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*Music and Emotion.*  
*Review of Music and Emotion,*  
*monographic issue of the*  
*journal «Music Analysis»,*  
*edited by Michael Spitzer,*  
*n. 29/1-2-3 (2010)*

Mario Baroni, Luca Marconi,  
Susanna Pasticc

## Music and Emotion

Review of *Music and Emotion*, monographic issue of the journal «Music Analysis», edited by Michael Spitzer, n. 29/1-2-3 (2010)<sup>1</sup>

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The last fifteen years have seen the development of a lively interest, on an international scale, in the topic of emotion in music, documented by numerous noteworthy publications: the two volumes edited by Juslin and Sloboda [2001; 2010], the monographic issues of the journal «Musicae Scientiae» published in 2001 and 2011, and many other texts published in various parts of the world. The topic is not without repercussions also for those involved in musical analysis; and it is no mere chance that the English journal «Music Analysis» chose to dedicate the volume we are now reviewing to the subject. The contributions contained in the volume derive from an international meeting held in Durham in September 2009 and offer a fairly lively cross-section of a wide series of questions. Our only regret is that with the exception of three nordic names (Juslin, Lindström and Eerola, whose place is now solidly established in English language publications) all the authors come from the now almost self-referential context of British or American research. But of course this is nothing new.

Generally speaking, the volume does not offer a systematic approach to the study of emotions in music but rather tends to cover a broad network of methodological and disciplinary perspectives. One of the main relevant aspects of this publication is, in our opinion, the choice to adopt an interdisciplinary design, even though it is not simple for a reviewer to take such wealth into account and propose a critical reflection on its many implications. We have tried to overcome this problem by dividing our review into five parts:

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<sup>1</sup> The Italian version of the review was published on «Rivista di Analisi e Teoria Musicale», XVII/2, 2012, pp. 93-131.

- 1) a synthetic description of the main topics of each article;
- 2) a recognition of the various possible meanings the concept of emotion has taken on in each essay;
- 3) an overview of the varying aspects of the idea of emotion applied to music;
- 4) a critical discussion of the relation between emotions and musical analysis (Luca Marconi);
- 5) a reflection on the possibility to think of emotions as elements “incorporated” in a musical text and represented in its structures (Mario Baroni).

The first fact to keep in mind is that not all the authors offer specific analyses of pieces of music or musical repertoires. The reasons behind this choice are given by Spitzer in his introduction, where he explains that the study of the relations between music and emotion can be tackled only through the collaboration between musicology and other diverse disciplines such as philosophy and psychology. We too adhere to this principle in the first part of our review.

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## 1. An overview of the volume: topics and issues covered in the various articles

### 1.1. Music and emotion: the philosophers' view

The essay by Derek Matravers offers a summary of the main theories on the expression of emotions in music and distinguishes three orientations based on the diverse interpretations of the same single phrase: “that music is sad”. A first interpretation is based on the relations of similarity (*resemblance accounts*): something is sad not because it expresses a felt emotion but because in its “appearances” sadness it is manifested through some characteristics of its own expression (a bit like the face of a St. Bernard's dog). A second possibility, inspired by the studies of Levinson [1996, 2005] and Walton [1988, 1994] concerns the capacity of the music to stimulate our imagination (*imagination accounts*): to say that a piece of music is sad is like saying that it makes us imagine somebody's sadness. The third line of thought [Nussbaum 2007] considers expression as an attribute linked to the capacity of music to provoke a particular interior state (*arousal or dispositions accounts*): a piece of music expresses an emotion if it is able to arouse the same emotion in its listeners. The comparison between these considerations leads the author to call for the adoption of a pluralistic approach, able to integrate the various instances.

Max Paddison's contribution explores the theme of musical expression in relation to the concept of *mimesis*. In particular, the paper sets itself three aims: 1) to investigate the meanings of terms such as “imitation”, “representation” and “expression”; 2) to broaden the concept of “imitation” –which is often used only in the static sense of “representation” or “similarity”– through the use of a dynamic and

historical concept of mimesis, in the wake of the studies of Caillois, Benjamin and Adorno; 3) to show the dialectical relationship of *mimesis* to concepts of expression, construction, rationality and form in Adorno's later aesthetics. What the author means by *mimesis* is an interpretative tool that doesn't imply "imitation of" or "representation of" an external element, but that should rather be interpreted as an embodied impulse, a mode of "identifying with". This impulse acts by entering into a dialectic relationship with its opposite –that is, the rational component of musical construction– giving rise to a "phenomenon of interference" [Adorno 1970]. Basically, if the experience of music oscillates continuously between its own rationalised constructional component and its unrationalised mimetic moments, the experience of its expressivity arises from the dynamic tension that is created within this "field of forces".

Tom Cochrane's article focuses on the concept of "persona" (a sort of fictitious agent, from the Latin *dramatis persona*). Opinions about the identity of this "persona" are discordant: the fact remains, however, that when we consider an emotion in music we are inevitably led to imagine an agent to whom the emotion belongs. In other words, the concept of persona allows us to explain how, during a listening experience, a process of transition takes place between the perception of a sonic pattern and the inference of a psychological state. Many pieces are characterized by a succession of different emotional aspects that can be attributed to the same "persona", or by complex emotions connected with oppositions and contrasts between different "personae". In order to examine this aspect more carefully Cochrane concentrates on the expression of jealousy in which, unlike other emotions, one inevitably imagines the presence of several subjects mediated by a single point of view, that of the composer-narrator.

### *1.2. Music and emotion: the musicologists' view*

Michael Spitzer tackles the theme of the relation between music and emotion by analyzing some pieces by Schubert in relation to a single emotion, fear. Even though everyone agrees that Schubert's music is "expressive", usually it is not easy for the analysis to accept the idea that the musical structures are endowed with emotional qualities

implicit in the formal process of the score. Spitzer's aim, though, is to demonstrate that music and emotion are two sides of the same coin, and that it is possible to find genuine “emotional behaviours” within the musical structure.

Before starting the analysis, Spitzer cites some theories on emotions as his preliminary background. One of these is the map of affects proposed by Russell [1980], that is the so-called “dimensional” theory [Sloboda & Juslin 2010, 76-77] that attempts to explain how emotions are set in a *continuum* where two dimensions interact: physiological attraction (arousal) and hedonic valence (positivity or negativity). Another is the “categorical” theory [*ibid.*] that identifies certain basic emotions from which other sub-categories derive hierarchically. Juslin [2003; Juslin-Timmers 2010] applied this to music, identifying a series of “acoustic cues” used by composers and performers to communicate five fundamental emotions (which scholars, in reality, do not always totally agree upon): fear, anger, happiness, tenderness and sadness. The models of expression proposed by Juslin and Russell surely represent a good starting point, but to analyze a complete piece one must take into account another perspective: Frijda's theory of “action tendency” [1986] according to which a subject, even though unconsciously, “appraises” the object that stimulates his emotional response and “acts” accordingly. Spitzer suggests that “the model of expression” and the “model of action” are two complementary dimensions that expressively interpret the pathways of the musical process in analogy with those of human behaviour in everyday life.

The heuristic potential of the model of expression is explored through the analysis of some passages taken from Schubert's quartets in G major op. 161 and in D minor (*Death and the Maiden*). The two pieces start with a strong expression of anger that determines the emotion of fear, and Spitzer shows how the fear is in the music, not in the listener or the performer. The potential of the model of action, on the other hand, is explored through the analysis of some passages from the Sonata in Bb D956. After an idyllic opening, a mysterious trill appears in b. 8, pre-announcing a danger; this signal of threat returns intermittently until finally exploding into a dramatic situation. In this case the listener is a sort of fixed observer in front of a situation of imminent threat that is slowly making its way towards him.

The nature of this threat can be analyzed in terms of the appraisal theories of emotion proposed by Scherer and Ellsworth [2009], who study how «emotions are elicited and differentiated by the subjective interpretation of the personal significance of events». While this theory of expectation tends towards abstraction, the theory of appraisal attempts to formulate a hypothesis on the way the events will have repercussions on our desires, objectives and interests. By taking both of these two domains into account, it is possible to take a step forward in understanding the ways in which emotional expression is linked to the induction of expectations in music. For instance, the mysteriousness of the trill is something that affects both the expressive character of the material and the cognitive uncertainty of the listener. A point of convergence between expression and perception can also be found with the help of psycho-physiology, and in particular through the model of “threat imminence trajectory” proposed by Öhman and Wiens [2003]. Each step of the gradual advance of the threat (pre-encounter, post-encounter and quasi-conflict) is associated with a particular type of behaviour (orientation, freeze and struggle/fight).

According to Spitzer, this “threat imminence trajectory” can prove very useful in analyzing fear in music because it highlights how a musical pathway, like human actions, can develop within a field that is open to possibilities. This model is then used in the analysis of two complete pieces: the first movement of the *Unfinished symphony* in which the situation of threat is resolved through a struggle, and the Lied *Erkönig*, where the situation of threat is resolved by a flight.

The analysis of the *Unfinished symphony* reveals the following trajectory: threat (introduction), orienting (first thematic group), freezing (second thematic group), struggle (development and recapitulation). The structural elements that work to define these emotions are explained through a meticulous analysis, backed up by examples and Schenkerian graphs.

The spectrum of emotions aroused by the “threat imminence trajectory” created by Schubert includes all five basic emotions, and according to Spitzer should be interpreted as a constellation of emotions that are called into play, orientating themselves towards the climax represented by anger, which epitomizes the category of the sublime (the definition of sublime as a “constellation” of the five basic emotions –fear, anger, happiness, sweetness and sadness– comes from Kant).

In *Erlkönig* the situation is more complex: while in the *Symphony* the three phases of the “threat imminence trajectory” are in order (orienting, freeze and strike), *Erlkönig* starts from the end, that is to say with the father who carries his son on horse-back to flee from the threat posed by the Elf King. The presence of a verbal text could lead one to think that we are dealing with a completely different situation compared to the previously analyzed examples of instrumental music. In reality, Spitzer believes, the function of the words is not to define meanings: they instead act as a series of “subtitles” to meanings that are already widely present in the music. The real problem therefore is to attempt to understand how the language, including the semantic lexicon, constructs the emotional experience.

The first strophe can be interpreted on the basis of the model of expression, since the four lines express four distinct emotional states: fear, happiness, tenderness, sadness. After this opening, the Lied concludes with a synthetic expression of the “imminent threat trajectory”, which follows the pathway orienting-freeze-strike. The fact that the “threat imminence” model emerges in such a blatant fashion at the end of the piece forces us to reconsider all that we have heard previously. The whole Lied can therefore be interpreted in two ways: as the expression of an imminent threat (model of action) or of growing panic (model of expression).

John Butt’s essay approaches the theme of music and emotion from a historical standpoint, focusing his attention on sacred music written for the Lutheran church in the 17th and 18th century. The author starts with the presupposition that the relations between music and emotion (just like the relations between music and meanings) are determined by cultural factors that change according to the historical context. In other words, even if music can make us experience emotions, these emotions are destined to vary depending on circumstances. Baroque music has often been studied in relation to rhetoric art; however, more than in the musical realisation of single figures, the rhetoric behaviour should be looked for in the tendency to reinforce the meanings of the literary texts through specifically musical repetitions and elaborations. For this purpose, Butt analyzes a duet by Schütz and an aria by Bach. The analysis shows that the possibility to produce associations with emotions is linked not so much to



the meaning of the words (which remain in the background), but rather to the musical management of the form, which allows the listener to develop a concept of consciousness as related to emotional states over time.

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Lawrence Zbikowski's article highlights how in recent years studies on musical emotions have been strongly conditioned, in terms of method and aims, by research into human emotions. The author discusses some of these approaches, calling into discussion their validity to the extent of refuting the idea –too often accepted uncritically– that musical emotions correspond with the primary emotions; his reasonings refer to Scherer [2004], who showed that the physiological responses to emotional stimuli are different from the responses to musical stimuli. Zbikowski believes that if we wish to give new impulse to research, it is necessary to reconsider the philosophical reflections of Susanne Langer [1942]. According to Langer, music is a symbolic medium in which content is subservient to form: as a consequence, it is able to symbolize the pattern of emotional life with a degree of fidelity unattainable in verbal language. While acknowledging that the correspondence between similar forms is governed by the principle of analogy, Langer never elaborated a systematic mapping of the analogies. The question of analogy is investigated through the analysis of a piano piece by Gottschalk, *The Banjo*, which shows how the sounds made by a piano can simulate the sounds of another instrument, giving rise to an imperfect but still vivid simulation of the experience of hearing its sounds. This example and an analysis of a sonata composed by Domenico Scarlatti are interpreted in the light of the studies of Hofstadter regarding the cognitive capacity to produce analogies [2001] and the theories of Barsalou [2005], who showed how the recognition of an analogy is determined by the re-enactment of the same sensory-motor states.

Robert Gjerdingen examines the reception of musical texts in relation to different historical contexts: an interesting topic, though somewhat marginal, or in any case little in line with the general themes covered in this volume. The Minuet mentioned in the title is that of Mozart's Sonata K. 331; in the *Neue Mozart Ausgabe* bars 24-26 have been corrected because, as the *apparatus criticus* tells us, they appear to have come down to us in an “obviously corrupt” form. According to

Gjerdingen, though, if the editors had listened to the piece with the ears of the audience of the period they would not have felt the need to make this correction, since Mozart's choice is perfectly in line with the composition practice of the time, based on the use of schemata in the galant style. The series of schemes were learnt through the study of the *solfeggi* and *partimenti* of the Neapolitan school, and were then used also in normal creative practice; these schemes take on a cognitive valence to the extent that they represent a repertory of models that musicians share with the community of their listeners.

Robert S. Hatten's article offers a reflection on the concept of "aesthetically warranted emotions" (AWEs). These are true emotions that can be identified through the analysis of a score if we consider its "composed expressive trajectories" (CETs). Through an analysis of the exposition of the second movement of Mozart's Sonata K553, the author highlights five fundamental aspects: 1) a good way to understand the expressive function of the CET is to compare the composer's version with an alternative version especially prepared by Hatten, in which he has eliminated the dissonances and other rather unpredictable superficial elements introduced by Mozart in order to intensify the emotional mood of the piece; 2) the capacity of the listener to feel the emotional experiences implied in Mozart's piece depends on his previous experience; 3) from a cognitive point of view, during the listening experience it is possible to appreciate the CETs even without personally feeling the emotions suggested by the piece; 4) the emotions we feel during a listening experience do not necessarily have to be congruent with the CETs of the experienced piece; 5) the analysis allows us to identify the most important "rhetorical gestures" of the piece, and shows how Mozart derived his CETs by breaking the schemes and playing with the formal expectations.

Kenneth Smith's article focuses on the following question: what makes Skryabin's music so erotic? Although in his writings the composer has often spoken of the nature of desire and sensuality, the issue has rarely been analyzed in terms of compositional systems: which is precisely what Smith intends to do by examining *Désir* and *Caresse dansée*. To reach this aim he makes use of certain concepts borrowed from psychoanalysis, in particular the distinction between desire and drive taken from the theories of Freud and Lacan, which can also be found

(albeit with different terminology and philosophical nuances) in the philosophical writings of Skryabin himself. Freud defines drives (*Trieb*) as the forces that determine the character of affective responses, while Lacan specifies that the pressure of the drives is directed towards an imaginary object that always remains unattainable. According to Smith, in Skryabin's music it is possible to identify many elements that tend to replicate the dynamics of drives and desires. The opening chord of *Désir*, for example, is an ambiguous chord resulting from four different drives (in this case harmonic), not only because it suggests four different possible interpretations (or *dramatis personae*), but also because it implies four different trajectories of development, oriented towards different goals.

Simon Mills introduces a completely different perspective by proposing an incursion into the world of traditional Korean folk music. When discussing the characteristics of this repertoire, Korean musicians and scholars often refer to two opposing emotional states communally experienced during musical practices: *han* (suffering) and *hŭng* (joy). The state *han* is felt as a fundamental trait of their national identity, linked to a long history of oppression, foreign invasions and wars, whereas *hŭng* is linked to the celebration of positive social events. The article focuses in *hŭng* (communal joy), examining the performing contexts associated with this state and how both musicians and public contribute to its realisation. The author analyzes a performance of the *Tale of the Three Young Brothers* recorded during a village festival in 2000. The story tells of a girl who is visited by Buddha and gives birth to three miraculous boys, who after various adventures are finally recognized by their father. The main purpose of the rite is not to tell the story but rather to induce transformations in the minds of the spectators, gradually immersing them in the myth through the double channel of narration and music.

Giorgio Biancorosso considers film music through an analysis of the sequence of the first shark attack in the horror movie *Jaws* (1975). The success of this first sequence turns on a bold and sophisticated use of the musical component: in reality the famous Leitmotiv of the shark makes its first entrance *en travesti*, in the background and not along with the actual appearance of the shark, even though its connotation suggests a situation of imminent danger. Hearing the shark in the mu-

sic is, then, a process of disambiguation supported by selective attention. Imagination plays a crucial role in the experience of the spectator, because it makes it possible, through a series of complex emotional states (fear, desire or intention to act), to fill the temporal distance between the music perceived and the waiting for the shark's attack. As the music features a succession of syncopes, suggesting the beating of a heart under heavy stress, we feel fear for the victim; but it is a fear that exists only in our imagination, since the victim does not know she is about to be attacked. These considerations allow the author to refute the hypothesis, recurrent in many studies, that film music is supposedly perceived by the spectator only unconsciously or subliminally.

### *1.3. Music and emotion: the psychologists' view*

The starting point for Marcel Zentner's article is a quotation from the sirens episode in the *Odyssey*, which describes the extraordinary powers of seduction and fascination inherent in music. According to the author, though, Homer's prophecy has been widely ignored by scholars. While accepting the idea that music is able to arouse emotions, the majority of psychologists and neuro-scientists have in fact limited themselves to applying the two main theories of human emotions to music (the "basic emotion theory" and the "circumplex model of affect"). Zentner moves in a different direction: his aim is not to adapt general models to music, but rather to try to understand whether music is able to arouse specifically musical emotions that can be classified and organized into a purpose-built system. His research on "primary musical emotions" led to the elaboration of the model known as GEMS (*Geneva Emotional Musical Scale*), the outcome of a survey conducted during a festival in Geneva in which the listeners were asked to indicate, from a list of affective terms, those that corresponded to the emotions aroused during their listening experience. The author believes that the GEMS model is able to offer a concrete contribution for answering the following two fundamental questions: 1) how are musical emotions induced? 2) how can the emotional responses of the listeners be measured? To answer the first question, Zentner elaborated an "Induction Rule Model" which classifies the factors involved in the induction of musical emotions into

four broad categories: structural features, performance features, listener features and contextual features; besides, it explores mechanisms such as empathy, entrainment, conditioning and memory. The second question is more complex, since the emotional flux is not constant throughout the listening experience, and the listeners cannot usually find the right words to describe it. But with the help of GEMS the task becomes more simple: thanks to the taxonomical map it is possible to understand whether different terms refer to emotions that are really different, or whether they are variants of a deeper affective state.

The essay by Tuomas Eerola is linked to that written by Spitzer, focusing its attention on the same Lied by Schubert, *Erlkönig*. However, while Spitzer offers an interpretation based on a musical analysis of the score, Eerola uses a computational model that analyzes the acoustic characteristics of the music for the purpose of predicting the emotions expressed by the music itself. The method used by Eerola for the extraction of acoustic features from an audio signal is based on a “cognitive” approach, attempting to model a perceptual process emulating the constraints of the human auditory system, incorporating aspects of attention, memory and other cognitive processes.

Firstly, Eerola elaborated a model for the analysis of emotions in film music; he subsequently used the model to find emotions in *Erlkönig*. Starting from the results of the analysis carried out by Spitzer, Eerola selected five extracts from the Lied that Spitzer associates with clearly defined emotions (anger, tenderness, happiness, anger/fear). In the five extracts from the Lied, the film music model recognises a predominance of the same emotional characters as identified by Spitzer, even though the correspondences are not always so close or precise. However, the application of the model to Schubert produced some interesting results: in all the segments analyzed the dominant emotion is always fear, even in the parts showing characteristics typical of tenderness and happiness. This confirms that the analysis of Spitzer –who considers fear as the dominant emotion of the piece– has grasped an important aspect; and it also shows how the interaction between musical analysis and computer research is able to offer a determinant contribution to the study of the relation between music and emotion.

Patrik Juslin and Erik Lindström investigate the processes that allow listeners to perceive emotions. A great deal of the studies carried out

in the field of the psychology of music have demonstrated that listeners usually agree about the nature of the emotions expressed by a piece of music: the authors believe that such agreement shows that the judgement of the listeners is based on information closely linked to the musical structure. The next step is to define the musical characteristics linked to the expression of given emotions: the article presents a table in which each of the five emotions considered as primary (happiness, sadness, anger, fear and tenderness) is associated with around twenty musical features that include aspects such as tempo, mode, harmony, tonality, pitch, contour, intervals, rhythm, sound levels, attacks, durations, vibrato, and others. This table make it possible to assign a certain type of expressivity to the music, but it is not clear whether the listeners actually use these traits to judge the emotional dimension of what they listen to. To check this aspect it is necessary to use a model which features both composer cues (such as mode) and performance cues (such as sound level); the authors used the *Expanded Lens Model*, and manipulated in a factorial design through synthesis of eight musical features (pitch, mode, melodic progression, rhythm, tempo, sound level, articulation and timbre). The relations between the musical features and the listener judgements were then modelled by means of a statistical procedure based on the method of multiple regression (a technique that allows us to analyze the relation between a dependent variable and a certain number of predictive independent variables). As well as confirming the results of various previous *post hoc* analyses, the results of this study suggest that some musical features may play an important role in the expression of different emotions, and that some features (such as tempo) are more powerful than others.

## **2. The different meanings of the term emotion**

The noun *emotion* (in its singular or plural form) and the adjective *emotional* appear in the title of eight of the fourteen articles, and obviously recur quite frequently in many of the texts (except for those of Gjerdingen and Smith, in which there are only a few instances). Not all the authors attribute the same semantic valence to these terms, since this changes in relation to its various spheres of application. The

question of terminology is by no means marginal, and merits specific attention: therefore, in this part of our review we will try to highlight the different meanings taken on by the term “emotion” in the various essays contained in the volume.

### 2.1. “Emotion” in psychology

Even if a “classic” like Leonard Meyer’s *Emotion and Meaning in Music* [1956], quoted in the bibliography of seven articles, is considered by many authors as an indispensable starting point, the main point of reference of the studies published in this volume has been drawn from the two anthologies published by Patrick Juslin and John Sloboda [2001a; 2010]: not only from the point of view of method, but also in the use of the term *emotion*.

Juslin and Lindstrom, like Eerola, adhere to an approach that the psychology of emotions calls “categorical” and more precisely to the theory of “primary emotions”: in this case *emotion* refers to a phenomenon with a spontaneous and universal expression, responding to functions of survival, and implying a particular physiological response to a certain stimulus. The primary categories used in these two articles are: happiness, sadness, anger, fear and tenderness.

As well as the “categorical” model, Spitzer explores two other psychological approaches: the first is that of the “dimensional” theories of James Russell, which use different terms from common language to speak of the “affective states”, placing them in a “map” resulting from the intersection of two “bipolar axes” corresponding to two components present in each affective state: hedonic valence, in the context of the opposition between the “poles” of pleasure and displeasure, and arousal, in a continuum that goes from a maximum to a minimum. For example, anger is defined by a high degree of physiological arousal and a negative hedonic valence, while tenderness has a moderate level of arousal and a positive hedonic valence.

Another model considered by Spitzer is that of the “appraisal theories” developed by Nico Frijda [1986], Klaus Scherer [2004] and Phoebe Ellsworth [Scherer-Ellsworth 2009], whose definition of emotion underlines how its main function is to stimulate those who experience it to undertake a certain type of action instrumental in achieving a

goal. As well as expressive manifestations (e.g. facial), the theories also take into account the appraisal of the situation in which the subject finds himself (whether he is facing, for instance, a danger that is imminent or just possible and not immediate).

### *2.2. "Emotion" in philosophy*

An essay that refers to the use of "emotion" in the context of philosophical theories is that written by Matravers, who, as in his book *Art and Emotion* [1998], takes his cue from authors of the American "analytic" school who deal with aesthetics (not only musical) including Malcolm Budd [1985], Stephen Davies [1994], Peter Kivy [1990], Jerrold Levinson [1996] and Kendall Walton [1988; 1994]. Even though these philosophers recognise the existence of specific emotions, such as sadness, their standpoint does not exactly coincide with the psychological theories of "primary emotions". Some form of convergence can be noted in the idea that every emotional phenomenon is characterized by a spontaneous expression and a physiological response; in general, though, the stress tends to be placed on the importance played by deeper and more subtle types of interior feeling. Similar uses of this term, although with a less explicit reference to the American analytic philosophers, can be found in the contributions of Biancorosso, Hatten and Paddison.

### *2.3. Comparisons between psychological and philosophical approaches*

Some authors, such as Cochrane and Zbikowski, compare the uses of the concept of emotion in philosophy and psychology, integrating some aspects borrowed from both disciplines. Cochrane, who moves within a philosophical perspective, starts with the presupposition that emotion is what can be expressed or felt interiorly (as a *feeling*) by a subject and that stimulates him to carry out an action. From the psychological theories of James Laird [2007], Cochrane takes up the idea that whoever lives an emotion is also able to recognize it as such: in some cases placing the stress on the situation from which it arises, in others concentrating more specifically on the bodily sensations involved.



Zbikowski, working in the field of psychology, finds a substantial compatibility between the meaning the term *emotion* assumes in the philosophical theories of Susanne Langer [1942] and Peter Kivy [1990], and in the psychological theories developed by Klaus Scherer [2004] and by Jay Dowling and Dane Harwood [1986]. First and foremost, he considers that the set of the referents of the term *emotion*, while not exhausting the somewhat wider range of referents of the expression “*affective states*”, is in any case less restricted than that used in the theories of “primary emotions”. By referring to the characteristics of emotional phenomena considered from a philosophical point of view by Langer and in psychology by Dowling and Harwood, he stresses in particular the processual and dynamic dimension of experiencing the feelings that substantiate the emotional states. With Scherer he instead shares the identification of two types of functions of physiological responses: on the one hand a “proactive” function, that has as its prototype the responses corresponding to the primary emotions, which consist of helping «the organism prepare its reaction to the stimuli» (Zbikowski, p. 42), and on the other a “reactive” function, characteristic of other responses aimed at distinguishing what someone is living in emotional terms from other phenomena that the same person may experience.

#### 2.4. “*Emotion*” and other affective categories

In his introduction to the volume Spitzer takes up certain considerations made by the historian Thomas Dixon [2003] in saying that «the term ‘emotion’ would not have been understood before the nineteenth century, when it displaced a more ancient vocabulary of passions, affections, sentiments and feelings» (p. 2). The historical transformations of the concept of emotion is also dealt with by Butt, who examines a series of terms (*Affekt*, *Passion* etc.) present in philosophical or religious writings published in German, French or English in the 17th and 18th centuries. Rather than highlighting the differences compared to present day usage, Butt focuses on the ethical implications linked to the use of these terms in the baroque era, in other words on the possibility to judge some states of mind as “correct”, while deploring others. He points out that what is subjected to ethic evaluation is not the state of mind in itself (which is considered an

“autonomous” sphere of lived experience at a personal level) but rather the uses to which it is put.

The problem of lexicon is also tackled by Zentner, starting from the presupposition that all affective states (emotions, states of mind and feelings) have in some way been codified by human language. This allowed him to conduct a blanket survey covering the lexicon of five modern languages, identifying over 500 terms that refer to the semantic area corresponding to the English expression *affective states*: «We did not consider it necessary that these terms refer to emotions as they are defined in philosophy or psychology textbooks. Rather, we felt it more important that the terms be generally understood and judged to reflect emotive states that could be felt» (Zentner, p. 103). After collecting this repertory of terms, Zentner’s investigation concentrates on studying the relations between the affective lexicon and the structural characteristics of music perceived during a listening experience.

Mills too, in his study on traditional Korean music, starts by surveying the possible meanings of the term *hŭng*, which normally refers to experiences of an “emotional” type: «For translations of *hŭng* into English, Korean–English dictionaries tend to propose words such as ‘fun’, ‘amusement’, ‘enthusiasm’, ‘merriment’, ‘mirth’ and ‘pleasure’» (Mills, p. 277). After discussing the semantic implications of the term *hŭng*, the author makes a study of the performing contexts associated with the realization of this particular emotional state.

#### *2.5. Criteria for the distinction of different emotions*

The idea that music is able to provoke different emotions, and not only a generic form of diffuse and indistinct affective state, is discussed by various authors. The articles written by Juslin and Lindström and by Eerola make reference to the theories on primary emotions and thus share the hypothesis that the emotions can be divided into distinct categories. On the contrary, the “dimensional” model considers the emotions on the basis of their different valence and/or extent of physiological arousal. But Zentner and Spitzer attempt to find a compromise between the two perspectives by referring explicitly to what was proposed on this matter by Juslin and Timmers [2010].

In addition, on more than one occasion the “aesthetic” emotions are distinguished from the “non aesthetic”: Spitzer, for instance, starts from the distinction proposed by Paddison [2009] between “physiological shiver” and “aesthetic shudder”, making a comparison between the primary emotions and those implied in Kant’s definition of the sublime. Zetner, on the other hand, presents an opposition between the “utilitarian” emotions (which are part of everyday life and have the purpose of adapting to specific worldly situations) and “aesthetic” ones, which are not aimed to stimulate any specific action or to resolve some problem of adaptation.

### 3. An overview of musical emotions

Over and above the various definitions of the term “emotion”, the volume *Music and Emotion* offers a fairly broad and wide-ranging view of the possible interactions between the phenomenon of emotions and musical experience.

#### 3.1. *Is musical emotion unique and “inexpressible”?*

Let us start from a point of view that is now almost historical, dating back, in its best known form, to Eduard Hanslick [1854], whose name makes quite frequent appearances in the articles we are reviewing. Paddison quotes him indirectly but in a significant manner: re-evoking Aristotle’s theory of art, he reminds us that the Greek philosopher considered artistic mimesis as «clearly to do with action, rhythm and movement» (Paddison, p. 132). The Greek philosopher’s standpoint is surprisingly similar to that of Hanslick, who holds that music is able to express only specifically musical ideas involving movements and rhythms. With this in mind, Paddison proposes the concept of the “intransitivity” of musical expressivity: «That is to say, one cannot simply equate musical gestures with emotions as if there were some kind of direct correspondence possible» (p. 140). The meaning of music is instead something ineffable that, as Adorno also suggests, «arises out of configurations and developments» (p. 140).

Other commentators also dwell, whether in terms of agreement or disagreement, on the question of the “ineffability” of musical emo-

tion, speaking of a form of “diffuse excitement” that is substantially unique and indivisible. Spitzer, for example (p. 3), recalls how the “formalist” tradition (from Hanslick to Leonard B. Meyer) considers single emotions as non intrinsic to musical experience: music has to do with a “core affect” or a unique and undifferentiated “feeling to-ne”, divisible at most into tension-release. But immediately afterwards he adds that in adopting this approach, the analysis overlooks a good half of the problem at hand. And the importance of tackling this other half is also emphasized by Zentner (p. 117).

Also Smith's article, dedicated to the analysis of some piano pieces by Skryabin, tends to describe music in terms of “undifferentiated emotional expressivity” but speaks of drive rather than tension, and in so doing refers more to the thought of Schopenhauer than that of Hanslick.

### *3.2. Emotions perceived and felt*

Another equally important issue is the distinction between emotions that can be identified in a piece of music (*perceived emotions*) and those felt by the listener (*felt emotions*). Juslin and Lindström describe the two processes as substantially different phenomena but also add that they are not always easily distinguishable.

Various authors make reference to the studies of Scherer and Zentner [2001], who propose a theory that identifies four factors that influence the process with which we live an emotional experience through music: the structures present in the score, the expressive features of its performance, the cultural and psychological characteristics of the listener and those of the context in which listening takes place. Thanks to the last two factors, even when listening to sounds without expressive features, we can nevertheless feel emotions. On this matter Cochrane comments that someone who is moved on hearing *Jingle Bells* does not properly perceive an emotional content of the music, but rather applies his own personal memories (p. 264). Spitzer provides a symmetric example when he observes that, in *Erlkönig*, the fear lies within the music, and certainly not in the listener or in the performer. Zentner, in turn, quotes a study by Paul Evans and Emery Schubert [2008] who showed that the emotions “felt” rarely reflect those “perceived”, which are normally quite different one from the other.



The need to maintain this distinction is upheld also in other studies [Zentner and Eerola 2010, p. 188].

However, we must also consider that some researchers, like Eerola, Juslin and Lindström, ask the subjects tested to consider if what they listen to can be associated with primary emotions, without specifying whether such emotions are perceived or felt. In their experiments, then, the distinction between perceived and felt emotions is not considered a decisive variable.

### 3.3. *Aesthetic emotions vs. everyday emotions*

The development of concert music in its most “pure” conception, that is to say independent from social functions, leads to another significant area of discussion, highlighted by Paddison with the following question: « if music is expressive, then what, if it is totally autonomous and self-contained, is it expressing?» (p. 130). There are at least three possible answers to this question: firstly, one that sustains, in the wake of Hanslick, the total “intransitivity” of musical expression. Secondly there is the opposing theory of those who (like Juslin) believe that musical emotions are no different from those of everyday life: music would not be comprehensible if it didn’t reflect common human experience. Finally a third type of answer comes from scholars who prefer to tackle the issue in an experimental way, promoting investigations into whether the emotions expressed in music are specifically aesthetic, and thus different from those of everyday life.

Zentner, for example, attempted to study the discourses on emotions in a specific musical context by conducting a blanket survey during a festival in Geneva (p. 103); the results are presented in a list known as GEMS (*Geneva Emotional Music Scale*). The list of terms used were gradually narrowed down from about forty to nine: *Wonder, Transcendence, Tenderness, Nostalgia, Peacefulness, Power, Joyful activation, Tension, Sadness*. The first five of these were in turn regrouped under *Sublimity*, while the term *Vitality* was applied to *Power* and *Joyful activation* and *Unease* to *Tension* and *Sadness*. The results of Zentner’s survey would therefore suggest that sublimity, vitality and tension are the typical emotional characteristics of musical listening: characteristics

that are all ascribable not to the sphere of utilitarian emotions, but to the aesthetic ones.

### *3.4. Emotions and "persona"*

Another element that is often mentioned when studying the relation between music and emotion, is the concept of "persona". The term, which derives from the Latin "dramatis persona", is used to indicate a "fictitious agent", a sort of imaginary subject who "operates" inside a piece of music. The listener does not simply perceive the music but unconsciously feels the imaginary presence of a "persona" (or sometimes several) who feels or communicates emotions.

Matravers (p. 11) states that the concept of "persona" plays a role in the philosophical theories developed by Levinson [2005] and also, more marginally, by Davies [1994]. Hatten (p. 93) prefers the treatises – in his opinion "more carefully nuanced" – of Robinson [2005] and Ridley [2007], while Spitzer, with reference not only to Robinson but also to Nussbaum [2007], uses this concept to point out countless «ways of gesturing, acting, feeling, perceiving and thinking» in the pieces he analyzes (Spitzer, p. 6).

Cochrane goes more deeply into the question and adds an interesting observation about the concept of the «minimal sense of self» as necessary for any form of emotion (p. 266). It is well known – he says – that human beings recognize emotions in two ways: either in terms of the relation between the emotions and the surrounding environment (external), or in terms of the reactions of one's body to environmental stimuli (internal). In such cases a specific idea of "persona" as an external agent is not necessary, but it is inevitable to suppose that there is at least a sense of self (albeit minimal or embryonic) without which it would not be possible to consider oneself in relation to the environment or to feel physical reactions. It is this "minimal sense of self", then, that is involved in the emotional expressivity of music.

## **4. Musical analyses and the emotions (Luca Marconi)**

In his introduction to the volume, Spitzer explains that he organized the *International Conference on Music and Emotion* (from which va-

rious papers in this collection are taken), because none of the nineteen chapters in the anthology *Music and Emotion* edited by Juslin and Sloboda in 2001 dealt with musical analysis (and the same could be said for the *Handbook* later published by the same authors in 2010). Considering the articles in the present volume edited by Spitzer in this perspective, it is possible to identify two main functions of analysis: an *explicative* function, which in the volume takes up a somewhat limited amount of space, and an *interpretative* function, which enjoys more space. By “explicative” I refer to an analysis based on empirical investigation: subjects are asked to listen to some examples of music, which are then analyzed to explain how certain acoustic stimuli can provoke verbal or non verbal responses that have been gathered empirically. By “interpretative” I mean the analysis of a piece of music which identifies its structural features potentially related to emotions, and tries to explain what this potential consists of. As well as presenting the applications of these two functions, I will also try to point out some areas that I consider worthy of further development. I will start by giving some examples of explicative analysis and then move on to interpretative analysis.

#### *4.1. The galvanic responses of the listeners and Spitzer's analysis*

First of all, let us consider the explicative analysis presented in the section “An Augenblick at Belfast” of Spitzer's paper. The empirical findings described therein, from experiments carried out by Tom Cochrane and Ben Knapp, concern the measurement of the electric properties of the skin (or “galvanic response”) while listening to music. The measurement is made by placing sensors on the listeners' fingers, and the increase in sweat is associated with an increase in tension, signaling that the body is preparing to move into action. The subjects included Spitzer himself and a group of listeners with little familiarity of classical music; the piece listened to was the first movement of Schubert's *Unfinished symphony*. In the discussion of the results, however, in which the data collected during the experiment are related to the analysis of the musical text, a comparison is made of the data for the galvanic response of only two subjects: that of Spitzer and

that of a “non expert” listener.

Apart from some episodic agreement, the responses of the two subjects only show a significant adherence during the long passage from b. 44 to b. 62, corresponding to the exposition of the second thematic group (see Ex. 1).



Example 1. F. Schubert, *Unfinished symphony*, I, bb. 44-47

The galvanic responses of the non expert listener reach a notable peak at the start of b. 63, where there is a sudden “sforzato” chord in C minor that arrives after a bar’s rest (see Ex. 2); the responses of Spitzer, though, register a significant decrease at that same point. How can this difference in response be explained? Spitzer offers the following answer: on the basis of his analysis of the piece, in bb. 44-62 we witness the representation of a *persona* in a state of frozen tension (freeze), while in b. 63 he identifies an event able to produce a sudden shock. He therefore hypothesizes that in bb. 44-62 his own reaction and that of the “non expert” are similar because both have empathized with the *persona* represented: as a consequence, the response of the subjects to a frozen tension is a variable quite independent from their degree of familiarity with the music (p. 178). The different reaction to the chord in b. 63 can instead be explained by suggesting that the shock of an unexpected event may easily have startled the “non expert” listener, but certainly not Spitzer who, being very familiar with the piece, was used to anticipating it.

Example 2. F. Schubert, *Unfinished symphony*, I, bb. 59-63



Such hypotheses are doubtlessly intriguing, and the methodological approach applied (using analysis to help explain similarities and differences between different experiences in listening) is noteworthy; however, as Spitzer himself admits, the rather limited quantity of empirical data collected does not allow conclusions of a wider and more general nature to be drawn.

#### *4.2. Perceived expressivity and Eerola's analysis*

A second instance of explicative analysis can be found in the section “Musical relevance of extracted features” of Eerola's essay. In this case, the empirical data collected by the author were obtained by asking 116 university students to associate 110 short extracts from sound tracks with one of the 5 primary emotions [Eerola-Lartillot-Toiviainen 2009]. The analysis was performed using a purpose-made computer programme which helped identify the presence of characteristics attributable to various parameters (dynamics, timbre, harmony, register, rhythm, articulation, structure).

The conclusions he reaches substantially confirm certain previous theories, more especially those of Juslin [1997, 2003], regarding the relations between the 5 primary emotions and some musical features: sad music has «a rich timbre, slowly changing key centres and a stable, unchanging register, and is in a minor key». Anger is associated with low pulse clarity, high “roughness” (a sensorial form of dissonance), unclear key and a complex spectrum of timbre. Sweetness is characterized by dark sounds, low roughness, clear key and a stable spectrum. Happiness involves fast rhythms, a more compact spectral constitution, high register, very clear key and major tonality. Finally, fear foresees a wide variety of dynamics, short attacks, high register and unstable key (Eerola, p. 220).

In the following section Eerola presents the results of another study on Schubert's *Erlikönig*, which is also analyzed by Spitzer in his article; but we will give more details of this second analysis later.

*4.3. Perceived expressivity and the experiments of Juslin and Lindström*

A third example of “explicative” analysis is found in the paper by Juslin and Lindström. The empirical data collected were obtained by means of a procedure similar to that described above, in other words by asking listeners with no expertise in music to judge how a series of extracts could be correlated to the 5 primary emotions. The experiment differs in two ways from that of Eerola: firstly, the researchers set their subjects the following task: «Remember that each version should be judged relative to the other versions» (Juslin-Lindström, p. 342). Secondly, the pieces the subjects were given to listen to and to judge in terms of emotional expression were quite unlike the music they usually were familiar with: they had been created purposely by a computer and consisted of an unaccompanied melodic line, quite monotonous in rhythm, dynamics, agogics and timbre, and with no particular reference to existing musical styles or genres. Juslin and Lindström (p. 356) freely admit that these pieces «are relatively simple compared to most music in the real world». But their arguments justifying the choice to use such simple material are not convincing; above all they are unable to alleviate the doubt as to whether the data obtained during a study of this type can really be useful in helping us understand the working of musical experiences in the «real world».

And this is the most serious limit of their study: consider, for example, that after dividing melodic progressions into “simple” and “complex”, Juslin and Lindström then propose that in order to transform a simple melody “a” into a complex melody “b”, it is sufficient to change the harmony of the third bar, replacing the chord on the II degree with one on the IV degree; this has little to do with our common experience of everyday listening.

A further element that gives rise to serious doubts is the notion that «the backbone of emotion perception in music is constituted by the main effects of the individual features, rather than by their interactions» (p. 353). This hypothesis, which the authors present as one of the most innovative findings of their study, does not however seem to be backed up by any convincing arguments. Also because in the “real world”, contrary to the experiments that led to this conclusion, liste-



ners are certainly not accustomed to orientating their responses to a list of primary emotions.

#### *4.4. The unavoidability of explicative analysis*

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Even though some aspects of the analysis discussed in the previous paragraphs are not always totally convincing, it nevertheless seems worthwhile to make more frequent use of analysis with an explicative function. The study of the relations between empirically accessible emotional qualities and the structural characteristics of musical pieces could in fact have important repercussions on a much wider range of disciplines: such questions are not solely of interest to scholars of cognitive sciences or specialists in the psychology of music. Many musicological surveys could, for example, draw great benefits from this form of study which, by adopting an empirical approach, allows the role of listening experience to be investigated.

#### *4.5. Conditions of interpretative analysis*

The examples of analysis with an interpretative function described in this volume are grounded on presuppositions attributable to two opposing conditions. Their common starting point is the quest to establish correlations between a list of emotional phenomena and a set of structural characteristics in the music. The means they adopt to reach this objective, though, are different: in some cases, they apply a model of correlations taken from a previous theory and try to understand how the analyzed piece fits into this model. In other cases, the correlation between the piece and the emotional sphere is not based on previous theories, but starts from a hypothesis inferred *ex novo* from the particular situation under examination.

#### *4.6. Applications of previous correlations*

The paper that most systematically applies previously formulated correlations is that written by Eerola. He basically makes use of two models: the first is that for the analysis of emotions in film music, of which we have already spoken. The second concerns the relation between

music and emotion in piano performance, and is based on a study conducted by Resnicow, Salowey and Repp [2004]. This model was formed by asking a group of expert pianists to play 3 pieces (respectively by Bach, Bartok and Persichetti) in five different expressive ways (afraid, angry, sad, happy and “neutral”), in a total of 15 performances.

Eerola used these (and other) previous results to analyze, with the aid of a purpose-made computer programme, extracts from a recorded performance of *Erlkönig*. The extracts were selected on the basis of the analysis of Spitzer, who associated these passages with clearly defined emotions (anger, sweetness, happiness, anger/fear). The analysis carried out by Eerola using the film music model suggests that the dominant emotion in all the extracts is fear. On the other hand, the results obtained with the piano performance model highlighted emotional states that are more “changeable” and closer to those pointed out by Spitzer. To explain this slight discrepancy, Eerola comments that in an expressively complex piece like *Erlkönig* different emotions such as fear, sweetness and sadness may also overlap and blend with one another. Given such emotional complexity, he adds, the research still shows evident flaws, and therefore needs to be perfected.

A first, clear limit to this approach is that it did not examine the empirical responses made by subjects who listened to *Erlkönig*; as a consequence, we cannot say whether Eerola’s interpretative hypothesis corresponds with the emotional experiences indicated by the listeners while listening to this particular piece.

A second limit can be identified in the fact that, as Juslin and Lindström point out, «the basic emotions hardly exhaust music’s expressive possibilities» (p. 356). The pre-existing models used by Eerola take into account only these specific emotions: essentially, it is as if we were suggesting that when writing *Erlkönig* Schubert could only use these five emotions to establish the emotional mood of his *Lied*.

Finally there is yet another problem: the “emotional” analysis of a determined musical unit always extracts a set of structural features of which only a few can be considered specific to a precise emotion. We therefore wonder whether, in establishing if a piece of music is expressive of a given emotion, it is sufficient for the number of its “specific” features simply to be greater than that of the analyzed features specific of other emotions, or whether they have to exceed a certain

threshold (let's say for example that the specific features need to reach at least 50% of the total) below which the piece cannot be considered expressive of that emotion.

Limits such as these can also be detected in some of the analysis carried out by Spitzer, who uses correlations taken from models previously proposed by Juslin and Timmers [2010] and associates the five primary emotions with sets of characteristics similar to those presented by Eerola.

Other analyses with an interpretative function made by Spitzer are based on the use of "topics". This analytical technique consists of taking into account complex sets of musical characteristics and associating them with various types of contents (which in some cases deal with the emotions, but in general do not necessarily refer to an affective phenomenon). The association is based on pre-existing studies in which the presence of a particular set of structural elements is matched with the same expressive contents in different pieces of music [Ratner 1983; Allanbrook 1983; Agawu 1991; Hatten 1994, 2004; Kassabian 2000; Monelle 2006; Chua 2007; Rosar 2010]. This approach can also be found in the analyses proposed by Biancorosso, and is used episodically by Hatten, Smith and Butt.

The topics, which are not only linked to the emotions, offer a less limited view of the expressive contents of music compared to the correlations proposed by Juslin, Eerola and other scholars, who instead tend to focus their attention solely on the primary emotions. However, the use of topics may also prove problematic especially if, as in some of the analysis presented in this volume, it is not backed up by empirical investigations aimed at verifying whether the contents associated with a certain piece is actually perceived by some listeners. In other words, the authors start from the presumption that the set of features identified in the piece is sufficient to stimulate a certain type of listening experience, but they do not take it upon themselves to prove scientifically that other elements, equally present in the piece, might not provoke a prevalence of other listening experiences over this one. To make their arguments more convincing they should therefore formulate a more detailed hypothesis that better specifies the functioning of the topic.

#### 4.7. *Applications of ad hoc models*

The author who enounces the most articulated hypotheses on the relationships between music and emotions, translating them in analitical tools, is undoubtedly Zbikowski. His hypotheses (that lead to analyses of an interpretative type) are based on the concept of “analogy” and on the theories of Barsalou [2005], who developed a cognitive model called the “simulator”. Analogy occurs when the relations between the elements of a given “domain” (in our case the sounds) have a structure correlatable with that of the elements of another “domain” corresponding to a different experience, even one of an emotional type. In such cases, Barsalou suggests that certain neuronal structures of the first “domain” are reactivated in the second “domain”, giving rise to a “simulation” that is not exactly identical but is nonetheless clearly evident.

Starting from these presuppositions, Zbikowski analyzes Domenico Scarlatti’s Sonata K. 208, in which he identifies processes of «syntactic detachment» and reattachment with respect to the tonic. These findings are convincing to the extent that the author, by reformulating intuitions quite soundly rooted in previous theories on tonal music, interprets the detachments and reattachments as simulations of the dynamic-affective processes determined by the distancing from or moving towards a desired goal.

Using a similar approach, Smith analyzes the music of Skryabin on the basis of an interpretative hypothesis on the affective processes linked to desire, even though the theoretical premises for this interpretation are described in less detail. In two closely related works by the Russian composer, *Desir* and *Caresse dansée*, certain syntactic aspects are highlighted in which it is possible to identify relations of (metaphoric) approaching or distancing with respect to a tonic and/or other points of reference. In such cases there arises, albeit less insistently than in Zbikovski’s article, an analogy with “psychological mechanisms” that are rich in affective implications and where «certain drives are ignored in favour of the stronger urges which find expression in the object-orientated networks of desire» (p. 246).

Another analysis of an interpretative type grounded on an *ad hoc* hypothesis can be found in the paper by Hatten, in which the author

affirms that by playing with the formal expectations of the listener, Mozart's piano sonata K. 533 invites him to infer the presence of «a protagonist-like agent that works its way through a kind of Pilgrim's Progress of experiences» (p. 95). The links with the theories of Meyer are evident, whereas the reflection on the emotional dimension of the expressivity of the various musical "gestures" identified remains more obscure.

Greater attention is devoted to this dimension in Spitzer's essay, where the primary emotions are used as the constant horizon of reference for the analytical interpretation. However, anyone looking for a more focused approach compared to that typical of "impressionistic" hermeneutics, will at times risk disappointment, since the correlation between musical passages and emotional states is not always discussed in an exhaustive manner. This is what happens, for example, in the author's interpretation of the two passages taken from the first movement of the *Unfinished symphony* – bars 63 to 71, and bars 85 to 93 – which is analyzed in great detail. But when he moves on from the analysis of the score to the correlation with emotional states, Spitzer limits himself to commenting that these passages «look and sound very different, and they project contrasting affects, respectively Fear/Anger and triumphant joy – that is, highly activated Happiness» (p. 174). In other cases the proposed interpretation is backed up by more detailed arguments, which however tend to make reference to pre-existing models of correlation, as already discussed above.

The most convincing parts of the essay are those in which Spitzer interprets certain features of the score in relation to the model of "action" and, more especially, when he explores the possibility of associating aspects of the construction of the musical time with the temporal dynamics of emotional situations.

#### *4.8. Towards an integrated approach*

The possibility to develop a method of investigation able to meet the needs of both explicative and interpretative analysis is without doubt an important objective for the study of emotion in music. In this volume – as, moreover, in a great deal of the studies produced in recent years – the attempts to integrate these two approaches have been

somewhat limited. Even though Spitzer and Eerola try to take a step in this direction, the results of their collaboration are still quite embryonic, or in any case not totally satisfactory. To integrate various competences and working methods certainly requires a great effort, which most likely can be achieved only through the combined work of a team of scholars from all the relevant disciplines. There is no doubt, however, that only by developing an integrated approach to analysis will it be possible to attain a decisive contribution to the study of the relation between music and emotion.

### 5. Considerations on "perceived" emotions (Mario Baroni)

The volume *Music and Emotion* offers a wide overview of ideas, points for reflection and investigative perspectives. I would nevertheless like to dwell on two problems that seem to be of particular interest to the musicologist-analyst (the most probable reader of this review): 1) the need to establish more precisely the role of the strictly emotional aspect, compared to all the other experiences that music is able to offer; 2) the need to indicate with a fairly good approximation the various types of emotion that music can express and/or provoke.

But before entering into the discussion true and proper I feel I should make a brief premise in order to define my field of action. In the following pages I will limit myself to speaking of *perceived* (and not *felt*) *emotions*, that is to say the emotions a careful listener might consider to be expressed by the music itself, and not those that he feels personally on the basis of other circumstances (important, but of a different nature). I will also exclude emotions that can arise from the act of producing music (whilst playing or composing), or the emotional variants that could be provoked by the context in which the music is emitted (in the square, at the stadium, at the cinema, in church, in bed etc.). I will examine just one genre of music, art music, which is in any case the genre considered by the majority of authors in this volume. More precisely, I will refer solely to the type of listening that takes place in a concert setting, in other words during the aesthetic events typical of art music. In a concert hall, the play of aesthetic relations involves a limited number of subjects: the listener, the composer, the performers (with their presumable intentions) and the score



that the composer has created (placed on the music-stands). I will also exclude “distracted” listeners: I will take into account only those who listen carefully, and possibly possess a good musical competence. I will therefore write about the emotions arising in this particular context, for the moment setting aside all the rest.

### *5.1. Music, emotions and other intellectual and affective activities*

Let us now turn to the first of the two problems: what role is played by the emotional aspects as opposed to all the other activities that might be triggered in this particular type of listener? To answer this question a further premise is necessary: someone who goes to a concert does so on account of diverse types of cultural motivations. Marc Leman defines this process as «being involved with music» [2008, 3]: the source that stimulates the interest can be found above all in the emotional spurs of a positive nature that music is able to inspire. And many other scholars have similarly concluded that music “makes you feel good”, tends to promote a state of well-being [Sloboda-Juslin 2010, 86]; one might also add that we are told, not by chance, that the angels in heaven sing and play music. What is more, in psychological theory we find a unanimously accepted thesis, that one of the fundamental components of the emotions is *embodiment*: the emotions are always associated with the body [Scherer 2004, 240] and, as Leman too sustains, consist of *embodied states*. When someone buys a ticket for a concert he does so for various reasons, but above all because he anticipates that the listening experience will procure him a pleasant physiological sensation.

All this is just an anticipation, or rather a state of mind we can generally attribute to the listener as he takes his seat; but what happens when the concert actually starts? Here the discussion becomes more complex: the fact of being well-disposed towards listening does not, in fact, exhaust the totality of concrete experiences of the person “involved”. A listener who is well versed in art music also has other requirements, which are not necessarily linked to the emotions. For example, he may wish to “understand” what he is listening to, to know what the music “expresses”. On the subject of musical sense

(or meaning) there exists a long established tradition of research which more recently has become increasingly more identified with the study of musical semiotics, thanks to a series of important works dating from the 1970s [Nattiez 1975; Stefani 1976] and continuing through the last few decades [Monelle 2000; Almén-Pearsall 2006]. In such studies a predominant place is assigned to the intellectual component: Raymond Monelle, for instance, believes that the logical exercise of the intellect plays a central role in the understanding of musical sense (although in a way that may not necessarily be fully explicit and conscious) and attributes a marginal place to the presence of non rational elements such as emotion which, in his opinion, may accompany musical listening, but not determine its sense [2006, 31]. The mechanisms employed for interpreting musical sense, mainly based on connections of an “iconic” nature [Peirce 1906] between musical structures and life experience – which some also refer to as *symbolic mimicking* [Zentner-Grandjean-Scherer 2008, 500-501] – show how music can “speak” of the world without resorting to verbal and conceptual tools, to the point of entering into the “discussion” of ideologies and value systems [Meyer 1989, 163-217; Baroni 2001]. On the other hand, also Gabriellsson and Lindström, who are not semiologists, point out that music can express or portray events/situations, motion, dynamic forces, human character, social conditions, religious faith, and still more [2010, 367].

The debate thus remains open between those who tend to identify musical sense with the emotions the music is able to express, and those who give more weight to the intellectual component. In truth, scholars of emotion show few signs of wishing to participate in this debate, or at least not explicitly: they are dealing with emotions (empirically perceived or felt), and not with musical sense. But sometimes they speak in such a way as to lead one to believe that, for some of them, emotions and sense come to objectively coincide. It would be worthwhile, among other things, to take a deeper look into the matter by conducting specific research on the way subjects listen during art music concerts. One presumes, for example, that some listeners prefer to abandon themselves to the indistinct flux of the pleasure of listening; that others concentrate their efforts on trying to interpret the presumed communicative “intentions” of the composer; or that others

still set out to recognize themes, forms and harmonies, relegating the pleasure with which they do it to the background. But little is known of all this.

The theme of the interpretative component of listening, and the activities carried out by a listener when he commits himself to listening carefully, also has other important and well known implications. In this volume of «Music Analysis», the problem is touched upon when speaking of transitivity and intransitivity. As already mentioned, the question can be put in these terms: is it correct to think that a competent listener stops at the perception of structures and at the sensation of pleasure derived from this, or should one imagine that he “passes on” or “transits” towards something else? And in this case, towards what? Here various hypotheses are possible: even without resorting to semiotic symbolism, some authors propose the concept of “persona” (where the listening never stops at the simple perception of structures, but “vitalizes” or “personalizes” them); some suggest the presence of aspects of movement, while others stress the importance of physiological activation (*arousal*). Whatever the case, it is hard to think that *being involved with music* doesn’t imply perceiving music as something that “goes beyond” the pure and simple musical structures; or that music is not able to involve contents of existence that are not exclusively linked to sound. The real problem, if anything, is to define the precise nature of such “contents”.

On this matter it should be remembered that the cognitive aspects, in any case present in the underlying expressive-communicative intentions of a musical text, are set in a *continuum* that goes from a minimum to a maximum of awareness (from Hanslick's mysterious and indefinite “moving forms”, to the fairly precise connotations attributed to Wagner's Leitmotives), or, if you like, from a maximum to a minimum of sub-conscious components. The expert listener is surely able to transform the rhythmic-dynamic components of a piece into motor sensations [Godøy-Leman 2009], with repercussions on his muscular apparatus; but can also transform the timbral components into sensorial images of a tactile or luministic nature [Dogana 1983; Fonagy 1977], and the tonal and formal components into sensations of expectation and tension [Huron 2006; Lerdahl 2001]. In such cases the cognitive reference to real world events is minimum, and for the most part semi-

conscious. However, if the musical structures allow, this reference can become increasingly more explicit, as we learn from the 19th century hermeneutic tradition (from Hoffmann to Schumann and Kretschmar), from Spitzer's theory of metaphors [2004], or even from 20th century musical criticism. The emotional component of music hinges on aspects of this type, and has the function of completing and specifying their nature: for example, the classic musical descriptions of storms are generally accompanied by emotional components of tension or fear. A particularly interesting case of a cross between affective and cognitive components is pointed out by Roberto Caterina [2012]: in some verbal communications intended to be humorous there is a component of expectation and surprise, indispensable for the emotional effect, which has a structural organization quite similar to that of the theory of expectation in music formulated by Meyer [1956] and further investigated in the studies of Huron [2006].

Also the emotions, as is clear from the literature, can be set in this continuous implicit/explicit space: the "categorical" theories, the various "dimensional" models, and the "eclectic" approach proposed by Scherer [2004], all foresee intermediate spaces between one verbal label and another, implying that the universe of emotion is in itself a non verbal phenomenon, or at least is difficult to satisfy verbally. Verbal labels serve to describe the nature of the attributes of feeling that theory deems necessary to indicate: and it can do so because there exists a sort of coincidence between the qualities of an emotional experience (for example, happiness or fear) and the contextual conditions that provoke it. In any case, such verbal labels indicate in a "coarse" manner –to use the expression introduced by James in 1884, and employed by Frijda and Sundararajan [2007]– an affective quality containing nuances that are not always possible, and not even necessary, to define verbally.

It is quite likely that the expert listener has a mixed perception of the cognitive and affective aspects attributed to the music he is listening to, and that this perception is partly intuitive and partly conscious, depending on the expressive structures of the music and the listener's capacity to recognize them. Yet neither in this field has an empirical approach been developed able to distinguish the components that the listener attributes to the music as opposed to what he experiences thanks to his personal emotional life.



## 5.2. *What kind of emotions can music stimulate?*

The second problem I wish to mention concerns the emotional quality that music is able to stimulate. The question can be put in these terms: does music offer us something belonging to the emotional sphere of our everyday experience, or does it deal with something substantially different? This area of research has been particularly lively, as testified by some of the essays cited in the previous sections. Generally speaking we can affirm that the hierarchisation of the emotions on the basis of just a few *primary* or *basic emotions*, which can then be divided into smaller subcategories, has today reached a high level of precision and refinement [Sloboda-Juslin 2010, pp. 76-79]. In this context we can appreciate Juslin's proposal to identify traces of basic emotions in music: if it is supposed to reflect human experience, then the realm of music cannot remain isolated and separate. One should keep in mind, though, that many scholars have focused their efforts on the distinction between “common” emotionality and that associated with artistic production. The list is very long, ranging from the pioneering attempts of Hevner's adjective clock [1936] to the studies developed by Imberty [1979], until arriving at the distinction between *aesthetic emotions* and *utilitarian emotions* proposed by Scherer and Zentner [2008], the refined emotions model of Frijda and Sundararajan [2007], the *Geneva model* developed by Zentner, Grandjean and Scherer [2008] or the idea of a «more contemplative kind of emotion» recently proposed by Zentner and Eerola [2010, pp. 201-202]. On this matter, one of the most interesting proposals seems to be that of the refined emotions discussed by Frijda and Sundararajan [2007] who, taking their inspiration from ancient Chinese philosophy, speak of the process of savoring. They ground their reasoning on a plain observation: when we listen to music or read a poem, the object that stimulates an emotional response does not trigger ancestral instinctive values in the listener or reader. A piece of music is not the same as a bear in a forest or a beautiful girl in a lounge. In the case of an artistic object, the emotional responses experienced have nothing to do with the biology of survival or the need to assess the object as attractive or frightening; instead they are linked to the capacity of that object to express itself adequately, and to prompt the listener or observer to

make judgements regarding its “beauty” or its nature as an aesthetically and formally well constructed work. To gain a better understanding of this process we must also take into consideration the point of view of those who make music or dedicate themselves to activities of artistic production: their task is to build expressive structures with the aid of rules of style, or “stylistic grammars” [Baroni-Dalmonte-Jacoboni 1999], which are able to give rise to affective and cognitive ideas through the non verbal means of a particular artistic language. The assessment of those who react with a certain degree of competence consists in the ability to “savor” what the producer had intended to communicate through the construction of his work of art (and, in the case of music, also the skill of the performer, who applies similar grammatical rules in the sphere of performing).

From this point of view, one could say that the mechanism of listening runs along two parallel tracks: on the one hand there is the work of interpreting the piece (what the theories on musical emotion call *perceived emotion*); on the other there is the work of assessing or “savoring” the aesthetic value of the text. Both processes entail the presence of both intellectual and emotional components. The emotional outcome of the assessment process belongs above all to the category of felt emotions (and not to that of perceived emotions): it has nothing to do with the emotions “present in the text” but instead concerns the expressive skill of whoever produced it. The listener expects to feel the emotion of wonder and enthusiasm for the skills of the composer and performers (an emotion that is normally vented in the final applause), and this is the most specific emotional component of his assessment process. In the other parallel process, however, the “perceived” emotions imply not only a cognitive act of interpretation, but also an emotional attitude that Scherer [2004] calls the “empathic” identification with the non “utilitarian” emotions that the music offers and contains. Aesthetic emotionality generally deals with the “refined” emotions that all artists elaborate within themselves and propose as sophisticated cultural and social values, quite distinct from everyday emotions.

On the other hand, all this doesn’t happen always, in every situation: it may occur, for instance, in the ancient, highly aristocratic Chinese poetry evoked by Frijda and Sundararajan, and certainly takes place in



the art music that is normally played in our concert halls. Throughout the course of history, the musicians who dedicated themselves to this type of repertory were not only heir to the aristocratic elegance of the 17th and 18th centuries, but also bore witness to the emotional privileges that the great European intellectuals (from Baudelaire to Wagner, from Nietzsche to Mallarmé and Debussy) claimed for themselves as symptoms of their own “diversity” with respect to the principles of behaviour and “vulgar” sentiments of those social echelons that they disparagingly called “bourgeois”. It is a question well known to scholars of social psychology [Faure 1985; Molino 2009, pp. 263-382], but that is often underestimated by those who frequent the concert hall. The music critic is aware of the issue, but doesn’t usually make open reference to it. A significant fact should nevertheless be stressed: music critics, who through professional necessity are more aesthetically conscious than psychologists of the emotions, tend to avoid using labels that are over simplistic. In fact, to express their interpretations of the “perceived” emotions, they often prefer to resort to shrewd metaphors and complex turns of phrase that correspond better, and more closely, to the subtle and nuanced emotional issues of the music they are describing. Also an able listener can immediately grasp these emotions, provided that an able composer has successfully managed to disclose them. Spitzer, who as well as being an able music psychologist is also an expert musicologist, moves quite skillfully across this thorny ground, even if he is not always entirely able to camouflage all the linguistic snares he encounters along his way.

Of course my argument does not refer to “music” in a general sense, a topic that psychological texts speak of all too often, but only to that particular genre –art concert music– that right from the very outset of my deliberation I have tried to distinguish from all the other existing genres. It is true that an infinite number of types of music exist, and that in the majority of cases their emotionality fully matches the characteristics of common social sentiment, or at least characteristics that are widely shared among particular social strata or groups. The psychology of the emotions should, however, pay greater attention to the fact that there is a substantial difference between emotion seen as a universal biological phenomenon (what Scherer calls “utili-

tarian”) and the emotion present in various types of music, which (according to Frijda) does not have a biological purpose, and is therefore much more closely linked to transient aspects and dependent on cultural change. In a dynamic society such as that of Europe, whose constant transformation and renewal has become one of its founding principles, also the interior life changes, and its emotions take on different connotations as circumstances require.

At this point I would like to conclude with an appeal for greater prudence and concreteness in studies on music, and on man in general. All human events are often the outcome of a multitude of different phenomena, and the need to observe them scientifically should never make us lose sight of aspects that a correct scientific method obliges us of necessity to ignore: at that moment it may be provisionally right to ignore them, but this doesn't mean they do not exist. I therefore believe that once again the most effective way to capture the “real” in all its multifaceted dimensions lies in a multidisciplinary approach involving different competences. In our case, for instance, one could hope for a more fruitful collaboration between the fields of musicology, psychology and philosophy. And this is precisely what this volume of *Music Analysis* has tried to do, but it is also clear that much work still remains to be done over the coming years.

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