

Musical Pedagogy's Improvement through New Technologies and Musicology: The Oigma Project

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Abstract

What is musical pedagogy? A way to teach someone the technical practice of an instrument? To learn how to express oneself through sounds? Something between these two approaches? We tend to think that this latter assertion is the closest to the truth. We learn how to play music by our countless hours of instrumental practice; however, it doesn't sum up our way to play: reading sheet music or playing a song alike the original is not a proof of a real musical expression. Therefore musical pedagogy grasps a third dimension: musical knowledge. Not necessarily on theoretical elements, but on our knowledge of a musical culture: the genre's genealogy (i.e. from which previous style it came from), the great names in the style, or the musical characteristics of it. A great deal of our musical vocabulary (whether we are composers or performers) arises from our familiarity with these musical universes (when we play it, hear it or learn it). In the case of French musical pedagogy, this last dimension is slightly left behind. It is from this conclusion that the idea of a new project in pedagogy is born: the OGMA project . Its only purpose is to improve the ways of teaching music, toward students or music professionals . The main goal of this virtual presentation is to introduce the main axes of our research in pedagogy, and our will to establish, in long term, a cooperation network through the research centers (private and universities) in different countries.

Keywords: Musical pedagogy, new technologies, musicology, musical philology, text theory

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The Different Axis of Musical Pedagogy

Musical pedagogy lies on three main axes, which structure our progression in artistic practice. First and foremost, teaching music is about training students to use their instruments – including singer's voice. We call this first layer technical practice: showing and leading pupils on the way to master – or at least understand and use correctly – their tools on musical matter. It is the most common way to define it – a definition that anyone can tell to describe musical education.

Secondly, we can consider musical pedagogy as an approach to expand individual expression throughout artistic form. This aspect emphasizes on the decisive role of teachers to help students' musicality to flourish and, finally, develop their own musical personality. It guides the person to build his proper voice, through two principle tools: on one hand, with instrumental practice (i.e. I produce a sound, a mode, I play a particular aesthetic and I include it to my vocabulary); on the other hand in listening to different kind of music, different composers... in short, you shape it while you are listening and understanding other ways to create music, in accepting or denying their approach. These two positions make the student evolving, by encountering the musical background of different repertoires.

Which lead us to our third axis: musical knowledge. We have to understand the aesthetic of songs, of an artist, of musical styles, and so on. Therefore musical pedagogy grasps a third dimension: musical knowledge. Not necessarily on theoretical elements, but on our knowledge of a musical culture: the genre's genealogy (i.e. from which previous style it came from), the great names in the style, or the musical characteristics of it. A great deal of our musical vocabulary (whether we are composers or performers) arises from our familiarity with these musical universes (when we play it, hear it or learn it). Students – and first of all teachers who drive them – have to emphasize on this particular point. Not only in listening: for musicians, it is not a passive activity. This is the significant distinction between hearing and listening. The first indicates a passive action whereas the second implies an active study, involving multidimensional analysis (e.g. rhythmic, melodic, harmonic, etc.). Besides, earning musical knowledge doesn't only grow from listening: it develops itself by practicing these different kind of repertoires. Playing – even if this word (in English or French) is misused (as Hans-Georg Gadamer pointed out in *Vérité et Méthode*¹) and might be replaced for the reader by the term of “studying” – put the student right into the core of musicians playing issues, both in terms of instrumental technique and balance between performers². Therefore, listening and playing are the two decisive sides of the same coin: the musical knowledge. A good musical development, to our mind, requires a valuable balance between these two points.

To conclude this part, musical pedagogy is built on three primary dimensions: technical practice, artistic expression and musical knowledge. Those three points aren't isolate one from each other: on the contrary, they are simply the different faces of a very one concept. The main observation during our years of practice as a musician, and a student, is that each individual emphasizes one – or more – aspects, all

¹ Gadamer, Hans-Georg, *Vérité et Méthode. Les grandes lignes d'une herméneutique philosophique*, Paris, Editions du Seuil, 1996.

² In the case of collective practice (e.g. chamber music, orchestra, band, duet, etc.).

along his apprenticeship. This consideration is not only employed by students, but also by the teaching staff in musical schools – such as conservatory or private schools of music – even if teachers try their best to bring their students to see these three dimensions. Nevertheless, these axes aren't fully represented in those institutions. Indeed, each one of them may highlight one dimension rather than the other. It is not necessarily the vision of a single school, but also a national approach of musical education. For instance, French musical pedagogy focuses on technical practice and artistic expression. Therefore, musical knowledge is slightly left behind.

This observation upon musical pedagogy is at the root of our article. We try here to show new paths in order to improve our way to think – and do – student/musician's education. As far as we are concerned, two elements brought by recent works in the field of musicology allow us to interrogate anew our teaching practice. We will detail them on two distinctive parts: first, aiming on advances in the field of musical philology, and finally we will show a new vision of the application of musicology in cultural practices and, also, in musical pedagogy.

New Textualities and Musical Works: Impact of Philology in Our Way to Understand Creation

Musical Philology and New Textualities

Since the audio support's appearance, with its role of musical production's preservation, it has become essential to modify our perception of philological object. When a new version of a song appears on an audio support, our view of it is reshaped. This audio document becomes then a textual form: Its action works on our perception of the musical work, guiding our aesthetic apprehension of the production. From this observation emerged the sound philology, coming out of the need to modernize this discipline.

This philology's field deals with sound archives: discographic funds gathering various amounts of audio supports. Sound philology is particularly interested in the role of computer science toward audio preservation: in few words, how digital changes sound into an audio textual form. Indeed, the musical work's textuality is not confined in a scriptural form, to the only sheet music. Most music didn't need to write down their productions, and their repertoires still spread all around the world. Textuality, as Barthes evoked in *Le degré zéro de l'écriture*³, relates to the idea behind the scripturality, the written text being only the vessel through which the sense comes to the reader. Musical work acts the same way: the creation developed by all the members of the creative process is not simply reachable with the score, but by all the layers of significance present: they can be produced by the light programming, choreography and so on. All of these elements are different kinds of texts. These findings gave birth to a new way of conceptualize musical document, called "new musical textualities"⁴.

In order to understand the purpose of this research field, we have to look upon the issues that composers were confronted with during the second half of the 20th

³ Barthes, Roland, « Le degré zéro de l'écriture », in *Œuvres complètes*, Tome I, Paris, Editions du Seuil, 2002.

⁴ De Benedictis, Angela Ida, "Le nuove testualita musicale", in Caraci-Vela, Maria (ed.), *La filologia musicale*, Vol. 2, Lucques, LIM, 2002, p. 71-116.

century. Jean-Yves Bosseur shed light on the premises of the mid-century's quandary: "However [...] when, at the beginning of the 20th century, some composers desired to include in their vocabulary some unused sound materials in traditional western music, they just have to face the failing of a notation that has not evolved so much from a century⁵". Those difficulties to represent the new compositional practice and the new sounds modalities (e.g. tone, spatialization) have reached their full proportions during the 1960s. The link between sound and textual form is preponderant in the text/performance relation. Its evolution is tied with the new ways to work on the sound matter, which leads philology on new inquiries on the musical text/musical work's relationship, main questioning in the new musical textualities' research field.

The mutation of the philological questioning is related to the technological innovation in the sound processing and recording's field. This subject took a different issues due to the support's digitalization. How we could qualify as a support something not physical. Angela Ida De Benedictis tries to redefine the textual concept with the digital "support": "The textual concept should be applied to tape as much as digital inscription [...]. All these sound experience linked to the computer technologies are similar to "on paper" composition bound to scriptural technologies⁶". New musical textualities' field of research consider this technical dimension as new step, an innovative point of view regarding our way to set the creation on a support. Angela Ida De Benedictis shows that musical textuality's evolution is bound to the computer, especially on the work on sound, putting the notion of sound at the core of the textuality's concept.

Moreover, this section of musical philology deals with the ways of broadcasting musical works, their history and their recent new advances. During the 21st century's first decade, a vast range of broadcasting platforms spread on the internet, such as Myspace, Deezer, Youtube, Itunes, Facebook, Twitter, and so on. These networks represent numerous measure for an artist – or a label – to promote their works. Thanks to the internet, the digital encoding has become a major form of audio support. This transcription mode is consider, according to musical philology, as the next step of musical notation. Digital encoding is often correlate of what is called "computer music": "even more than its printed homologous, digital text can take a great variety of forms, even if its potentiality is far from being exploit to its maximum, in view of the screens and software's limitations⁷". Computer music gathers all the practice employing sound processing software, both used by technician (i.e. sound engineer) and musicians to compose or work on sound itself. It includes the score editions software, as Sibelius or Finale, recording software (e.g. Cubase, Pro Tools, Logic, Ableton Live) and plugins of sound processing (e.g. compressor, equalization, mastering plugins, etc.) Computer music opens new perspectives on our way to work on sound, to record and write it on an audio support. Therefore, it is through this new area that new musical textuality find a crucial importance: "Computer music's advent [...] opens new frontiers in textuality/creation relationship thanks to the complete substitution of the paper toward the music edition software. The writing domain's extension has become, during the 1980s and 1990s, a major tendency for computer musical experimentation [...]"⁸".

⁵ Bosseur, Jean-Yves, *Du son au signe*, Paris, Editions Alternatives, 2005, p. 95.

⁶ De Benedictis, *op.cit.*, p. 82.

⁷ Vanderdorpe, Christian, *Du papyrus à l'hypertexte*, Paris, La Découverte, 1999, p. 88.

⁸ De Benedictis, *Ibid.*, p. 81.

New Textualities: Influence of the Evolution of Textuality's Concept

With the textuality's concept widening, we have to reconsider our way to understand musical work. Studying a song is not simply referring to sheet music in order to reproduce it. Many textuality forms are involved in the production process. To summarize Barthes' theory, a text refers not only to the scriptural form, but also to the idea behind it. Thus we can consider stage direction, choreography, lighting programming, even the session⁹ on a recording software (such as Pro Tools, Cubase or Logic¹⁰), as a textuality forms that carries a level of significance regarding the musical work. They contribute to its accomplishment, on an audio support as much as in live performance. Likewise our description of the three aspects of musical pedagogy, recording and stage performance are two sides of the same concept. In fact, they simply highlight different textualities, and therefore, different layers of signification that each one brings to the audience. As a result, studying a song is not only "reading" sheet music, but concerns a wide range of dimensions, both artistic and technical. Consequently, it shows that musician – student or professional – has to approach musical creation in all these dimensions that characterize it.

Textualities' multiplicity should be reflected on our way to teach music to our pupils. This result strengthens the weight of musical knowledge and musical identity development. Indeed, when a student faces different audio versions (and then different arrangements or orchestrations), he will have to choose between them, determining which one suits him best¹¹. Searching, hearing – and seeing¹² – different variants of a track, performed by different artists, in different situations (recording, live performance, etc.), at different periods (which implies different musical gears and setups¹³)... all these factors reinforce our knowledge of the musical culture about a repertoire, about the way we perform a musical work, as much as our perception of the distinctive manner to emphasize the ideas beneath the textualities.

The development of textuality's concept leads us to realize the relevance of these questions for the student's evolution. Learning – and playing – music brings him to embrace a large range of artistic expression (e.g. lighting, stage setting, choreography, etc.) and technical practice (e.g. sound engineering, light engineering, computer music, etc.). Consequently, he will not simply read a score, but will consider musical production as a whole of various skills put together¹⁴ in order to perform music. Music production, its execution, is the result of cooperation: this distinguishes the common way to consider it as the product of this virtual encounter between the composer's will and the performer¹⁵: "the only performer's purpose is to understand musical work's truth and make the audience grasp it¹⁶". We think, as the different works in musical philology illustrate, that performing a song – especially in the case of popular music – is the result of multiple contributions, in the creation but also in

⁹ It refers to the folder on which the song is recorded and mixed. The name may vary according to the software employed: for example, Ableton Live calls it "project".

¹⁰ With all the plugins used to shape the sound set on the audio format

¹¹ He may also not want to choose, and will prefer to mix the different versions. The appropriation's process is still the same in that case.

¹² In the case of recorded shows.

¹³ Obviously, we don't record the same way in the 1960s than today.

¹⁴ This action of collecting, putting skills together, reminds us the true definition of composition: It came from the Latin *cum ponere*, which can be translated as "putting together". Composing is putting elements all at once in order to produce something new.

¹⁵ Leibowitz, René, *Le compositeur et son double*, Paris, Gallimard, 1986

¹⁶ Leibowitz, René, *Ibid.*, p.33.

the performing process: the knowledge and skills of the various actors contribute to the performance advancement. Thus, in order to develop student's musical expression as much as their musical knowledge, music teachers (in all levels of teaching¹⁷) have to put them in contact with all these dimensions, and make them grasp the idea that a musical production doesn't lie solely on sheet music, but express itself through a tremendous amount of modalities.

Is an Applied Musicology Possible?

Musicologist and Creative Process

Traditionally, musicology is considered as a speech on music. In *L'altération musicale*, Bernard Sève distinguishes five different types of speech on music (theoretical, philosophical, musicological, activist, scientific¹⁸). The musicological discourse is representative of how musicology approaches its subject of study: "It has to be descriptive, analytical, historical, but not normative, it analyzes facts but doesn't prescribe any rules [...]"¹⁹.

Musicology shows a duality regarding musical study, as known as "participative" and "objective" approaches. The first encloses the musicologist in the observed phenomenon: by his position, he has a unique perception of the event. The second tendency, on the contrary, demonstrates that the previous position might involve a subjectivity bias, because the musicologist only has a limited sight on the entire phenomenon. Thus, it would be better to take some distance from it, be objective toward the event, so as to avoid interaction prejudice. This is what we called "objective" approach. As a result, we consider musicologist's theoretical approach through two elements: his disciplinary orientation (e.g. philology, historical, etc.) and his involvement (or non-involvement) toward the event studied²⁰.

Traditionally, musicology's subject deals with discourse on music, glossing on musical practices, significance and its impact on society. However, could we consider musicologist as being a part of the creative process? We think the encounter of these two worlds might be sources of opportunities and innovations.

What musicologist could bring to the creative process? In the case of an historical production²¹, his knowledge concerning the period (style, analysis, technical and social ways to produce a piece of music, etc.) is particularly valuable. Together with the other members of the musical project, the musicologist could assume the role of advisor regarding production's historical authenticity. Moreover, musicologist can be a source of information on possible repertoires melting, especially on crossing western, traditional and/or pop music. His historical and analysis knowledge (on style, specific composing methods, etc.) may guide composers (and arrangers) in their crossing choices, preventing false alternatives. The approach's aim is to guarantee a certain authenticity, or at least a fine quality about the way we borrow stylistic

¹⁷ E.g. high school, conservatory, music school, university, etc.

¹⁸ Sève, Bernard, *L'altération musicale*, Paris, Editions du Seuil, 2002, p. 45.

¹⁹ Sève, *Ibid.*, p. 45.

²⁰ This description refers to the main theoretical musicological approaches. Of course, those choices aren't absolute: we can observe some crossing between the different tendencies.

²¹ I.e. a production that tries to reproduce a musical work in its original conditions (using instruments of the same period, using the same recording technique, etc.).

elements from a certain repertoire. In these two cases, musicologist can have a reliable influence on a technical point of view (i.e. advising and coordinating) in conjunction with other members of the creative process.

The musicologist's help can grasp other creation levels. His familiarity with broadcast modes (including web process of broadcasting), about audio supports and different forms of textuality can contribute to the musical project in guiding through new ways to explore. For example, with the help of the sound engineer, they can exploit new forms of sound spatialization (moving from stereophonic to multiphonic productions, in 5.1 or 7.1 for example), or using some video performance devices (e.g. motion capture, MIDI triggering on visual effects, etc.). These examples have already been applied by different teams (e.g. the works on the Inuit singer Tanya Tagaq by the research team of Serge Lacasse and Sophie Stévançe²²), but the true musicologist's relevance lies on his profound knowledge of all the different technique employed in show performance, and the efficiency of the process. Besides, he can propose new strategies (concerning textual elaboration, broadcasting form, etc.) pulling out the conclusions of the previous attempts in musical history.

Canadian's research team have develop a research field called « Research-Creation ». The purpose of it is to join artistic practice and scientific research. It can be used by a unique person (e.g. a PhD student producing an artistic work during his degree course, adding consequently scientific reflection on his production), or in conjunction with a research team. Findelli and Coste see in this approach a “fruitful way” which “seek to dig out this “[research] need”, to see on what concept it relies, to better understand the factors and their reason to be, in short to make a reasoned and argued inquiry²³”.

Nevertheless, we consider musicologist's role in the creation process as a complementary member of the creation team. In this way, musicologist's advising role will be a systematic element of the creative process. The musicologist's wide musical background (in history as well as technical and mediological practices) offers a full range of tools that he can put at the creative team service. Furthermore, considering his activity as a musician, he has a unique vision of the questionings and issues in this field of practice. All of these elements are in favor of our repositioning will of the musicologist's role in supporting the creative production.

Musicology's Contribution to Musical Pedagogy

Thus, the previous part has revealed that musicologist knowledge and know-how can be useful in the creative process. This element brings a new perspective to apply on musical pedagogy. The example of textuality's concept expansion is an excellent illustration. The link between musicological reflection and practice echoed primarily on his work as a composer. We try here to highlight the musicological knowledge as a significant resource to exploit in the case of musical pedagogy.

This consideration is at the core of the OGMA Project²⁴. It is a brave new initiative in french musicology, trying to extend the links between university and schools of

²² « L'ethno-pop selon Tanya Tagaq : une démarche artistique cosmopolite comme manifestation d'un équilibre social chez les Inuits », in Gresem [en ligne], consulté le 03/10/2014. URL : <http://gresem.oicrm.org/projets-de-recherche-creation/tagaq/>

²³ Findelli, Alain, Coste, Anne, « De la recherche-cr ation   la recherche-projet : un cadre th orique et m thodologique pour la recherche architecturale », in Lieux communs, n  10, 2007, p. 151.

²⁴ French acronym for Office G n ral de Musicologie Appliqu e (General Office of Applied Musicology in English).

music. As we said before, the musicology's definition is clear: it refers to the speech on music. Once produced, it will be rewrite on paper, or deliver in a lecture, in order to be used by other musicologists. Its impact on student – except students in musicology – is not decisive for musical practice. Which is a shame: we saw what could bring works in philology to our conception of a musical creation. We assume this illustration is a first step toward a wider contribution of musicological research in our music pedagogical system.

That is why we use the terms “applied musicology”: we are looking for a way to put the musicological knowledge – and know-how – to serve musical practices. This definition should be extended to the whole cultural process which contribute to the musical production. The interdisciplinary approach is at the root of this initiative: as we have described musical creation as a cooperative process between characters of specific abilities (e.g. sound engineering, staging, etc.), we need to approach the musical production through all its dimensions (artistic, technic, mediologic). This method is, to our mind, the only way to fully understand a cultural phenomenon such as musical creation. Furthermore, the OGMA's position concerning musical pedagogy is not limited to music students: it must be broaden to professional practitioners who want to study new forms of understanding of their own art and, in contact with musicological works, try to find new ways to perform.

Musicological part in musical practice development's could take different forms, depending on which musicological field the person want to expand. Here are some examples of the different possibilities, it is, of course, not a definitive list of options.

- *Musicology of production*: a study of the different production modes in music industry, of its protagonists, etc.
- *Musicology of recording*: Critical study of the recording modes employed through the history of recording, including the ways to pick up sound, understand and establish a recording aesthetic and help to develop new techniques of recording.
- *Musicology of performance*: From a research about various version of a same musical work, trying to point out similarities and dissimilarities between the different performance.
- *Musicology of musical creation*: investigations on the creative process, document the different step of a production, by periods, repertoires, etc.

Cooperation between musicology, cultural practice and pedagogy – in its widest sense – might be decisive to develop a new way of thinking musical practice and education. The OGMA project tries to initiate a reflection about interdisciplinary connection and collaboration in order to promote new approaches on cultural practices. One of our goal is to open an original consideration of this questioning with other institutions – musical as musicological – throughout the globe concerning this design: readjusting musical pedagogy – and musical practice – to the evolution of our manner to think the musical creation and practice process, through observation (i.e. considering, for example, the numerous amount of actors involved in musical production) and theory (i.e. our way to conceptualize the phenomenon, and drew the relevant elements from it).

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