional attitudes as emotions into the nonhuman world by displaying their (behavioral) characteristics.

The concept of an expression implies the warranting of certain inferential structures, and it cannot be located by scrutiny of the descriptions of behavior alone, unless those descriptions include among their truth conditions the relevant inferential moves. Explosive laughter, a facial grimace, a shudder, or a periodic tic are, in themselves, neither expressive nor nonexpressive, and only if we have reason to connect the behavior inferentially with some desire, belief, intent, or conflict are we entitled to treat it as an expression. [Tormey 1971, 44]

Thence, the behavior might be part of the expression, but it is definitely not the whole. In the case of art we can say that even though the expressive behavior may be somehow displayed in the formal characteristics of the work, it does not imply that it is genuine expression that we are encountering. In effect, Tormey claimed that what is in consideration is not to be found in an actual and sincere intentional expression of, say, an actor's inner state, but rather in the tissue of characteristics the work of art presents, where some of them are set forth in a form that is prone to make us relate them to particular emotional states.

As we have seen, Collingwood's expression theory considers that the artist's expression depends on her being engaged in doing something else than just giving way to an impulsion, because she is also shaping certain materials to "embody" her sentiment. In Tormey's critique of the expression theory, though, the difference we may agree exists between the mere emotional impulses and "artistic expression" might suggest that the latter is not expression at all, rather than being the only authentic expression, as it has been romantically described.

Tormey claimed that the error of the expression theory consists in assuming that the existence of expressive qualities in a work of art implies an act of expression as well, as if there were a necessary link between the qualities of the artwork and certain states of the artist, which may or not exist and, furthermore, might very well be irrelevant. [Tormey 1971, 104] Hence, the same reasoning can be applied

to the case of music, where the existence of expressive qualities does not allow us to infer an act of expression by the artist, by assuming that she is in a particular ‘inner state.’

2.3.1.2 Robinson’s new Expression Theory

Jenefer Robinson rejects Tormey’s characterization of the expression theory on three fronts. In the first place, she complains about Tormey’s assumption that the expression theory takes the process of artistic expression as an activity ‘prior’ to the creation of the work. Indeed, as it has been pointed out, Collingwood defended instead the idea that the expression occurred during the creation of the artwork, and not prior to it. In the second place, Robinson claims that the expression theory does not really imply the fact that the artist *imparts expressive qualities* to the artwork [Robinson 2005, 244]. In the third place, Robinson thinks that Collingwood is not confusing an *X* expression from a true expression of *X*, but rather, she considers that what Collingwood maintained is that artworks should be true expressions of *X*, and not only *X* expressions. Nevertheless, I consider that some of Robinson’s arguments to defend the expression theory do not really help either. For example, in order to argue that the expression theory rejects the idea of the author ‘imparting expressive qualities’ to the artwork, she says:

Keat’s Ode expresses longing for a timeless world of art and beauty far away from the misery and tedium of the actual world, but this does *not* mean that the poem possesses an *expressive quality* called ‘longing’. What the poem does is to articulate in a unique and original way the speaker’s very particular emotion of longing in **such a way**¹ that we in reading the poem can come to understand this feeling for ourselves. [Robinson 2005, 245]

She rejects the idea of expressive qualities imparted by the author, but at first glance she does not seem to offer anything instead to underpin the expression mechanism. Also, it was not said, as Robinson seems to imply, that something is an expressive quality if and only if it is labeled with a single emotion word such as ‘longing.’ Her critique pretends to exhibit the hollowness and absurdity of the idea of expressive qualities by supposing that the expressive quality’s main task is to give a label to an emotion in order to pretend it expresses it. But, of course, that is not what expressive qualities are, at least not in their strong version. In fact, Robinson’s position in regard to the expressive qualities is rather hard to trace. My point is simply that

¹ Emphasis added.

we cannot be satisfied with an answer as ‘such a way,’ since it is a rather confused phrase that leaves us in complete obscurity in regard to the process of expression.

In attempting to defend the expression theorists, Robinson stresses that they did not really deny that expressive qualities are emergent properties of art objects, and she claims that what they were trying to explain is rather what expression *is*, and not the way the expressive qualities get ‘incarnated’ in non-expressive properties. However, I can scarcely understand how we could attempt to explain what expression is without explaining how the process happens. Instead, to fill the gap, the alternative we are left with is full of expressions such as ‘emotionally charged material’ or ‘manifestation’ that do not help the analysis any further either.

If what Robinson says she seeks for is a theory of what expression *is*, rather than a theory of the mechanisms that underlie expression, our interests may simply differ. Yet, to defend the expression theory, an answer to the following counterargument must be given: It is not the case that the artists necessarily feel the emotion they are supposedly expressing in their artworks.¹ For indeed, if an expression is necessarily an expression of an emotion actually felt by a person, and the Romantic expression theory identifies such emotion with an emotion that the artist herself is feeling, such an idea of artistic expression would demand that the artist is sincere if there is to be expression. In order to avoid such problems, Robinson follows Edward T. Cone and considers that the emotion we perceive or infer from musical artworks is rather an emotion that we as perceivers attribute to an implied author or, to keep her terms, to an imagined *persona*.²

Now then, Edward T. Cone’s outstanding book, *The Composer’s Voice*, is the source of the idea of an implied persona in musical experiences. Cone took the idea over from the literary analysis by T. S. Eliot, and applied Eliot’s analysis of an implied persona to the case of music with a great variety of examples. One of the main pursuits of his work was to apply the concept of an implied narrator to the case of pure

¹ Along with the variants of this counterargument; e.g., an emotional episode is not likely to last as much time as the creation of some artworks such as paintings would take, and therefore, it is not likely to be the case that the actual emotion of the artist is the one that is being expressed.

² Jerrold Levinson also holds a Persona Theory [1990, 2005], arguing that music is expressive because we experience it as if it were a narrative about an imagined persona. However, for the argumentation I am going to focus on Robinson’s version of the Persona Theory.

instrumental music. Although Cone claimed that this way of analyzing and listening should be applied to all music (a claim that is undoubtedly too strong), without going too deep in recalling the details of Cone's theory, it is worthwhile to also underline the virtues of his proposal.

Cone conceived of music as a sort of narration and claimed that, while it might be possible to offer a musical analysis that neglects this narrative character of music, such an analysis (or listening) would overlook essential features of musical expressiveness that would only show up when this narrative flow of music is taken into consideration. Also, he claimed that, in order to recognize and follow this narrative character of music, the listener must consider the music as if it had an implied narrator; i.e., that the listener must imagine a persona whose utterances are the expressive components of the work. However, neither Cone nor Robinson differentiate finely between an implied narrator and an imagined creator outside the work's world and that is not the creator herself. As we will discuss later, this distinction might be crucial in criticizing Robinson's theory.

It is also interesting what Cone thought was resembled by music. For him, the musical expressive features are related to emotions by means of resemblance. However, what Cone considered to be resembled by music and that is most relevant for its expressiveness is not that much a program that music could pretend to tell, but rather, the (subjective) experience of a subject. What subject? It could be thought that this subject is the author, but not necessarily. Indeed, even if it was an autobiographical composition, it always would remain a reading of the author's own life and, in that sense, a recreation of it. And that is why, according to Cone, the experience resembled is that of the implied, hypothetical persona, the compositional persona, or the complete persona.

Berlioz's position, then, seems to be that an instrumental composition is the communication of an experience, transformed into abstract sound. A program can tell us something about the subject of that experience and the specific circumstances giving rise to it. But the experience the music records is not the event described by the program; it is the reaction of the subject to that event, a reaction that may be largely or entirely subconscious. What I call the complete persona of instrumental music is this experiencing subject. [Cone 1982, 84]

Cone also acknowledged the presence of what he calls "symbolic gestures" [Cone 1982, 88]. I think he is right in focusing on certain expressive qualities, and on trying to disentangle their nature. However, I think they are not necessarily symbolic (in Peirce's terms), though there are some of them that may be. What is

becoming more and more evident to us, though, is that we will need to look closer into the different types of meaning in order to figure out what is going on in musical expressiveness. This is a topic that we shall take in detail later. Let us now for now continue by briefly outlining Cone's contributions.

The theory Cone offered has also many resonances in the job the performer does, for he thought that an intelligent performance would clearly differentiate agents and their functions and, furthermore, that it would fill the empty spaces that the composer leaves in order to give some place to the performer's freedom. Indeed, the agents we may follow in music, according to Cone, can be permanent or temporary, unitary or implicit, leading or subordinate, and all these can be found and traced in musical compositions, as many musicians may agree. But at the moment, let it suffice here to say that Cone's view is illuminating in this respect and that it may be as well quite popular among performers.

Why does the first movement of Beethoven's *Sonata quasi una Fantasia* Op. 27 No. 2 seem intolerably sentimental if the melody is made unduly prominent in performance? Is it not because a temporary implicit agent has been mistakenly converted into one that, by its insistence, seems permanent? Imagine the same movement transcribed for violin and piano. The violin, whether it is playing or not, is always "there"—a permanent agent. When it is silent it is resting, waiting for its next cue. The sentimental performance applies this kind of interpretation to the implicit agent of the melody. But this does violence to Beethoven's conception, according to which the melody is a temporary agent, arising out of the accompaniment and at times sinking back into it. [Cone 1982, 101-2]

I won't go any further with this at the moment. But of course, this example, despite its illuminating parts, would leave us just in the middle of the debate on how we are supposed to know what the intentions of the composer were (in fact, that would become one of the main challenges a persona theory would face). But in sum, Cone's theory suggests that the persona that we can intelligibly imagine in vocal music or in program music, such as a symphonic poem, could also be applicable to all instrumental music. According to him, all musical compositions can be interpreted as the 'symbolic utterance of a virtual persona.' The composition may also address different voices according to its form: it may be a soliloquy, a monologue, a private utterance, or a complex structure that involves the three voices Eliot found in poetry. In any case, according to Cone, the voice belongs to a persona who is not telling us a story in the composition, but rather her inner experience; a subject "in whose thought the play, or narrative, or reverie, takes place—whose inner life the music communicates by means of symbolic gesture." [Cone 1982, 94]

In sum, the concept of the complete musical persona must be as multifarious as that of musical composition itself. The persona may be unitary, as in a piano solo; or it may be implied, as by a group of instruments. It may combine verbal and musical components, as in song; or it may be entirely virtual, as in instrumental music. It may be well defined or relatively indeterminate. It is to be posited as an intelligence embracing and controlling all the elements of musical thought that comprise a work. These elements subsist in its consciousness, which is in turn awakened by the performance (in actuality or in imagination) of the gestures that express them. [Cone 1982, 109]

Once a general outlook of the persona theory has been given, let us go back to Robinson's approach so that we can see how it stands out. The first difference she states is that she does not consider, as Cone did, that the hypothetical persona is helpful to understand all music. Instead, she restricts the scope of the persona theory to Romantic musical compositions. As we have mentioned, Robinson is interested in the Romantic expression theory, which considers that the author's emotions are the ones that are being expressed. This brings back the issue of it being necessary that the author is sincere in her expression, and that she actually feels the emotion she expresses. Since this condition is very unlikely to be met in most cases, Robinson goes on to plug the persona theory into her own approach, and so, the hypothetical persona is the one to whom the emotions are attributed by the listener. But of course, as she rightly foresees, we may ask whether her theory has not passed surreptitiously from being an expression account focused on the artist to an arousal perspective where a perceiver imagines whatever emotions she wants to attribute to an also imagined persona.

It now begins to sound as if expression is not something brought off by an author but something detected by a reader. But as I have stressed throughout this book, experiencing and interpreting artworks is a two-way process. However much work the reader has to do, the actual author has a big say in how the reader experiences the work. [Robinson 2005, 264]

It is not surprising that Robinson stresses that the emotion the audience attributes to the persona is somehow warranted by the work itself or by the author's 'say.' To me, this is precisely the core debate, and I do not think it is sufficiently endorsed in Robinson's theory. What Robinson claims, if I am understanding her correctly, is that artistic expression is an intentional action performed by the author of the artwork, in which she clarifies an emotion she might be feeling in the moment, or has felt in the past. By clarifying this emotion, the artist expresses it in the work (and the other way around as well, since she claims that this clarifying of the emotion and its expression happen at the same time). Thus, the artist expresses the emotion in the artwork, but not by creating 'expressive qualities' in a temporal way. Furthermore, she also stresses that it is a good sign of successful artistic expression when the audience gets to understand

appropriately the emotion expressed, and that the audience does this by attributing this emotion to an implied author or persona.

Surely there are too many things happening here. However, the point that I would like to focus on for now is the one in which the emotion gets ‘instantiated’ or ‘manifested’ in the work, for it seems to me the most problematic. To make things clear, my interest is not to deny that there might be cases in which the author actually expresses true emotions, nor that the audience might get emotionally aroused by the music they listen to. In any case, what I am saying is that those are not necessary conditions for music to be expressive. Even though I do not wish to argue for a closed signifier-signified framework, I think that without explaining this step, we would be really left in an obscure realm that would not allow us to go any further.

What Robinson denies is that the artist imparts expressive qualities that she knows prior to the creation of the work; therefore, Robinson claims that the mere display of ‘expressive qualities’ would not allow us to talk about real expression.¹ My suspicion is rather that Robinson’s rejection of the ‘expressive qualities’ as understood by Tormey is not really grounded on a difference in what the expressive qualities essentially are, but rather on the different roles that she wants to attribute to them and the way they come into existence. In effect, Robinson wants to stress the point—as the Romantics did—that the expressive qualities an artwork has come into existence as a result of the cognitive process in which the artist clarifies her emotion. But that would not be necessarily incompatible with the simple claim that there are some qualities in the artwork that are related to emotion in diverse intricate fashions. These qualities are called ‘expressive qualities,’ and one needs to acknowledge their existence if one does not want to explain the process of expression by means of a magical force or a black box. Indeed, if she rejects the claim that the author imparts expressive qualities to the artwork, one is right to ask what is she denying then, whether the existence of expressive qualities (in which case she would leave a big question mark in what regard to the mechanisms of expression), or whether she is denying that the artist imparts the expressive qualities

¹ At this point I would only want to remind us that that was exactly what Tormey claimed; i.e., that the display of expressive qualities is not enough to allow us infer an act of expression on behalf of the author as well. However, Tormey and Robinson are interested in defending very different approaches to what art is or should be.

(in which case, an uncharitable reading would suggest that then they are either casually there, or that they are completely bestowed by the listener's imagination).

The main point for me is merely to realize that if there is to be expression of emotions through an artwork, that work must have certain characteristics that put it in a certain relation with emotions or other affective phenomena. This research is all about that relationship. Now then, these expressive qualities might play different roles in different theories. Let it be so. What is important in our case is only to figure out such a relationship; i.e., the mechanisms that support expressive qualities.

But in order to do so, what the artist does is to manipulate the material she has at her disposal, be it sounds, colors, marble, or otherwise, and that constitute the matter of the artwork. I submit that it would suffice for a characteristic of the artwork to be called 'expressive property' if (a) it is a characteristic that pertains to the work itself, and (b) this characteristic stands in a certain relationship with affective phenomena so that it would make us relate it to affective states such as emotions. Also, this relationship might be of different sorts (which we will analyze later on), but for now, and just to mention an example, we can say that one of these relationships is iconicity. Nevertheless, Robinson states that an expressive quality, in order to be so, should arouse the appropriate emotions in the audience, a position that is way closer to an arousal theory.

Finally, one question I have left unanswered is the question of how exactly we should think of 'expressive qualities' now that we have a better understanding of what expression is. [...] I would like to suggest that we should confine the term 'expressive quality' to those qualities in an artwork (or other things such as merry brooks and anguished old oak trees) that are not only named by an emotion word but also arouse appropriate emotions. More particularly, expressive qualities are qualities that can be grasped through the emotions that they arouse. A 'sad poem' that is inexpressive—that does not have the expressive quality of sadness—may not arouse emotion at all or it may evoke emotions irrelevant to its sadness. [Robinson 2005, 292]

This last condition seems to me too harsh the way it is stated, though I will later argue in favor of the necessity of the possibility of certain reactions guided by the expressive qualities. However, if we are to analyze where this condition came from in Robinson's theory, the need for this is likely to be related to the persona theory. Since, according to Robinson, the listener imagines a hypothetical persona who is the one to whom the emotions are attributed and who gives narrative unity to the work, the listener seems to have a much more important role in the game than was first allowed and acknowledged. Under the risk of being

uncharitable, it seems now that the construction the listener makes in her mind supports all the weight in Robinson's (author-focused) expression theory.

In conclusion, it seems to me that Robinson has not secured a necessary bond between the author's emotional states and the music itself, nor between the listener's imagination and the musical features. Indeed, even though she tells us that the author has a 'big say' in determining the listener's imagination about the work, that big say is not sufficiently explained by Robinson's theory. Effectively, we may allow that, indeed, the exploration the artist makes of her own emotion may contribute in her producing a powerful work, but that fact depends on the artist's shaping expressive qualities of the work. And, as it has been outlined, Robinson's account in regard to expressive qualities is rather confused, for in her attempt to avoid talking about 'fixed properties' of the work, she ends up making it all depend on the listener's imagination.

At this point, it would be worthwhile to formally present the persona theory. Nonetheless, as Stephen Davies notices, there are many versions of it: First, a weak version in which it is only claimed that it is possible for the audience to hear music as the emotional expression of an imagined persona. Second, a stronger version in which it is claimed that the musical emotional experience is richer or somewhat better if the audience experiences the music as the utterance of an imagined persona. And third, the strongest version that would claim that music expresses an emotion if and only if we hear it as the expression of an emotion by an imagined persona.

The weak version of the persona theory is not really controversial. Indeed, one can willingly agree in that it is possible for the audience to hear music as the expression of the emotions of an imagined persona. The second version—the one that Robinson advocates—seems sensible, since it allows that there might be some music to which the persona theory does not apply, and furthermore, that hypothesizing a persona is just a better way to experience certain kinds of music. The third version is the strongest one, since it claims that music expresses an emotion only if we hear it (or are disposed to hear it) as an expression of an emotion by a musical persona. As Jerrold Levinson puts it:

A passage of music P is expressive of an emotion E iff P, in full context, is readily heard, by a listener appropriately backgrounded in the musical genre in question, as the expression of E in a

sui generis, purely musical manner, by an indefinite agent, what we can call the music's persona.
[Levinson 2002, 89]

The strongest version of the hypothetical persona theory would imply that there are some features of musical expressiveness (in some, if not all musical works) that are not able to be grasped if the listener does not hypothesize a musical persona to which all these psychological states are to be attributed. That is to say that musical expressiveness grasping is not *fully* achieved or achieved at its best without this hypothesizing. In Davies's words: "I take this position to amount to the claim that the musical works in question must be heard as being about the emotional life of the persona whose presence in the work should be imagined." [Davies 1997, 108 14] Indeed, as it can be implied by Robinson's account, if there are to be expressive qualities that depend on the listener's arousal, and that might (in some works at least) be dependent on the listener imagining a persona and attributing an emotional life to it, that would suggest that music should be heard as being about the emotional life of that persona.

But what does it mean to say that a musical work is about something? Davies sees four possibilities and criticizes them all in regard to hypothetical emotionalism, as he calls this theory. First, it could be said that a musical work is about something when the composer intended it to be so. Second, it could also be claimed that a musical work is about so-and-so when there are some conventional practices that determine that such works are to be approached in such a way. Third, a musical work can be about something if a wide span of suitably acculturated listeners would appreciate so-and-so in it, or would concur in what the work is about. Fourth, the understanding of music would be undermined or not fully achieved without the invoking of the presence of that what is presumed the work to be about.

Davies doubts, as I do, that there is much evidence to support that the intentions of the composer were that the listener would imagine a persona in the music. However, if that was the path an account followed, a suitable notion of intention must be given. For indeed, it is not enough that the composer intended the listener to imagine a persona, since the achievement of such intentions presupposes that there are public conventions that would allow the listener to understand what the composer intended. Therefore, to endorse the strong version of the persona theory by appealing to the claim that such were the intentions of the composer, would need that the second and third possibilities can be proved; i.e., conventions that stipulate so, and a widespread agreement among listeners that such a persona is to be imagined, along with agreement about what the persona's emotional life outlined in the work is about. But

let it suffice it to say here that there is no evidence given that supports such strong claims regarding the imagining of a persona in music (particularly in instrumental music).

However, the persona theory would still have a go if it could demonstrate the fourth possibility; i.e., that there is a realm of musical expressiveness that we cannot grasp unless we imagine a persona to whom we can attribute a psychological emotional unfolding that we presumably perceive in the music. But in order to do so, it would have to strengthen the limits of the listener's imagination if it is going to account for the work's expressiveness and not merely for her own free reverie and inventiveness. That imagination would need to be constrained by the musical features, for otherwise, the imagining of a persona would not expose a realm of the work's expressiveness not achievable by other means. If that cannot be secured, the listener's imagination, although rich, might just very well be irrelevant. What needs to be shown, though, is that the invocation of a persona is essentially implicated in an understanding reaction to the music; and that has not been proved.

In conclusion, it is evident that it is not desirable a theory of musical expression that supports the free inventiveness of the auditory while listening to a musical work, probably only using music as a trigger for their own private imagination that may not have anything to do with the music itself. However, it seems that the persona theorists do not approve such a theory either. The problem, though, is that in order to avoid such danger, the theory should be able to explain the musical constriction of the listener's imagination. For indeed, the listener is supposed to carefully follow the musical flow, and so, the 'emotional story' that she comes up with should be determined by the music itself. As we have seen, just appealing to the intentions or the 'big say' of the composer does not really help, since if the composer's intentions are to be achieved, the discussion should be nevertheless focused on the expressive qualities she imparts to the work.

2.3.2 THE AROUSAL THEORY

Sadness is to the music rather like the redness to the apple, than it is like the burp to the cider.

O. K. Bouwsma

A simple version of the arousal theory of musical expressiveness claims that music is expressive of emotions insofar as it arouses or tends to arouse those emotions in the listener. In other words, a piece of music *is* happy if it makes you happy. As we have discussed earlier, this theory faces a bunch of counterarguments that particularly doubt that the strength of the bond between the listener's arousal and the music's properties allows us to pass from attributing an emotional state to the listener to say that it was expressed by the music. Indeed, it remains to be explained how a reaction in the listener (be it deserved or not) constitutes music's expressiveness. Moreover, as it has been repeatedly stressed, emotions are processes that entail an evaluation of a situation or state of affairs (even if it is unconscious), which means that emotions are intentional. Musical 'emotional' experiences fail to exhibit such intentionality, and so, even if it were secured that we get emotionally aroused by the music, it needs to be clarified how this arousal can constitute musical expressiveness if the intentional element of emotions is lacking.

Derek Matravers [1998] has offered a new version of the arousal theory, and this version is the one I am going to focus on, given that it is formulated in stronger terms. He synthetically states his formulation as follows:

A work of art x expresses the emotion e if, for a qualified observer p experiencing x in normal condition, x arouses in p a feeling which would be an aspect of the appropriate reaction to the expression of e by a person, or to a representation the content of which was the expression of e by a person. [Matravers 1998, 146]

There are quite a few things to mention in respect to this new formulation that I consider that constitute a good leap toward a more appropriate account of musical expressiveness. First, it deserves special attention that Matravers passes from talking about emotions to framing the arousal in terms of feelings. I totally agree with him in this respect, for (as I will be arguing in the next chapter) feelings are components of

emotions, but not the whole, and they needn't embrace all the components an emotion has. Indeed, emotions typically have a cognitive component, which is what it is about, and a belief, a 'propositional attitude,' or rather an unconscious evaluation. In any case, there is an intentional object or event and an appraisal of it that seem to intrinsically constitute the emotion. However, we do not say that a piece of music is sad because it made us sad because there was something regrettable about the music. Music is not the intentional object of our emotional arousal (in the interesting cases).

Claiming that an emotion is aroused by the music would leave a mystery in regard to the cognitive aspect of the emotion in question; namely, the reason why we got aroused must be different than in 'normal' emotions, given that the intentional event or object and the relevant evaluation are lacking. There must be, then, another way in which music arouses the listener with emotions. Matravers's claim is that we get aroused only with a feeling, not with a fully-fledged emotion. Then, such a feeling arousal causes in the listener the belief that the emotion related to the feeling she was aroused with *is* the emotion the musical piece is expressive of. [Matravers 1998, 149] But I will leave the discussion on whether feelings can determine emotions to the next chapter and for now I will stick to the reasons Matravers himself offers.

Against what he calls a 'cognitive' theory of musical expressiveness (among which are the resemblance theories), Matravers states the following argument: The way we affectively react to music is related to the way we emotionally react in other non-musical scenarios. So, if we encounter a sad person, the appropriate response to that situation would not be merely to recognize her sadness, probably not even to become sad ourselves, but rather to react, say, with pity. In the same fashion, in our musical experiences, Matravers thinks that sad music would not necessarily arouse the feeling of sadness in us, but the feelings that we would get aroused with when seeing a person that expresses sadness. This is a critical point in which a cognitive approach and an arousal one such as Matravers's differ. It is not merely—Matravers claims—that we can recognize that a person is sad and thus we formulate a belief such as 'That person is sad.' Rather, we react in a way that is not as cold-blooded and we feel an emotion; that is, we have an emotional phenomenological experience as a reaction of seeing someone else being, say, sad.

So, facing the question about how music arouses the emotions, Matravers insists that it doesn't. It does arouse feelings that are not fully-fledged emotions; whereas the question about how music arouses feelings is left for the physiologist or psychologist to answer. Surely I am not satisfied with this answer at

the moment, for it leaves a big hole in the argumentation, but Matravers's answer permits us see how far an arousal theory can get without providing an account of the mechanisms of the arousal. Philosopher Justine Kingsbury stresses the point quite clearly as follows:

There is a plausible kind of answer to the question 'Why does sad music make us experience sad feelings?' which is not available to the arousal theorist. If you are a cognitivist who thinks that sad music makes us sad, you can appeal to the sadness of the music (of which you have given some cognitivist analysis) to explain why it makes us sad. If you are an arousal theorist, this option is not open to you, since for the arousal theorist the music's sadness just *is* its tendency to make us sad. [Kingsbury 2002, 19]

What Matravers maintains is that the relationship between the arousal of a feeling in the listener and a musical piece's expressiveness is indeed a causal relationship. His main claim, though, is that this causal connection is enough to secure musical expressiveness¹. However, this assertion is just odd. In effect, it must be said that the claim that the feeling we get aroused with *is* the emotion the music is expressive of needs further explanation, since it overlooks a main distinction between being expressive of and being aroused with. Indeed, a happy piece of music might not make me happy, and this is the main case an arousal theory would be unable to explain without either saying that the music was not happy after all, or that the listener was lacking some important skills. Matravers's characterization of the arousal theory is a bit more complex, however. What it says is that certain music arouses in us a feeling that is related to a particular emotion and that is why, as listeners, we conform to the belief that that emotion is what the music is expressive of. Because the music expresses sadness, it arouses a sadness-related feeling in the listener, which she further on takes as evidence for maintaining that it is sadness that the music expresses.

The trick here is that, given that it is provided from the beginning that it is indeed sadness that the musical piece expresses, the listener's judgments based on her aroused feelings are not misleading and they seem to refer to objective properties of the music. For, as Matravers himself acknowledges, there is a bunch of cases in which the listener's emotional arousal is aesthetically irrelevant for musical expressiveness, and an arousal theory must be able to rule out those cases. Indeed, as has been noticed many times by now, it is possible that the music triggers an emotion in the listener whose object is nevertheless external to the work. But even if it were the case that the music caused that particular feeling

¹ Matravers adds the restrictions of music being listened to in normal conditions and by competent listeners. We will talk about this in what follows.

in virtue of its expressive properties, we would still need a reason to say that we are not entangled in Bouwsma's claim, considering the burp as an intrinsic characteristic of the cider. A musical expressiveness theory that takes as a foundation the causal relationship alone needs obviously to explain (1) how an effect can tell us something (constitutive) about the cause, and (2) how the effect's characteristics rule out the possibility of it being caused by a different cause than the one that is being inferred.

Consider (2) for now; i.e., how the listener infers the emotion music is expressive of from the feelings she gets aroused with. The cognitive content of an emotion is what has been taken as the determining element that allows the distinction between different emotional states. For example, the difference between jealousy and envy would be describable in terms of beliefs. Both, the jealous and the envious persons have the belief that someone else has something they want. However, the envious person also thinks that what she desires does not belong to her and that she is probably in a powerless position, whereas the jealous person thinks that whatever she desires belongs or should belong to her. How are we going to distinguish between jealousy and envy if we do not appeal to the cognitive content of the emotion (which is not available for us in instrumental music)? The cognitive approaches to emotions simply stress that this cognitive content is what allows us to distinguish between emotions. The question for an arousal theorist such as Matravers is whether the feeling aroused in the listener suffices for a differentiation among the different emotions the listener judges the music to be expressive of. Namely, we need to know whether there is a distinctive phenomenological aspect for each emotion, so that we have a sadness-feeling, a jealousy-feeling, a grief-feeling, and so on.

Modifying the analogy in this manner seems to lead to further problems, however, as it now appears to contradict one of the motivating intuitions behind the cognitive theory of emotions. The arousal theory maintains that the feeling aroused by an expressive work causes a belief as to what the work expresses. In order for this belief to be correct, this would seem to require that a listener be able to discriminate between the feeling components of emotions in the absence of their propositional counterparts. That is, to be able to discriminate between the feelings associated with, for example, hope, awe, anger, sadness, and despair. [Matravers 1998, 149]

In order to give support to this requirement, Matravers quotes with approval Levinson's argument against the claim that in the absence of cognitive content we are not able to differentiate between the feeling components of different emotions.

Even if it is granted that the standard emotions—and even more so, the ‘higher’ emotions that especially concern us—are defined, logically individuated, and necessarily conceived in terms of their respective cognitive components, it does not follow that there is nothing else that is in fact distinctive or characteristic of the individual emotions. Emotions comprise, at the least, affective, hedonic, conative, behavioral, and physiological components as well, and there is nothing to show that reliable and cognizable differences in the total constellations of non-cognitive components of the various emotions could not exist. On the contrary, it seems more than plausible that with all such factors taken into account—qualitative feels, desires, and impulses, varieties of internal sensation, degrees of pleasure and pain, patterns of nervous tension and release, patterns of behavior (gestural, vocal, postural, kinetic)—each of the emotions standardly distinguished in our extramusical life would have an overall profile that was subtly specific to it, even leaving its cognitive core to one side. [Levinson 1990, 334]

Maybe the feeling component allows much more determinacy than we are able to judge, or maybe it lacks the specificity for the emotions criteria to work, but has other specific characteristics. We will get to this subject in more detail in Chapter 3. The main point here is to stress the problem that the arousal theory faces, namely, that even if the music causes a feeling in the listener, this feeling has to be specific enough to form in her the [correct] belief that the music expresses the emotion related to that feeling. The same problem has many faces. For indeed, considering (1), what needs to be proved is that the causal relationship that is already agreed that exists between music and the [feeling] arousal in the listener, secures a necessary bond so that the listener’s particular arousal could possibly constitute what a particular musical piece is expressive of.

The arousal theory reverses the order of things, as it were. Instead of allowing that sad music makes us feel sad because it expresses sadness, the theory maintains that sad music expresses sadness because it makes us feel sad (if it does). [Davies 1994, 199]

If the order of the terms is reversed, even allowing the implausible condition that we always get aroused with relevant feelings while listening to (expressive) music, what we have is a sufficient condition surreptitiously converted into a necessary one.

Furthermore, the requirement that the listener gets aroused with a feeling in order to form in her the belief that a musical piece is expressive brings another problem. In effect, this closes up the possibility that a person that does not get aroused with the relevant feeling could judge whether a piece of music is expressive, and what it is expressive of. This problem is dubbed by Kingsbury “the dry-eyed listener.” Even though Matravers tries to constrain the scope where the arousal must occur to the listening by ‘a suitably musically literate person under optimal conditions,’ in order to escape the cases in which the listener just

does not get aroused, this seems to be a prescriptive position that still rules out the experience of some musically literate persons.

Indeed, Matravers contends that musical expressiveness is rather a way in which we experience it: *we hear it as expressive* of certain emotion. Against the cognitivist, he claims that to hear musical expressiveness it is not enough that a listener recognizes certain properties in music if she does not feel anything thereby. But, as Kingsbury notices, to assume that to hear music as expressing certain emotions requires the listener to get aroused with the related feeling simply begs the question against the cognitivist.

But Matravers does provide an argument for the claim that experiencing music as expressive must involve experiencing a feeling oneself. He considers that to experience music as expressive of certain emotion is a phenomenon that happens through time, whereas the mere recognition of properties the cognitivist claims is all that is necessary for experiencing music as expressive is something that happens in just a moment.

I am not confident that Matravers is being fair here, for the recognition of properties also happens through time, since both, music and emotions (or other affective phenomena) surely are dynamic processes that have duration as well, and the recognition of music's properties must therefore happen in time too. What must be highlighted for our further enquiry, though, is that to experience music as expressive of a particular emotion seems to be to experience it with a particular phenomenological character. As I said, I will talk about this in more detail in the next chapter.

The issue with an arousal theory is not that it stresses that there is or might be a causal relationship between music and the arousal of emotions in the listener. That is pretty much widely accepted. The problem arises in considering that the effect constitutes the cause. We might in effect, as Matravers's version of the arousal theory says, infer that a musical piece must be expressing certain emotion, based on the feeling we, as listeners, got aroused with. But our judgment might be wrong, and even if it weren't, our inference cannot constitute *music's* expressiveness.

In order for this inference to be justified, it must be based on the musical piece's expressive properties, and I fail to see how this could work otherwise. In fact, Matravers himself acknowledges this

when he insists in that the listener's arousal is relevant when it is the result of the close tracking of the music. It must be so, but that would at most provide a ground for us to experience music as expressive, or trigger our judgment that a particular musical piece is expressive of such and such, but it would not prove that in virtue of that arousal the musical piece itself is expressive of what we got aroused with.

2.3.3 SUMMARY

Since it would be absurd to consider a direct relationship between music and emotions, the relationship must be indirect. That means that the emotions we are concerned with are either the listener's, the composer's, or the performer's on the one hand, or rather that it is a representation of the emotion what we are facing.

The main version of the expression theory takes the composer's or the performer's emotion as the one that is getting expressed and in virtue of which music is expressive. This version of the expression theory faces the challenge of acknowledging that not every composer or performer is feeling the emotion related to what the music is considered to be expressive of. Another more complicated version of this theory, though, considers that there is a hypothetical persona in the unfolding of a musical piece, to whom we attribute mental states. The main problem we did not find solved in analyzing this theory, is that there is no justification of the claim that whatever the emotion the composer or the performer is feeling is actually instantiated in the music itself. In the case of the persona theory, there is no justification that the 'adventures' the persona faces, along with the persona itself, is not a fun invention of the listener that does not really have much to do with the musical piece.

Let us now turn to the arousal theory. The simplest version of it takes the listener's emotion arousal as the emotion that music is expressive of. We analyzed here Matravers's version, though, which does not consider that the listener is aroused with an emotion, but rather with a feeling related to that emotion. This move permits Matravers to escape some of the counterarguments that the lack of intentionality in 'musical emotions' posit. However, his theory also claims that the listener—according to the feeling she was aroused with—makes the judgment that the music must be expressive of the emotion that

corresponds to that feeling. As we saw, in this case the problematic was just removed from place to place, because now a feeling must be distinctive enough to individuate an emotion, which has not been proved yet. But the biggest challenge for an arousal theory such as Matravers's is that it claims that the causal relationship that exists between a piece of music and the listener's affective arousal is enough to set up the grounds for music's expressiveness. Indeed, music may cause the listener to feel such and such, but this does not entail that these aroused feelings come to constitute properties of the music itself. What is needed is rather an account that is grounded in properties of the music. We are now going to analyze the theories of musical expressiveness that claim so.

2.4 EXPRESSIVE QUALITIES AND THE RESEMBLANCE THEORY

As we have seen, Tormey argued that it is not a legitimate step to infer a particular emotional state in the author from the expressive qualities an artwork presents. That is not to say, however, that we do not usually do it. For indeed, if we are able to recognize other's emotions and intentions through their behavior and to react appropriately, this is because those gestures and behaviors typically are the result of an actual emotional state on behalf of the beholder. It is true as well that the person that we think is in a particular emotional state *e* might deceive us into believing that she is experiencing *e* when she is not. And we can even go further and suppose that she is indeed experiencing *e*, but that she tries to hide it by making us believe that she is deceiving us into believing that she experiences *e*.

My point is, though, that Tormey is correct in evidencing that we are not allowed to blindly infer an emotional state in the author from the characteristics that the artwork she created has. But I also claim that the artwork's expressive qualities give us certain cues that refer us to certain particular emotions *that we do not necessarily attribute to the author* (or to an implied author or persona). This might be a gratuitous use of our programmed reactions to other's emotions, or to unconscious emotion appraisals, or the internal enacting of emotional programs, or otherwise. In order for that to happen, these expressive qualities must stand in a relationship to certain aspects of human emotional processes.

That is to say, it is true that we cannot infer an actual emotional state in the author, but we might very well be given hints about what her intentions were. Maybe, without making such an inference, we simply enter an emotional process due to certain features that may trigger certain unconscious appraisals; or maybe we just consciously recognize in the work an aura or set of features that we relate to a particular emotional state. These features, though, are typically the result of the author's intentions¹.

¹ However, as Kendall Walton has correctly pointed out, there might be cases where certain features happen to be part of the work, but that were not intended to be so. [Walton 2015]

2.4.1 MUSICAL SIGNS

Let us focus on these features that presumably have a relationship to people's emotional life. We can use certain frameworks or meaning theories (set up for other purposes) and apply them to the case of music in order to try to understand these musical features' relationship to affective life; that is, what kind of a relationship is held between a musical feature and affective phenomena such as emotions, so that it can refer to it or stand for it. I suggest to dig a little bit in these theories in order to enquire on whether this relationship is a matter of representation, actual presentation, symbolization, or otherwise.

In the first place, I would like to begin by briefly talking about Charles Sanders Peirce's very simple classification of signs. He submits that signs are the kind of things we are interested in insofar they convey to the mind an idea about another thing; i.e., they are referential. Indeed, a sign stands for another thing—it represents it—but it may represent different aspects of the thing and not necessarily the thing in its completion. Peirce classified signs into icons, indications (or indexes), and symbols.

Icons are based in resemblances; they are likenesses. They represent their objects insofar as they resemble an aspect or a bunch of aspects of the thing, and this resemblance is enough to carry the mind from one to the other. It is important to emphasize, though, that a complete likeness between the icon and the thing it resembles is not required. What is needed is only a resemblance to that aspect of the thing that is to be highlighted; i.e., to that aspect (or aspects) of the thing that it is intended to carry the mind to. Nevertheless, resemblances alone are not sufficient for an iconic relation either. As S. Davies has noticed [1994], similarity is a symmetrical relation, so that it lacks the directionality that is necessary for representation. In effect, if two random things are similar in some respect, there is no way to say which one represents the other. The directionality ingredient that is lacking—Charles Nussbaum will argue [2007]—is provided by the intention, without which no representation is secured. Now then, indications, on the other hand, have a particular bond with the world insofar as they enable or guide a possible physical experience of the thing. A map, for example, is not only related to the territory it maps by resemblance, for it also intends to guide a potential experience of the territory. Finally, Peirce considered symbols as conventional signs that depend on habit, since they have been associated to their meanings by usage.

Any ordinary word, as “give,” “bird,” “marriage,” is an example of a symbol. It is applicable to whatever may be found to realise the idea connected with the word; it does not, in itself, identify those things. It does not show us a bird, nor enact before our eyes a giving or a marriage, but supposes that we are able to imagine those things, and have associated the word with them. [Peirce 1894, 6]

Now, let’s briefly consider how this differentiation of the kinds of signs would work in the musical case. The iconic level would be found in certain resemblances that music (or more specifically, certain musical features) might hold with other external things or phenomena. What could music resemble? For example, as we have seen in a preceding section, during the Renaissance and Baroque periods, in order to achieve expressive music, a resemblance between music and different things such as features of affective phenomena was sought. The mimetic mechanisms used were (1) an imitation of what the poems are talking about; (2) an imitation of the emotional gestures that humans make while undergoing an emotional episode (sighs, cries, shouts, gaits); (3) an imitation of particular movements (suspension, elevation, upwards, downwards, etc.); (4) an imitation of the phenomenological aspect of the emotions; i.e., how does it feel to have a particular emotion. I will take up in more detail these mimetic mechanisms in a moment, but for now, let us continue with the Peircian classification of signs.

The second kind of sign is constituted by indications. So, indications have a special relationship with the world insofar as they do not only carry the mind from the sign to the thing it represents, but because they do it in order to direct or indicate either what has to be done in the world, or a special way to proceed in it. Considering this, I guess that one parallel with the musical case would be the musical score, as an indication or index of what should be played. However, in the next chapter I will be arguing, following Charles Nussbaum, that musical performance features might work as indications insofar as they guide in the listener an internal, offline enacting of the implicated movements. Thus, it won’t be merely a matter of recognizing the similarities, but rather a matter of guided action, albeit an offline action.

Symbols are the third kind of signs. While it has been both, claimed that music is symbolic and denied that it could be so, I consider that, of course, *it is possible* for there to be symbolic elements in music. In fact, there are many examples of these, like the B-A-C-H motif that stands for “Bach” in *The Art of Fugue*. Indeed, at the moment I am taking into consideration only Peirce’s very simple definition of what symbols are (which certainly has been challenged). This very broad definition of symbols is that they are conventional signs, constructed by habit, and usually nested in other icons and indications. However, I

neither submit that music is necessarily symbolic, nor that such symbols are essential elements of musical expressiveness. But I can indeed imagine a case in which a musical feature, say, a sequence of notes or a chord might acquire a determined meaning due to conventions or stipulations. For example, in Dimitri Shostakovich's *String Quartet no. 8 in C minor* Op. 110, the D-S-C-H (D-E flat-C-B) note pattern was stipulated by Shostakovich as a motif to stand for his name in the way a signature would.

I have suggested as a starting point an overview of how Peirce's classification of signs could be applied to the musical case in order to figure out which of these kinds (i.e., icons, indications, or symbols) is most suitable or helpful to explain musical expressiveness. However, it is also important to emphasize that I believe that the three of them actually have a place in musical practices.

In order to clarify how iconicity would work in music, let me go back to the different mimetic mechanisms that were listed before. The first mechanism mentioned is the imitation of the meaning of the words of the poem, or the endeavor of 'programmatic music' of representing with music a story or a landscape. It has of course faced several difficulties and doubts on whether music is actually capable of achieving a resemblance sufficient to bring the mind from the music to the things it is intended to represent. For instance, it might be intended to represent with music the singing of a bird, the falling of a stone from a cliff, the brightness of heaven, or the darkness of an abyss, or, of course, more complicated stories, as it happens in Symphonic Poems. I consider that some of these resemblances are achieved and some of them are not, while the more complicated a story gets, the more improbable it is that the listener follows the story. An example of this would be the following fragment from "Cadrò ma qual si mira", from the opera *Berenice* by Francesco Araia, where the singing voice imitates a landslide.

14

Ca - drò, ma qual si mi - ra per - te ca - der dal mon - te

19

del-la sas-so - sa fron - te che quant' a lei s'op-po - ne ur - ta fra -

24

-cas - sa e se - - - - co pre-ci - pi - tan - do va

28

[f] [p] f p

[f] [p] f p

f p f p f p

f p f p

32

mf f

mf f

tr tr

36

mf f

mf f

tr tr tr

pre - ci-pi-tan-do va, pre - ci-pi-tan-do va



Fig. 1 Francesco Domenico Araia, fragment of the aria “Cadrò ma qual si mira” from the opera *Berenice*. Taken from IMSLP. In this fragment we can see the singing voice (and the instrumental ensemble as well) imitating the landslide that the lyrics are talking about.

The second mimetic mechanism is a resemblance to emotional behavior and gestures such as sighs, cries, gaits, or shouts. This is the resemblance in which Stephen Davies on the one hand, and Peter Kivy on the other, base their theories, commonly known as ‘Resemblance Theory.’ However, I will dedicate more time to this theory in particular, as I take it as the basis for the approach I am willing to put forth. At the moment, though, let me just present some examples of this kind of resemblance: The slow, heavy, uneasy gait that a person exhibits as paradigmatic emotional behavior of grief is resembled by a funeral march, as opposed to the light, vivid movement of a happy dance; the Recitativo also provides a good example of this kind of imitation, since it resembles with the singing voice the way that a voice would sound if the person were under a particular emotional episode, such as sighs or cries while undergoing sadness.

A third option of mimetic mechanism is the imitation of movements alone. This kind of resemblance has many times been disregarded as merely metaphoric at its best¹ [Scruton 1983, 2004]. The claim is that music cannot present real movement, since movement requires an object that is changing places through time, while in music there is not such an object or a special dimension for it to provide places for the object to move. Nevertheless, I do not intend to go into this discussion here, but it is not necessary either, since for now we depart from the assumption that what is been made is an imitation of the movement with

¹ This subject will be discussed at length in the next chapter.

sounds, and not that music itself is moving. But movements, along with their subtle features, constitute one of the most important resemblances with music. Moreover, since it is possible to resemble quite closely with music the particularities of movement, the subtlety that is achievable with this kind of imitation is remarkable.

The reader might be wondering why this kind of mimetic mechanism is separated from the others, since it seems that all of the mimetic mechanisms in music have to do with movement after all. This is true. Due to the dynamic character of music, the mimetic mechanisms available for music have mostly to do with movement. Nonetheless, I would not want to circumscribe all musical features to the movement set, since it is not clear to me that some features such as timbre, or harmonic color would be best explained in terms of movement, though they might have relevance for the movement characteristics. Also, I preferred to separate this kind of imitation from the others because, while the imitation of mere movements does not necessarily refer to anything else but to the movement itself (as it happens with suspension, acceleration or sudden stopping), the other imitations use the musical movement to refer to something beyond music itself (as emotional behavior or descriptions of the world).

Finally, as in Mattheson's *Figurenlehre*, a fourth kind of imitation, that of the phenomenological dimension of the emotions has been attempted. This can be understood as the imitation of the feelings that intervene in an emotional episode. Following Mattheson's theory, philosopher Susanne Langer suggested something quite similar; i.e., that music is a symbolic form of human sensibility, a 'tonal analogue of emotive life.' However, let it suffice here to say that the relationship she described as happening in music is a resemblance relationship between the phenomenological dimension of the emotion (the feeling) on the one hand, and music on the other. While she claimed that this relationship is a resemblance relationship, she considered that the role of the musical emotive symbol is not that of representation, but rather of an ostensive presentation, which she labeled 'presentational symbol.' Indeed, she distinguished presentational symbols—which are rather iconic—from discursive ones, and so she claimed that music is a presentational symbol, meaning that the relationship that music has with the emotive life is iconic. Indeed, she considered that musical symbols are not conventional, which according to the Peircian classification of signs, is a necessary condition for a symbol to be so (and that is why it can get confusing and one needs to keep in mind that what Langer considers a presentational symbol is not a symbol in Peircian terms).

The tonal structures we call music bear a close logical similarity to the forms of human feeling—forms of growth and of attenuation, flowing and stowing, conflict and resolution, speed, arrest, terrific excitement, calm, or subtle activation and dreamy lapses—not joy and sorrow perhaps, but the poignancy of either and both—the greatness and brevity and eternal passing of everything vitally felt. Such is the pattern, or logical form, of sentience; and the pattern of music is that same form worked out in pure, measured sound and silence. Music is a tonal analogue of emotive life. [Langer 1953, 27]

Langer wanted to separate musical significance from linguistic meaning, and so she refused to claim that this ‘symbolic’ nature of musical form would lead us to grasp any musical ‘meaning’. Rather, she preferred to call it the “vital import” of music: “Let us therefore call the significance of music its “vital import” instead of “meaning,” using “vital” not as a vague laudatory term, but as a qualifying adjective restricting the relevance of “import” to the dynamism of subjective experience.” [Langer 1953, 32]

Complicated as is the attempt to understand musical expressiveness, it is not surprising that Langer’s theory has faced many objections. Firstly, Langer claimed that this presentational symbol is not based upon conventionalities, but rather, that music is naturally meaningful of emotions. The main problem with this is not merely a matter of terminology, though (which I certainly consider unfortunate). It is rather a matter of the kind of answer we obtain from her theory. Indeed, in order to argue in favor of natural meaning, it should be demonstrated that the musical ‘presentational symbol’ stands in such a relationship with what it stands for, that we all get that a presentation of a form of a particular emotion is being presented in a particular musical passage. However, this demonstration is lacking in Langer’s approach. Secondly, it is not clear what she referred to as the ‘logical form of human feeling’ is, and the explanation of how such a form could be resembled by music is rather obscure. Indeed, the relationship she affirmed between human feeling and music within her theory remains as undemonstrable iconicity. [Davies 1983, 231]

Nevertheless, I consider that, even though the composers and performers may not have an answer to how this happens (or, as with the Affektenlehre and correspondent Figurenlehre, they might have developed a technique to precisely answer this question and compose accordingly), theories such as Langer’s and Mattheson’s have the asset of taking into consideration the ‘feeling’ component of emotions. Indeed, the problem Langer’s theory faces lies in the basis of the iconicity suggested, since it is not at all clear what or how a form of a feeling is. However, the dismissal of the feeling component in emotional processes or other affective phenomena related to musical experiences is not the answer either.

Peirce's classification of signs has been helpful so far in clarifying what kind of signs we are interested in to explain musical expressiveness. We are interested firstly, in icons, and only secondly, in symbols, and thirdly, in the next chapter we will find that indications have a lot to say about arousal. In order to prepare the basis for a theory based on iconicity, we have also sketched what resemblances can be found between musical features and some affective phenomena. But for our purposes, Peirce's classification cuts too big slices, and in doing so, relevant characterizations of the kind of relationship between music's features and affective phenomena might be overlooked.

I consider that Stephen Davies's account is the most helpful so far in analyzing this issue. He has argued against the usefulness of comparing music to a sort of natural language, since music does not meet the conditions required for a language-type meaning.¹ Indeed, to understand what can be meant when it is claimed that music is the 'language of the emotions' (a kind of natural language that deals especially with emotions) we are left with two possibilities. First, if natural languages also deal with emotions, music would be an impoverished kind of natural language (which can be used only for a subset of what can be communicated with a regular natural language). Second, if natural languages cannot deal adequately with emotions, music could be treated as an alternate language that is not impoverished. However, neither of these options is really helpful. Indeed, the musical case is difficult insofar as we acknowledge that there is 'meaning' in music, but that by that we do not mean propositional content, given that whatever the music may mean is elusive to be specified linguistically. As Davies puts it:

This is not to suggest that what music says is ineffable; instead, it is to deny that music says anything at all. Music might possess meaning in the sense that it presents a content that invites understanding. It might also be the case that, in one way or another, music draws attention to, and reflects on, extramusical phenomena, such as the world or human emotion. But its meaning is not stated. [Davies 1994, 24]

In order to get on firm ground, Davies offers a typology of meanings, which I find very helpful since it clarifies the different relations between the elements that have a role in meaningful connections; i.e., intended/unintended; natural/arbitrary; meaning within a symbol system/stand-alone meaning [Davies 1994, 29]. Davies classifies meanings into five types: A natural, unintended meaning (Meaning A); the

¹ Davies follows Göran Hermerén conditions for something's being a language (Hermerén: 1988): (1) discrete and repeatable elements; (2) evocation of ideas; (3) vocabulary; (4) indexical and characterizing elements; (5) force-showing devices and modalities; (6) possibility of metalinguistic assertions; and (7) logical connectives. [For the discussion, see Davies 1994, 5-29]

intentional use of natural significance (Meaning B); a systematized, intentional use of natural elements (Meaning C); an intentional, arbitrary stipulation of stand-alone meaning (Meaning D); and arbitrary meaning generated within a symbol system (Meaning E).

Meaning A—natural meaning—is non-referential and stands independently of any symbol system. There can be a causal connection between the signifier and the signified, as when dark clouds mean rain, or smoke the presence of fire; but also a constant conjunction may suffice, as when lightning might mean thunder to follow.¹ Also, we can say that the emotional behavior, such as crying, might mean sadness. In cases like this, however, the relation is constitutional, rather than causal (the behavior constitutes part of the emotion). In regard to the relation of resemblance, we have to say that it lacks the selectivity and directionality necessary for meaning, since resemblance is a symmetrical relation (i.e., one thing resembles the other as much as the other thing resembles the one thing and none is the signifier or the signified). Davies claims, though, that resemblance can sometimes secure meaning A, given that our interests provide the lacking directionality. The example he gives to illuminate this case is that of the willow tree, which we see as having the bearing of sad people, due to our interest in human emotion.

Meaning B is an intentional use of Meaning A. An actor may use a sad face to use the natural meaning of it to pursue an intention (for example, to convince his audience of his character's sadness). Resemblances, which lacked directionality, acquire directionality through their intentional use. However, the intention must be recognizable for the audience, be it that the intention is apparent, it is announced, or that there are certain conventions that establish so.

Meaning C is a systematized use of Meaning B. Even though Meaning C takes its significance from a natural relation (Meaning A), it might be that its taking up meaning as a result of its insertion in a system makes it apparent only to those familiar with the rules of such a system. Davies is emphatic—and rightly so—in differentiating ‘conventional’ from ‘arbitrary’; and so, while Meaning C is dependent on culturally shaped

¹ Charles Nussbaum considers that Meaning A is not a variety of meaning after all. Davies’s Meaning A is what Nussbaum calls *de re* informational content, which is a nonintentional, physical phenomenon, and he denies that *de re* informational content should be considered meaning: “Meaning is carried by representational vehicles only, and [...] an informational vehicle becomes representational, and therefore normatively evaluable according to correctness conditions, only when it is used as a representation by an interpreter. So there is, in my view, no uninterpreted “natural meaning.” For me, if not for Davies, if music is meaningful at all, then it is representational.” [Nussbaum 2007, 89]

conventions, it is not arbitrary. He exemplifies this kind of meaning with the use of consonances/dissonances and the tension they generate. Supposing that there is a natural relation that establishes these, there is also a set of conventions dependent on the particular context in which the intervals were used. And so, as it is known, while the thirds were considered dissonances in medieval music, they are almost a resting point in Wagner's music. Another example of this kind of meaning, I suggest, is precisely the Figurenlehre that we have been talking about. I suggest so because there is a resemblance that could secure meaning A, then a clear intention to utilize them (Meaning B), and finally, a systematization of such resemblances (Meaning C).

Meaning D is an intentional, arbitrary stipulation of stand-alone meaning. It is a kind of meaning that is not only conventional, but arbitrarily so. An example Davies offers of this type of meaning is a bell that signifies that supper is to be served. Albeit Meaning D depends on conventions, these conventions do not constitute a symbol system.

Meaning E is the use of meaning D within a symbol system. In this type of meaning, a symbol has meaning as an element of an arbitrary scheme that assigns the meanings and rules for the generation of meaning. Davies considers that linguistic meaning is of this sort. In meaning E, however, the generation of meaning is not dependent on any natural relation, as in meaning C, since the symbol system is responsible for the creation of semantic content.

As I said, I consider that Davies's account in this respect is the most helpful. Indeed, the lack of fine differentiation between these types of meaning has resulted in rather obscure explanations of what happens in musical expressiveness. First, the confusion between what is conventional, on the one hand, and arbitrary, on the other, has driven the discussion into a false neat distinction between natural meaning and conventional-arbitrary meaning. Second, the suggestions of considering music the 'language of the emotions', treat music as if it was a matter of meaning E, which is very debatable.

There is an unfortunate tendency to treat "conventional" as equivalent to "arbitrary" and to regard all conventions as structuring symbol systems dedicated to generating semantic content. To do so is to obscure the distinctions between meanings A, B, C, D, and E; it is to see (wrongly) meanings B and C as more intimately allied to meanings D and E than to meaning A, or it is to assimilate (wrongly) all intentionally used meanings to the model of linguistic meaning, or it is to assume (wrongly) that music might possess only one type of meaning. [Davies 1994, 39]

This typology of meanings casts aside the objection of, say, considering ridiculous the attempts of the Baroque composers to create a catalogue of Figurenlehre (Meaning C), on the grounds of confusing it with an arbitrary symbol system (Meaning E). Although there might be unintended Meaning A in musical compositions¹, I consider that musical meaning is mostly of the B and C types. Likewise, I think that there are various examples of meaning stipulations of the D type in musical compositions, for sure, but I have my concerns regarding the possibility of Meaning E in music.

However, Charles Nussbaum [2007, 111-2] makes a further differentiation regarding meaning E. Even though he does not hold to Saussure's semantic theory of semantic fields, Nussbaum builds on his distinction between three axes of contrast of signifiers²: phonological, syntagmatic, and paradigmatic contrasts. The phonological contrast determines the sounds that are functionally available in a particular language, as opposed to others. The syntagmatic contrast determines the various *grammatical rules* that govern within a language. Finally, the paradigmatic contrast concerns the *semantic fields* of different words that play the same grammatical words. That being said, Nussbaum claims that music does not present syntagmatic organization, but that it does present paradigmatic one.

But musical syntactic structure does not achieve genuine syntagmatic organization, for it does not contain grammatical categories and has no analogue to the subject-predicate-modifier structure. Because it lacks grammatical categories and therefore lacks true syntagmatic organization, the structure of music (according to the Lerdahl and Jackendoff theory) is less strictly "generative" (organized from the "top down") and more "cumulative (organized from the "bottom up") than is linguistic generative grammar [...]. There is no analogue in music to this strictly category-governed generative process. Nonetheless, a melody can also be expanded "from the inside" by adding more and more properly nested subordinate tree branches, as occurs perhaps more commonly in variation and in ornamentation. [...] Still, because it is recursively organized, musical syntax does seem generative to some degree; and may it may be appropriate to regard the generative/cumulative distinction as not absolute but relative. [Nussbaum 2007, 112]

Summarizing, although following Peirce's classification of signs we would be inclined to say that in music we mostly find iconic relationships, Davies's meaning typology allows us to go one step further and properly

¹ Again, I submit with Walton [2015] that there might be cases where the artwork's surface might have certain features that allow the listener to make some inferences about the intentions of the author, or inferences about certain meaning that the author was, nevertheless, not aware of (and that, therefore, were not intended to mean such-and-such).

² Saussure distinguished between two interrelated systems in his theory of semantic fields: signifiers and signifieds. The signifieds are the contents of the signifiers, to which are related by convention. The sign is for him the conjunction of signifier and signified. These two interrelated systems are internally articulated by means of identities (the contents) and differences or contrasts with other signifiers. [Saussure 1915/1959, 115]

distinguish relevant elements of musical expressiveness that remained overlooked. Indeed, according to Peirce, symbols are conventional. Agreed, but does that mean as well that they are arbitrary? What is the case in musical expressiveness? Musical meaning can stress natural elements in an iconic way, although these natural elements may well be inserted within a conventional system. Of course, there can also be conventional stipulations (not rooted in any natural meaning), but I deny that such stipulations in music work in the way natural languages do, especially in that music lacks the rules for generating meaning as a symbol system does. Why is that? Because even though music is recursively organized and does present paradigmatic (i.e., semantic) contrast, it does not stress syntagmatic organization as well.

2.4.2 THE RESEMBLANCE THEORY

Now then, let's move on into considering the Resemblance Theory. This theory has been set forth by Peter Kivy on the one hand [1989], and Stephen Davies on the other [1994]. The theory has been labeled by Kivy as 'Contour Theory', while Davies prefers to call it 'Appearance Emotionalism'. However, I will stick to Davies's exposition of the argumentation, as I find it stronger, and generally refer to it as "Resemblance Theory".

The main claim this theory sets forth is that music is expressive of emotions in that it presents emotion characteristics in its appearance. Davies maintains that we are legitimately entitled to say that a mask is sad because it possesses features that we relate to sadness (the frown) even though we all understand that the mask is not actually a human being experiencing sadness. Davies claims that this is so because there is a second and legitimate use of a claim of the type 'X is sad' that includes cases such as the mask one, where we are concerned with the sadness-look, rather than with the emotion proper. In the same way, we can say that a piece of music is, say, sad, if it exhibits the relevant appearance of sadness, without getting entangled either with the assumption of believing that music is a sentient being, or with the discussion of locating the emotion outside the music itself.

Let's consider the following claim: "Appearance emotionalism maintains that the expressiveness of a piece of music is an objective and literally possessed but response-dependent property of that piece." [Davies 2006, 180] It is claimed that a piece of music is expressive of a particular emotion in an objective and literal sense given the second use that emotion words have that I have just mentioned. That is to say that the piece is not, say, metaphorically expressive of sadness, but rather that it is objectively and literally sad, but with this second use of the emotion words. On the other hand, musical expressiveness is a response-dependent property because it also hangs on its ability to produce a particular response or experience in an auditor of a certain kind. Davies considers that color and pitch are examples of response-dependent properties, since the color experience is not only dependent on the objective properties the object may have, but also on the perceiver's capacity to perceive things as colored. Likewise, the experience of pitched sound is not only a matter of the properties of sound itself, for it also hangs on the particular capacity of the listener to hear sounds as pitched. Another musical element that would work as an example is melody. Indeed, it is not obvious that other animals experience melodies as a conjunction of ordered sounds that make sense in the way we experience melodies, and not only as crude sounds or noises. In the same fashion, musical expressiveness, albeit objective in the sense that it depends on properties music itself has, is also response-dependent.

But in order for emotions characteristics in appearance to be recognizable by the auditor or to elicit the appropriate responses, it would be necessary that the emotion appearances were distinctive of that particular emotion, so that it becomes unnecessary to make any reference to the intentional object of the emotion (which music cannot embrace). Thus, the emotion characteristics relevant to this second use of the emotion words—emotions characteristics in appearances—are those that show a particular behavior that is perceived as sufficient evidence for the emotion in question.

To see movement as flight (to or from) is to recognize a relation between the action and its object. Where there is no such object, there is movement, but not flight as such. By contrast, radiant smiles can be seen as expressive of happiness in the absence of evidence about the object of the smiling person's happiness. [Davies 1994, 225]

Therefore, the recognizable emotions from the appearances are far less than the complete set of emotions, so to speak. Indeed, some emotions might be easily recognizable from the behavioral characteristics they exhibit, but for many others a reference to their intentional objects or beliefs is in order. In the literature it is common to find a distinction between "higher" emotions or Platonic attitudes [Moravcsik 1982] and

more basic emotions (garden variety emotions as Kivy dubbed them¹, Kivy 1989), which aims to differentiate between emotions that seem to require cognitive content in order to be individuated and that do not seem to have characteristic behavioral expressions (aka higher emotions), from those that seem to have them. Among the “higher emotions” are usually included hope, envy, jealousy, embarrassment, and puzzlement, while among the “garden-variety” emotions joy, sadness, fear, and anger are included.² I do not consider that this distinction is neat or definite at all, since both the role cognition plays in different emotions and the characteristic behavioral expressions are much more complicated. Nevertheless, the use for us of such a distinction is simply to quickly get to our point. What are the emotions that are distinguishable from musical contour, given that music cannot be expressive of those emotions that do not seem to have distinctive behavioral expressions, since it cannot embrace a reference to the beliefs or thoughts that individuate them? Davies considers that music can be expressive of sadness and happiness, but not much more. Moreover, since grief, depression, gloom, etc., are all forms of sadness, music can present their general expressive gestures or primary expressions. However, since we would not be really entitled to say that a person is, say, ‘grief looking’ only based on her expressive gestures if we do not have any context or reference to the cause of her sadness, Davies considers that music would only be expressive of the general kind of sadness and not of grief in particular.³

Musical expressiveness, thus, relies on a resemblance the auditor perceives between musical features and emotionally characteristic behavior. Now then, what behavior is resembled by music? In Kivy’s view, music presents emotion characteristics displayed in the vocal expressions of a particular emotion (among other resemblances). This, as it has been pointed out earlier, is one of the resemblances that composers worked upon during the Renaissance and that was present in the *Recitativo*. However, Davies

¹ It is not really clear what Kivy means by ‘garden variety emotions.’ He just says that these are emotions like joy, sadness, love, and the like, but he does not commit himself with a finer differentiation regarding their cognitive content, for example.

² It can be wrongly conceived that the garden variety emotions are non-cognitive or poorly cognitive and that the higher emotions are equally ‘highly’ cognitive. I do not see any hope in this distinction. I do not consider that the line between ‘cognitive’ and ‘non-cognitive’ is easily definable in regard to emotion processes, as I have already argued in Chapter 1. Nevertheless, the aim is to point out that ‘higher’ emotions like envy, pride, or embarrassment seem to require a belief or propositional-attitude that, say in the case of envy, someone has something an individual wants for herself. Moreover, envy does not seem to have a particular behavioral characteristic that would make it recognizable without providing any evidence for its intentional object or belief. The ‘higher emotions’ are not included in the so-called ‘basic emotions’ set, as we have already discussed.

³ Of course, this is considering pure instrumental music, since, say, in an Opera we could recognize grief from the dramatic context.

regards the resemblance found between the dynamic character of music and human movement, gait, bearing, or carriage, much more determinant.¹

The most important resemblance found, I agree, is the one held between music's dynamic character and movement itself. Summarizing for now, the Resemblance Theory maintains that music is expressive of emotion in that it resembles certain aspects of human emotional behavior that are distinctive and recognizable; namely, vocal utterances and carriage, gaits, bearing, and other emotional expressive movements.

My claim is that musical movement invites attention to expressiveness because, like human action and behavior (and unlike random process), it displays order and purposiveness. Musical movement is invested with humanity not merely because music is created and performed by humans but because it provides a sense of unity and purpose. We recognize in the progress of music a logic such that what follows arises naturally from, without being determined by, what preceded; in this, musical movement is more akin to human action than to random movement or to the fully determined movements of a nonhuman mechanism. This feature of music, as I have said, arises from the character of musical materials themselves, not solely from the recognition that human hands shape those materials. [Davies 1994, 229]

Although true, there is something else to movement that interests us. Why does movement seem so relevant for musical expressiveness? Moreover, even if music iconically presents movements that are related to affective phenomena, what is the action a listener must undertake? Is she supposed to simply recognize the features of the musical piece as similar to those of humans under a particular emotional state, or is she supposed to get aroused after all? These are questions I will take up in the next chapter.

¹ Davies thinks that music does not resemble the noises we make when under the influence of strong emotions, but he does think music might resemble the prosodic elements that in ordinary speech make it expressive.

3. Musical Gestures



Corporal exploration: *Ausencia 1*

(monotype, acrylic and ink on paper)

Ruth M. Pamatz

3. MUSICAL GESTURES

3.1 MUSICAL SPACE AND MOVEMENT

I would like to begin this section by talking about psychologist Carroll C. Pratt's account of musical expressiveness. Pratt argued that music does not represent emotions, since for him, music shares with emotion its dynamic character and, in so doing, it possesses the properties of 'feeling' itself. Hence, without considering that music is a sentient being that possesses the emotion (which would be to commit the pathetic fallacy) Pratt instead maintained that the patterns of musical movement are intrinsically related to emotion, given the dynamic properties that they both possess and share.

Music sounds as though it were saturated with mood and feeling, and for that reason has for centuries been called the language of emotion. But music speaks of emotion only by way of tonal patterns which at the level of form are indistinguishable from the patterns of bodily reverberations. *Music sounds the way emotions feel.* [Pratt 1954, 296]

In Pratt's view, the words used to describe emotions are also used to describe music's expressiveness, which for him reveals a crucial fact: the similarity in music's and emotions' formal dynamic character. These words are: agitated, calm, forceful, weak, wistful, dramatic, seductive, excited, quiet, indecisive, languid, restless, pompous, graceful, awkward, clumsy, somber, triumphant, erotic, exhilarating, martial, tripping, indecisive, yearning, stately, majestic, lugubrious, pensive, rhythmic, fluent, ecstatic, sprightly, and aspiring [Pratt 1931]. According to him, these words are applied to describe music as well as to describe the way we feel emotions, because they apply in the same way to the qualities of the bodily movements we experience. In other words, he considered that the connection between music and the emotions is underwritten by a shared connection from these two categories to a third: motion.

Pratt had the intuition that there is a bodily sensation or feeling related to (outer and inner) movements, generally said to be perceived through kinesthesia. Particular movement patterns so perceived

would be the common denominator between music and emotion.¹ I believe Pratt's position is not tenable as it is (and it has certainly faced several critiques) insofar as it does not explain how movement is transduced into sound and, furthermore, leaves a big mystery in his explanation of musical space, musical movement, and how it is justified that music and these movements share the same dynamic character, which moreover, are said to correspond to emotions.² Nevertheless, I consider that his intuition was on the right track, for the very crux of the puzzle of musical expressiveness is musical motion and its relationship with emotions. So, even though appealing to the etymology of the word 'emotion' does not seem to provide enough of a foundation to establish a proper relationship between emotions and musical movement, it may now be seen to provide good insight after all.

Certainly, the relationships between music and movement on the one hand, and movement and emotion on the other need more clarification. Let's begin by focusing on the first issue at hand; i.e., the relation between music and movement. Indeed, as we have insisted, although it seems that music presents movements, it might also be argued that it rather represents them (metaphorically or otherwise). The discussion focuses on the issue of whether we should consider musical movement as an illusion or as something real. Malcolm Budd [1983], arguing against Carroll Pratt's idea that music intrinsically involves movement, considers that the notion of musical movement is problematic for two reasons. (1) There is not an object that moves from one place to another. Instead, a note is succeeded by another, which according to him is not sufficient for giving the impression of one thing moving from place to place: "my perception of a higher note following a lower note is not as of movement in the sense that the perception of a wave moving across the sea is the perception as of something moving across the sea, or in the sense in which the experience of the motion picture is the experience as of motion." [Budd 1983, 211] (2) In music there are no 'positions' or musical space where movement could take place. Budd claims that, while pitch organization of the sounds would be the obvious candidate for the role of position in musical space (since,

¹ The word "emotion," as previously noted, has its very origins in the idea of a motion that gets expelled.

² In this respect, Stephen Davies critiques Pratt's position (and rightly so) in that these words cannot properly be called emotions and, moreover, in that such a position reveals an impoverished account of what emotions are, for it neglects emotions' intentionality. Also, Davies doubts the scope that Pratt's (and Langer's for that respect) theory is actually able to explain. "[...] I doubt that the emotions listed by Pratt are individuable in terms of the conjunction of these inner and outer motions. If they are not so, music could not be expressive because of sharing with these feelings their dynamic form. Mere similarity between the forms of musical works and the forms of the emotions cannot fully account for the inclination to describe music in such terms, given that music resembles in its dynamism many other events and processes which it is not usually said to express or present [...]" [Davies 1994, 134-37]

according to Pratt, higher notes seem to come from a higher place in physical space than lower notes), it is only an unnecessary illusion. In Budd's view, 'spatial organization' of pitches is not necessary or even important for the experience of music. "It is not necessary to suffer the *illusion* that low notes are coming from a lower position than high notes in order to hear notes as higher or lower. The perception of forms in music also does not require that different notes should seem as if they were coming from different heights." [Ibid. 212]

However, Budd seems to allow that there is certain non-physical-spatial organization of pitches in music that is, nevertheless, not derived from our imagination of a higher pitch as coming from a higher position in 'real' physical space, and so forth. In Budd's view, the pitch positions in musical space are just analogues for points in real space, but he insists that this analogy has limited scope. [Ibid. 214]

Nevertheless, I contend that in order to account for musical movement it is not necessary to argue that there is physical space in music, nor that there is an object that changes places through time. The space that is taken as necessary is rather a representation of space that has been considered differently by diverse philosophers and psychologists, namely, as 'ideal' [Edmund Gurney 1880], 'metaphorical' [Pratt 1931, and Scruton 1983], 'virtual' [Langer 1942 and 1953], 'aural' [in Davies 1994], or 'acousmatic' [Nussbaum 2007] (all of which have different subtle implications, of course).¹ Here is one of the differences in Davies's words:

Usually it is claimed that music unfolds within and through aural space. Aural space is not to be confused with real space; it has no location relative to the equator, for instance. [Davies 1994, 230]

But why is it so important to include a spatial representation in musical experiences? It seems that there are multiple crucial features of music that are not conceivable without it (despite Budd's claims, according to which 'the spatial metaphor' is eliminable). Pitch intervals seem to be ordered as higher or lower with

¹ I do not intend to go through all of these terms and debates here, though, nor through the discussions on the nature of phenomenological time. It will be enough to briefly remark that taking as a departure point an impoverished linear notion of phenomenological time devoid of memory or ordering possibilities does not only make it impossible to consider movement in music, but also in all sorts of human experiences where temporal processes are to be perceived. That is why I do not regard this debate as especially problematic for the musical case. Indeed, I would claim that movement involves a mixture of time and space, even though it might not be physical space, but rather aural space or, so to speak, a representation of a homogenous instance or continuum.

respect to each other (even if one does not perceive, believe, or make-believe that they come from those points in physical space). Moreover, melody, harmony, rhythm, pace, dynamics, and texture, alongside the different sound-organization compositional techniques such as counterpoint or the general musical forms and structures (e.g., the sonata-form, or a twelve-note series or tone row in a dodecaphonist composition) involve a notion of movement; and since the experience of motion in music requires an aural or virtual space, such a space is not merely an extended, but eliminable metaphor.

Indeed, there has been much debate on the issue. Roger Scruton [1983, 2004] claimed that musical movement must be explained in spatial terms. However, since nothing ‘literally moves’ through ‘real space’, Scruton considered that musical space and movement should be better understood as metaphors.¹ He also submitted that, nevertheless, these metaphors cannot be eliminated from the description of music without also taking away the experience of music itself. [Scruton 1983, 106]

Budd argues against Scruton in this regard, and suggests instead a differentiation between ‘spatial movement’ and ‘temporal movement,’ and claims that music involves movement of the latter sort, maybe referring to a contrast between physical movement and the things happening to consciousness. In Budd’s view, a melody is experienced as a temporal *Gestalt* of elements on a non-spatial continuum. And regarding rhythm and harmony, Budd also considers that a reference to space is not required. However, again, he does require a ‘non-spatial continuum’ to account for melody, rhythm, and harmony. But indeed, I consider that the objection of there not being a space through which an ‘object’ could change places in order for it to be proper to talk about movement could be fairly satisfied with the instance of a continuum. Again, it is not ‘physical’ space, and it may be fair enough not to dub it ‘space’, but it is nevertheless a continuum in which the consciousness is able to encompass different moments and different ‘points’ in the same moment and, moreover, is able to grasp static and moving relationships between those ‘points’ and ‘moments’.

¹ In his 1983 essay “Understanding Music”, Scruton drew a distinction between sound and music, considering sound as a physical, material fact, and music—in contraposition—as an intentional construct. As such, music does not present the ‘physical space’, nor real ‘physical movement’, but only apparent motion that should be therefore regarded as metaphorical. According to him, the concepts of space and motion are metaphorical transferences brought to explain musical experience. Nevertheless, Scruton does not think this metaphor is eliminable without missing essential aspects of musical experience.

As I said, I do not intend to delve deeply into this branch of **the debate**.¹ Nevertheless, the following must be said: while I am not convinced by the idea that the notion of metaphor is what best explains the spatial element of music, I agree with Scruton in that a reference to space is not eliminable. And I consider that it is not eliminable firstly because it is rather a representation of space that works as a condition of possibility for the perception of movement in Kantian terms.² Again, I do not agree with Budd in that there is spatial and temporal movement, since for me, movement involves a mixture of both instances, space and time, and in order to perceive a temporal sequence (say, of sounds) as a process, a continuum must also be presupposed.

I worry that this discussion could get entangled in a terminological issue. Apart from Pratt, who argued that listeners really perceive notes coming from different places in physical space according to their pitch (which, we will see is not so unintuitive after all, in light of Charles Nussbaum's research), what is generally agreed is that there is a representation of a continuum in which musical movement takes place, and that this continuum is what is necessary for the perception³ of musical movement. Whether this continuum should be called virtual space, aural space, or metaphoric space is a further issue. I do reject the tag 'non-real space', though, because it surreptitiously introduces a claim on the lack of reality of our mental states that is unwarranted (although a proper discussion of this issue falls outside the scope of this dissertation).

In addition, and against the idea of an 'object' that could be the one that moves in music, Budd [2008] argues that, since a tone's identity is inseparable from its pitch, musical movement cannot consist in a tone moving from one pitch to another in the pitch continuum (for it would not be the same tone, and, therefore, there would not be an identifiable object that moves). His point is that musical movement would require us to hear that one pitched sound moves to another place in the pitch-continuum, and that such a

¹ To follow the debate, see Budd [1983, 1992, 2003 and 2008]; Scruton [1983, 1997, 2004]; see also S. Davies [1994, 233-40]; and De Clercq [2007].

² Indeed, it could be understood under the Kantian argument for the preeminence of an intuition of space in perceiving movement, that what is needed is something that remains permanent and permits the moving object to be contrasted with and, therefore, perceived as moving. [*KRV*, B275-6]

³ There is debate, however, on whether this continuum is necessary for the *perception* of musical movement or for the *categorization* of the "temporal Gestalt" as movement. For hypothetically, one could hear bits of music as melodic, harmonic, rhythmic, etc. without "hearing the motion and the space"; in which case what would be lost is rather the rich descriptive language we can use to characterize these musical features.

thing is impossible, since it would mean that a note, say, a C, will move to, say, an F, while continuing to be a C. He submits that in following, say, the development of a melody, a listener does not imagine that tones (or something other than tones) move from place to place.

With regard to this objection, Scruton agrees that pitched sound is not the object that moves, but claims that a moving pitched sound is not what is perceived, but rather that we hear pitches as places through which 'music' moves. He first urges us to differentiate between sound and tone, considering that, while the former is a physical event, the latter is an intentional object that possesses other additional properties such as direction, relations of attraction and repulsion, energy, and a kind of internal 'wanting'. In order to hear sounds as musical—Scruton tells us—they must firstly be heard as tones. Thence, according to him, we are able to hear sound collections as melodies because of this intentional character that is presupposed in tones, and that relies on our capacity to hear metaphorically-as.

When we hear tones in the pitched sounds we may also hear a melody: the first subject of Beethoven's Third Piano Concerto, say, which starts on C, moves to E flat, and on to G, before going stepwise back to C. Our way of hearing melodies implies that we identify the pitches as places through which the music moves, not as items which are themselves in motion. Of course the melody does not *literally* move; and it is not *literally* there. But we hear it all the same, by virtue of our capacity to hear metaphorically—in other words to organize our experience in terms of concepts that we do not literally apply. [Scruton 2004, 186]

This issue has been long debated¹. Nevertheless, one of the salient branches of this discussion is the debate over whether this musical 'metaphorical space' (or virtual, aural, or otherwise) is a concept and, if so, what its content is. I must say that I do not think this aural space should be considered as a concept, and I feel much more comfortable with a pre-conceptual characterization of it. Surely this is not the place to get any deeper in this important philosophy of mind discussion, but I will still suggest that whatever conclusion we

¹ In this respect, there is also a related well-known debate on musical structure perception mostly held between Peter Kivy [2001, 183-217], who defended an architectonic position, and Jerrold Levinson [1997], who defended a position that he called concatenationism. The debate between architectonicism and concatenationism focuses on the possibility of a 'spatial' audition of a musical work, or in other words, on the possibility of grasping a 'spatial' compositional structure while [temporally] listening to a piece of music. Without going further with this subject, let it suffice here to say that I take this debate to be an unfortunate consequence of undertaking these enquires without an appropriate concept of phenomenological time.

arrive at in this respect needs more research (even empirical research), for is not as straightforward as it has been treated.¹

Again, I submit that musical movement is a central character of music, without which it would be impossible for a listener to make sense of the bunch of sounds that are heard during the performance of a musical piece. That would involve that we are able to hear those sounds as melodies, harmonies, rhythms, textures, and evolving structures, along with the tension-release relationships and so forth, and not merely as brute noises. The problem arises from the fact that those ‘movements’ do not seem to belong to the music itself, but rather to our (human) way of organizing the sounds in such and such ways in our perception (perhaps other non-human animals do not hear melodies, but perhaps they do).

Scruton’s solution is that space and movement in music are metaphors, but the problem with this solution is that metaphors are concepts with a given semantic field that are applied to a different semantic field.² That would suggest that he is considering ‘space’ as a concept that has a source-significance in the physical realm and that in the musical case has been applied to a different semantic field, so that in this shift we are able to understand certain features of music that would not be understandable without it. In

¹ For example, Ned Block—although analyzing the case of visual perception (not auditory perception, and certainly not music)—goes against the idea that all seeing-as involves conceptualization. Block considers that philosophers have underestimated the extent to which the following issues are empirical or even experimental: (1) Whether seeing must be seeing-as; (2) whether seeing-as is exhausted by seeing low level properties (shapes, facial relations, motion, texture, brightness, body, and color), as opposed to high level properties (a car, a bat, or as a person); (3) whether seeing-as is conceptual; (4) what the distinction is between perception and perceptual judgment. Block argues that there is a boundary in nature between perception and cognition, and that there is a form of seeing-as that falls on the perception side, which is thus not conceptual, and therefore not propositional [Block 2014].

Block suggests distinguishing between visual representations of low-level properties on the one hand, and visual representations involving the attribution of high-level properties like ‘baseball bat’ on the other. Are representations like ‘baseball bat’ *in* the visual system, or do they depend on conceptualizations? Is vision able to represent high-level properties? Block thinks that the answers would probably be *no* for ‘baseball bat’ but would probably be *yes* for faces or other more ‘biological’ or evolution-dependent properties. Thus, he considers that this is not an a priori, armchair analyzable kind of issue. For a further discussion on this subject, see for example Laura Cacciamani, Andrew J. Mojica, Joseph L. Sanguinetti, and Mary A. Peterson [2014]. See also Fodor [2007].

This discussion could be related to the musical case insofar as hearing a set of sounds as a melody and not merely as a random collection of sounds may or may not involve the necessity of the concept ‘melody’. In the same fashion, representing sounds as spatially organized or as involving movement may turn out to depend on the possession of such concepts. But in the same way, it might equally turn out that there is a form of ‘hearing-as’ that ‘falls on the perception side’ and that is, therefore, previous to conceptualization. Clearly, this issue needs further research, and I am not in a position to address these questions here.

² Saussure 1915/1959

other words, we are able to categorize and understand what is going on in music only when we have these metaphorical concepts—space and movement—and, in applying them, make sense of what we are hearing. The other option, though, would be to suggest that space and therefore movement are not concepts that are being applied to a different semantic field in order to better understand something, but rather, that they belong to a pre-conceptual, or non-conceptual realm in [human] auditory perception, so that what is at stake is not how we are able to understand music, but rather how we are able to *perceive it as music*.¹ To what extent can we justify that [in music] space and movement are really-incarnated metaphoric concepts, or rather pre-conceptual instances that allow *hearing-as*? As I said, I believe this is a particular philosophy of mind issue that requires much more attention than I am able to afford it here.

However, we shall try to approach this debate from a different perspective, namely, Charles Nussbaum's, who in turn suggests a phylogenetic explanation to why we hear combinations of tones of set frequencies as defining space and movement; or, in his own words, an evolutionary speculation that will try to show a much more close bond between the senses of touch and hearing. Of course, it is not my intention to overlook the importance of the discussion of this subject from the philosophical perspective; rather, I ponder that sometimes it is worthwhile to approach a particular problem from a new perspective, and that, in this particular case, considering this subject from a scientific point of view opens routes of solution that were not available. And so, Nussbaum points out that the specialized human sensory systems share common functional organization, for they all code for stimulus modality, intensity, duration, and location. However, these systems use three different modes of stimulus transduction; namely, photoreception, chemoreception, and mechanoreception. Now then, of the different human sensory systems, the auditory system and the sensory-somatic system are the ones that work by mechanoreception. [Nussbaum 2007, 51]

The main mechanism of transduction of the acoustic events lies in the ear's motion-sensitive hair cells in the organ of Corti that detect and respond to periodic waveforms of different frequencies (the

¹ In this regard, Lakoff and Johnson [1980] have suggested that spatial-orientational metaphors (as other abstract concepts) are based on 'emergent concepts' derived from our bodily experience; namely, from the fact that we have a human body that works in certain ways and that usually interacts with the environment in particular ways. These metaphors (in-out, up-down, front-back, on-off, deep-shallow, central peripheral), they say, are thus based on these 'emergent concepts' that do not need further metaphorical grounding, since they derive from a more basic bodily experience.

basilar membrane and its striations where these cells are suggest the organization of the harp of a piano, which makes it possible for the hair cells to detect different frequencies). These hair cells in the organ of Corti evolved from those present in the lateral organ of aquatic vertebrates, the main function of which is to detect [movement] vibrations.¹ In fish, this lateral line extends from head to tail and permits them to perceive and locate moving objects in the water. Nussbaum tells us that the human cochlea developed from the lagena, a structure within the sacculus of fish. The sacculus, which is a part of the labyrinth that is responsible for equilibrium and balance in humans, is also an organ of hearing in fish without cochlea. The fish lateral line atrophied in terrestrial living beings, while its connections to the medulla were replaced by the vestibulocochlear nerve. Nussbaum thinks that there is a homologous relationship between the acousticolateral nuclei of fish and the human cochlear nucleus that will help to explain why we experience music as spatial: The acousticolateral nuclei in fish allow them to locate the stimulations according to the location of the hair cells on their body, while the cochlear nucleus in humans maps higher or lower frequencies. Nussbaum's bet is that, if some of the ancient tactile function is preserved, it would help illuminate why we perceive in music both object and observer motion, along with the fact that we tend to locate higher pitches higher in musical space, and lower pitches lower in musical space.² Indeed, the main claim is that the acoustic sensory system had a tactile nature that was suppressed in humans, but that may still have certain functions that might explain why we have this mixed sensory experience between the tactile and the auditory.

Assuming, as is reasonable, some preservation of ancient function between the somatotopical mapping in the acousticolateral nuclei of fishes and the tonotopical mapping in cochlear nucleus of humans, we might well expect a head-to-toe spatial orientation naturally built into musical pitch, with higher pitches heard "up" near the head and lower ones "down" toward the toe. The reason for this is obvious: the human body, unlike the fish body, is normally oriented vertically with the head up relative to the terrestrial gravitational field. [Nussbaum 2007, 54]

In effect, it is Nussbaum's suggestion that acoustical experience is fundamentally haptic and bodily, given that the human body gets mapped onto the tuned length of the organ of Corti. According to him, the sounds' frequencies map onto vertical motion in space. But also, he takes into consideration the phase-frequency parameter of waves, which he maintains could explain the puzzling sensation of the octave that

¹ Nussbaum cites Matthews [Matthews 1998, 437].

² The human cochlea is rolled up, but within it, the hair cells in the organ of Corti that can detect higher frequencies would be located closer to the head, while the lower frequencies would be located closer to the feet (as in fish, but vertically oriented).

is responsible for one of the most salient indications of spatial representation in music. Indeed, the octave interval is of so much interest for the consideration of musical space, mainly because it bears an apparent contradictory character, since the octave of a given sound seems to be further away, but at the same time, it seems that, once reached, one ‘arrived’ to the same place that one departed from.¹ At the same time, the octave works as a musical space frame within which the rest of the intervals are located. How does Nussbaum explain this? He suggests that the lateral line in fish responds especially to periodic movement waveforms in the water, a sensitivity that is preserved in the organ of Corti. This periodicity in the acoustic analogue would mark the phenomenological difference between pitched sounds and unpitched sounds or noises.² Thus, while the octave is related by a proportion of frequency of 2:1 (as double the Hertz of the original tone), the rest of the intervals in a diatonic scale also stand in relationships determined by the similarity of phase-frequency profile, but within the scope of an octave (which, apart from the unison is the most consonant interval) and with a bigger ratio of dissimilarity.³ Nussbaum jumps from this to hypothesize that

¹ Even though pitch is defined as determined by wave frequency, so that the auditory sensation could be ordered in a continuum from low to high, there is also a strong similarity perceived between tones that stand in an octave relation. That is why pitch is rather regarded as depending on two dimensions: the position a tone occupies in the continuum from low to high, and the position of a tone within the octave, which is a circular dimension of pitch class that is also called ‘tone chroma.’ Thus, musical pitch has been represented as a helix that completes one full turn per octave.

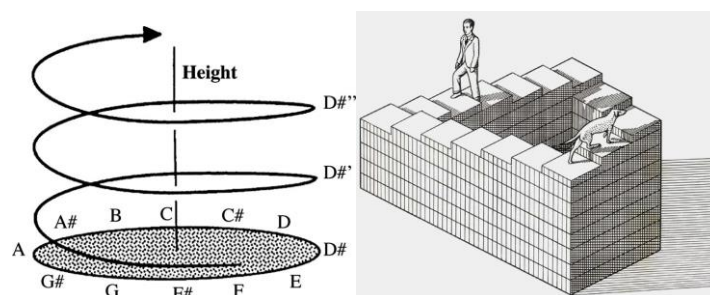


Fig. 1 The pitch helix. Linear pitch continuum is ‘wrapped’ around a cylinder completing a cycle per octave. Hence, music is represented as varying along both, the linear dimension of height (the linear organization of pitches from low to high), and chroma (the inherent circular dimension of pitch organization or pitch class). Chroma describes the pitch rotation as it traverses the helix. In Western tonal music, chroma is divided into twelve positions or pitch classes. Thus, tones standing in octave relation are represented in close proximity, because they share the same angle in chroma circle, regardless that in a simple monotonic representation of height, they would be much further away. This effect has also been commonly represented as the Penrose staircase. [Deutsch, Dooley, and Henthorn 2008]

² A pitched sound wave is much more regular than those of unpitched noises.

³ “In musical experience, the two functions, ancient and modern, coexist, but a little uneasily, for their coexistence combines two orthogonal metrics, the more recent one based on absolute frequency difference and the more ancient

degree of phase-frequency similarity maps inversely onto degree of deviation from the vertical of the center of gravity of the body moving in a gravitational field. Why should this be so? Perhaps the harmonic stimulation of the organ of Corti affects the state of the labyrinth, the organ of balance, to which it is anatomically related and which is located right next door; perhaps, because pitch is already heard spatially, a high degree of phase-frequency dissimilarity in the stimulus pattern of the organ of Corti is interpreted by the brain as a “disturbance” in the scala vestibule and the scala media, as something like a fluid disturbance or disequilibrium in the labyrinth, which would signal a deviation from the vertical in physical space. [Nussbaum 2007, 59]

That would suggest that the degree of phase-frequency dissimilarity (experienced as the degree of dissonance) is interpreted as a degree of disequilibrium, as a deviation from the vertical in the bodily center of gravity. Now then, our movements in physical space dictate constant deviations of our centers of gravity, and also constant returns to the vertical. Given the distribution of our body mass, certain bodily positions or postures are preferred over others, since they are just more stable. According to Nussbaum, these preferred stable positions are mapped onto steps of the musical scales that work like stable points or “islands of stability in the vast flux of audible frequencies”. In the case of the octave, Nussbaum tells us that it corresponds to the bodily experience as when in your gait you regain lost stability again, and that is why one hears it like the same tone once again, even though one has gone further away. *“Momentary deviation from and then return to balance is a recurring aspect of gait; gait is therefore cyclical; hence, acousmatic space is cyclical.”* [Nussbaum 2007, 60]

As we know, melodic movement is not the only element of music, for we also include among its most important elements rhythm and harmony. Nussbaum believes that both rhythm and certain aspects of harmony can also be illuminated through the persistence of the tactile functions in human auditory system vertically oriented according to the gravitational field. While melody is mapped as a horizontal movement of sound flux through time, harmony adds mass and heaviness to the moving ‘object’ (or I would say ‘flux’), which provides a sense of stability (or instability) in musical space.¹ The more dissimilarity in phase-frequency it presents, the more dissonant an interval is experienced as being, and so, since intervals

one based on similarity between phase-frequency profile; and it is this combination that gives rise to the apparently paradoxical structure of musical space.” [Nussbaum 2007, 58]

¹ This explanation, I believe, would work for Western cadential-harmonic music, but probably also for other musical systems of simultaneous sounds, for it depends on the sounds being experienced as consonant or dissonant. Nevertheless, consonances and dissonances, as we have discussed before, are not universally maintained. That is to say, not every harmony system considers the same intervals as consonant or dissonant, and that has not been the case in historical development of music either. However, constancy in having the octave and considering it consonant is universal; shortly after that, the fifth is nearly universal. Consonances and dissonances are not only dependent on the way the sound waves work, but also on historical determination, I believe.

other than the octave are more dissimilar in phase-frequency, they are experienced as more dissonant. But they are also mapped as disturbances in the bodily gait or imbalance with respect to the vertical center of gravity.

The more consonant a chord is, the more balanced it is, the pure octave being the most balanced of all; and the more thickly scored a chord is, the more tones within the octave it contains, the denser and more “horizontally extended” it is. The denser the chord, the more it is prone to instability and the greater are the forces of musical “torque” that bear on the moving body in musical space. [Nussbaum 2007, 60]

What we are getting at is the realization that musical movement and space are rather consequences of our ‘human’ auditory system, which translates a bodily (spatial) mapping that detects outer motion objects onto acoustic percepts. Thus, it is not that surprising that musical space and movement are related to gait and posture equilibrium, as well as to the detection of outer movement (that gets also transduced onto sounds’ organization), provided that the antique function of our evolutionary history that relates our human auditory system to the somatosensory system of fish still remains present—although perhaps covertly.

The idea is that the otherwise puzzling ‘impelling tendency’ we have to describe music in spatial and movement terms gets clarified if we take into consideration the way the human auditory system works and how it evolved: “Musical space is a joint product of the physical acoustics of sound, the physiology of the human ear and neural auditory system, and the motor systems of the human brain and body.” [Nussbaum 2007, 21] Indeed, if we follow Nussbaum’s suggestion, the haptic nature of the auditory system itself would explain many musical features. First, it would explain the tendency to represent those tones with greater frequency as “higher” and those with lesser frequencies as “lower” in ‘musical space’, along with other spatial relations we describe music with. Second, it would allow us to explain musical movement and, furthermore, to link it with the perception of movement outside and inside the body. Third, it would help us to understand the role simultaneous sounds and rhythm play in the perception of bodily equilibrium and imbalance, shedding light on the relation we find between music and human gait. These advances would generally make it less puzzling to relate music to movement, paving the way for us to relate music to gestures.

We are now in a better position to try to answer some of the challenges that Pratt's theory faced. As we have seen, his idea was that the relation between music and emotions is underwritten by a shared connection with motion. So far, we have not talked about the relationship between movement and emotion, nor between music and emotions. We began by attempting to clarify the relationship between music and movement. For again, Budd's critique of Pratt's theory focuses on challenging the idea that music can indeed present movements and if we cannot secure this first step, the rest of Pratt's intuition falls to pieces.

Budd's and Scruton's discussion on whether musical space and (or) movement are metaphorical concepts, and if so, whether they are necessary for musical understanding show how challenging it turns out to be to justify the common sense intuition that music involves movement. We have a strong tendency to describe musical features in terms that involve motion and spatial relations. However, the reason why this is so could go further and it could be not only that we need space and movement to *understand*, categorize and talk richly about musical features and our musical experiences, but that we may *perceive* music as involving movement and, therefore, space.

However, this happens to lead us to a very complex debate of philosophy of mind that we did not jump into: where to trace the dividing line between cognition and perception. Instead, we followed Nussbaum's alternative phylogenetic explanation. He hypothesizes that we describe music in spatial and motion terms mainly because of the way the auditory system evolved. The auditory system is mechanoreceptor: it translates wave vibrations into sounds. As we saw, human auditory transduction's main mechanism lies in the hair cells in the organ of Corti, which presumably evolved from the bony fish's hair cells in the lateral line system that 'maps' vibrations along the length of their bodies. The lateral line allows fish to locate moving objects in the water, and provides spatial awareness and the ability to navigate in space. The bet is this: if some of the fishy ancient functions are preserved, our auditory transduction would also 'map' motion.

Pratt implicitly jumped from the fact that there is a bodily sensation related to outer and inner movement perceived through kinesthesia to the claim that we 'hear' movement in music likewise. Even though this step is totally unwarranted in Pratt's theory, it does find certain foundation in Nussbaum's evolutionary explanation. Indeed, Nussbaum's theory allows us to relate sound with movement perception,

and furthermore, with our kinesthetic bodily posture and gait perception (in terms of equilibrium and spatial orientation). Moreover, it suggests that the correlation goes from motions to sounds, but also from sounds to motions and bodily gaits. Now then, in Pratt's theory there is a second issue that we left aside at the moment; namely, the relationship between motion and emotion. That is the subject that we will be undertaking in the next section.

3.2 MASKS, FACES, OR SIMULATIONS

In musical experience, to understand is to undertake

Charles Nussbaum, *The Musical Representation*

We have now suggested that our descriptions of music in terms of movement and spatial relations are not as mysterious as they might appear from the philosophical perspective, since our sound perception is evolutionarily tied up with the functions of movement perception, spatial location, and balance. But music is not merely sound, for it carries something like meaning, a meaning that is nevertheless non-propositional. Furthermore, we seem to understand music at different levels of expertise, but we would hesitate to state it merely in terms of conceptual understanding.

For instance, facing the question “what does a diminished fifth chord mean?”, an expert could probably explain to us why this chord is so dissonant and restless, and she could even give us a historical explanation of the meaning that the tritone had during the Middle Ages, and tell us all about the Church’s rejection of it, along with the way it was considered the ‘chord of evil,’ for it contained the ‘devil in music interval’ (namely, the diminished fifth). The expert could also tell us why the tritone evades tonal reference, for it divides the octave exactly in two, and so forth. However, a listener might not have any of this information and nevertheless feel restless in response to a diminished fifth chord within a particular musical context. There are different levels of expertise in musical listening and understanding, of course, but it remains to be explained why the naïve listener also affectively reacts and seems to respond accurately in many cases even though she might not have any clue about the complex symbolism that a musical element (such as the tritone) may entail.

If music is representational, it is so in a particular way that does not have as a goal the mere recognition of what the music might be depicting, nor of the concepts that might be implicated. Instead, as Nussbaum has said, “In musical experience, to *understand* is to *undertake*.” [Nussbaum 2007, 81] This section aims to state this last point. Music does carry information. Furthermore, otherwise, affective

responses to music would depend on the listener alone and would not have any tie with the music itself; in which case it would be unwarranted to call such a response an effect of ‘musical expressiveness.’ Nonetheless, it is still debatable that music’s expressiveness depends entirely on the recognition of obvious virtual objects or events in the music’s surface, or that it is a discursive symbol system with the necessary conceptual elements for individuating and re-identifying objects.

Peter Kivy suggested that music is iconic, insofar as it may resemble different things (as I have outlined in Chapter 2), but mainly emotional gestures and utterances that make the listener relate what she is listening to a particular emotional state. According to Stephen Davies, music can be sad in the same way a mask can be sad, not because it is believed that the mask (or the music) is a person that undergoes emotions, but because it is presenting certain features that correspond with the gestures a person makes while feeling, say, sadness. However, within the framework of the Resemblance Theory, what seems to be operating is rather a cold-blooded identification of a musical feature with an emotional gesture. I do not deny that this may happen; nevertheless, I consider that there is yet another main process going on in musical expressiveness. Another alternative to attempt to explain musical expressiveness depends on the concepts of ‘musical simulation’ and ‘musical affordances’ in Charles Nussbaum’s terms. The argumentation for this departs from a Gibsonian inspiration according to which the gap between perceptual and motor functions is artificial. But before fully entering the musical case, let me present in more general terms what an ‘affordance’ is and where this concept was developed.

3.2.1 GIBSON’S AFFORDANCES

Challenging standard cognitive science, according to which perception is sparse, and informational gaps are filled by computations within the brain in order to construct an accurate representation of the world, psychologist James, J. Gibson set forth the so-called ‘ecological theory of perception’ [1966, 1978]¹. For Gibson perception is not sparse since it is not static either. It involves the exploration of an environment,

¹ For a similar current account, see Alva Noë, *Action in Perception* [2004]. According to Noë’s ‘enactive approach to perception,’ we do not make an inner model of the world, since the world itself is ‘its own model’ and we find it in exploration. Many of Gibson’s ideas were maintained in Noë’s theory, and I will only refer to Noë’s version when different from Gibson’s and relevant to our particular musical enquiry.

and it is during this exploration that further required information about the perceived objects is revealed.¹ Gibson considered that perception is much more dependent on motor explorations of the world than it was thought, and stressed the importance of the organism/environment relationship in order to understand perception. His ideas would deeply influence the research on our cognitive capacities for the years to come.

Organisms interact with particular environments in different fashions depending on the kind of bodies they have, and depending on whether they are pigs, humans, birds, or otherwise. Different organisms have different evolutionary histories and different needs. The way a crab or a turtle interact with a sandy beach is not the same, because they have different kinds of bodies and they seek for different things in the same sandy beach, and so their perceptual equipment responds to determinate information about their environments. So, for example, a blossoming tree provides food for a bee, but not for a tiger. Gibson called ‘affordances’ the properties that matter in a particular way to an organism. The blossoming tree ‘affords’ food for the bee insofar as the bee explores it and responds to the tree’s characteristics as able to provide it with food. Now then, Gibson famously claimed that affordances are able to be directly perceived without further cognitive intervention, meaning that the organism does not need to make complicated computations to conclude that, say, ‘that tree could be a good shelter;’ instead—Gibson would claim—the organism directly perceives it as a good shelter; i.e., it recognizes the tree’s affordances.

Thus, the recognition of an object’s affordances depends on the organism’s exploration of its environment, on its evolutionary history, and on its particular needs, and not merely on the characteristics the object may have. To use Lawrence Shapiro’s example, an upright vacuum cleaner could ‘afford’ to be a coat rack, and the coat could ‘afford’ to be hung on the vacuum cleaner. However, if we ask someone to hang a coat on, say, an apple, we would most certainly be accused of being ridiculous. Being a coat rack is not a possible affordance of an apple, and we know this because we have interacted with coats and apples

¹ The exploration discloses “invariants,” which are the features that remain constant through the variation and the change of perspective during the exploration. Presumably, invariants come from the rigid layout of environmental surfaces. “Ordinarily these invariants underlie the transformations and emerge most clearly when the persisting properties separate off from the changing properties, but they can also be distinguished in the limiting case of an unchanging structure.” [Gibson 1978, 228]

before. Moreover, you could only ask another human being to see a vacuum cleaner as a possible coat rack, but you could not ask an individual of another species that does not wear coats to do the same.

At this point, it will be useful to mention Noë's remark that experience not only guides movement, but more importantly, that "perceiving is constituted by the exercise of a range of sensorimotor skills." [Noë 2004, 90] Thus, it is not that perception allows or 'affords' a range of possible movements, but that one comes to perceive something as affording possible movements only insofar as one understands sensorimotor patterns in relation to it. Hence, perceptual capacities depend on sensorimotor skills. For example, "Only someone who understands, implicitly, that turning the eyes to the left brings an item on the left into view, can be said to experience something as on the left. Someone with this knowledge can enjoy the corresponding experiences." [Noë 2004, 90]

In an analogous way, music's surface presents certain characteristics that work as layouts and scenarios that the listener explores in a haptic way, given the intimate relation between the senses of hearing and touching that we discussed in the past section. The listener does not experience whatever her reverie or inventiveness allows her to experience, though. Rather, the listener's experience is a result of her haptic exploration of a musical scenario that 'affords' certain experiences.

Now then, what do I mean by the idea of it being a haptic exploration? Haptic perception includes the idea of a bodily exploration of what is being perceived, as opposed to a mere static and passive reception of information. Also, perception includes an action plan for the exploration of the object. For example, if I were to perceive an object such as a pyramidal sculpture that is on the table in front of me, I could merely see it without doing anything else. But in such a case, I might also be in doubt about whether it is actually a pyramid or rather something else that my static perspective does not allow me to discern. The idea is that I do not have to make complicated internal calculations to decide on the matter. Instead, I extend my hand, touch it, move around it, and so forth. I saw, for example that it seemed to be made out of glass, and so I expect a certain sensation on my hand skin while touching it, and I make an action plan to explore it based on how much I expect it to weigh, decide where I am going to carry it to, etc.

Thus, a haptic perception is rather a haptic exploration, and the correlation with music is that music's surface presents scenarios that are able to be explored in an analogous way. Hence, there also

seems to be a connection between musical affordances and motor responses. But certainly, we do not literally move through music, nor do we touch it. How, then, does this haptic exploration of music take place? As we have seen in the past section, the evolutionary history of our auditory system suggests that the senses of touch and hearing are very closely correlated. Indeed, the notions of space, movement, equilibrium, and pace, have their analogous correlations in sound. Nonetheless, there is still a step to secure between this and the way in which we explore a musical scenario. This step, according to Nussbaum, is an offline kind of simulation of the action plan in action perception that also gets run while listening to music. He considers that there are two scientific discoveries that support this idea: First, the discovery of mirror neurons, and second, the improvement that autistic children show when treated with music therapy. Let us talk about mirror neurons.¹

3.2.2 *MIRRORING*

Around two decades ago, in 1996, Italian researchers led by Giacomo Rizzolatti discovered mirror neurons in macaque monkeys' premotor cortex, which is the part of the brain that is active during motor planning in goal-oriented actions, such as grasping or manipulating an object [Rizzolatti et. al., 1996]. The interesting thing about these neurons is that they were found to fire when the animal performed an action, but also when it merely observed another individual performing a similar action. Thus, it was suggested that an action plan in the actor's brain is mirrored by a similar action plan in the observer's brain. Since the observer

¹ In regard to autism, autistic children are said to be impaired in their social interactions, and in their capability for joint attention. It turns out that music therapy has proved to be significant in helping children with Autism Spectrum Disorder in those areas, especially with regard to joint attention, and emotional attunement. Among other things, music is used to scaffold the flow of social interaction and intentional action, which the autistic child begins to understand by means of bodily simulation [see for example LaGasse 2014, and Geretsegger et.al. 2015]. Autistic children's difficulty in interpreting the intentional actions that others are performing apparently can begin to be overcome by motor experience, which suggests (at least partly) that what is going on is an impairment in running simulations or offline mimetic activity while watching others. And that is presumably what music helps with; i.e., an offline simulation of intentional actions. [See especially Perkins et. al. 2010]. Now then, the way in which this offline simulations work will be approached in the following pages.

runs a mental simulation of the agent's action plan, it was pondered that these neurons' activity 'represented' the observed action, and they were called 'mirror neurons.'

Evidence for mirror neurons in humans was also found, and it has been established for sound, vision, and touch, as well as for some 'emotions' such as disgust [Kohler et. al., 2002].¹ Mirror neurons are bimodal, meaning that their activity correlates both with performing a particular action and with merely witnessing it [Shapiro 2011, 109]. But more surprisingly, mirror neurons seem to fire in response to transitive actions; i.e., actions that involve certain goals such as grasping a tennis ball, but not for actions that do not seem to have a particular intention behind them, such as moving an arm randomly.

Mirror neurons fire during the simulation of an action plan for an intentional action, and therefore, it has been suggested that they are involved in the process of grasping others' intentions and of mindreading. Of course, the process of mindreading requires an attribution of a mental state to another individual, which is not warranted merely by the activation of mirror neurons. However, research on imitation, embodied cognition, and empathy does suggest that mirroring and imitation underpin more complex processes (such as empathy) that require the 'reading' of the intention the other has, as well as the attribution of mental states to another. [Ferrari and Gallese 2007, 73-89]

Because the mirror system of an observer tracks the mental state (or brain state) of an agent, the observer executes a mental simulation of the latter. If this simulation also generates a mental-state attribution, this would qualify as simulation-based mindreading. It would be a case in which an attributor uses his own mind to "model" that of the target. [Goldman 2013, 30]

Without delving too deeply into what is necessary for actual 'mindreading' and mental-state attribution, let me just remark that the suggestion that mirroring actually underpins mindreading is problematic. Of course, it has faced critiques that stress that the activation of mirror neurons is not sufficient to suggest a mental-state attribution to the agent [Goldman 2013, 31-2]. Fair enough, but such deflationary interpretation would suggest that mirror neurons' activation is not sufficient condition for mindreading, not that it is not involved in it at all, nor that the simulation of the agent's action plan is not at the core of

¹ However, as has been mentioned in the first chapter of this dissertation, there is debate on whether disgust should be considered a proper emotion or rather a reflex-like response.

more complex cognitive processes.¹ We will get into more depth on this subject applied to the musical case further on.

3.2.3 MUSICAL AFFORDANCES

Nussbaum suggests that while listening to music, we run an offline simulation of the action plans that would be necessary for the exploration of the musical scenarios and layouts as set out in a particular musical work [Nussbaum 2007, 215-33]. As we can see, there is a parallel between the on and offline action plans suggested by Nussbaum and the bimodal nature of mirror neurons. An offline simulation would not exhibit an actual movement, but would run a simulation of the action plans necessary for it.

Mirroring, of course, is mental mimicry usually unaccompanied by behavioral mimicry. The sparseness of behavioral imitation (relative to the amount of mental mimicry) seems to be the product of inhibition. Compulsive behavioral imitation has been found among patients with frontal lesions, who apparently suffer from an impairment of inhibitory control. [Goldman 2012, 33]

Thus, the exploration of a musical scenario needn't be accompanied by behavioral mimicry either, for an offline simulation of the action plan gets run instead. Again, such offline simulation of the action plans needed for an exploration of a musical scenario should be understood as haptic exploration. Moreover, with the meshing of these ideas, the musical surface characteristics become aesthetically relevant, for they set affordances for their possible haptic/virtual exploration.

¹ The finding of mirror neurons has received considerable attention, and it has been called out to support research on many different cognitive complex problems such as language, empathy, and musical understanding. Nevertheless, one has to be very careful in what mirror neurons can in fact explain. For example, it has been suggested that mirror neurons underpin speech abilities, but this last statement seems unwarranted and faces many problems; also—and more importantly for us as we will see—mirror neuron activity has not proven to be sufficient to ‘feel other’s emotions.’ To delve deeper in arguments against some mirror neurons research applications, see Hickock [2008]. I consider, though, that mirror neurons activity could provide grounding for a theory of simulation, but of course, quick extrapolations should be avoided. For objections more relevant to the aesthetics case, see Davies, David [2014].

The internal representations employed in recovering the musical structure from the musical surface specify motor hierarchies and action plans, which, in turn, put the listener's body into offline motor states that specify virtual movements through a virtual terrain or a scenario possessing certain features. [Nussbaum 2007, 47]

To explain a little further: The listener makes an offline simulation of the action plans to explore a given musical scenario in a haptic way.¹ To do so, she represents the musical surface as virtual layouts or scenarios that afford certain interactions and reject others. Furthermore, the musical scenario is a rather movable one, for the musical plan seems to be an already launched exploration of an environment, an exploration that the listener offline mimics.

Now then, what exactly is to be mimicked? This is a very important point to be clarified. Whereas Nussbaum rightly holds the view that what is mimicked is the exploration of a physical environment through touch and sound, this—I consider—is a possibility among others, since there are many things in a given musical experience that could be mimicked. Indeed, a musical experience is not merely a sound experience, for it usually involves a myriad of other features and variables. For instance, a musical experience may take place in an important concert hall with a very renowned performer as a soloist, or rather in a salsa dancing club. A listener may start tapping to the pulse of a song (either on or offline), or imitate the performer's movements and gestures as if she was playing the drums or the guitar in a rock solo.

Musicologist Rubén López-Cano [2006] has offered a classification of the different affordances a musical experience might be said to provide. He divides them into two, the ones with manifest motor activity (non-musical movements and postures, para-musical movements, ritualizations, and dance²), and the ones with covert motor activity. Among the latter ones he counts (1) the simulation of 'real' possible

¹ For a review of the neuroimaging studies about the neural mechanisms underlying orienting attention in time and sequence learning, see Janata and Grafton [2003]. They consider that because of the intimate coupling between perception and action, "music provides a panoramic window through which we can examine the neural organization of complex behaviors that are at the core of human nature." Thus, they relate the neuroimaging studies of sequence learning and temporal production and propose an interaction with the case of perception of complex patterns of information in music.

² As 'non-musical movements' López-Cano takes the gestures that come from a non-musical source, such as sexual insinuations in salsa dancing, or the gesticulations of Rap singers. (However, as we discussed in an earlier chapter, I consider that to demarcate the criteria to discriminate features as musical and as non-musical is in many cases a tricky task.) 'Para-musical movements' are the result of the imitation or synchronization with any given musical element, such as tapping the pulse, performer's imitation and so forth. By 'ritualizations' he means those motor routines that are rather part of a larger ritual or game, of which the music is also only a part and not the whole.

movements as sources of sounds, as opposed to (2) a simulation of imaginary sources of sound, (3) simulations of movement with ‘corporal extension,’ by which he means that in the exploration of music we might feel as if we get a prosthetic extension of our corporeal capacities and move through music in ways that would be impossible for us on-line,¹ and (4) kinetic somatization, or motor empathy,² meaning the sensation of movement in our bodies. Even though I won’t stick strictly to this list, I consider that it does help in realizing that there are many different possible simulations that can be run depending on the setting that a particular musical experience places. [López-Cano 2006, 4-8]

Nevertheless, without neglecting the importance of the manifest motor activity mimicking cases, I consider that, at least for Western classical music (where we stay silent on our seats in a concert hall), the most interesting explicative weight relies on those simulations that are run offline. However, within an embodied cognition framework, the fact that the simulation gets run offline—I insist—does not mean in any case that it is disembodied or that it is a somewhat less corporeal process. Musicologist Mark Reybrouck [2015], also drawing on a theory of simulation, states it in terms of ‘resonance’ and suggests that music induces “a kind of motor resonance that prompts the listeners to experience the sounds as if they are involved in their production” [Reybrouck 2015, 17]. It is worthwhile to reproduce his words in some length:

Even if they are not manifest, they operate at virtual levels of imagery and simulation—also called *ideomotor simulation*—with motor behavior being manifest only at an ideational level of mental representation. What is argued for, therefore, is a kind of phenomenal experience, which involves the experience of movement but without the action being actual or manifest. It corresponds to the so-called internal imagery—or first person perspective—which enables the transition from overt action to internalized forms of action. The whole process calls forth a kind of motor empathy and ideomotor simulation, allowing the listener to experience the music as something that moves

¹ Charles Nussbaum has also remarked this effect. He describes it richly as follows: “During such a performance, the fingers of the player will execute real motions spanning inches in physical space. But if we acknowledge the phenomenology of virtual motion in musical or acousmatic space, these sweeping eighth notes and valuating fugal subjects, all the while exchanging registral positions, do not sound as if they are traversing distances of mere *inches* in musical space: they sound as if the motions in question must be measured in *leagues*. Real motions in physical space of such speed, extending over such distances, and exhibiting such elaborate coordination and transfer of function (the physical analogue of the musical registral exchanges between the subjects and the running accompaniment) are not within the realm of physical possibility for the human organism. The brightly colored, high-register minor ninth chords gently pulsating over a deep pedal accompanying the words “*Ueber Sternen muss er wohnen* [Beyond the stars must He abide]” that conclude the section immediately preceding the *fugato* suggest distances so vast as to be measurable only in the musical equivalent of light-years.” [Nussbaum 2007, 62-64]

² I am not comfortable with using the term ‘empathy’ in this case, since, as we will see in what follows, even though empathy and motor simulation might share the same mechanism, empathy has other cognitive requirements, such as further differentiation between self and other, an appraisal of what the other’s situation is, and so forth.

over time, while simultaneously experiencing this movement as a movement of the own body. Musical affordances, therefore, involve an aspect of egocentricity, in describing subjective experiences in terms of bodily resonance or motor imagery that projects the listener's bodily movements to the music. [Reybrouck 2015, 18]

I particularly agree with Reybrouck in that musical affordances involve an aspect of egocentricity, for they make the listener relate what she is hearing with motor patterns of her own body. More of this further on when we get to take over the persona theory. For now, let me say a word about the way we explore a musical surface.

3.2.4 EXPLORING THE MUSICAL SURFACE

Once it is suggested that we explore music in a haptic way just as when we explore an environment with its layouts, we are in a position to wonder how we actually explore this musical surface. Nussbaum suggests that there are actually three mechanisms going on: First, certain information can be derived from the musical surface, by means of recognizing the piece's "hierarchical plan structure" [studied by Fred Lerdahl and Ray Jackendoff, 1983]. Second, information is also extracted by means of what we have been calling a simulation of an action plan according to the musical affordances. Third, Nussbaum considers that musical performances work as 'pushmi-pullyu representations' that both, describe what the musical plan is, and prescribe the implementation of the action plan to the listener. Indeed, this last mechanism urges the listener to explore the music, as opposed to letting her stay comfortable and passive in her chair. I will describe the three of them briefly.

Lerdahl and Jackendoff have developed what they call a "generative theory of tonal music." Their interest was to describe the inferential grammatical rules that the listener employs to extract the structure of a musical piece she listens to. That is to say, music appears to the listener as an organized entity, and she grasps such organization given that certain elements happen to be in particular relationships to each other and exhibit patterns of pitch, attack, duration, intensity, timbre, etc. With enough exposure to a musical idiom, a listener would recognize such patterns, and therefore identify whether the piece is typical

or not, whether a critical error has been made in a performance, and so forth [Lerdahl and Jackendoff 1983, 6].

Thus, the organization the listener infers in a given piece is not merely the result of her inventiveness, even though it usually does not happen consciously; it is 'highly constrained' in specific ways set by this implicit 'grammar' or set of rules that provides the connection the listener makes between the musical surface she is presented with, and the structure she attributes to the piece. Indeed, Lerdahl and Jackendoff realize that providing an account for the totality of the listener's musical intuition is just a goal out of reach; therefore, they stick to making explicit the internal rules of those components of musical intuition that seem to be hierarchical; i.e., the grouping structure, metrical structure, time-span reduction, and prolongational reduction. However, their theory does not presume that these four hierarchical components or classes of representations comprehend the totality of musical intuition, but only part of it.

I will only explain them very roughly. The *grouping structure* expresses a hierarchical organization of motives, phrases, and sections. Despite it being an organization, it is the only one of them that is not 'headed', meaning that there is not one element (in this case a phrase or motive) in each group that is the most important one, as happens in the other classes of representations. [Nussbaum 2007, 37]. The *metrical structure* representations, in turn, divide the events into strong and weak beats. On the other hand, time-span and prolongation reductions are represented as generative tree-like structures (See Fig. 2 and 3). *Time-span* reduction assigns a hierarchy to the pitches according to their structural importance (according to their position in the grouping and metrical structures). *Prolongational reduction*, instead, assigns a hierarchy to pitches but this time according to the harmonic and melodic relationships of tension and relaxation, continuity and progression. [Lerdahl and Jackendoff 1983, 8-9].

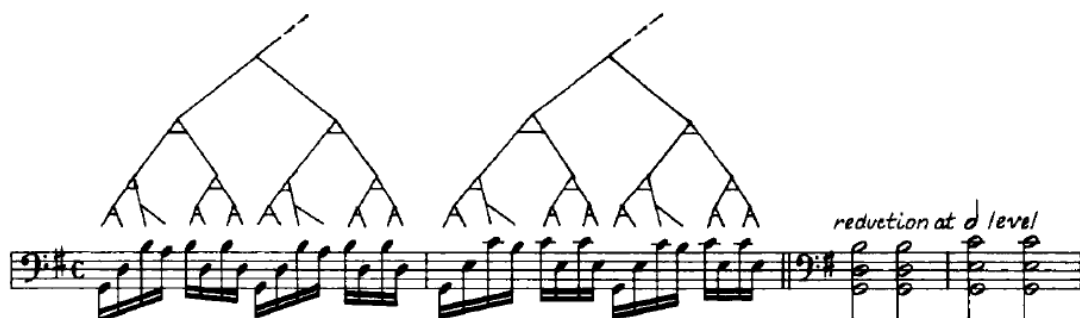


Fig. 2. The beginning of the Prelude of the first Bach cello suite. This is an example of tree-like generative representations that shows that each half measure is heard as the arpeggiation of a chord. [From Lerdahl and Jackendoff 1983, 154]



Fig. 3 A complete time-span reduction of the Chorale “O Haupt voll Blut und Wunden” from Bach’s *St. Mathew Passion*. [From Lerdahl and Jackendoff 1983, 144]

Unfortunately though, I cannot afford to give a complete explanation of the Lerdahl and Jackendoff generative theory here. It is a very insightful theory though, since it aims to make explicit the implicit grammar rules that are operating within the listener’s mind. Now then, why would this theory be useful in trying to understand musical offline simulations? Well, because the action plan the listener runs implies that the listener is capable of acquisition of information from the musical surface; and one of the ways she

acquires information is by inferring hierarchical structures from the musical piece she listens to.¹ She can do this presumably because she is a listener who has been exposed to a particular musical idiom (Lerdahl and Jackendoff studied the particular case of Western tonal music²), a factor that explains as well the influence that different levels of expertise might have in the overall musical experience of a particular piece.

However, since it focuses on inferable hierarchical structures, the model offered by Lerdahl and Jackendoff has been accused of neglecting the force of the melody and other elements such as timbre, dynamics, and motivic-thematic processes. On their behalf, Lerdahl and Jackendoff consider that even though these elements do contribute to musical structure, they are not hierarchical in nature and so that they are not able to be formalized in their theory [Lerdahl and Jackendoff 1983, 9]. Despite how helpful their account is for understanding the implicit musical ‘grammar’, this theory does not account for the exquisite expressive detail that exists in the unfolding of those non-hierarchical elements when not considered as contributing to musical structure. This big gap is filled in Nussbaum’s account by the consideration of the second way the listeners extract information from a musical surface; i.e., by the exploration of the musical scenario in a haptic way. This exploration states a relationship between the musical environment or scenario and the listener that explores it, since, as we have seen, affordances are determined by both, the environment and the way the explorer sees it.

So, taking up what has been already said about the musical haptic exploration, listeners explore the music they listen to as if they were exploring an environment in a haptic way. This happens because we hear movement in music as an unfolding intentional process and we run an offline simulation of such a virtual exploration. That is to say, we mimic it. Again, why is it a haptic exploration? Because the evolutionary history of our hearing system tells us that it has worked as a mechanoreceptor transductor for both, sound and tactile information. The lateral line in fish is related to the organism’s ability to detect sound waves, but also moving objects in the space as mapped by its own body, and to map the position of the organism’s body in space as well. The conjecture is that this ancient capacity is not entirely lost in our

¹ See also Janata and Grafton [2003].

² It should probably cover all tonal or modal music, with only minor adjustments. But it's not clear that they could do the same for non-tonal music.

hearing system and that it is responsible for the fact that we perceive music in spatial terms and especially in terms of movement.

However, the movement we seem to hear *in* music is not mainly inferred from the movements we might see the musicians make while playing an instrument or conducting a choir, despite the impact these may have on the listener's musical experience. For example, Jerrold Levinson has claimed that acknowledging the way a musical sound is produced significantly contributes to the expressive forcefulness of a musical gesture.

The sound of the sound, so to speak, does not suffice in itself to fix the expressive character of the passage, but only that sound in conjunction with a presumed manner of production. The same sounds present different appearances, and affect us differently, according to the notions we entertain at the same time regarding the actions or processes that have engendered them. [Levinson 2006, 80-1]¹

However, I contend that the kind of movement we hear *in* the music is not (at least not mainly) the result of our perception of the performer's movements. It is rather the movement of a virtual exploration of a musical scenario; and this is where our approach finally gets in touch with the Persona Theory firstly set forth by Edward T. Cone and that we talked about in the past chapter. I will develop this idea later on. But for now, let us continue with the explanation of the third way Nussbaum says we extract information from a musical surface: The pushmi-pullyu representations.

Nussbaum uses Millikan's concept of "pushmi-pullyu representations" to explain what kind of representations musical utterances are and especially the way these representations 'prescribe' a particular exploration. Millikan uses the label 'pushmi-pullyu representations' (PPRs) to refer to those representations that are not only descriptive, but also prescriptive, "yet they are not equivalent to the mere conjunction of a pure descriptive representation and a pure directive one but are more primitive than either. Purely descriptive and purely directive representations are forms requiring a more sophisticated

¹ Levinson gives an example, Mozart's Serenade for Winds in E-flat K. 375, which begins with a honking by the winds. He considers that, apart from the sforzandi, the beginning phrase works as a call to attention in part because it is precisely an instance of honking, which we know because that is the way the sound was actually produced [Levinson 2006, 81]. I do not deny that this might be the case at all. Nevertheless, I would firstly add that this phenomenon happens since the listener (on or off-line) mimics the actions she is witnessing. But secondly, I must insist in that this is not the only, nor the most important mimicking that is going on and that might shed light on what musical affordances are.

cognitive apparatus to employ them than is necessary for these primitives." [Millikan 2005, 166-7] Thus, pushmi-pullyu representations (which she also called intentional icons) are nonpropositional, since they are more primitive than that. Examples of pushmi-pullyu representations are the hen's calls to her chicks or the nectar-locating dance of the bees. These representations, according to Millikan, do not only signal some information, such as "There is nectar that way!" but also express the individual's intention to engage in a particular action, and prompts another individual to do the same. These could be examples of pushmi-pullyu representations in humans:

The natural way that we fall into doing "what one does," "what women do," "what teachers do," and so forth, suggests this. I suspect that these primitive ways of thinking are an essential glue helping to hold human societies together. [Millikan 2005, 167-8]

According to Nussbaum, a musical piece works as a pushmi-pullyu representation in the sense that it communicates the musical plan that the performer intends to follow, and it also indicates to the listener that she should follow it as well. However, neither performers nor listeners need to be aware of these representations or the way they work, in the same way that they are not necessarily aware of the implicit generative rules that a theory such as Lerdahl's and Jackendoff's make explicit.

The intentional icon, however, also functions as an imperative (Implement this musical plan!) and expresses an intention (Now implementing this musical plan!). The occurrent mental entity constructed by the listener is also a pushmi-pullyu representational token: an internal one expressing the same intention. During a musical experience a performer sends a pushmi-pullyu representation the listener's way that both communicates this plan structure and enjoins him to implement it and to construct an appropriate set of mental models in his own head, models which are themselves action-oriented. [Nussbaum 2007, 99]

To use Millikan's example, a list of groceries can be used as an inventory list or as a shopping list. In the first case, it would be merely descriptive (the list accommodates to the world), and in the second one it would be prescriptive (the world should accommodate to the list) [Millikan 2005, 166]. Instead, music, as a token of pushmi-pullyu representations, has both functions. Thus, music does not only describe or show a state of affairs, for it also prescribes the listener to follow the action plan that it describes. That is why I consider that musical pushmi-pullyu representations (to continue with Millikan's and Nussbaum's terminology) are better understood as indexes or indications (in Peirce's terms), rather than as icons. Nevertheless, before going any further with this, let us now resume Nussbaum's account of musical representation.

As we have now seen, Nussbaum suggested an explanation of how music can carry information that has three mechanisms: First, the listener extracts information about the hierarchical structure of the musical piece she listens to (given the mechanisms described by the Lerdahl and Jackendoff theory). Second, she explores a musical environment and runs an offline simulation of the action plan necessary to explore it and that is delimited by the musical affordances. Third, music works as a pushmi-pullyu representation insofar as it does not only describe an action plan, but it also prescribes it or urges the listener to follow it.

There are two advantages of such a theory that stand out immediately. First, despite it being an explanation of the listener's responses, it is not strictly speaking an arousal theory, for it is also a theory about the way music itself carries information. Insofar as the listener's responses depend on the affordances set by the musical scenario, it avoids the problem that the persona theory faces; namely, that the listener's responses may very well depend exclusively on her inventiveness. Second, the musical surface allows an exquisite degree of detail, which in turn allows for the same exquisite degree of subtlety in its expressiveness and exploration.

To understand a piece of music is to token the musical plan of the piece: composer, skilled performer, and comprehending listener produce representational tokens of the same types. The musical "plan" of the piece may be identified with its version of the hierarchically organized representational structures postulated by the Lerdahl and Jackendoff theory. The characters of the virtual movements specified by the action plans, slow/fast, labored/easy, expansive/contracted, smooth/angular, and so on, limn in exquisite detail the contours of this virtual layout by way of structural complementarity and motivate the construction of appropriate analog representations, or mental models which are constantly updated as the piece unfolds. The virtual layouts and scenarios are the nonconceptual contents of the musical mental models. [Nussbaum 2007, 47-8]

Now then, having set the terrain for us to understand how musical simulations work, let us recur to the relationship between them and musical expressiveness, for which we shall begin by talking about emotional contagion.

3.2.5 EMOTIONAL CONTAGION

Stephen Davies [2011, 2013] has suggested that there is an interesting case of musical emotional arousal that could be understood under the concept of ‘emotional contagion,’ in which musical expressiveness induces an emotional reaction in the listener as emotional ‘mirroring’ or ‘infection.’ But before explaining it, I must say (as I have outlined when we got to talk about the ‘Arousal Theory’) that I concur with Davies in that the arousal theory as it is does not successfully account for musical expressiveness, insofar as it claims that music is expressive of a particular emotion if and only if it arouses such emotion in the listener, or disposes her to experience it. If one were to accept such a claim, the totality of music’s expressiveness would rely on the listener’s actual reactions; an unfortunate conclusion that I think does not concede any relevant role to the music itself with regard to its expressiveness.

That being said, we should have no troubles in acknowledging that music may arouse emotions. However, many of the cases of musical emotional arousal are not philosophically interesting. For instance, if I associate a given musical piece with the death of my grandmother because she used to play it for me during her last days, and henceforth it makes me sad every time I listen to it, I can definitely say that I am being aroused with sadness by the music. However, that would not be an interesting case of musical emotional arousal, for it does not tell us anything about music’s expressiveness, but about a particular external situation that made me relate a musical piece with a particular emotion. The interesting case would be one in which the listener gets aroused by an emotion that is indeed related to the expressive character of the music, and Davies suggests that appealing to ‘emotional contagion’ would help explaining these cases.

As we have repeatedly mentioned, the relationship between music and emotions is difficult to establish. This difficulty arises mainly because emotions are complex processes that seem to have an intentional object or event that gets appraised as relevant for the wellbeing of the individual (even though this might happen in a quick-and-dirty unconscious way), a fact that unleashes a whole set of physiological reactions, action tendencies, feelings, and categorizations. We have now thoroughly talked about the different emotion theories, and analyzed the extent to which the cognitive or physiological approaches may be correct. However, even if we do not stick to an extreme cognitivist view (such as that that comes from

the propositional-attitude theorists), the need for an intentional object of the emotion seems to be broadly acknowledged.¹ In our emotional reactions to music, on the other hand, music does not seem to provide the relevant intentional objects to unleash the related emotional reactions in the listeners. When we get saddened by a sad piece of music, it is not because we appraised that those chords may represent that we are suffering any loss. Music is not the intentional object of the emotional reaction (again, not in the interesting way) or, as Davies states it, “the response is *to* the music without being *about* it” [Davies 2011, 137]. But nevertheless we often get saddened by music’s sadness, and this is the case that Davies believes can be explained as an instance of emotional contagion. Here is the formal characterization of this concept in his words:

What characterizes emotional contagion? Intuitively, the hallmarks are these: one emotional state, appearance, or condition is transmitted to a person (or creature) who comes to undergo the same emotion; the display of the first emotional state plays a causal role in the process of transmission and the first emotional state must be perceived, either attentionally or non-attentionally, by the emotion’s recipient; the first emotional state is not the emotional object of the response, however, because the responder does not hold about the first emotional state beliefs that make it an appropriate intentional object for the response in question. [Davies 2011, 138]

Davies maintains that emotional contagion is a kind of mirroring response that could explain the emotional reaction people often have to music that possesses the expressive qualities relative to that precise emotion. Interestingly, emotional contagion would be a kind of emotional reaction that does not have a relevant intentional object. There are different kinds of emotional contagion, though, and Davies complains about psychological characterizations of emotional contagion that focus on the human-to-human case, since they explain emotional contagion through the monitoring of facial expressions or perception of pheromones. Indeed, for obvious reasons, such an approach is unable to explain the music-to-listener case of emotional contagion [Davies 2013, 170-171]. And even though some explanations of the emotional contagion phenomenon rely on mirroring and simulations, Davies worries that applying the human-to-human model to the music-to-listener one would imply that the latter is metaphorical, given that the listener cannot really mimic music’s facial gestures or music’s muscle’s movements.

¹ We have also talked about the counterexamples to the ‘intentional object requirement’: the cases of phobias and moods. However, as I said, I consider that these cases might be explained as also having intentional objects that are nevertheless unconscious.

I am less worried about this possibility than he is, not because I stress that this mirroring is metaphorical, but because I think this mirroring is actually explainable using Nussbaum's framework of a virtual haptic exploration of the musical surface that we have just sketched. I think that the hypothesis of the listener's offline simulation of a virtual, haptic exploration of the musical scenario works out if we take into consideration that (1) there is movement in music, and (2) our perception of sound is linked to spatial perception, so that we relate sound with posture, movement, pace, equilibrium, and so forth.

My worry goes in another direction. When we talk about music-to-listener emotional contagion, we refer to the fact that the listener may 'catch' the emotion that is 'expressed' by the music. Nevertheless, this last point is the controversial one, as we have seen. What emotions is music actually able to be expressive of? I have maintained that if we are trying to explain musical expressiveness, a focus on the expressive qualities of music itself must be held. Thus, among the main accounts of musical expressiveness (arousal, expression-persona theory, and the resemblance theory) I find my position closer to the resemblance theory, since it focuses on the expressive qualities of music. Thence, when we say that a musical work is sad, it is literally sad because it has certain characteristic features of sadness. It is not sad because it makes me sad, nor because the composer or the performer were sad, but because of its own expressive qualities.

On the other hand, as I outlined in the first chapter of this dissertation, the main claim cognitivists have against the James-Lange inspired theories of emotions is that emotions are able to be differentiated only through the intentional object and the relevant belief about that object or event that unleashes the rest of the physiological reactions related to a particular emotion. Thus, given that in musical emotional experiences we have the intentional object place empty, musical emotions could only be differentiated through the characteristic behaviors of those emotions and that music resembles. However, those differentiable emotions by their acoustically-relevant behaviors turned out to be very few, and—I claim—they are unable to provide us with a ground to understand music's subtle expressive power.¹ My worry is

¹ Stephen Davies elaborates on this objection to his account in his "Response to Robert Stecker" [1999]. Davies maintains that, even though his theory only accounts for music being expressive of general emotions of the sadness and happiness varieties, it is highly particular in the manner by which the emotion's characteristics are presented. "The sadness is not special as such, but it is a sadness that is presented in a very specific note-sequence. If the sadness strikes some people as hard to describe, I think this is because they expect they should be able to elaborate from a phenomenological perspective on the sensational character of an episode of sadness, or expound on the attitudes, objects, and settings that usually give such an experience its distinctive character. These things are absent from the

that likewise, when framing the case of musical arousal in terms of emotional contagion, we would only be able to explain why we get aroused with emotions, among which we have sadness, and happiness, but not much more. The mistake, I submit, is that music's expressiveness is not restricted to proper emotions, as it has been mainly analyzed. There are more basic affective phenomena that could also account for musical expressiveness, without it being necessary to present all the components that an emotional process entails (and that music fails to exhibit).

3.2.6 A RUSSIAN DOLL MODEL

Before going any further, I want to refer to the 'Russian doll model' that primatologist and ethologist Frans de Waal uses to explain the empathic capacity [2007, 2008]. Accordingly, like a Russian doll, complex cognitive mechanisms of empathy operate in the outer layers, but have simple mechanisms at the core to which they are attached and on which they depend. At the core there is a hard-wired basis of what he calls 'Perception-Action Mechanism' (PAM) that induces emotional contagion, adding cognitive filters, and perspective-taking abilities as its outer layers. (Precisely talking about autism, De Waal ponders that, even though it is reflected in a deficiency of the empathic capacity, such deficiency comes from impairment in the inner layers of the Russian doll, rather than in the outer ones.)

De Waal proposes that the Perception-Action Mechanism underpins emotional contagion, which in turn develops into empathy with increased differentiation between one's own states and the other's. Indeed, cognitive empathy requires much more than emotional contagion, for it requires an appraisal of the other's situation, the intention to understand the reasons underlying the other's signals and behavior,

musical case, and so are not available for description, but this does not mean that we cannot be more specific about the expressiveness we hear. The sadness of Chopin's funeral march is not the same as that of Beethoven's, but the difference lies not in the emotion of which the music is expressive but in the concrete detail from which arises the musical realization of that expressive appearance. In my view, what music tells us is the way emotion-characteristics sound. This recalls Carroll Pratt's aphorism, which certainly was a perceptive one, but which could not but seem empty for the absence of an explanation in his own account of how music could sound as the emotions feel." [Davies 1999, 287].

and so on. However, the point to be made is that there is an ancient action-imitation mechanism that is necessary for the outer higher cognitive elements involved in empathy to operate.

Empathy encompasses—and could not possibly have arisen without—emotional contagion, but it goes beyond it in that it places filters between the other’s and one’s own state. In humans, it is around the age of two that we begin to add these cognitive layers. [De Waal 2007, 52]

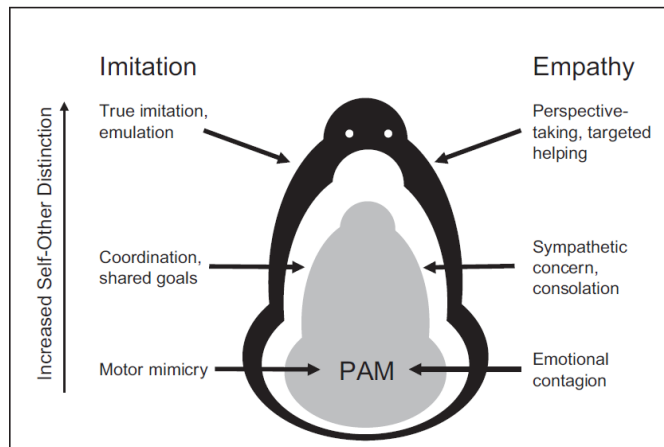


Fig. 1. The Russian doll model of empathy and imitation. [From de Waal 2008, 288]. Empathy and imitation are underpinned by a common core of Perception-Action Mechanism (PAM). The doll’s outer layers also represent an increase in distinction between self and other. Imitation is correlated with empathy, for they share at the core the same mechanism. For imitation, the PAM underlies motor mimicry, coordination, shared goals, and true imitation. For empathy, the PAM subtends emotional contagion, sympathetic concern, perspective taking, and targeted help.

Preston and de Waal [2002] have explained as follows the Perception-Action Mechanism (PAM) that provides the basis for motor mimicry and imitation, and that also underlies emotional contagion, and therefore empathy. When an observer attends another’s state, the observer’s neural representations of similar states are automatically activated. The more similar states the observer has in her repertoire (which she acquired during her own exploration of the environment), the more matching peripheral motor and

automatic responses will be activated (e.g., changes in heart rate, skin conductance, facial expression, body posture), which, according to Preston and de Waal, permits the observer to get “under the other’s skin”. Their suggestion is consistent with the common coding between perception and action suggested by Wolfgang Prinz,¹ and also with the discovery of mirror neurons, as we have seen.

I brought De Waal’s Russian doll model to attention because I consider it very insightful. It suggests that at the core of some process (in this case, empathy on the one hand, and true imitation on the other) may very well be a common simpler mechanism that underpins different more complex processes.² Thus, underpinning emotional contagion, we have what De Waal calls Perception-Action-Mechanism, which is ultimately the sort of basis for the kind of musical expressiveness account that I want to set forth and that is consistent with Nussbaum’s account. Thus, unlike López-Cano, I consider that it is not necessary to go so far as to state this ‘musical mirroring’ (or kinetic somatization to use his words) in terms of ‘motor empathy.’

¹ Wolfgang Prinz set forth the ‘common-coding’ view, which suggested that there is no need for a sensory-motor translation, since perception and action share the ‘same code.’ He claimed that the performance of an action leaves traces in terms of an association between the motor pattern that was necessary for that action to be performed, and the sensory effects that the movement produced. Prinz submitted that this information (or perception/action code) is usable for anticipating the effects of a movement, even during mere observation. [Prinz 2005, 2006].

² De Waal’s observation that empathy requires a greater degree of self-other differentiation than other cognitive processes is consistent with psychologist Jean Decety’s and co-workers’ research. Decety and Hodges [2006] claim that empathy requires making a link between the self and the other, but without confusing the self and the other. They propose that, even though empathy first relies on a system of shared neural representations, these representations need further regulatory mechanisms for the distinction between the self and the other. In another paper, Decety and Jackson [2004] propose that these are the three major functional components that dynamically interact to produce the experience of empathy in humans: (1) affective sharing between the self and the other, based on perception-action coupling that lead to shared representations; (2) self-other awareness; and (3) mental flexibility to adopt the subjective perspective of the other and also regulatory processes. “The way our nervous system is organized and tailored by evolution provides the basic mechanism for resonating with others, as well as the capacity to simulate our own actions, their consequences, and also the actions of others. This shared-representations mechanism (i.e., distributed neural patterns temporarily activated by actual perception or evoked form memory), driven by the common coding between perception and action, provides the default mode of self-processing (or tendency) to relate implicitly to others. Humans come prepared with the innate motivation to seek engagements of conspecifics and implicitly learn that others are similar to themselves. It is through bodily activity that one first grasps the presence of others and then gains insight into their subjective lives. It is thus not productive to disentangle cognition and affects from actions. We argued that the shared-representations mechanism is responsible for the human projective tendency, which needs to be regulated (or calibrated) when sharing emotions or when adopting the perspective of others to understand their feelings. This requires additional processing mechanisms, including monitoring and manipulation of internal information generated by the activation of the shared representations.” [Decety and Jackson 2004, 92-3] It is to be remarked that Damasio [1994] also claimed that knowledge about another’s emotions relies on a simulation of how those emotions would feel in the perceiver herself. In this case, the simulation consists of rapid modification of ongoing body maps. [Decety and Jackson 2004, 93]

Empathy needs much more than we can afford. Davies's explanation in terms of emotional contagion is much more sensible, though I worry about the extent of what it can actually account for.

When we start trying to make the emotions model match the musical case, all kinds of difficulties arise. Maybe we shouldn't go that further away, since a simpler, common mechanism between emotions and the musical kind of exploration is at our disposal: a simpler perception-action mechanism, which allows us to explain musical expressiveness in terms of virtual action mirroring. Furthermore, this mirroring would be able to account for a greater extent of subtlety. Indeed, whereas music is not very successful in resembling pictorial images and stories, it achieves incredible degrees of detail in resembling movement.

It could be argued that a link between movement and emotions should be stated or, otherwise, nothing about musical expressiveness would have yet been explained. I disagree. Although emotions and movement are indeed associated, emotions are more complex processes with components that are mostly not shown in musical experiences. Yet we get aroused, and we insist in saying that such is an emotional arousal. Fair enough, but under the characterization of emotions we arrived at, it can only be established that it happens for very few emotions. We face two options at this point if we do not want to restrict musical expressiveness to those few emotions: either (a) broaden our concept of emotions, so that other 'musical emotions' could have a place in it,¹ or (b) go back just one more footstep and stick to the simulation model without having to forcibly make it account for musical full-blooded emotions. After all, emotions are not the only affective phenomenon; there are moods, preferences, and feelings. I contend that movement

¹ This is what Klaus Scherer suggests [2013]. "Past definitions of emotion, as well as the CPM model of the emotion process described above, tend to emphasize the adaptive reactions to relevant events, often stressing physical survival and wellbeing, as in the case of "basic emotions." To be able to describe certain musical experiences as emotional, we need to broaden this definition and consider emotions as adaptations at various levels with different types of relevance, as determined by goals such as experiencing pleasure, regulating arousal, or engaging in social bonding." [Scherer 2013, 124] While Scherer recognizes that there are different affective phenomena, such as preferences, emotions, moods, interpersonal stances, attitudes, and personality traits, he still wants to focus on the emotions that are elicited by music. He proposes to classify emotions into utilitarian, aesthetic, and epistemic emotions. The utilitarian emotions ("basic emotions") would be those that serve survival or wellbeing, whereas the aesthetic and epistemic ones would be disinterested in a Kantian way. However, the apparent absence of direct personal relevance in aesthetic or epistemic emotions does not mean that they are completely disembodied. The bodily reactions to music are goose pimples, shivers, tingling in the spine or moist ayes—which do not serve any obvious adaptive purposes. This contrasts with the arousal and action-oriented responses for many basic emotions that prepare for emergency reactions.

is particularly linked to feelings, and that musical expressiveness does not have to be confined to proper emotions.

In addition, there are other musical features or elements that might have become associated with emotions through cultural determinations, establishing certain symbolisms or conventions for such associations that, with continuous usage, become somewhat natural. I will certainly take those cultural determinations into account, but my guess is that they operate on top of a more basic mechanism which is the one I am interested in at the moment. Thus, a perception-action mechanism (probably underpinned by mirror neurons) works in an offline way in a simulation of an action plan for the haptic exploration of a particular musical scenario. This kind of simulation explains a lot of features that I do not hesitate to call affectively expressive (and that certainly account for what I would refer to as ‘musical expressiveness’), though they might not qualify as proper emotions.

An example will help to get my point across. The *Computer Suite for ‘Little Boy’* by the French composer Jean-Claude Risset was composed for the play by Pierre Halet. The play staged a nightmare of Eatherly, the pilot who dropped the atomic bomb over Hiroshima. Eatherly identified himself with “Little Boy” (which was the code name of the bomb), and dreamt that he—the bomb—was endlessly falling: Eatherly thinks he falls, but it is only an illusory psychic fall, a mental collapse. Risset intended to create this feeling with music, for which he worked at giving the impression of a continuous descent by developing the illusion of an endless descending glissando. [See also Cochrane 2013]

At Bell Laboratories in 1964, Roger Shepard synthesized endlessly ascending successions of chromatic tones. These tones were made up of octave components, with a bell-shaped spectrum tapering down at both ends. But I wanted gliding tones, not chromatic scales. Roger believed that a gap was needed between tones to achieve the illusion. Joe Kruskal did not succeed in making endless glissandi. I generated the effect by dynamically changing frequencies. [Risset 1985, 69-70]

The result is that the listener is restless to say the least. This might relate to the way sound is ‘mapped’ in our bodies, providing a spatial translation not only of external moving objects but of our own body’s position and equilibrium. This is what Nussbaum brought to attention in regard to the relationship between discrete musical scales and human gait. He noticed that in both, musical explorations and bodily movement in space, our movements are discrete and continuous at the same time. Whereas the bodily movement

through space is indeed continuous, because of our steps, the stable contact we have with the terrain is rather discrete. “Hence the possibility of experiencing virtual continuous motion through a series of discrete tones.” [Nussbaum 2007, 60] Considering (as seen in the past section) the idea that steps on musical scales are mapped in our bodies as ‘islands of stability’ just as when we walk the bodily center of gravity constantly deviates and returns to the vertical [Nussbaum 2007, 59], it is not that surprising that an endless descending glissando with no ‘islands of stability’ will generate a restless sensation as if one were actually endlessly falling.

However, one need not label the disturbed sensation of an imminent fall as any particular emotion, though this particular case might very well be related to anxiety.¹ Although falling may elicit an emotional process, falling in itself is not an emotion, not even a common component of any emotion. Furthermore, if one listens to the music, but knows nothing about the plot, one still gets that restless sensation of an endless fall. However, relating this sensation with the plot, one may get to feel empathy for Eatherly. I hope this example will show that one needs to be a lot more careful in characterizing musical features as emotional, if one wants to talk properly. This example seems to me very clarifying, since I believe it is a token of a (very) expressive musical gesture that is nevertheless not directly related with any particular emotion. Indeed, how entitled are we to treat this example as representing a particular emotion? What emotion is it expressive of? Does it represent the whole set of components of an emotional process, or only parts of it?

¹ I want to correlate what I am arguing here with Jesse Prinz’s [2004] concept of ‘embodied appraisal.’ As we discussed in the first chapter of this dissertation ([Chapter 1, 35](#)), Prinz adheres to the James-Lange theory and contends that the emotion is indeed the perception of the bodily changes, but he adds that it is because the bodily changes represent ‘matters of concern’ such as danger. Again, “We run when we are afraid. Why? It’s certainly not because our hearts are racing. Fear makes us run because fear represents danger.” [Prinz 2004, 13] So, regarding Risset’s example that I have just presented, it would be possible to argue that the sensation of an imminent fall constitutes an ‘embodied appraisal’ of an emotion in Prinz’s terms. In fact, Tom Cochrane [2010] argues for this. He claims that the bodily changes, such as an increased heart rate, can represent, say, danger, because evolution has set it up and we have learnt that dangerous situation usually triggers a raise in heart rate. Actually, he claims that the content of an emotion is not that much the actual event or object we are encountering, but the effect it would have in our body. “The situation, say a bull charging towards me, is less the direct cause and content of my fear than is the imagined impact of the bull upon my body, which triggers bodily responses to flee or resist.” [Cochrane 2010, 192] While I think this approach is somewhat compatible with the Gibsonian ‘affordances’ concept that I am endorsing, I still doubt on the extent to which the bodily changes are able to distinguish among emotions.

3.2.7 THE PERSONA THEORY REVISITED

I want to turn back to the Persona Theory, according to which the emotion we perceive in a musical piece is an emotion that the listener attributes to an implied, imagined persona. I will take into re-consideration Cone's version of the persona theory that we sketched in the past chapter, under the light of a simulation approach to musical expressiveness.

As we know, Cone conceived of music as a sort of narration, and stressed that a listener that neglects this narrative character of music does miss essential features of its expressiveness. In order to take into account the narrative character of music, though, the listener must hypothesize an implied persona whose utterances are the expressive components of the work. (In Cone's version of the Persona theory there might be more than one persona at the same time.) However, what I want to bring to attention is that, for Cone, the musical expressive features resemble the subjective experience of a persona while describing a given event or program. Cone's hypothetical 'complete persona' is, thus, the experiencing subject.

As such, Cone's theory seems more related to an exploration of an environment or scenario, than to the description of a program or story. It is as if the persona were communicating her inner experience of an event through what Cone calls 'symbolic gesture.' [Cone 1982, 94] Needless to say, this statement is problematic as it is. The (already problematic) accessibility to another's inner states is now expanded to the recognition of those of an imagined persona. Moreover, this presumably happens through symbolic gestures. As I have said, the differentiation of signs as symbolic, iconic, or indexical is not trivial for the musical case, and I am not sure that 'symbolic' is the correct concept to use here. Nevertheless, the intuition behind this theory is valuable and I think it resonates with the idea of a virtual exploration of a musical scenario, even though I do not believe that in musical experiences we have enough grounds to secure a mental state attribution to any imagined persona.

Taking into consideration the research on mirror neurons, simulations, and empathy that we have now reviewed, it seems to me that going into the difficulties of justifying that a genuine mental state

attribution to an implied persona is taking place is too much effort for what we actually need for musical expressiveness. Moreover, I consider that Nussbaum's model works just as well with mere simulation. Indeed, even though this more basic simulation mechanism is related to empathy, empathy requires that other cognitive layers (such as greater differentiation between self and other, and 'theory of mind'¹) sum up. Furthermore, the Persona Theory seems to need mind-reading, which in turn requires mental states attributions that are not warranted. However, as I said, I submit that the musical simulation theory need not appeal to complex forms of mindreading to provide a satisfactory account of musical expressiveness. Thus, in order to argue for that, let's remember that the mirror neurons systems suggest that during the simulation an individual makes of an observed action, the internal representations of the body states and sensations associated with these actions and emotions are evoked in the observer, 'as if' she was performing a similar action or experiencing a similar emotion [Ferrari and Gallese 2007, 85].

According to this perspective, social cognition is not *only* explicitly reasoning about the contents of someone else's mind. Our brains, and those of other primates, appear to have developed a basic functional mechanism, embodied simulation, which gives us an experiential insight of other minds. [Ferrari and Gallese 2007, 85]

Although this mechanism underpins mindreading and empathy, I consider that it is important to acknowledge that it might not be the whole story. In effect, the simulation mechanism is related to a basic form of mindreading but only insofar as it has been shown to work for intentional actions: Given that the observer has a repertoire of similar actions, she can grasp the other's intention. Now then, as Goldman notices, this might not be enough to prove that mental-states attribution is a direct upshot of mirroring, and that a simulation theory could claim that simulation plays a central but not exclusive role in mindreading [Goldman 2013, 31-33].² And yet, simulation—underpinned by the mirror neurons system—

¹ 'Theory of mind' (ToM) is known as "the cognitive capacity to attribute mental states to self and others." [Goldman 2013, 19] Thus, it accounts for the ability to acknowledge that another individual does not necessarily possess the same information as one does. It also includes nested mental attributions (e.g., he believes that she remembers her daughter's misunderstanding).

² Nevertheless, simulation does seem to provide a 'usual' ground for mindreading: "An important feature of the imagination-based simulation story is that successful mindreading requires a carefully pruned set of pretend inputs in the simulational exercise. The exercise must not only *include* pretend or surrogate states that correspond to those of the target, but must also *exclude* the mindreader's own genuine states that don't correspond to ones of the target. This implies the possibility of two kinds of error or failure: failure to include states possessed by the target and failure to exclude states lacked by the target. The second type of error will occur if a mindreader allows a genuine state of his own, which he "knows" that the target lacks, to creep into the simulation and contaminate it. This is called *quarantine failure*. There is strong evidence that quarantine failure is a serious problem for mental-state attributors. This supports

appears “to be at the basis of basic forms of mindreading.” [Ferrari and Gallese 2007, 85] The question for us, though, is whether we really need to appeal to complex processes of mindreading in order to account for musical expressiveness, or whether the simulation by itself can provide a satisfactory grounding for it. I bet for the latter option.

Indeed, this shift will constrain musical expressiveness to the realm of the related sensations that the listener may evoke from an offline haptic simulation of a musical scenario. This by itself might not be enough to explain musical expressiveness in terms of emotions. But is that really necessary? Whereas the persona theory requires that the listener hypothesizes a persona who experiences such and such, the model that I suggest does not require that the listener imagines a musical persona, since the differentiation between self and other might not be fully developed at this early stage. Also, in order for a mind state attribution to take place, a higher level of differentiation between self and other must have been accomplished. Why consider that it is a differentiated hypothesized someone else’s experience that we are witnessing and being empathic with, when we can directly argue for our own experience of the musical surface exploration?

Moreover, one of the strengths of the persona theory is that it takes into account the narrative character of music and considers it as a process. I claim that this feature is maintainable in the simulation theory. But one does not need an imagined persona to whom to attribute orphaned mental states. As it has been sketched, music provides a scenario whose features allow certain ‘affordances’ in its exploration. Thus, the listener has a somewhat directed and constrained experience in her exploration of the musical scenario. This exploration is rather haptic and is especially sensitive to movements. Indeed, music itself has certain features *aka* expressive qualities and a listener explores them while exploring the musical scenarios and layouts. While the expressive qualities belong to the music itself, they are also ‘expressive qualities’ insofar as they have certain relationship with what I have been calling ‘affective phenomena.’ The use of this last term is not innocent, as it does not make it imperative for the expressive qualities to be necessarily expressive *of emotions*.

ST because quarantine failure is a likely affliction if mindreading is executed by simulation, but should pose no comparable threat if mindreading is executed by theorizing.”[Goldman 2013, 35].

While Robinson maintains that an expressive quality, in order to be such, should arouse the appropriate emotions in the audience, under the simulation perspective that I am endorsing the listener's affective response is rather guided by the expressive qualities the work itself has. One of the main problems with the Persona Theory was that it did not secure a necessary bond, neither between the author's emotional states and the music, nor between the listener's imagination and the musical features. The simulation approach that I am following, in turn, does secure a relationship between the listener's experience and the musical features through the notions of musical affordances, action plans, and simulations that we have now discussed. Thus, I consider that the persona theory was right in recognizing the narrative character of music, but I strongly claim that such narrative character does not have to be stated in terms of a given experience that happened to a hypothetical persona toward which we are supposed to feel empathy.

3.2.8 CONCLUSIONS

It might be thought that adopting a position that concedes the most important role in musical expressiveness to the expressive qualities of the work leads us to the conclusion that all we have is masks portraying a (non-existent) emotion that the listener has to recognize. Indeed, whereas musical expressive qualities are in fact able to portray emotions recognized by the listener, the catalog of emotions that are able to be portrayed as such seems to be quite narrow. But there is also a feeling of dissatisfaction about this theory and it is that we are reluctant to consider our affective reaction to music as a cold-blooded recognition of features: We do not want masks, we want faces.

On the other hand, leaving all the weight of musical expressiveness to either the composer's, the performer's, or the listener's emotions without offering a satisfactory account of their relationship with the musical work itself has led to a not very profitable theory either. It is not only about what face we care about (whether the composer's, the performer's, or the listener's), but also about figuring out the musical importance of that face, if any. Nonetheless, this last task has not provided good results either.

However, the concept of 'simulations' offers another option for understanding both, our active role in musical expressiveness, and its relationship with what is actually provided by the work itself. I propose to consider music's expressive qualities as indexes or indications, and not merely as icons. The reason why is because they are not only aimed to be recognized, but also to be 'enacted,' underwent. The musical surface, thus, presents a scenario or environment. The listener perceives in it affordances that mesh with the characteristics the musical scenario has and with the action plans she comes up with for its exploration, and she runs an offline simulation of this haptic exploration. The simulation theory allows us to connect music's expressive qualities with people's experience of their exploration. Furthermore, it opens up the possibility for us to account for musical subtle expressiveness, given the exquisite capacity music has to represent in detail movement's characteristics. However, in the way, we had to give up the necessity of constraining musical expressiveness to emotions. Indeed, my suggestion is to account for musical expressiveness using the broader concept of 'affective phenomena.' I will talk more about this in the next section.

3.3 MUSICAL SUBTLE EXPRESSIVE GESTURES

In this last section I bring together some of the conclusions of the past sections with the aim of offering a characterization of musical gestures that could account for subtle expressiveness. Also, I want to go deeper into some sticking points in order to clarify the particular simulation theory of musical expressiveness that I endorse.

First of all, I contend that the Resemblance Theory is correct in asserting that music's expressive power is underwritten by characteristics which must be possessed by the music itself. Otherwise, to secure a link with the music between the listener's arousal on the one hand, and the composer's and performer's emotions on the other becomes very complicated. That is not to say, however, that the expressive qualities music possesses are all that is involved in experiencing expressive music. Indeed, music's expressive qualities are not only to be recognized as icons, but also—I suggest—as indexes that direct the listener's exploration of the musical scenario. This approach takes the listener's experience of the music and the composer's and performer's intentions as somehow considered in music's expressiveness, without making it depend entirely on factors outside the music. It is as if it were a directed potential exploration of a musical plan that gets actualized, of course, when the performance and the listening take place.

Hence, I contend that the Resemblance Theory provides a fulcrum for a simulation theory such as the one I am proposing here. First, though, we should be clear about how the Resemblance Theory is to be understood. As Matravers notices [Matravers 1998, 118-9], it is sometimes ambiguous what this theory amounts to. Indeed, it could be understood as claiming that (a) the listener hears the music as an actual expression of an emotion, (b) the listener hears the music as an appropriate expression of an emotion, or (c) the listener hears the music as *resembling* a human behavioral expression of an emotion. The claim that the listener hears the music as a human utterance (or gesture) expressive of emotion (a) suggests that when we listen to, say, sad music, we have the same experience as of the audible expression of human sadness, meaning that it literally sounds like a sad person. The question raised is whether this actually happens, and it faces two main problems. First, the behavioral expression of the emotion that music presents should be appropriate or representative behavior of that emotion and it is not clear that such is

the case for the musically expressible behaviors. Second, this approach suggests that we literally hear sobs and moans in music, and that that is why it may sound like a sad person, a statement that is unsatisfactory to say the least. Indeed, using Matravers's example, if someone bangs her fist on the table, shouts, or says 'I am angry', one is justified in considering that demeanor as an expression of anger, but it is not clear that the emotion gestures reproducible in music are enough to secure a reference to anger in the same way. What would be the analogous audible gestures that could be mimicked by music and that are sufficient to consider them as expressions of particular emotions? Well, if we come back to what was expounded on in Chapter 2 when we got to talk about the diverse Figurenlehren, we can take some of the figures described by the Renaissance and Baroque composers as examples of this kind of imitation; mainly, the imitation of the way a human voice sounds under the influence of a particular emotion, such as joy or sadness. And in fact, we find multiple examples of imitations of sobs and cries in musical phrases, as in the very famous example of Monteverdi's 'Tu se' morta' in his *L'Orfeo*.

The image shows a page of a musical score for the opera *L'Orfeo*. At the top, it is labeled "ORFEO." and includes the instruction "Priuo d'ogni tuo ben misero A mante. Vn organo di legno & un Chitarone." The score consists of a vocal line for Orfeo and a lute/organ accompaniment. The lyrics are: "Tu se' morta / fe' morta mia vi ta ed io respì ro Tu se' da me partita / fe' da me par- / tita Per mai più mai più non tornare ed io riman go Nò nò che se' i ver' alcuna cosa / ponno N'andrò sicuro à più profondi abissi E intenerito il cor del Rè de l'ombre Meco trar- / rottri A riuocer le stelle O se ciò negherammi empio destino Rimarrò teco in cōpagnia". The music features a prominent, repetitive rhythmic pattern in the vocal line, consisting of a series of eighth notes, which is a key element of the "Figurenlehre" for grief.



Fig 1. 'Tu se' morta' from *L'Orfeo* by Monteverdi. Taken from IMSLP. In this aria Orfeo's singing voice resembles the sobs and cries of someone in grief. In this part of the drama, he finds out that Euridice is dead, and in his grief he cannot accept that he is still breathing while she has passed away. We can recognize a 'grief shout' in the "No!"

But, are we hearing Orfeo's grief shout as an actual grief shout or as a musical representation of it? Certainly, it might be the case that on some occasions we do not hear music as music, but rather as an instance of some other thing, for example, as a shout or as a sob.¹ This first (and not very charitable)

¹ An excellent example of a limiting case of this would be *A-Ronne* by the Italian composer Luciano Berio, written following a poem by Edoardo Sanguineti. In this piece, Berio used a wide range of vocalizations and vocal gestures including shouts, sighs, and even burps. Interestingly, despite the fact that this piece includes many traditional musical elements such as heterophonies, melodies, and polyphonies, *A-Ronne* is usually not considered a piece of music, but rather another borderline case between music and 'something-else'. I strongly recommend hearing the version by The Swingles II.

interpretation of the Resemblance Theory (a) suggests that we hear music literally as instances of human expression of emotion. However, this kind of imitation is probably not that common to ground most of music's expressiveness cases; and foremost, it is also true that sad music's expressiveness is not merely comprised of audible sobs and cries. In fact, I can think of many poor singing performances that make up for the lack of skill in interpretation by adding moans and sobs in order to make it more 'expressive.' Music's expressiveness is certainly discernible from a mere bunch of moans.

Now then, turning to the second possible interpretation of the Resemblance Theory, namely, that we listen to a piece of music as an 'appropriate' expression of an emotion (b), we can say that this new formulation does not really improve the position that the first option presents in this respect, because it adds conditions for a behavior to be appropriate as an expression of a particular emotion, but it does not solve the second problem that the first formulation presents; namely, that a musical affective experience is distinguishable from listening to sobs and cries, independently from the fact that sobs and cries may

to Ward and The Swingles II

a-ronne
for eight singers
(1974-1975)

Luciano Berio
(1925-2003)

indeed be appropriate expressions of sadness. Indeed, the formulations (a) and (b) imply that when we judge a piece of music to be sad we mean literally that it is so because it sounds like a sad person.

The third formulation (c) is that we hear music as *resembling* a human behavioral expression of an emotion. A subtle difference, indeed, but that becomes relevant insofar as it claims that it is not literally a human expression that we hear in music, but that we rather recognize a resemblance between human behavioral expressions and music. Although this is the strongest interpretation of the Resemblance Theory, it still faces two main difficulties.

The first one can in fact successfully be dealt with. As we have already discussed, in order for there to be a resemblance, there must be certain emotional features replicated in music, and certainly, in order to recognize a resemblance, we must be able to realize that there are certain features that are shared. Even though this resemblance has been challenged as possible given that music is not the most depictive art, there have been good results from the efforts to represent diverse features of the affective experience, including emotional gestures and the phenomenological dimension of the emotions. In fact, we actually have at our disposal in music history a wide range of examples of musical gestures theories, techniques, and catalogues that establish this.

The second difficulty the Resemblance theory faces, and that is more worrisome, is that it must be explained how it is that an experience such as recognizing resemblances becomes an experience of expressiveness. Let us go deeper into this last point. Matravers has challenged the thesis of considering that the recognition of the resemblance of emotional gestures in music is sufficient to account for the experience of hearing music as expressive, insofar as the recognition of properties does not capture the particular phenomenological character of the experience. In other words, it is not clear how the awareness of certain properties could constitute the experience of music's expressiveness.

An alternative way of characterizing the awareness would be in terms of holding onto a belief. The listener forms a belief about the music and, for as long as the music is expressive, he holds this belief concurrently with experiencing the music. If anything, this seems to me a step away from an account of experiencing music as expressive. There is, as I have claimed, a problem in accounting for the way that an emotion can 'enter into' our experience of music. Such experiences have a particular phenomenological character which is not simply that of being aware of music.

Given that holding onto a belief is not a state with any phenomenological character at all¹, it is difficult to see how the sum of holding onto a belief and listening to music will equal the experience of listening to music as expressive. [Matravers 1998, 121]

The main problem is that the acquisition of a belief—in this case, that the music possesses certain properties that correspond to, say, the gestures made by sad people—does not seem to be equivalent to an experience of music's expressiveness. Despite the fact that I am not inclined to adhere to the arousal theory as Matravers presents it, I do believe that this debate is problematic for the Resemblance Theory's adherents, for in its claim that the resemblances in music function as icons to be recognized, the experience of expressive music would be resumed in the acquisition of the belief that there are similarities shared between music and emotional gestures. This does not seem to be correct, given the nature of the phenomenological experience of expressive music.

Tom Cochrane [2010] has even argued that the recognition of the similarities with the gestural demeanor of people undergoing emotions is grounded in a certain kind of arousal. He bases this claim on some of the empirical evidence that shows that when people become unable to get emotionally aroused, they also gradually lose the ability to recognize emotions in others. The examples are: (1) Damasio's description of the case of 'S', a patient with damage in the amygdala who became unable to feel fear and, consequently, to recognize it in others [Damasio 2000]; (2) the case of Huntington's disease, where patients become unable to feel disgust and also to recognize its expression in others [Goldman & Sripada 2005]; and (3) patients with Parkinson, who are affected in their production of dopamine, and so they are impaired in feeling anger and, thus, in recognizing it in others [Lawrence et al. 2007].

In order to recognize an emotion in another person, and similarly in music, it is necessary to be aroused by either attenuated bodily changes or, which is more primary, a neural simulation of such changes. / Supporting this conclusion is empirical evidence that when people become unable to experience a particular emotion, they develop a corresponding inability to recognize that emotion in others. [Cochrane 2010, 196]

¹ I am not convinced of Matravers's justification of the claim that holding onto a belief has no phenomenological character. But I think that even if it did have a phenomenological character, one has the intuition that it is not the same kind of experience as that of being aroused by expressive music. The cognitivist theorist would be fine with this last claim, though, but would still hold that the second kind of experience is not needed for music to be expressive.

Cochrane's claim makes sense if we consider de Waal's model that we reviewed in the past section, according to which the ability to perceive others' emotions (and therefore the ability to feel empathy) is underpinned by a core Perception-Action Mechanism most probably secured by the activation of mirror neurons. So, we recognize the action that another is undertaking on the basis of our past experience in exploring the world. We simulate those actions "offline," and in so doing the related feelings are triggered in us. But, as I have insisted, for us to be able to feel empathy, further cognitive layers that build on self/other differentiation must be added.

Consequently, when considering an 'embodied cognition' model, we should also take into account feelings, and not only "cold" mental states on the one hand, and measurable bodily changes on the other. Regarding the musical case that we are discussing here, I claim that these particular problems are better approached if we do not only consider the resemblances as icons, but also as indexes or as pushmi-pullyu representations (to continue with Millikan's terminology). When I say that these resemblances work as indexes, I mean that they prescribe a certain use of them, that they imply certain action on the behalf of the listener (and certainly also on the performer).

So, for instance, to use Matravers's own example, some music moves slowly and methodically in the way sad people move. I claim that the listener's role would not be only to recognize such resemblance (a resemblance that remains indeed necessary), but also to 'move' herself accordingly. Of course, it is possible to make these explorative movements in an offline sort of way as we have explained in the past section. That is to say, as listeners, we internally simulate such movements, we enact them. Again, to be clear, what we enact is a haptic offline exploration of the musical surface or, so to speak, of music's virtual layouts or scenarios: We explore these to-be-given layouts according to the affordances that they represent to us.

Going back to Gibson's and Noë's main idea in order to connect it with the theory of musical simulation, we may recall that perceiving is constituted by the exercise of a range of sensorimotor skills. Perceiving something as having certain properties is to perceive it as affording possible movements, because, in encountering it, one is able to make use of particular sensorimotor patterns to interact with the object. Consider the following example.

You see two trees and you see that they are roughly the same size. One of the trees is nearer to you. The nearer tree looks larger to you in the sense that it takes up more of your visual field. [...] We see that the trees are the same size. But we see their sameness of size not despite the fact that they differ in their apparent sizes, but because they do. We see their sameness of size in the fact that they look to be of different sizes from here. The experience of the actual size of the tree depends on the implicit grasp of how the apparent size is fixed by your relation to the tree. [Noë 2004, 79]

We experience the trees as having the same size and as being at such distances given that we possess certain sensorimotor knowledge that we have gained during our past exploration of the world. If the person lacks the relevant sensorimotor understanding, it would not be possible for her to perceive the trees as having the same size but as being at different distances. Now then, how can this apply to the musical case? As it has been suggested, the listener recovers information from the musical surface and her perception specifies and actualizes motor hierarchies and action plans for its exploration—which happens mostly offline—and determines virtual movements through a virtual terrain. [Nussbaum 2007, 47] To illustrate this, I will present a couple of examples of the way music can possess certain properties that indicate what sort of movement is needed for its exploration.

First, let me give an example concerning the sensation of different kinds of motion in music and the diverse affordances that they allow for. The effect of motion in music may be either of the sort in which the listener feeling that an object is moving and that she is observing it, or of the sort in which the listener moves along. Accordingly, the action plans for each of these possibilities will differ, since in the first case the listener is stable while she perceives another object that is moving, while in the second case the listener is carried along with the music's movement, and thus, she has the same points of stability that the musical movement allows for (if any).

If one instrument is in "motion," an effect of object motion is produced, particularly if the lines of other instruments remain relatively "motionless"; if the entire ensemble is engaged in concerted, rhythmically coordinated "motion," an effect of observer motion is produced. [Nussbaum 2007, 50]

For instance, Sibelius's 2nd Symphony in D major Op. 43, third movement, begins with rhythmic continuous motion that is shared by most of the instruments. This kind of motion would create the effect of observer motion, in which case particular affordances are set and particular motor tasks are prescribed, considering that in the simulation the listener herself is moving along and is immersed in a flow. Contrastingly, in the

next section of the same movement, in the 'Lento e suave', the opposite effect is created, since most of the instruments stay still in a pedal, while the oboe alternates with the clarinet to create a solo, generating the effect of 'object motion.' Thus, the affordances set in this case differ insofar as the listener is now in a stable position.

In this respect, let me make a small parenthesis here, because I do not want to miss the opportunity of going a bit further and relating the 'observer motion' and 'object motion' effects with Edward T. Cone's analysis of the different personas to be found in a musical piece, and that apparently need to be differentiated in order to get a reasonable understanding of the musical piece. It should be said, however, that it is not the case that these two kinds of motion effects are clearly demarcated or, moreover, that they necessarily remain the same kind of motion all throughout the piece.

Agents, then, can be permanent or temporary, unitary or implicit, leading or subordinate. And every instrumental composition can be described in terms of the interaction of all its agents. Whether the work is for orchestra or for chamber group, for ensemble or for solo, intelligent performance demands that its agents and their functions be clearly distinguished. [Cone 1974, 96]

Contrastingly, I claim that it is always an egocentric perspective from which the musical surface exploration takes place. However, I contend that from that same egocentric perspective, the listener is also able to perceive the effect that she is standing still while witnessing object motion, and furthermore, that she is able to distinguish different objects' motions too (agents, or subjects' to use the musical term). In addition, as I said, I consider that these kinds of motion may and do indeed constantly change and merge with each other, and so, for instance, while the listener (standing still) perceives the effect of object motion, she can suddenly be pushed into a flow and merge with it. There is a vast realm of subtlety in these different kinds of motions and subjects and in the merging of them that conveys great expressive power.

III.

Vivacissimo.

2 Flauti.

2 Oboi.

2 Clarinetti in B.

2 Fagotti.

I. II.

4 Corni in F.

III. IV.

I. II.

3 Trombe in F.

III.

3 Tromboni.

Tuba.

Timpani in B. D.

Violino I.

Violino II.

Viola.

Violoncello.

Contrabasso.

Vivacissimo.
(d.)

E Lento e suave.

Musical score for the first system, measures 1-3. The score includes parts for Oboe (Ob.), Clarinet (Clar.), Bassoon (Fag.), and Horns (Cor.). The Oboe part is marked 'Solo' and 'mp', with a 'tenuto' marking. The Clarinet part is marked 'pp'. The Bassoon part is marked 'pp' and 'mp'. The Horns part is marked 'pp'. The score is in a key signature of three flats and a 4/4 time signature.

E Lento e suave.

Musical score for the second system, measures 4-6. The score includes parts for Flute (Fl.), Oboe (Ob.), Clarinet (Clar.), Bassoon (Fag.), Horns (Cor.), and Violoncello (Vcllo solo.). The Flute part is marked 'p' and 'mp', with a 'tenuto' marking. The Oboe part is marked 'mp'. The Clarinet part is marked 'mp'. The Bassoon part is marked 'pp'. The Horns part is marked 'pp'. The Violoncello part is marked 'pp' and 'dim. pp', with a 'cresc.' marking. The score is in a key signature of three flats and a 4/4 time signature.

The image displays a page of a musical score for the beginning of the third movement of Sibelius's 2nd Symphony. The score is arranged in a standard orchestral format with multiple staves for woodwinds and brass. The instruments listed on the left include Flute (Fl.), Oboe (Ob.), Clarinet (Clar.), Bassoon (Fag.), Cor Anglais (Cor.), Trumpet (Tr.), Trombone (Tromb.), and Tuba. The music is written in a key signature of two flats (B-flat major or D-flat minor) and a 4/4 time signature. The score is divided into two systems. The first system shows a gradual increase in dynamics, with markings such as *p cresc.*, *mf cresc.*, and *f*. A *tenuto* marking is present above the first staff in the second measure of the first system. The second system shows a decrease in dynamics, with markings such as *f dim.*, *p dim.*, and *ppp*. The music features a continuous movement in triplets, which creates an observer-motion effect. The score is taken from IMSLP.

Fig. 3. In the beginning of the third movement of Sibelius's 2nd Symphony we find a continuous movement in triplets which creates observer-motion effect. Contrastingly, in the 'Lento e suave' of the same third movement (just a few bars later) we listen to a pedal, i.e., motion-less notes that stay for some time while the oboe moves, giving the effect of object-motion. (Taken from IMSLP)

Cone's theory is very insightful in this respect, I do believe. Nonetheless, as I said, I contend that it is not a narrative of a persona's venture that explains music's expressiveness (nor our affective engagement with it), but rather a launched exploration of a musical surface. Furthermore, there are not enough good reasons for us to suppose that there is a persona that undergoes a narrative plot. There is also not enough ground for us to empathetically connect with her, since that would require mind reading. Nevertheless, Cone's theory is very accurate in its musical descriptions and intuitions (an insight that is often lacking in a lot of the theoretical approaches), and it is this musical intrinsic understanding which grants great forcefulness to Cone's theory. This accurate musical insight is what a theory ought to be able to explain, and I contend that the simulation theory is able to explain many of Cone's intuitions.

Now take, as an example, Glenn Gould's two recordings of Bach's *Goldberg Variations*. Let's stick to the main theme. In both versions, the movements of the voices are clearly differentiated and understood (as Cone would demand). In the 1955 version, though, the theme is played in a very andante way, where the $\frac{3}{4}$ measure is really felt like a dance pace. Contrastingly, in the 1981 recording, Gould plays it notably slower. Each beat of the $\frac{3}{4}$ measure is now felt like a tranquil, almost pensive step in itself. And so, the affordances of these two great performances of the same piece are different. Certainly, when we move slowly, we are able to pay attention to a lot of detail in what we see and in the characteristics of our own movement as well. Small features stand out when we have enough time to contemplate them. On the other hand, when we move fast, a sizable amount of this detail vanishes with the velocity, while other expressive features come into existence with the speed: other expressive gestures are created. The musical plans of both performances are different, but not in the hierarchically organized structures such as those postulated by Lerdahl and Jackendoff, but in what regard to all those little not necessarily hierarchical features such as timbre that give these performances a distinctive character. These features, that I will call 'musical gestures'—and explain in what follows—prescribe the listener to implement, offline, different action plans for different layouts. Indeed, music is dynamic and modifiable by the performer in subtle characteristics that in turn are able to be explored in an offline haptic way. The importance of these modifications should not be overlooked.

So, while our affective engagement with musical performances is related to gestural resemblance, it is also related to our bodily responses in daily life explorations. The way our bodies move and respond in

everyday life in the experience of diverse environments has been building models for future responses that may be applied to the musical context.

Much of the metaphorical language of musical description draws on just these experiences. Music can sound halting and uncertain because we know what kinds of rhythmic and gestural movements arise from and signify uncertainty in life and we recognize the similarity when we hear these same movements in musical sound. [Leech-Wilkinson 2013, 50]

But, as I have been stressing, it is not only a matter of recognizing the similarity, but also, since musical features work as a pushmi-pullyu representations, it is demanded a simulation of the exploration of the musical scenario in which composer, performer and comprehending listener get involved. It is understandable, then, that in theories that explain musical expressiveness through emotional processes and, furthermore, those that take conceptual judgments to be essential for emotional processes, we find complications in many respects. Foremost, the relationship between emotions and music seems forced, since (as has often been said) the lack of intentional objects and related judgments makes it difficult for the musical emotional experiences to meet the 'normal emotions' definition. However, if we focus on the patterns of bodily changes, along with the phenomenology (feelings) of those changes, it becomes much easier to account for the subtlety and strength of musical expressiveness.

Tom Cochrane [2010] also proposes a simulation theory of musical expressiveness. His point is that music hijacks the mechanism that has evolved to recognize emotions in oneself and in others. It is interesting, though, that Cochrane considers that the resemblance to the external gestures of emotions—as the Resemblance Theory proposes—is not enough to account for music's expressive range and subtlety. To make up for this particular challenge, Cochrane proposes—as I do—to consider a resemblance to feelings, that is to say, to the phenomenological dimension of an emotional process.

Cochrane's theory relies on empathy, though, while considering that the arousal, the resemblance and the persona theories contribute to a simulation theory. However, as I have discussed in the past section, I do not think that we have enough grounds to say that we feel actual empathy for the music or for a persona's feelings we imagine in the music. Instead, I contend that we merely have an egocentric perspective. We can only account for the simulation of bodily responses and the feelings related to them, which are indeed at the core of empathetic processes, but that are not sufficient for empathy. On the other

hand, the necessity to refer to an imagined persona in a musical process is usually grounded in the lack of someone to apply the emotions we claim to hear in music without thereby committing the pathetic fallacy. It also seems that the persona theory helps explain the dynamic and narrative character of music. Furthermore, if it were the case that we hypothesize a persona who undergoes a plot, then we would be able to explain the listener's arousal by means of empathy or sympathy toward this persona and her fortune. I contend instead that this brings more problems than it solves, and that all such difficulties can be sorted out by other means.

In the first place, under the simulation theory based on resemblance there is no risk of committing the pathetic fallacy, since according to this approach, the music possesses features that are related by resemblance to a dynamic exploration of a scenario. The theory does not need to commit to the untenable claim that the music possesses feelings, nor does it face the necessity of hypothesizing a persona to avoid such danger. In the second place, the dynamic character of music is perfectly explainable through the upheavals of the exploration of the musically given layouts.¹ In the third place, the listener has an active role while listening, for she explores offline the continuous musical settings in a haptic way. As we have seen, through this simulation and the action perception mechanism, related feelings to the witnessed action get stimulated. Hence, in order to account for our affective engagement with musical works, we do not need to refer to empathy, and certainly we do not need it to account for music's expressiveness either.

Moreover, I insist that we should proceed by letting go the obstinacy of explaining music's expressiveness only in terms of full-blooded emotions, since there are other affective phenomena we can

¹ Nevertheless, the claim that music has a 'narrative character' leaves me somewhat uncomfortable, given that the concept of 'narration' is related to a story, message, or tale that is being transmitted. Music lacks the propositional distinctive characteristics of narrations and only under special circumstances can we say that this has been attempted and achieved (to a certain degree), as in the case of the Symphonic Poems. To give a clearer idea of what I am referring to, let me mention a couple of examples of the Symphonic Poems' plots (where instrumental music attempts to portray a story). The *Prélude à l'après-midi d'un faune* by Claude Debussy, was written as an illustration of a poem by Stéphane Mallarmé. Its plot is about a faun that gets aroused by the evasive nymphs and naiads in the woods and who tries to pursue them without success, until falling asleep and getting sozzled by the visions of his afternoon dream. Another example is *Verklärte Nacht* by Arnold Schönberg, written following a poem by Richard Dehmel. It is about a woman that, during a walk, confesses to her lover that she is pregnant with another's baby. He reflects about the sad words of his woman, and finally accepts her and forgives her. Even though the music follows a story and to some extent portrays it, it is almost impossible to assert that the listener can get the whole tale with its minutiae without the help of other non-musical resources. Surely, if that is what is meant by being subtly expressive, music would be hopeless. Nonetheless, I consider that musical expressiveness is not subtle insofar as it can convey determinate narrative tales, but insofar as the resembled feeling component itself admits great detail.

explain it with. Feelings, for example, can indeed account for a realm of musical expressiveness that allows a greater level of detail and subtlety than the concept of emotions allows. If we use a Resemblance Theory based on feelings, and we consider emotional feelings to be components of emotional processes that needn't themselves present all the components of emotions, but only their phenomenological character, we free the music's expressiveness theory of the need to account for all the emotion's components in the musical representation. Not all of them have to be present. Now then, the critic may reply that in that case we would not have enough grounds to say that those feelings refer to a particular emotion. But that would be fine, since the theory needn't label feelings with a single emotion reference term in order to work.

Under the simulation theory that I am endorsing, a certain response is indeed necessary for musical understanding. Certainly, it need not be a full-fledged emotional process on behalf of the listener, but it is required that she explores the music offline and follows and carries through the upheavals that it dynamically presents. But, unlike Cochrane's, my claim is that we do not need to hypothesize a persona and to explain our emotional reaction by means of empathy. The listener does not need to imagine a persona, because it is her own exploration that accounts for music's expressiveness. And it is music's expressiveness and not merely the listener's imagination because the listener's exploration is guided by the affordances that the composition and the performance allow. Again, as Stephen Davies said [Davies 2006, 180], it must be recalled that musical expressiveness is a response-dependent property (just like color or pitch), since the expressiveness experience is not only dependent upon properties of the music, but also on the perceiver's capacities and actions.

3.3.1 EMOTIONS' COMPONENTS REVIEWED FOR A THEORY OF MUSICAL GESTURES

Thus, music is not sad merely because it resembles the behavior sad people have, such as moving slowly and methodically. It is sad because to appreciate such resemblance makes the listener move slowly and methodically. It is because it is an indexical or pushmi-pullyu representation that allows certain affordances while guiding the exploration. Sad music makes the listener move along with a slow, heavy pace and, thus,

it makes her pay more attention to certain details, and set further action plans accordingly. It does not merely rely on the recognition of the slow pace as characteristic demeanor of sad people. Furthermore, the categorization of such demeanor as corresponding to sadness is not even necessary, for the resemblance was mainly established in terms of feelings and not of emotions as complete wholes.

We should now remember that emotions are processes that entail diverse elements which are processes in themselves. Furthermore, these elements interact with each other in a dynamic way. Recapitulating, I adhered to a multi-factored account of emotions, meaning that the different elements of an emotional process are taken into consideration, without neglecting either the physiological or the cognitive side of them. I also claimed that in trying to understand emotions I do not commit to defending hard dualisms either between mind and body, or between what is natural and cultural. Even though there was a longstanding debate in that respect between the cognitive approaches on the one hand, and the physiological approaches on the other, more recent accounts of emotions recognize both elements as necessary for emotional processes.

Therefore, we can say that emotions begin with an interaction of the individual with the environment which makes her face a situation that gets appraised as somehow relevant for her. This appraisal might happen in a quick-and-dirty fashion, or instead in a much more meditated way (and that is why Scherer uses the term 'multilevel appraisal' to refer to this element). If the situation is appraised as relevant, further emotional processes are triggered in order to cope with the situation successfully. So, diverse physiological changes are unleashed. These include Autonomic Nervous System (ANS) activity, hormonal changes, action tendencies, and gestures. There is also a phenomenological dimension of an emotional process, the first-person experience of the situation, namely, the 'feelings.' All of what is happening to the individual may then be categorized and labeled. The individual may recognize, say, that she is depressed or angry, even though it is also possible that this categorization never happens. But foremost, we should remember that emotions are processes, that they are not photographs of what happened within the individual in a particular moment. As Klaus Scherer's and Cotinho's Component Process Model (CPM) proposes, these elements continuously interact. So, if I feel, say, a pang as part of an emotional process, that pain will then be re-appraised, and this new appraisal will then influence further physiological changes that will then be integrated as different feelings, and so forth. In the same way, if I

categorize my emotional state and consider that I am overly angry about a situation that does not really deserve it, that categorization will definitely influence further reappraisals.

Now then, let us now consider which of these processes are able to be integrated in a musical expressiveness theory by means of resemblance—which is the foundation of both the resemblance and the simulation theories of musical expressiveness—and how much would the different emotion components contribute to music’s subtle expressiveness if they were able to be resembled. Does music resemble appraisals? I wouldn’t say it does as such. However, music can represent situations that could probably be appraised as, say, dangerous, such as an enraged crowd that surrounds you, as pointed out by composer Jean-Claude Risset in an interview for Tom Cochrane.

Indeed hearing is performing complicated and effective cerebral operations even when concentrating on a single sound. For instance we can guess whether a tone arriving at the ear with a level of 30 dB has been produced by a powerful source far away or a soft source nearby. We can also localize precisely the direction of the source. This is quite remarkable. / Such discriminations help the predator find the prey or the prey escape the predator. One can reasonably believe that evolution has optimized our senses to provide information about the outside world that can help survival. Thus we are equipped to perform inquiries on acoustic sound, to guess where they come from (from what direction, how far) and what caused them. Music makes gratuitous use of our cognitive capacities: the ear may be frustrated if the sounds are too simple to enable such inquiries. Clearly these quests can produce emotional effects. For instance the “chorus” effect of many tones together may hint at a threatening crowd. So music is anchored in our perception, but the way perception has evolved is itself anchored in the physical reality of sounds in the outside world. [Cochrane 2013, 24]

According to the simulation theory that I am proposing, when the listener explores the musical scenario, certain affordances are generated. Some of these affordances may as well be appraised as relevant and unleash an emotional process, such as fear in the case of the chorus that resembles a threatening crowd, or as a response to musical sounds resembling gunshots. In any case, we would be talking about a very quick-and-dirty kind of appraisal, since it is very unlikely that music can endorse highly cognitive reasoning in regard to the appraisal element. Why is this so? Well, because in this case music does not resemble the act of appraising, what it resembles is rather a situation that might be appraised as relevant for the individual’s wellbeing. But it hits more the automatic responses than the consciously reasoned ones, given that the listener does not really think that the chorus will harm her, for example, and so, the initial unconscious appraisal would not make it through a conscious reevaluation. In this respect we should as

well remember that the appraisal element might be either volitional and conscious, or unconscious, meaning that it might happen somehow automatically and below the line of awareness.

I believe the process of emotion generation is often automatic rather than deliberate and volitionally controlled. It is not possible to say with any confidence what proportion of appraisals and emotions are based on either mode of cognitive activity, and perhaps most adult appraisals involve a mixture of both. In all likelihood, too, we have probably underestimated the importance of resonances or automatic processing even in the adult emotions. Though they can be so equated, we should resist equating the automatic with the primitive, because automatic processing can involve complex, abstract, and symbolic significances that through experience can be condensed into an instant meaning. [...] Sometimes our initial appraisals are hasty and unreflective, but if given time and opportunity, we engage in reappraisals that result in a different evaluation than the one we began with. [Lazarus 1991, 154-5]

If the appraisal element that we can possibly include in our theory of musical expressiveness can only be achieved by means of a hijack of automatized unconscious appraisals of situations that might be resembled by the musical scenario that the listener explores, then our next step is to ask about the level of subtlety achievable by this means, and how much this kind of unconscious appraisal can help us determine what emotion or other affective phenomena music might refer to.¹

Indeed, emotions as processes begin with the interaction of the individual and a situation that gets appraised as relevant for the individual's wellbeing (mostly belonging to one of the core-relational-themes described by Lazarus). The evaluation of the situation might happen, as we said, either in an automatic, unconscious way, or in a meditated one. Moreover, the evaluation usually happens again and again during

¹ I want to briefly refer to the distinction stated by Peter Kivy between Gross, Moderate, and Subtle Expressive Properties (GEPs, MEPs, and SEPs respectively). He uses this distinction to defend himself from Newcomb's criticism about his theory not being able to account for music's expressive subtlety. As an answer, Kivy claims that music can possess GEPs and MEPs, but not SEPs. Even though Kivy is not very clear about the conditions for these distinctions, I understand that he maintains that GEPs would be gross or general expressive properties such as those related to happiness or sadness, while MEPs would be moderate expressive properties such as those that refer to 'triumphant joy,' 'exuberant good spirits,' 'calm or contemplative joy,' 'funeral melancholy' and so forth. The SEPs are a different story, though. It seems that Kivy considers (that Newcomb considers) that they are achievable only by means of semantic content. And, since he considers that pure instrumental music cannot countenance semantic content, Kivy rejects that music can countenance for SEPs as well [Kivy 1989, 183-7]. I will not say too much about this differentiation, since it is not clear enough, and it will hinder us wondering what Kivy had actually in mind. However, I brought it to attention because of the idea underlying it, which seems to be that in order to ascend in the subtlety scale, an emotion has to add something like a plot, a semantic content (which pure instrumental music cannot successfully achieve) that would be integrated within the appraisal and/or categorization components of emotions (in Scherer's and Cotinho's Component Process Model of emotions).

the process of monitoring, and it might as well depend on categorizations or not. The question is: Is the appraisal or the categorization what accounts for subtlety in expressed emotions? Not so much, I would say. Surely, at this point we meet over and over again the cognitivist counterargument that says that we are not even able to differentiate among emotions unless we have an intentional object and an appraisal of it (if not a conscious belief); that it is in virtue of the emotion's cognitive character that we can even know what emotion we are undergoing. This is what seems to be behind the following Lazarus's words that are relevant given that we can only afford unconscious appraisals in musical expressiveness:

Preconscious evaluation of social events seems to be made for simple categorical distinctions such as good or bad rather than for finely graded analogical distinctions. This is consistent with the idea that conscious, deliberate, and volitional evaluations, which have the advantage of language, may be more finely graded than unconscious, automatic, and involuntary ones, which are apt to be hasty and vague. [Lazarus 1991, 158]

When we try to find explanations of what it means for a musically expressed emotion to be subtle, we find answers like: "it is not just 'happiness' it is *that* happiness," or "yes, it is only happiness and no other emotion, but it is a happiness that is expressed in a particular subtle way that only that passage of the symphony could capture." Is the distinctiveness of *that* happiness found in the appraisal, on the semantic content, or on the categorization? I am not convinced at all. I think we are looking for the answer in the wrong place. Let's keep going on which of the emotion's elements can be resembled by music.

Which of the physiological changes related to emotional processes can music actually resemble? Notice that the question is not what physiological changes are likely to be undergone by the listener (a subject that we have analyzed with Gibson's concept of 'affordances'), but rather which of them are able to be resembled by the music. Certainly, it is not liable that music can resemble ANS activity, but some action tendencies could be, as well as certain emotional gestures and some automatic bodily responses, such as increased heart rate. For example, the flight tendencies when facing dangerous situations, such as running away could certainly be imitated. Would such imitation be enough to know it is a flight response from danger? Probably not referring to a particular situation, for the idea of the intentional object is still something to be debated (a debate that we shall take over shortly in what follows), but it is possible that it

conveys the idea of flight from danger in a general way. In Rashid Brocca's *Marsias' last breath*,¹ for example, there is a clear resemblance to the death rattles of the satyr. Certainly, death rattles are not necessary components of any emotion by themselves, but they can definitely unleash emotional reactions given the correct contexts. However, without delving too deep in these cases, what I want to make noticed is that some physiological disruptions are indeed able to be resembled by musical features. Again, it may not be enough to appeal to these resemblances to refer to an emotion in particular, but in combination with other features they may help to secure the reference.

Next in the list, emotional gestures are the obvious candidates for a successful resemblance. We have now thoroughly talked about which gestures are likely to be resembled by music. For obvious reasons, the facial expressions studied by Ekman are not that useful for the musical case. However, his research became a huge guideline for research focused on audible gestures, such as Scherer's and Zentner's. As reviewed in Chapter 2, although the results found by Ekman in facial expressions were fairly replicated for audible cues, there are some differences (e.g., it seems that we are better at recognizing vocal utterances of negative emotions than positive ones). Trying to find the universally recognizable audible gestures of the basic emotions in music has led, conversely, to a mild disappointment, insofar as not all the basic emotions have universally recognizable audible gestures that could be used as a basis for a resemblance theory. Thus, the emotions that can be recognized only by means of the resemblance to audible emotional gestures cannot account for music's expressive subtlety.

Next is the feelings component, which I have been proposing as a leading candidate for what can be resembled by music. Again, the way feelings are resembled has been explained through the Gibsonian idea of affordances, mostly in Nussbaum's theory. However, this theory proposes that the music features constitute a scenario that the listener explores in a haptic way. Up until now, though, it may appear that it has not really been stated that there is a resemblance with feelings, but rather that the feelings are the result in the listener of her exploration of the musical scenario. Nevertheless, it should be noticed that music does not present a static scenario that the listener explores at will. Instead, it is a guided already

¹ Rashid Brocca (1983-2010) was a Mexican composer whose death I still very much regret. In 2009 he was awarded with the first place in the Aeron Flutes Competition for his piece *Marsias' last breath*.

launched exploration of the layouts. Musical expressive features—I insist—are response-dependent and work as pushmi-pullyu representations, meaning that they both resemble and prescribe.

Facing the question whether feelings can account for expressive subtlety, we can now respond affirmatively. When we say that it is not happiness in general that is expressed in a musical passage, but *that* particular sadness that was only expressed as such there, we do not really claim that we found a different, subtler, finer classification for happiness. Rather, it is the quality of the feeling component that makes it specific, though not as an emotion, but as a particular feeling. We arrive at a different sense of referring to subtlety in that regard to that of the expression of emotions. The patterns of the affective feeling component might then be what can in fact account for the immense subtlety of a particular emotion expressed in music. We might then classify them as pertaining to the category of an emotion, but in doing so, the emotion categorical classification will blur away the phenomenological detail of the feeling. This is maybe why we often say we lack enough words for what we feel.

At this point it is worthwhile to recall Matravers's claim that what music arouses is not the emotion as a whole, but rather the feeling component of it that then will cause her to judge that it is, say, sadness that she is aroused with. As it is foreseeable, for the arousal theory to be plausible, it is necessary then that the listener is able to discriminate between the feelings to associate them with the relevant emotions without the propositional component. The cognitivist theorist maintains that this cannot be done, but Jerrold Levinson and Derek Matravers challenge this claim:

Even if it is granted that the standard emotions—and even more so, the 'higher' emotions that especially concern us—are defined, logically individuated, and necessarily conceived in terms of their respective cognitive components, it does not follow that there is nothing else that is in fact distinctive or characteristic of the individual emotions. Emotions comprise, at the least, affective, hedonic, conative, behavioral, and physiological components as well, and there is nothing to show that reliable and cognizable differences in the total constellations of non-cognitive components of the various emotions could not exist. On the contrary, it seems more than plausible that with all such factors taken into account—qualitative feels, desires, and impulses, varieties of internal sensation, degrees of pleasure and pain, patterns of nervous tension and release, patterns of behavior (gestural, vocal, postural, kinetic)—each of the emotions standardly distinguished in our extra-musical life would have an overall profile that was subtly specific to it, even leaving its cognitive core to one side. [Levinson 1990, 334; 1995; cited in Matravers 1998, 151-2]

Is the feeling component specific enough to refer to a particular emotion, so that there is just one hope-feeling, sadness-feeling, happiness-feeling and so forth? I do not consider that this is necessarily so, but such a fact does not diminish the subtlety of the feeling itself, it only makes it (at most) not sufficiently specific to identify an emotion by referring to a single emotion-category by itself.

Now then, is it possible for music to convey intentionality? The answer is negative in a general way, but there is a possibility if we consider intentionality as part of the feeling component. As we saw in Chapter 1, Peter Goldie and Jesse Prinz claimed that feelings can indeed convey intentionality, and that they are about something. Goldie differentiated between mere bodily feelings and ‘feeling towards.’ Feeling towards entails intentionality, not because of an added belief, but in virtue of the phenomenology of the feeling itself. To recur to an already mentioned example, a pang of grief is not just whatever old chest pain. The individual feels it as being about the grief and not about the bodily disruption. And to recall Prinz’s example once more, when we run away because we feel fear, it’s certainly not because our hearts are racing, but because fear *represents* danger [Prinz 2004a, 13]. And so, can the feeling towards be captured in music?

Given that Cochrane proposes a simulation theory of musical expressiveness, it is not surprising that he draws on a theory of emotions that considers the bodily changes as essential for emotional processes. However, this kind of theory needs to meet the counterargument according to which mere bodily changes are not sufficient to differentiate among emotions, mainly because they cannot embrace intentionality and the content of emotions. Against this, as we have seen, Jesse Prinz suggested that the feeling of the bodily changes related to an emotional process actually involve a certain intentionality, because feelings are also about the impact a particular situation of the environment would have on the body. In Cochrane’s words: “This is what emotional feelings are, meaningful presentations of the impact of the world on the bodily organism or self.” [Cochrane 2010, 206] Prinz’s theory is presented as a James-Lange inspired theory, but introduces intentionality in claiming that the bodily responses may represent the content of emotions. Increased heart rate and the impulse to flee may represent danger because they are set up by evolution to be causally initiated by dangerous situations. These bodily responses—as Tom Cochrane has it—are simulated by music, and thus, the intentionality that they involve may also be embraced by the musical simulation. Music’s expressive success depends on it hijacking this brain simulation mechanism evolved to detect one’s own and others’ emotions.

I think that Cochrane's suggestion of music borrowing the already borrowed intentionality of feelings from the associated causes of the bodily disruptions is plausible. Certainly, it is possible that feelings are beforehand related to some cause (maybe even a core relational theme), and that music uses such intentionality without having it itself. However, I do not think that my version of the simulation theory is harried by the necessity of finding intentionality in musical affective experiences anyway, since it does not forcefully need to refer to all of the components of an emotional process.

Last, with regard to the categorization and labeling of the emotional process presumably expressed by a musical work, I contend that music cannot really resemble the conceptualization needed for categorizing. Certainly, the former claim does not exclude that the listener could conclude, on the basis of certain features of a musical piece that it is, say, happy.

Hence, a resemblance to some of the emotions' components is achievable. Music does not resemble all of them, though, and because of that, a comprehensive one-to-one correlation from musical features to emotions is often not possible, and a complete, clean categorization is commonly not accomplished. Nevertheless, the resembled elements may work together to achieve the correlation to an emotional referent, since there is no stipulation that dictates that to accomplish the reference they need to work by themselves without help of any other (musical) feature. However, to categorize the expressive musical features in terms of emotions, we end up organizing them in big chunks that do not considerably contribute to grasp music's subtle expressiveness.

3.3.2 MUSICAL GESTURES

I use 'musical expressive gestures' to refer to musical features that intentionally resemble some component of emotional processes, be it a vocal utterance, a pace, a feeling, or a situation that might trigger an unconscious appraisal and unleash an affective response. Furthermore, as musicologist Robert Hatten convincingly argues, musical gestures are features perceived as meaningful units, or "temporal gestalts."

They might comprise any of the musical elements, without being reducible to any of them alone. They are mostly within what might be called the 'perceptual present' [Hatten 2004, 101]. Although Hatten contingently limits the perceptual present to what might be encompassed in around two seconds, I consider this limitation unnecessary. Nevertheless, this time restriction does point to an interesting debate: whether we need to restrict musical gestures to smaller units, or whether larger structures (e.g., sonata form) ought to count as musical gestures too. There is no doubt that larger structures can and do contribute to musical expressiveness.¹ However, without restricting the time span, my claim is that musical gestures should be perceived as units, and that where the unit perception gets lost (be it because of the limits of memory capacity or otherwise), the gesture gets lost as well. Foremost, I contend that the unity of the musical gesture is secured by the unity of the action it refers to.

The reader may well be wondering what action I am talking about. It is the action that the listener offline simulates. So, the listener explores offline a musical environment in a haptic way. The exploration is guided, though, for it depends on the musical features that are fixed beforehand and that set certain possible affordances. It is suggested that this exploration is underpinned by mirror neurons. However, as it might be recalled, mirror neurons activate only when the observer perceives a goal-oriented action, and not when she merely perceives random movements. Imagine for instance that a macaque sees another macaque that is aiming to grasp a banana. The observer internally simulates the movements she is witnessing and so foretells what movements are going to be needed next; also, related feelings are triggered in it as well, and so forth. However, even though in music there is no clear goal such as grasping a banana, we can say that a musical gesture is not perceived as a random movement either. Rather, it is perceived as a unity with an intention. Imagine now a musical scenario, such as a harmonic progression, where the tonal reference is momentarily blurred and is perceived as a stability loss. In that case the goal

¹ This debate is related to the one held between Kivy and Levinson, between architectonicism and concatenationism. As we referred to before, Kivy argues that musical understanding needs a comprehension of the general structure by which the musical piece is constructed, while Levinson argues that the listener cannot hold that much time in perception, and coins the term 'quasi-audition' for the musical time span that she can actually perceive as the musical present [Kivy 2001; Levinson 1997].

would be, I imagine, something like regaining bodily stability, and such goal-oriented action would be what give unity to the musical gesture.¹

3.3.3 FURTHER CONSIDERATIONS

We are now in a position to keep Aquinas's accurate insight about the correspondence between bodily movements and soul movements—where there is a resemblance relationship between the bodily motions and the soul's qualitative motions—and to bind it together with a simulation theory of musical expressiveness. If we wanted to extrapolate, as an exercise, we might say that offline simulations would correlate to the qualitative movement of the soul in Aquinas's terms, while actual online bodily movements to locomotion. In effect, the animal spirits theory had an outstanding force insofar as it delightfully described the feeling component of the emotions, despite the fact that the mechanistic description it used to explain it was hopelessly flawed. As we know, the Baroque composers took over the spirits theory as the foundation of their theory of affections and, consequently, their musical gestures catalogue. However, even though the theory of affections they endorsed is not tenable anymore, I contend that the simulation theory based on mirror neurons' activity can work just as well and can also be applied to the *Figurenlehren*.

Similarly, the intuition behind Susanne Langer's and Carroll Pratt's controversial aphorisms, namely, that "music is a tonal analogue of emotive life" and that "Music sounds the way emotions feel" [Langer 1953, 27; Pratt 1954, 296] can be somehow recovered under the simulation theory. Indeed, what both philosophers rightly assessed is that music and feeling share certain dynamic forms. However, as we have seen, the foundation of this strong claim was lacking in their accounts, and so their proposals have been obscured by an understandable suspicion.

¹ I do not want to imply that musical gestures require tonal reference to be goal-oriented. In fact, I consider that the characterization of musical gestures that I am proposing here can and should be used to understand non-tonal contemporary music's expressiveness.

But again, what a simulation theory is able to explain is the affect in terms of feeling, mostly referring to movements. On some occasions, those movements may refer to emotions, but not necessarily. And so it is not surprising that the GEMS project list of musically aroused affects (that we reviewed in Chapter 2) differs so much from the basic emotions model [Zentner 2010, 106], while it has more matching points with Pratt's list of musical-emotional words and even with Johannes Nucius's list of words able to be represented by the Figurenlehren.

[M]usic's ability to express emotion should not be exaggerated: the scope of the musical expression of emotion is not the complete field of the emotions, and unless a literal conception of states that involve emotion is adopted the list of kinds of emotion that music—the music we are familiar with—can express is embarrassingly short. [Budd 1989, 129]

Finally, I want to recall what examining social constructionism as a theory of emotions revealed and which we should bear in mind when explaining musical gestures. Averill taught us that there are many components of emotions which are culture-dependent. For example, some appraisals are learned as roles we enact, as well as some emotional gestures and action tendencies. We learn these roles through experience, and they develop simultaneously with ego development. So, we shouldn't be afraid of including culture determinations in musical gestures, for fear of making them contingent; they are to a certain extent. They depend on personal experience (e.g., by using sensorimotor patterns), they depend on historical determinations (e.g., the banning of the tritone, as it was considered the devil's interval); and they have an evolutionary fulcrum as well (e.g., by triggering fear when a chorus sounds like a threatening crowd). For example, during the Baroque period, the *arsis* motion was considered more elegant than the *thesis* one. So, the court dances used the thesis as a mere excuse to direct the movement to the arsis again, creating a sort of bouncing with a suspension effect that was very much liked. But it would not be very profitable to try to disentangle how much of such a musical gesture is history-dependent, and how much of it is natural. Most certainly, the musical demeanor associated with affects is also culturally shaped, and so the history of music is of central importance not only in understanding why we take certain features as affectively expressive, but also to even get the musical gestures.

And so, regarding the Kantian claim that 'music is the language of the affects,' by means of which it universally communicates sensations and the ideas related to them that are nevertheless not concepts [Kant, *KU*, §53, 328-9], I do not disagree completely. I think it is unfortunate to call music a language,

though, given that it presents paradigmatic, but not syntagmatic contrast. Also, claiming universality is oversimplifying, as it neglects cultural and personal determinations. However, musical gestures do communicate by means of sensation representation, perception, and simulation. And even though these sensations may indeed be grasped by many people, they are just not conceptual.

CONCLUSIONS

In this research I aimed to approach the subject of musical expressiveness taking as a point of departure the insights of three major areas of knowledge: emotion theories, musical practices and history, and philosophical theories of musical expressiveness. The intention has been to elaborate a concept of ‘musical gestures’ that could explain musical subtle expressiveness (at least partially).

Thus, given that the relationship between music and emotions is the main path through which musical expressiveness has been explained, I began by enquiring what an emotion is. There are various different approaches to the subject, and hence, despite its importance, a deeper research on the emotions would have taken us far afield from the musical subject. Nevertheless, position taking on the debate of what emotions are is ineludible if one is to approach the relationship between musical expressiveness and emotions.

Historically, there has been a large discussion elucidating whether emotions are cognitive, or rather physiological processes—a discussion that has been around for centuries, however stated sometimes in terms of the relationship between soul and body. Also, the debate has been approached from the perspective of the way we feel emotions or from the perspective of the mechanisms that trigger and underlie emotional reactions. It has also been discussed when is it appropriate to experience a certain emotion over another, how to cope with an emotional reaction, and what would be the appropriate behavior as a reaction to one or the other emotion. Furthermore, there are other surrounding debates on the emotions that also relate to the musical expressiveness subject, such as the debate on the extent to which emotions are the result of evolutionary history or of culture history.

However, only for clarity purposes I would say—with obvious oversimplification—that the main debate has been on the question of what kind of states emotions are, whether mental or physiological, and thus, we can probably say that there have been primarily two flanks: the cognitive and the physiological approaches. The first set of theorists defend the thesis that emotions are essentially constituted by an

intentional object plus a belief about a state of affairs or situation that constitutes the content of the emotion. Emotions, according to the cognitive theorists, are about something, and the belief about that something intrinsically constitutes the emotion. The second set of theorists stress the importance of the physiological changes in constituting the emotion. The James-Lange theory assesses that we do not experience physiological changes as a response to an emotional reaction, but on the contrary, that we have an emotional reaction because of the physiological changes we undergo. But, of course, there are different kinds of physiological changes that take place during an emotional episode. They might be behavioral, vascular, gestural, etc.. Darwin studied them, and hypothesized that emotions have an evolutionary fulcrum, and that they might serve survival purposes. In this line of research, some further investigations showed certain cross-cultural matches in emotion's gesture-making and gesture-recognition. The results point to the fact that emotions cannot be merely subjective, inaccessible private mental states, since apparently we, as human beings, share not only emotion-related gestures and action tendencies, but also some appraisals that might be hardwired.

In all this debate, though, there has been a tendency to neglect feelings. They are a quite uncomfortable component of the equation. Indeed, physiological changes can be measured, while an old-fashioned cognitive theory could attempt to reduce mental states to propositions. In both cases, there is something that seems suitable to work with. But feelings, on the other hand, are not measurable, not appropriately expressible, accessible only through introspection, and doubtfully universal (and in any case it would be more that difficult to attempt to prove a universal feeling correspondence). Talking about feelings has become like talking about 'ghosts in the machine,' as the behaviorists used to pejoratively refer to mental states. These ghosts, however, provide no less than the first-person experience of the emotion that—I contend—is not eliminable.

Of course, in addition to merely wondering about the mechanisms and wires that determine our emotional reactions, historically it has also been attempted to describe what it feels like to experience the emotions from the first-person perspective. However, mechanistic and phenomenological explanations have been pretty entangled since the ancient discussions. And so, the way we feel an emotion was explained precisely through the mechanisms that were thought to produce the emotion. An example of this is the animal spirits theory which, despite not being tenable nowadays, brilliantly enlightens the core of the philosophical debate on the phenomenological character of the emotions. The main question was:

If the emotions belong to the soul, how is it that we feel them in the way we feel them in the body? The answer to this, as we know, was that there are very tiny and airy, but material corpuscles, named the spirits, that are mixed with the blood and precisely because of their minimal size are able to enter the pineal gland—where the soul was supposed to be—and thus move in ‘resonance’ with the soul’s emotions. This resonance would make the spirits describe a particular movement within the body that would explain why we feel emotions in the body in the precise way we do.

It is not my intention to defend a contemporary variation of the spirits theory; rather, I want to pay attention to what this explanation points to (and in this sense, to the moon rather than to the finger that points to it). Apart from offering a flawed mechanistic explanation of the way the emotions are felt in the body, the spirits theory does point to the phenomenological character of the emotions, and offers a description of the experience. And what is very interesting is that we seem to agree that, say, in a sadness episode we feel that our chest shrinks and our forces seem to wane, that when we are proud our chests seem to expand, etc. So, even though apparently from a theoretically rigorous point of view all we can aim at in this discussion is to descriptions of the experience and to hope that ours corresponds to others’ experiences, at least to some extent, there is also practical knowledge that takes these descriptions as good enough for building upon them other practical knowledge, among which we can definitely count a lot of successful musical expressiveness techniques.

Now then, coming back to the unfolding of the arguments about the essence of emotions—especially the evolutionary ones, a concern has emerged about whether the evolutionary wires determine us even in our emotional realm, which has been considered the silver lining of our subjectivity. But no, we do not ‘freely’ decide to get emotional about the spider, we unconsciously react to it, and cope with the situation by shouting, running away from it or killing it, because we are indeed hardwired to do so. Thence, we are not completely free of evolutionary determinations regarding our emotional appraisals and behaviors. However, on the other hand, there are a lot of other emotional reactions that are culturally shaped. We learn to take offense if someone insults our mother and react emotionally in accordance, for example. Furthermore, we have certain roles of appropriate appraisals and appropriate behaviors to particular emotions and they may vary culturally, historically and even from family to family and from person to person.

Moreover, this same uneasiness is found in response to neurological explanations of emotions. It is rather a matter of resisting reducing emotions (among other 'mental states') to mere physiological changes and neurological connections. As it has been noticed, this constitutes a well-known and profuse philosophy of mind debate on the nature of our sensations and experiences, and even though I did not get into this underlying discussion (since it would have constituted an entire dissertation in itself), a few things ought to be said. First, although I do not go into depth in explaining it, I certainly hold a position in which feelings are not eliminable from an account of emotions. This means that emotions are not reducible to the exhibited behavior, or to the physiological conditions that are shown when undergoing an emotional episode, and I also consider that holding a belief is not equivalent to experiencing a feeling. Hence, the position I hold is not reductionist of the phenomenological character of emotions neither regarding exhibited behaviors, nor beliefs. Second, I consider that it is not helpful to begin from mind/body dualism, and I find myself much more comfortable working with an account that allows an interaction between the two instances without reducing one to the other. Thus, the fact that there are, say, some consistent neural connections could help elucidating emotions as complex processes, without thereby committing us to the claim that all the emotional process (or a part of it) is reduced to such connection. Therefore, I strongly contend that it is not necessary to neglect the explanatory power that such neuroscientific findings could have because it is wrongly thought that they necessarily carry the consequence of reductionism. They don't. So, Damasio's and LeDoux's findings, showing that when the bodily mechanisms that underpin emotional processes are impaired the emotions wane, should instead broaden our perspective regarding mind/body dualism. Emotions are complex processes that include a combination of a mental evaluative process, with dispositional responses to that process, mostly toward the body proper, resulting in an emotional body state, but also in additional mental changes. Interestingly, contemporary approaches to emotions such as Damasio's take into consideration the feeling component of emotions, and thus the longstanding omission of the qualitative character of emotional experiences is being redressed. Now then, Damasio defines feelings as continuous readouts of the body state at a particular moment juxtaposed with a thought of what that body state is about: "a feeling about a particular object is based on the subjectivity of the perception of the object, the perception of the body state it engenders, and the perception of modified style and efficiency of the thought process as all of the above happens." [Damasio 1994, 147-148]

Concerning the evolutionary explanation of emotions, as against the historical one, I concur with Griffiths's view that one needs to be very careful not to rush to quick conclusions. Again, if a trait is evolved, that does not entail that it must be necessarily universally displayed, given that there are polymorphic traits,

and there is no reason to assume that all traits or reactions that are hard-wired at birth must be monomorphic as well. Also, variations are explainable within evolutionary theory, meaning that not every variation must be explained by acquisition. It does not mean, either, that every variation is hard-wired at birth. I find it sensible to adhere to a “developmental systems approach”—as Griffiths labels his theory—according to which there is an interaction of biological and cultural resources in constituting the “psychological phenotype,” where the mutation of some of these resources may also be inherited. Thus, emotional phenotypes may vary cross-culturally because some extra-genetic resources may be incorporated into the system.

I adhered to the path of theories (especially Klaus Scherer’s and Nico Fridja’s) that consider that emotions are complex processes that entail other elements that are also processes in themselves and thus, that emotions should be firstly understood as dynamic processes that encompass (a) an interaction of the individual with her environment; (b) an appraisal of the situation that can be quick-and-dirty or rather highly reasoned, conscious or unconscious; (c) physiological responses of different sorts, including ANS activity, action tendencies, gesture making, and motor responses; (d) feelings, understood as the phenomenological, first-person experience of what happens to the individual; (c) cognitive categorizations; and (d) monitoring. Furthermore, these elements continuously interact with each other, modifying the next appraisal, and thus, the entire process over and over again (and not necessarily in the same order).

As you know, I paid special attention to the feeling component of emotions precisely because I contend that musical expressiveness is better explained through it rather than through the whole set of processes involved in emotional episodes, since some of the (ineludible) emotion components are lacking in experiences of music’s expressiveness. Thus, I devoted more time to the phenomenological element of emotions not only because it is the one that has been more neglected throughout the debate (given its first-person controversial character), but also because I consider that it carries the biggest explanatory power with regard to musical expressiveness.

Now then, contrasting the information we now have about emotions’ components and functioning with the case of expressive music, we can see the state of affairs a little bit more clearly. If one aims to find universality in the recognition of the basic emotions (fear, anger, disgust, happiness, sadness and surprise), in music one is going to be a little disappointed. Indeed, it turns out that of them, the only two ‘musically-

expressible' emotions that showed consistent universal recognition and are relevant to what listeners actually report in response to music, are happiness and sadness. These two emotions are too few and too general to explain music's subtle expressiveness.

On the other hand, the GEMS project shows from an inductive and statistical point of view that the affective responses to music differ from the basic emotions model, suggesting that the list of affects may be somewhat different. For example, affects such as being amazed, getting thrills or the sensation of transcendence, melancholy, impatience, nervousness, sorrowfulness, feeling triumphant, dreamy, or calm, etcetera, were the main reported musically related affective experiences. Zentner and co-workers grouped them together into these emotion-clusters: wonder, transcendence, tenderness, nostalgia, peacefulness, power, joyful activation, tension and sadness. These affects are different from the basic emotions not only in quantitative terms, but also in qualitative ones. So, for example, joyful activation—the 'happy' affect related to music—is not quite like happiness, in that it is more related to bodily motion than to a positive appraisal of a situation. However, as it is evident, the affects mentioned by the GEMS project are not precisely emotions, nor are they easily classifiable into higher and basic emotions.

The main reason why they are not emotions is that the intentional object, the appraisal, some of the physiological reactions and the categorization—as components of emotional episodes—are just not present in most of the musical 'emotional' experiences. This is the big issue, and I contend that neglecting it is no longer a tenable position for a musical expressiveness account. Firstly, there does not seem to be any situation in the music that the listener (composer or performer) appraises as relevant for her wellbeing (related to Lazarus's core-relational themes). Secondly, although there are some physiological changes related to musical experiences (e.g., shivers and goose bumps), they are not the same ones that are related to the 'regular' emotions. Thirdly, the action tendencies are also not the same, and even though one may cry because one was very 'moved' by a musical performance, one is not impelled to run away from the concert hall (as related to fear), or to hit somebody (in relation to anger). Finally, while a categorization may or not occur, people seem to be convinced that they are having an emotional experience toward music, and I suggest that the reason why is that they are indeed experiencing the feeling component of emotions, and that they are mistakenly considering it to be the whole of an emotion process proper. Thus, either we commit to the claim that musical emotions are a special, different kind of emotions, or we commit to the claim that they are not emotions after all. I bet for the second option.

As we know, the cognitive theorists pay more attention to the intentionality and appraisal elements, since they take them to constitute the very content of emotions. Certainly, in musical ‘emotional’ experiences, the intentional object seems to be lacking, and so is the appraisal about it. Again, I do not get sad because of a chord in the sense that I do not appraise the chord as a loss relevant for my wellbeing. The sadness, in any case, would be caused by the chord without being about it. This is indeed a strong argument that we already found in Hanslick’s rejection of emotions in musical experiences, but that is maintained across the main theories of musical expressiveness, even if it is with the aim of demolishing it. What seems to be a general concern, though, is that there is the intuition music ought to be expressive through emotions, be it by expressing, representing, or arousing them. My general claim is that this is mostly an incorrect intuition. I contend that emotions are not the primary affective phenomenon through which we can explain musical expressiveness, and that ‘feelings’ could carry out that job much better.

On the other hand, in the shaping of musical expressiveness and our reaction to it, there has been great influence of historical, contingent determinations. But that is perfectly fine, since there is no theoretical need to argue for perfect universality and homogeneity in musical expressive gestures. Furthermore, such a claim would contrast with too many counterexamples across cultures, traditions, and time periods, to account for. Thus, I made a very brief review of three periods of Western musical tradition: ancient Greek music, rhetorical music in the late Renaissance and early Baroque, and the rise of the symphony during the XVIII and XIX centuries. My aim was not merely to point to a set of contingent conventions concerning musical expressiveness in different periods. Instead, I considered that there is a great amount of wisdom in musical practices that may answer not merely the way people historically solved the riddle of musical expressiveness as anecdotal data, but that signals to the very nature of music from the musical practices themselves.

So, even though they might look merely as *ad hoc* examples, it is interesting that none of the three historical periods that I reviewed can be accommodated to a theory of emotion’s representation if by emotions we understand complete complex processes that entail all the elements we have already discussed. In the historical periods reviewed here, though, what seems to be the case is rather that musical gestures represent, say, “simpler” units with more detail than the emotions concept does allows us to explain. There are two important points that this historical review showed: (1) Musical expressiveness is

thought to be achieved by means of a mimetic activity, (2) this mimesis is not captured in terms of emotions, but rather as feelings or sensations.

For example, in the ancient Greek music tradition, it was thought that music stands in a mimetic relationship with actions and feelings relative to human character. Moreover, the capacity to influence souls was attributed to music, for it was considered that souls move in sympathy or resonance with it. Thus, the claim was that when we hear musical imitations of movements, our feelings move in sympathy, and furthermore, that if music has character or temperament, this is insofar as it imitates that temperament's associated demeanor. Interestingly, these elements (mimesis to human character by means of movements and feelings, and sympathy or resonance of those movements in human souls) are the same elements that we need and maintain in the contemporary simulation theory that I am here proposing (of course, with a different choice of terms and, primarily, a different conceptual framework). The musical theory as stated by Quintilianus is strikingly close to a simulation theory of musical expressiveness. Suffice it here to recall this lecture on rhythm: "Again, those remaining in one genus move the soul less, while those changing into other genera forcibly pull against the soul, coercing it to accompany each difference and to liken itself to the variety." [Quintilianus, *On Music*, II-15/83-4]

Now then, turning to the Renaissance and Baroque periods, the relationship between music and rhetoric was very intricate, and this relationship would motivate profuse efforts toward clarifying the musical representation of diverse affections. As it has been said, musicians drew on the theory of animal spirits of emotions and thought that what music should imitate is the movement that the spirits describe within the body. The theory of affects (*Affektenlehre*) provided a ground for diverse catalogues of musical gestures (*Figurenlehre*). Of them, I would want to come back to Johannes Nucius's for a moment. Let's recall that he made a list of words that could be described using musical gestures, and his list included 'affective words' such as rejoicing, weeping, fearing, wailing, mourning, pleading, raging, laughing, and pitying; 'words of motion and place', such as standing, running, dancing, resting, leaping, lifting, lowering, ascending, and descending; 'adverbs of time and number', such as quickly, fast, soon, slowly, early, late, again, often, and rarely. We should notice that these words do not refer to emotions proper as complete processes; rather, they mostly refer to actions, movements (egocentric or not), and feelings or sensations. However, even though these words do not refer to emotions, they may refer to a part of an emotional process, mainly to movement and feelings.

If these musical gestures catalogues, along with their particular theory of affects might appear as a mere eccentricity that musicians believed during the Baroque period, some examples of them will put off such a flat misconception, given that they are very intuitive and extremely effective in their musical results. Exclamation, interrogation, tension, ascending or descending movements, terror, sighs, cries, climax, repetition, contrast (among others of course), were studied and musical figures were provided to represent them, having also the goal of moving the listener to such affections. Without denying that a conjunction of these diverse affects' representation may help a reference to emotions (and even to the so-called 'higher emotions', such as grief), let us notice that the initial resemblance did not go that far. Let me give an example. From Vincenzo Galilei and Zarlino to Bach, the Phrygian mode was (and still is) highly associated with grief and mourning, along with ideas of death and finality, given its characteristic lower tetrachord and the positioning of the semitone in it at the bottom [Medić 2013, 144]. Indeed, it became associated with grief precisely because of that semitone; but why does that semitone have such an effect?

It is the position of the semitone in the tetrachords that gives to each its distinctive character and quality. As a dissonant interval it possesses greater energy and intensity and consequently internal momentum which in melodic progression accelerates in the direction of the second tone, and as the terminal interval of a melodic gesture it creates an unmistakable sense of partial or ultimate arrival, termination or finality. In the ascent through the major form of the tetrachord the arrival is felt as an active and successful attainment of a melodic goal. In the descent through the Phrygian form with decreasing melodic energy the arrival is felt as a passive yielding to the gravitational pull of the lower tone and a cessation of melodic energy. The implications of these two opposite manifestations of melodic energy for the dialectics of life and death in music are obvious. [Kimmel 1980]

What ought to be noticed next is that what the Phrygian as a musical gesture captures is the idea of finality and force waning that is then associated with grief because death is certainly a cessation of forces, and then the grieving person often lacks strength; furthermore, the association is also achieved through conventions and, certainly, through the lyrics. Examples of the Phrygian gesture (or, in Kimmel's words "Phrygian inflection") are the Crucifixus of Bach's *Mass in B minor BWV 232*, Dido's Lament in Purcell's opera *Dido and Eneas*, or the last measures of Schubert's *Der Erlkönig*.

Turning now to Romantic aesthetics, we notice that during this period the question about whether music could embrace conceptualization was made even more explicit. Music's inability to convey concepts was exposed and treated first as a deficiency, and later as its greatest characteristic, as it freed music from representing particulars. However, the Romantic rejection of musical mimesis was based on a dismissal of

matter that pertains to German idealism, and that enhances the symphony as the finest and most universal art, as it directly represents the Absolute, the Will, or the Spirit. Meanwhile, though, the musical practices of 'pure music' continued using Baroque expressive mechanisms built for musical representation of affects, in the way a vine climbs up a trunk and even kills the tree while making use of its structure. However, pure music—the one that is supposed to be representation-free—borrows the musical features' associations and references, albeit devoid of words. To begin with, what this story teaches us is that the ideal of pure music cannot be a default point of departure for musical analysis, be it philosophical or otherwise, since the claim that pure music is absolutely free of representations, associations, and uses, is deceitful to a great extent. Certainly, there is a rejection of mimesis in favor of a higher metaphysical significance of aesthetic intuition, given that the Absolute is taken by far as more pristine than the phenomenal. However, how can music achieve such a sublime task? No devices and mechanisms are provided as explanations by Romantic aesthetics, and we are left with the very obscure concept of The Genius to cover all the explanatory gaps. Nonetheless, acknowledged or not, musically speaking the mechanism underlying is still mimesis, a mimesis sought between musical gestures and movements related to feelings.

Now then, since, anyway from the philosophical perspective, emotions have been the primary way through which musical expressiveness has been explained, the first question to be answered is: Whose emotions are we talking about? And thus, the main three approaches to musical expressiveness can be set forth as follows: The expression approach would be the one that takes the composer's (or performer's) as the relevant emotions insofar as they get expressed, the arousal approach would take the listener's emotional reactions as the linchpin, while the representational approach supports musical representation of the emotions. The modern versions of them would be the Persona Theory (standing as a variant of an Expression Theory), the Arousal Theory as stated by Matravers, and the Resemblance Theory (which claims for a sort of emotional representation).

The expression and the arousal theories face the same difficulty; namely, that they explain musical expressiveness through emotions that do not belong to the music, but that are related to it in a merely causal way. Hence, the difficulty is that they explain music's expressiveness through characteristics outside the music. Thus, in order to be sustainable, these theories need to provide a stronger bond between music and the emotional states (be it the composer's, the performer's or the listener's), for musical expressiveness should depend on characteristics of music itself.

So, the expression theory maintains that the emotions that matter are those expressed by the composer or the performer. The modern version of it—the persona theory—contends that the artist expresses her emotions by shaping the music, and that we imagine a persona's ventures while listening to it. This persona's emotions are the relevant ones for musical expressiveness and it is also claimed this persona is the one we empathetically connect with. The problem is, though, that despite the good wishes, there are not enough grounds provided to make sure that the listener's imagination of the persona and the persona's venture is not merely result of her fantasy and that it has anything to do with the music. Moreover, the instantiation of the author's emotions in music is also very obscure, to say the least. Furthermore, our affective arousal by means of empathy toward music is also not justifiable.

Now then, the simplest version of the arousal theory takes the listener's emotional arousal as the emotion that music is expressive of. However, in Matravers's version of it—the one we focused on—it is not an emotion that is aroused in the listener, but rather a feeling that is related to an emotion. With this move Matravers is able to avoid the cognitivist's argument that contends that the listener's arousal cannot be about the music, because it can neither embrace an intentional object, nor the appraisal of it, that is necessary for an emotional process to exist (again, in the interesting cases). However, the biggest challenge for an arousal theory remains, for it contends that the causal relationship that exists between a piece of music and the listener's affective arousal is enough to set up the grounds for musical expressiveness. Again, my aim is neither to deny that such a causal relationship exists, nor that the listener comes to experience some feelings as a result of listening to music. However, this causal arousal does not constitute a property of the music itself.

Now then, regarding music's expressive qualities, we have mainly the resemblance theory. According to this theory, there is an iconic relationship between musical features and the appearance of the emotions (in Peircian terms). I contend that this simple statement is a big advance in explaining musical expressiveness in comparison with theories such as the artistic genius, as it aims to make clear the mechanisms involved rather than offering a black box to explain what the theory should clarify. Thus, the point of departure that the resemblance theory proposes seems to me clearer, and akin for fruitful philosophical discussion.

But first, it should be clarified in what sense musical features represent emotional appearances or gestures. The claim is that the relationship between music and emotional appearances is iconic insofar as it is based on resemblances; however, this classification might still leave space for misunderstandings, especially regarding the role of conventions and intentions. Thence, we might as well use Stephen Davies's classification of meanings to clarify a bit further. Davies classifies meanings into five types: Meaning A is natural, not intended meaning (as smoke means the presence of fire); Meaning B is an intentional use of meaning A (as in theater an actor may intentionally adopt a frown to make his audience believe or make-believe that he is upset); Meaning C is a systematized use of Meaning B, which would be a meaning acquired by the insertion of a Meaning B within a conventional system; Meaning D is an arbitrary stipulation of meaning (as if I henceforth decide to call my cup "Rossey"); and meaning E is a systematized use of Meaning D (Davies claims that language is an example of this type of meaning). Even though the claim that there is such thing as a meaning A has been challenged insofar as it lacks intention and in that sense it might as well lack meaning, I consider these differentiations quite useful.

Music's iconic relationship with emotion's appearances would be thus mainly of the B and C types. However, there are also many examples of meaning D in music; namely, arbitrary stipulations of reference. Davies considers, however, that musical expressive meaning cannot be of the E type. Why is this so? Music does not work like a language, since it lacks the grammatical meaning-generative capacity. The issue is that music embraces paradigmatic, but not syntagmatic contrast, meaning that music may embrace the semantic content, but not the grammatical rules governing a language. Thus, the claim that 'music is the language of the emotions' is just misleading.

Now then, what emotional gestures can music possibly resemble? As has been reviewed in the historical enquiry we went through, it was mainly sought in a resemblance with gaits, movements, and vocal utterances. Examples of these are: Quintilianus's treatise on the utilization of rhythms according to the kind of gait they resemble; the Recitativo as the imitation of the way a voice would sound under the influence of a particular emotion, and of course, the whole set of Figurenlehre or musical gestures catalogues that we find in the Baroque composers and music theorists; these show a wider set of resemblances. The first thing that I want to emphasize here is that the resemblance theory is not an adventurous conjecture, and that actually, resemblance (mimesis or imitation) has been the main way musicians have dealt with the task of composing expressive music since antiquity.

Nevertheless, there are a couple of issues that the resemblance theory faces. First, the resemblance Kivy's and Davies's philosophical approaches stress is the one holding between musical features and emotion's gestures. This move would allow music to be expressive of emotions without it being necessary that it embraces (by resemblance or otherwise) the intentional object of the emotion, along with the relevant appraisal as necessary components of emotional processes. For this to be possible, though, the gestures displayed by music must be recognizable without their intentional object. And so, even though we might make use of the evolutionary findings on universal emotional gestures recognition, the experiment's outcomes leave us with too few emotions that music could be expressive of in this sense: happiness and sadness. The resemblance theory, although theoretically strong, seems to be unable to explain musical expressive subtlety if it does not use conventionality and does not go beyond emotional gestures. In this respect, my claim is that the resemblance theory is not tied to any of these two conditions, for it can embrace conventionality and music can resemble other affective processes that are not necessarily emotional gestures.

The second problem the resemblance theory faces is that musical expressiveness would be a matter of recognition of emotional gestures, and it is not clear—as Matravers notices—how it is that a cognitive recognition becomes an experience of emotional expression; i.e., the resemblance theory seems to contradict the phenomenology of listening to expressive music. Nonetheless, it is true as well that this does not seem to be a very strong counterargument, insofar as it might get divided into mere opinions and descriptions of each person's phenomenology. I contend that the simulation theory that I propose can offer a satisfactory answer to this challenge that the resemblance theory faces.

First, my general intuition is that the resemblance theory should be extended to include resemblances to feelings and movements that may (or not) be part of an emotional process. This kind of resemblance, though, builds upon the assumption that music is related to movement on the first hand, and on the other, upon the claim that such movement is related to emotions. I must say that I find myself quite sympathetic to Carroll Pratt's intuition that 'music sounds the way emotions feel,' although I realize that this claim needs vast explanation if it is going to point to something other than to a supposed magical super power that only music has. In Pratt's account, music and emotion are connected by means of the relationship each of them has to movement. Thus, for both, Davies's account and Pratt's, the relationship between music and movement must firstly be clarified.

The philosophical debate on this respect is vast, for as much as it is very common to think about music in terms of movement and 'spatial metaphors,' it is not obvious what kind of relationship holds between music on the one hand and space and movement on the other. The claim that music presents or represents movement is in turn anchored in the idea of musical space, since the very idea of movement refers to an object changing places in space through time. However, music is usually assessed as a temporal display with no spatial instance; furthermore, in music there does not seem to be any clearly identifiable, stable object moving from place to place. Therefore, talk of musical space and movement have been considered merely as extended metaphors.

However, the space that Davies, Nussbaum, Gurney, Scruton, Pratt and Langer consider as involved in music is not physical space, but rather a representation of space as a homogenous continuous instance that is dubbed aural, virtual, or acousmatic. What we have is the perception of motion through a continuum. Although I am aware that it lacks a profuse research on the subject (especially from the realms of philosophy of mind), the intuition is that the perception of movement and space in music comes before categorization. I consider that musical movement should not be taken as metaphoric, since I believe it is not a concept, but rather a percept.

There is, however, another reason to believe so, which is Nussbaum's phylogenetic explanation about the relationship between the hearing and the tactile senses. Accordingly, our hearing system is a mechanoreceptor, meaning that it transduces waves into sound perceptions. This transduction mechanism relies on the motion sensitive hair cells located in the organ of Corti in the ear. These hair cells, in turn, evolved from the lateral organ in vertebrate fish, which allows fish to perceive moving objects in the water as mapped in the length of their own bodies. Nussbaum's bet is that the ancient tactile function of the lateral line is somehow preserved in humans, causing us to have, say, a mixed perception of sound, movement, and space, in relation to the listener's body, generating a sound-haptic original perception. Thus, if this is true, we would not merely categorize sounds as movements, since it would be just the way we perceive them from the beginning. Without reproducing the minutiae here, let's just say that this would explain the spatial and motion references in music, along with a large set of other related interesting phenomena, which are based on the perception of stability and instability in sounds' intervals and rhythm.

Hence, in order to recover Pratt's idea that music sounds the way emotions feel because the relationship between music and emotion is underwritten by the relationship that each of these categories have with movement, the relationship between music and movement had first to be clarified, and then the relationship between movement and emotion, along with the way we experience emotions and explore music. As we know, Pratt used the etymology of the word 'emotion'—that refers to a motion that gets expelled—to underpin the relationship between motion and emotion; however, this unfortunately lacks explanatory power. On the other hand, even though Aquinas's theory of affections hits the nail on the head regarding the relationship between motion and emotion, it is needless to say that the vital spirits theory is not considered well-founded anymore.

But what does one refer to with the relationship between motion and emotion? We may refer to the action tendencies, behaviors, demeanor, and other movements within the body that people experience while undergoing emotions, along with the feelings of such movements and the dynamic nature of emotional processes proper. That does not seem problematic, really, at least if one is not tempted to reduce the complete set of elements included in emotional processes to single elements, such as any of these movements in isolation.

However, this is relevant for us insofar as it is often assessed that listeners engage empathetically with the performer's, composer's or the music's emotions. But this sounds just weird to me to say the least. For how exactly would that happen, and by which means? If we delve a bit deeper into the research about our emotional engagement with others' emotions, we find that the empathic capacity is a complex mechanism that requires cognitive layers such as mind reading and theory of mind that we would find very difficult to justify in the musical case (at least if one is to depart from the expressive qualities approach toward an imagined persona). However, empathy builds upon more elementary mechanisms such as emotional contagion and the Perception-Action-Mechanism that would explain what is going on in musical expressiveness in a much simpler and unproblematic way.

Thus, underpinned by the activation of mirror neurons (probably among other mechanisms yet to be discovered), there is a mechanism in which an individual perceives a goal-oriented action, runs an offline mental simulation of it, and then the related sensations get triggered. All this underlies emotional contagion and empathy, prior to the cognitive assessments of the other's situation and behavior. This core mechanism

does not provide enough to be dubbed 'empathy' yet (because more complex cognitive layers must be added), but it subtends empathy and is necessary for it.

Turning again to the musical case, let's remark that during her audition, the listener is able to recover information from the musical piece. Nussbaum recognizes three mechanisms for this: First, the listener (mostly unconsciously) extracts from the musical surface some 'grammar rules' (such as the ones studied by Lerdahl and Jackendoff), ending up with something like a schema of the piece's structure or its hierarchical plan. Second, the listener runs an offline haptic exploration of the musical scenario (probably based on the activation of mirror neurons and provided by the close relationship between the senses of hearing and touch). Third, musical performances work as Millikanesque pushmi-pullyu representations.

The hierarchical plans studied by Lerdahl and Jackendoff, although very rich, are not particularly helpful in explaining music's subtle expressiveness, since the theory is only able to recover the hierarchically organized elements of music, and neglects others like timbre and melodic line if not used hierarchically. That is why I focus primarily in the second and third mechanisms by means of which the listener recovers information from a musical performance.

The claim of a simulation theory of musical expressiveness is that the listener explores music as if she were taking part in a somewhat guided exploration of a sound landscape. The musical scenario is already set by the music's qualities (determined by both, the composer and the performer), and the listener joins the exploration of it. The exploration is somewhat restricted, though, since the musical scenario provides certain affordances for its exploration to begin with. However, the actual exploration also depends on the listener's expertise, provided that she may or not have particular expectations for the music's unfolding, and so forth. The big gain with considering this sort of mental simulation of the music is that such simulation can recover the subtlety of musical movement, from the unstable effect of a diminished chord, to the roughness of a note played *col legno* in a double bass, the floating sensation of a melodic ascending interval accentuated on the deeper note, the *accelerandos* and *ritardandos* (along with the diverse possible uses of them in ascending or descending movements), or the rhythm-pace relationship. These kinds of elements and effects have been studied from antiquity. That is what Aristotle and Quintilianus were talking about when referring to the hesitant effect of starting on the *arsis* or the determined one if starting on the *thesis*. Why? Because that is the way it feels. Although, that is not to say

that a particular musical element is always experienced in the same way, or that it ought to be. Again, musical affordances are also dependent on elements that are provided by the listener, like her expertise in hearing music from a particular tradition, among other historical, cultural, and personal determinations. Thus, as musicologist Daniel Leech-Wilkinson said, “[...] when we speak of the emotional power of music, even when we draw on the findings of controlled experiment, we can speak reliably only of its power for ourselves and our participants, not of transhistorical principles.” [Leech-Wilkinson 2013, 44] Nonetheless, we can still stress that many of these musical elements have stable references to particular effects in the generated sensation.

Finally, Nussbaum’s suggestion that musical performances work as pushmi-pullyu representations, closes a cycle in the aforementioned debate on whether we should depart from an expression, arousal, or expressive qualities approach (although I prefer to consider musical performances as ‘indexical signs’). I will say it as follows: The composer causally confers expressive qualities on the music that may or not have correspondence with her emotional state. These expressive qualities are related to affective phenomena by means of resemblance or mimesis. The performer actualizes the composition and completes the ‘blank spots’ of what the piece will turn out to be in performance. This means that the performer takes some musical decisions (such as a particular phrasing or to make a *ritardando* in an ascending scale) that will mostly have its effect during the haptic offline exploration that the listener will make, and not on the hierarchical structure of the already composed piece. Then, the listener (along with the performer if it is a live performance) engages in an exploration of the evolving musical landscape. The musical landscape allows certain fixed affordances that are nevertheless also dependent on the listener’s past experiences and history.

Nevertheless, by saying that musical performances are rather indexes, I want to emphasize that they are, yes, dependent on the piece’s qualities, but that they also prompt the listener to take some action. The action required is not to recognize them as related to some reference (as happens with icons), but to undertake the exploration of the music, which happens in a sound-haptic way and mostly offline.

However, if one talks about musical performances as being iconic signs, one is way too vague to grasp the pith of music’s expressiveness. It is not the whole performance of a musical piece that I am considering an index (although it certainly is in a vague way), but rather its musical gestures. Indeed, in this

dissertation my main aim was to elaborate a concept of musical gestures that could explicate music's subtle expressiveness, considering both musical practices and philosophical rigor. Thus, from the musical elements I take musical gestures to be temporal gestalts, meaning that they are perceived as units of intention. They are related to affective phenomena by means of resemblance, mainly to feelings, but also to other elements of emotions such as action tendencies or emotional gestures (like pace or cries). Regarding their extension, musical gestures are smaller units than musical pieces taken as wholes. They are rather perceived as the present intentional action that the listener offline simulates (by means of the PAM mechanism), getting the related feelings triggered.

Thus, I claim that the motions we can perceive in music are not sufficient for recognizing and categorizing an emotion, at least in isolation. However, music's expressiveness is not really endangered by this at all. It only leads us to realize that other affective phenomena might have been doing the job that we attribute to emotions. To recover music's expressive subtlety, we must focus on the fineness of its movements and textures, while the capability of going through music's surface with this acoustic, almost tactile sense, turns out to be particularly suitable for the task. Indeed, even if we find a particular musical movement to be very expressive, such as a melodic line or an *accelerando* with sudden stopping, such movement does not usually refer to any emotion in particular (and hence would remain inexplicable within an emotions theory). However, such movement's subtle characteristics do have a non-conceptual feeling referent, and extending a resemblance theory to include the feeling component, while endorsing a simulation approach where music's expressive qualities are not merely considered as icons, but also as indexes, permits us to overcome the challenges of the Resemblance Theory, while being able also to explain music's subtle expressiveness.

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