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# Music analysis: a bridge between performing and aural training?

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## **Abstract**

*This article looks at whether music analysis might function as a bridge between the subject of instrumental performance and the subject of aural training in higher music education. It derives from a study with three sub-studies that was carried out at the Norwegian Academy of Music; lessons given by four instrumental teachers were observed in terms of their use of music analysis, and students were surveyed about their opinions regarding music analysis, both with a questionnaire and in group interviews. The findings demonstrate that music analysis does not presently function as such a bridge, despite the fact that many students think it is very important and seek to improve their capacity in this regard. This inconsistency might be reconciled through minor changes in the way teachers conduct their music analyses for their students, and in the amount of communication between the teachers regarding analytical issues.*

*Keywords: music analysis, aural training, performing*

## **1. Introduction**

The individual subjects in a coherent educational program should relate to one another, and students should find it both straightforward and desirable to transfer knowledge from one subject to another. As an aural training teacher at the Norwegian Academy of Music (NAM), I am particularly interested in the connection between the subject of instrumental performance and the subject of aural training. The curriculum for NAM (2012), Aural training 1: Aims, reads as follows (my translation):

Through working with this subject, the student is expected to develop and strengthen the ability to inner representation of sound, and to be able to use the inner ear actively when working with music. The student is expected to

- develop his or her musical memory [ . . .];
- acquire good abilities for reading, structuring, rehearsing, memorising and reproducing a score (by singing or playing) independently, quickly and precisely;
- strengthen the ability to listen actively to music, and to develop the skills of perceiving, remembering, structuring and reproducing (by singing, describing, writing) both details and overall structures in music.

In short, students are expected to be able to use their inner ear actively and to develop their ability to *memorise*, *to deal with a score* and *to listen*, all of which are important qualifications when working with a music instrument. When I teach aural training, I have found *music analysis* to be a very useful tool, both when one re-creates the music in a score using the inner ear and when one listens to actual sounding music. The clarified overview of musical content that is enabled by analysis makes it easier to know how to listen and what to listen for, because of the successful analysis' attention upon various musical elements. Such deliberate analytical attention also helps the memorising process. The formulations in NAM's curriculum, quoted above, highly support an analytic way of working, especially in the final bullet point, here rendered with my italics:

- [...] and to develop the skills of *perceiving*, remembering, *structuring* and reproducing (by singing, *describing*, *writing*) both *details* and *overall structures* in music.

When one works to heighten one's musical attentiveness, labelling is important as well: 'Labelling (using terminology on) a phenomenon is an important supposition for teaching this phenomenon, partly because labelling makes it possible to talk about it, but also because it is of great help in just discovering the phenomenon' (Nielsen, 1998:107, my translation). Naming something makes it important, which in turn makes it more likely to contribute to the sought-after understanding of a musical work. In aural training lessons, one frequently uses professional music terms. When all of the students in the group share an understanding of a term, you no longer need

to discuss the content of the term and are free to focus upon the content of the music with the help of that term.

Because music analysis with use of professional terms holds such a grounded position in aural training in connection with active listening to music, I assumed that music analysis would hold a similar position in the instrumental lessons. I was therefore very surprised to hear the following from a student of mine in a lesson: 'We never use analysis in the instrumental lessons, only in your lessons'. The other students in the group agreed, and I got the impression that they felt it was a waste of time to pursue analysis as part of the aural training subject. This triggered my curiosity and eventually produced the following research question:

*Can music analysis function as a bridge between aural training and performing in higher music education?*

To answer this question, I had to know more about the content in instrumental teachers' lessons, and I also had to find out if the view about analysis expressed by the students in my small aural training group was in fact representative of most of the students at NAM. Before I present the project I undertook to investigate these issues, I will summarise some of the previous research related to my work.

## 1.1 Previous research

Norwegian scholars Kosberg (1998) and Reitan (2006) have looked into the relationship between aural training and performing. Kosberg, on the one hand, interviewed brass instrumental teachers and aural training teachers and found that many of the former were sceptical about the usefulness of aural training to their own subject because they feared that aural training teachers knew too little about the specific characteristics of brass instruments. Reitan, on the other hand, surveyed students and found that about 50 per cent of them considered skills and knowledge from aural training to be useful when working with their instrument.

According to Vaughan, however, there is a gap between *music analysis* and performance that is typically caused by teachers failing 'to make any links between analytical study and other facets of musical tuition' (Vaughan, 2002:256). She carried out a study with twelve students taking part in an advanced undergraduate class in music analysis and had this to say about analytical method: 'Perhaps what we are looking for is not what suits the music best, but in a sense *what suits the individual student best*' (2002:266).

Ward (2004) is also concerned about the use of analysis (or lack thereof) by instrumental teachers. She investigates the aims and objectives of professional instrumental teachers working at a wide variety of levels. According to Ward, instrumental teachers were revealed to have a largely negative view of the term 'music analysis' and those related to it when they were presented for rating. However, a majority of teachers, when offering further comments about teaching methodology, indicated that analytical techniques, such as studying a piece of music for details of structure, form, shape and direction, were used within the lessons. Therefore, Ward concludes that terminology, not music analysis itself, is the problem: 'It is more likely that terminology and specific concepts of music analysis produce a negative response on the part of the teacher' (2004:212).

To make a better connection between music analysis and performance, Mawer (2003) underlines the importance of analysis being both intellectually fascinating and fun, as she proposes connections between academic study and practical performance.

Bresler (2009) is using perceiving as an approach to analysis; her doctoral students are to spend at least 30-60 minutes with an artwork to perceive it, where after they are going to describe it in detail and interpret it. Bresler says: 'Perception and description lead to the more abstract activities of deepened interpretation, generating themes and issues' (2009:19).

In order to make the music analysis more accessible, Rink (2002) suggests making graphical maps of different elements in the music, while Ward (2007) presents a 'toolkit' of strategies for instrumental teachers. Aitken (1997) emphasises holistic music analysis through following the long lines in the music and focusing on the musical context.

Despite the differences between music analysis and performance, they have much in common, as stated by Ward (2007:23): 'Put succinctly, the shared goals of music analysis and performance teaching are musical understanding, communication and problem solving'. Such common goals were important for me as well and inspired the present project.

I have pursued my investigation through three studies, all part of an overall project called 'The Bridge between Aural Training and Performing'; I will return to this in the method section below. Both the main project and the three sub-studies have been approved by the Norwegian Social Science Data Services (NSD).

## 1.2 Concepts

In the following section I will clarify my use of the most central concepts in this study.

My students' statements about analysis - 'We never use analysis in the instrumental lessons, only in your lessons' - might not be that uncompromising after all. One explanation might be that the concept of music analysis has different content in aural training and in performing. As I began my project, I realised that I needed a working definition of the concept of analysis that would be suitable for my project, one that was not already linked to and influenced by a certain music-educational area but was sufficiently open and neutral to encompass different ways of doing analysis. In addition, I was interested in the connection between analysis and synthesis, along the lines of Pratt (2005:12): 'Breaking down the total experience, *analysis*, becomes constructive only when followed by building up again, by *synthesis*'. I settled upon the following definition, based on my practical experience within my subject area but also on a commitment to a certain neutrality:

Analysing means separating a material or abstract entity into its constituent elements and generating extended knowledge through examination and reflection, in order to obtain a better understanding of the entirety when those elements are recombined.

Even if this definition does not mention the use of *words* as a part of the analytical process, one normally thinks of analysing as a verbal activity, often with great use of professional terminology. In terms of the present project, the use of professional music terminology was also of interest; I wondered whether the terms used in aural training and in instrumental performance were the same, and whether terms were used to the same extent as well. Therefore, I also needed to clarify my understanding of the concept of terminology, and concluded with this definition:

Terminology, or professional terms, refers to words and expressions that are particularly connected to a certain field. A professional term has a restricted meaning that is part of a common understanding.

These two definitions represented important tools in the analysis of my empirical data.

## 2. Theory

In this section I will present the theoretical basis for my study.

The meeting of performance and music analysis may be complicated to the extent that it implies the collision of 'art' and 'science'. Danish music educator Nielsen speaks of *art* as being attached to perception, while *science* is attached to intellectual and verbal processes. Nielsen says about art and science: '[...] they both serve as tools for our acknowledgement. The difference between them lies in the ways in which they express the acknowledgement, and its degree of synonymy as well as which parts of our reality they manage to capture' (1998:111, my translation).

Russian psychologist Vygotsky claims that the perceptual and the thinking consciousnesses reflect reality differently. Regarding human conceptual development, he also emphasises the connection between *thought* and *words*: 'Thought is not merely expressed in words; it comes into existence through them' (1962:125). In his opinion, words seem to be indispensable in a process of reflection. Since analysing requires reflection and thoughtfulness, one would expect words to be an essential part of it, due to Vygotsky's statement. Since there may be many different ways of expressing oneself with words through an analysis, I also find it interesting that Vygotsky distinguishes between two different kinds of concepts: *scientific* and *spontaneous*. He claims that a scientific concept is brought about by someone, while a spontaneous concept is usually connected with a personal experience in a concrete situation. According to Vygotsky, developing scientific concepts is dependent of similar spontaneous concepts on a certain level. He underlines the importance of developing scientific concepts by saying that *associations* never will lead to higher intellectual activity (ibid.).

This project is not only concerned about use of words in an analysis, but also to a certain extent about the learning process, for the students to be able to link what learned in the two subjects of aural training and performing. Scientists Lehmann, Sloboda and Woody (2007) are interested in the learning process when they refer to different studies concerning expression in musical performance. They conclude:

[...] imitation alone, without explicit conceptualization and verbalization, is likely to be less than optimal in assisting students to expand their expressive repertoires. Teachers who demonstrate what they want and then get the student to engage in discussion and description of what they heard may have greater impact on their students' expressive development than those who simply demonstrate or talk. Similarly, students who try to verbally characterize what they hear may be more effective at incorporating new expressive options into their toolkits than those who just copy without

verbalization. Only what you consciously attend to can be effectively learned and transferred to other contexts. (Lehmann et al. 2007:96)

The authors' focus is on the students' opportunity to *reflect through the use of words* in their lessons, an opportunity that teachers ought to give them. Making their musical awareness more of a conscious affair through discussion will help students to develop the ability to musical expression and to transfer knowledge from one setting to another.

Not everyone celebrates the use of words and development of scientific concepts as central to the learning process. According to Hungarian scientist and philosopher Polanyi (1983) we will always *know* more than we can *tell*. Some knowledge cannot be expressed in words, it is *tacit knowledge*. Polanyi uses the terms *proximal* and *distal* to describe how we come to understand some given comprehensive entity: 'Thus the proximal term represents the *particulars* of this entity, and we can say, accordingly, that we comprehend the entity by relying on our awareness of its particulars for attending to their joint meaning' (1983:13). Tacit knowledge is attached to the proximal term. Polanyi emphasises that we turn *from* the proximal *to* the distal level, for instance as when we look at a face: 'We are attending *from* the features *to* the face, and thus may be unable to specify the features' (1983:10). Because we cannot focus on the whole and the details at the same time, the ability to comprehend the whole may be destroyed by going into details on the proximal level. However, Polanyi also claims that the destruction can be reconstructed by interiorising the particulars, even if such a recovery will not bring back the original meaning. These points of view are relevant to analysis, which implies looking at details compared to the entirety. Even though Polanyi may seem sceptical to analysis, he says: 'The destructive analysis of a comprehensive entity can be counteracted in many cases by explicitly stating the relation between its particulars. Where such explicit integration is feasible, it goes far beyond the range of tacit integration' (1983:19).

It may be challenging to find words that sufficiently express the musical content. American scholar Schön confronts this problem using his notion of 'reflect-in-action', whereby the reflection takes place simultaneously with the action, 'a process we can deliver without being able to say what we are doing.' He continues: 'Clearly, it is one thing to be able to reflect-in-action and quite another to be able to reflect *on* our reflect-in-action, so as to be able to produce a good verbal description of it' (1987:31). In a discussion whether to analyse verbally or not, his view may be weighty.

When we are working tacitly, without the use of words, intuition seems to be an important guide. Nevertheless, American psychologist Bruner talks about the value of intuitive thinking in combination with analytic thinking:

Through intuitive thinking the individual may often arrive at solutions to problems which he could not achieve at all, or at best more slowly, through analytic thinking. Once achieved by intuitive methods, they should if possible be checked by analytic methods, while at the same time being respected as worthy hypotheses for such checking. (1977:58)

Here Bruner speaks for combining the two ways of working by utilising both of their qualities: working intuitively, allowing new ideas to arrive, and working analytically, by going into details and entireties to get a cognitive overview.

English pianist and academic Rink talks about musical intuition as based on knowledge and experience, which he calls 'informed intuition':

I also proposed the term 'informed intuition', which recognises the importance of intuition in the interpretative process but also that considerable knowledge and experience generally lie behind it—in other words, that intuition need not come out of the blue, and need not be merely capricious. (2002:36)

It seems that even the advocates for tacit knowledge find the possibility of expressing oneself in words invaluable. In an article about tacit knowledge Swedish philosopher Molander says that no knowledge is *completely* silent. He also says that even if one could imagine a 'silent' education, it is hard to see why one would strive for it, because nothing can compensate for words (1990). In addition, verbal expressions are a vital part of human *culture*, which may turn out to be important when focusing on the link between different subjects in higher music education. The student's statement about analysis referred to at the beginning of this article set up a distinction between aural training and instrumental performance as subjects within the same music-educational programme, a distinction that may be connected to the culture within each of these subjects, including its use of words. Research has shown that the learning process is influenced to a significant degree by the situation in which it takes place, including the way things are done and the words that are used. The same word in different teaching situations may have different meanings, which affects the learning process—that is, the learning becomes *situated*. American scientists Brown, Collins and Duguid talk about how a word in a sentence is situated: it is necessary to know the whole sentence to successfully and completely interpret a given word within it. They say: 'All knowledge is, we believe, like language. Its constituent parts index the world and so are inextricably a product of the activity and situations in which they are produced' (1996:22). According to their view, activity, concept and



culture are keywords when it comes to learning: 'Activity, concept and culture are interdependent. No one can be totally understood without the other two. Learning must involve all three' (1996:23).

### 3. Method

The overall approach of this study is qualitative, including its sub-studies which are both quantitative and qualitative.

There are three sub-studies:

- Study 1: Observation of lessons by instrumental teachers in terms of the use of music analysis.
- Study 2: Written survey given to students about their views on music analysis.
- Study 3: Group interviews with students using in-depth questions about music analysis in their educational programmes.

In this article, I will privilege the first sub-study and rely upon the other two for support. In the following section, I will review the methodology of each of the sub-studies in more detail.

#### 3.1 Study 1: Lessons by instrumental teachers

Four instrumental teachers were asked to allow observation of their lessons for this sub-study. These teachers, all men, were chosen for two main reasons:

(1) Their rather different instruments (percussion, piano, string, and woodwind). I wanted to compare and contrast the role of music analysis in the approaches of different instrumentalists.

2) Their view of aural training and analysis. They had all previously expressed interest in the connections between performance training and aural training, and showed an understanding for the use of analysis as a method when working with students on their instrumental repertoires.

Two lessons with each teacher, with different students each time, were included in the project. The teachers were supposed to teach just one student in each lesson, but on one occasion, there were two students present, playing together. All of the students were attending an educational programme with a performing profile.

I video- and audio-recorded the first few lessons I observed, but the video recordings turned out to be virtually useless, due to their bad audio quality. Later on, then, I arranged for audio recordings alone. I was present at all of the lessons but did not participate or take notes. On occasions the teachers addressed comments to me, and at one point a student, a former student of mine, asked me a question. On these occasions I answered as shortly as possible. In general I tried not to disturb the focus of the lesson, though I did think it was important to be there, partly to make sure the recording machine functioned as expected, and partly to feel the mood and experience for myself what was happening during the lesson.

Later, I transcribed and analysed my recordings, identifying moments of music analysis according to my definition of the term. Only analysis that was elaborated and explained for the student in the lesson was taken into account—that is, I excluded statements such as ‘You must play more vigorously here’, even if they may have been based upon an analysis by the teacher, because such an analysis was not part of the lesson.

I categorised the moments of analysis in different ways. In particular, I looked for different *forms* of analysis, and I looked at *when* in the student’s working process the analysis took place. In terms of *when* the analysis took place, I divided the working process into *phases*: a *learning* phase (when one learns the notes from the score), an *interpretation* phase (when one tries to determine the best expression of the music), a *memorising* phase (when one learns the music by heart) and a *concert* phase (when one focuses on the presentation of the music to an audience via a concert). In terms of my various observations, I had no influence on which working phases would be represented, because the teachers chose the students that participated in the study. Besides, the students were on such a high level that the first phase, when learning the notes, was already mastered when playing the piece for the teacher for the first time. However, I experienced each of the other phases, as identified through the conversation between teacher and student during the lesson.

### 3.2 Study 2: Survey among the students

Because the NAM music students complete coursework in both aural training and performing, they are in a position to compare the two and accordingly represent important informants in their own right. I therefore invited students in the first or second year of study, all with ‘classical’ instruments, to participate in a survey concerning the use of music analysis and professional music terminology in their lessons. My response rate of 60 per cent reflected the participation of 94 students out of maximum of 156, representing the following 19 instruments: flute, oboe, clarinet,

saxophone, bassoon, trumpet, French horn, euphonium, trombone, percussion, violin, viola, cello, double bass, organ, piano, guitar, recorder, and voice.

At the beginning of the questionnaire the concepts 'analysis' and 'terminology' were defined. These definitions were simpler than the ones presented in this article, but they were supplemented by examples. The questionnaire included fourteen questions. For most of the questions, the students were asked to mark in a form, but they were also encouraged to comment on their answers. In the present article, I will refer only to the results of questions 1, 2, 4 and 13. The other questions are omitted here partly to limit the length of this article and partly because of some indistinctness in some of them, which led to unreliable results. The omitted questions did not affect the questions included here, which read as follows:

(1) In your opinion, to what extent would it be useful to analyse the music you are playing?

(2) To what extent do you yourself analyse the music with which you are working?

(4) To what extent do you use professional music terms instead of everyday words and expressions when working with music for your main instrument?

13) If, in your opinion, there is a difference regarding the use of music analysis and professional music terms in instrumental lessons and aural training lessons, respectively, does this impact the ways in which you yourself use analysis and professional music terms? Choose one of the following alternatives: I am using analysis and professional music terms as it is done in the aural training lessons. / I am using analysis and professional music terms as it is done in the instrumental lessons. / I am using analysis and professional music terms as I see fit, in my own judgment.

When analysing data from the questionnaire, both a quantitative and a qualitative approach were important. I counted the markings in the forms to determine percentages and conduct comparisons, thus working quantitatively. I treated the comments on the questions quantitatively when grouping those with similar views on an issue but qualitatively when I assessed them for originality and creativity.

### 3.3 Study 3: Group interviews with students

The students answering the questionnaire were then invited to participate in a group interview; though the questionnaire encouraged comments, I wanted to discuss some issues in more depth with the students. Ten students accepted, five females and five males, and I divided them into four groups, according to their instruments: group 1, violin + clarinet; group 2, bassoon + vocal; group 3, organ + organ + organ; and group 4, guitar + guitar + piano. Broadly speaking, then, the students in groups 1 and 2 had 'melodic' instruments, while the students in groups 3 and 4 had 'chordal' instruments.

I created a semi-structured interview guide to guarantee that the same topics would be discussed from group to group. When working out this guide, I drew upon Krueger (1998), *Developing Questions for Focus Groups*. My guide contained nine questions, and in this article I will rely most heavily upon five of them, here rendered in brief:

- What are the advantages and disadvantages by using analysis?
- When in the working process with a piece of music do you find analysis to be relevant or not relevant, and why?
- In your opinion, what should be analysed, and what should not? Why?
- What do you consider to be the advantages and disadvantages by using professional music terms when analysing music?
- All things considered, what would be the best situation regarding the use of analysis and professional music terms in your educational programme?

In the questions not included here, I asked the students to compare and contrast aural training and performing subjects concerning the use of analysis and professional music terms. I am excluding these answers here both to limit the length of this article and to remain consistent with my earlier questionnaire use.

The interviews were recorded and later transcribed. Because the number of students participating in the interviews was so low, it was important to determine a reliable way of handling the data. When a group contain a dominating individual, other members of the group may conceal their own view. In addition, certain views may prove quite idiosyncratic. The most valuable input, then, included those views shared by several students and those views that were best argued. Thus I hoped to accommodate both common opinions and original perspectives.

With this data, of course, I worked entirely qualitatively. In this article, I have intended to communicate the 'story' the students told me in the interview situation in a form that contributed to my research project (Kvale, 2001).

## **4. Findings**

In the following section, I will present the findings in each of the three sub-studies, with some reflections.

## 4.1 Findings study 1: Lessons by instrumental teachers

### 4.1.1 Ways of doing analysis

When observing the teachers' lessons, I found that they generally used four different ways of analyzing: (1) Analysis by the use of professional music terms; (2) Analysis by the use of metaphors and colourful words; (3) Analysis by the use of the music itself; and (4) Analysis by the use of rhythmical, meaningless syllables.

Regarding the first finding, *analysing by use of professional music terms*, the four teachers differed regarding the amount of professional music terms used. Two used many professional music terms, one used only some connected to the area of harmony, and one used very few professional music terms at all.

All four used *metaphors and colourful words*. For example, one of the teachers warned a student against playing too slowly in a given passage, because it might be felt like 'being out swimming and not having the strength to return to shore' (my translation).

The third finding mentioned, *analyzing by use of the music itself*, was used by some of the teachers, and especially by one of them. In one lesson, this teacher focused on the importance of the ninth in a certain harmonic passage, particularly in relation to the succeeding passage and in turn to the form of the whole piece. He makes his point partly with words and partly with the music itself, playing both his own instrument and the nearby piano. The music fills out what the words neglect:

And then, the energy in that ninth, you must . . . [*He plays the current musical part on the piano.*] You see? You must let that energy last all the way down—here you are too weak. Then the return to the main theme will sound too irresolute . . . [*He plays the ninth chord, E9, as it occurs in the piece, on his own instrument.*] Because, after you have played this, the piano continues with . . . [*He plays an E7 chord on the piano.*] You see? You have to play so loudly that this will . . . [*He plays the piano.*] Forte, you see, because from this, the recapitulation shall emerge. And then the recapitulation will appear in quite another light. (My translation)

All four teachers drew upon my fourth finding, the use of *rhythmical, meaningless syllables* to refer to musical themes. For example:

The musical notation is in 2/4 time. It consists of three measures. The first measure contains four quarter notes with the syllables 'Jam pam pam pam' underneath. The second measure contains a triplet of eighth notes, followed by a quarter note, and then another triplet of eighth notes, with the syllables 'di-de-li-di-de-li-di-de-li-di-de-li' underneath. The third measure contains a quarter note followed by three quarter notes, with the syllables 'dum bom bom bom' underneath. A double bar line is at the end of the third measure.

### 4.1.2 Reflections

When I visited the instrumental teachers' lessons, my first concern was whether or not there would be any music analysis according to my definition of it. Within the powerful master-apprentice tradition to which instrumental teaching belongs, there might be little room for music analysis. However, I found that the music the students played in the lessons was indeed divided into natural parts and considered for its musical content and qualities, then put back together again for the student to play with greater insight and awareness. This process resonated with my definition of analysis. In the following I am going to add some comments to the findings.

First of all, it is clear that each of the four different ways of analysing that I observed in the instrumental lessons encompassed the use of words in one way or another. Two of them use spoken and recognisable words, while in the other two the words are partly tacit or without meaning.

When analysis with *professional music terms* was used, the link to analysis in aural training lessons was perfectly clear. *Metaphors and colourful words* were used to a greater extent in the performing lessons than is normally done in aural training, presumably because they enable useful associations for the performing student who seeks to master a given musical expression. In the vignette above, the passage had to be performed at a tempo that worked for *all* of the music, including what came just before and after the passage in question. In this regard, the metaphor used powerfully communicated the feeling of exhaustion that could accompany a tempo that was too slow. Such a metaphor evokes what Vygotsky (1962) calls a *spontaneous concept*, an important preliminary stage in the larger move toward scientific concepts. According to Vygotsky it is important to progress from spontaneous concepts (or associations) to scientific concepts in order to fully exploit one's intellectual ability. Transferring his statement to musical situations, one might say that professional music terms, since they have a defined content, are applicable to many musical situations, but their effective use demands a deeper knowledge of both the term and the musical situation. On the contrary, personal expressions about a musical passage may be appropriate for that passage alone. However, even if certain colourful expressions could be replaced by professional music terms as a given student's knowledge increases, it may still be important to maintain those expressions as an additional expressive outlet.

Doing analyses via *the music itself* seemed to be another speciality for performing subjects. I consider this being use of tacit knowledge. According to Polanyi (1983), we know more than we can tell. In my opinion instrumental teachers using this kind of analysis rely specifically on the students' tacit knowledge. In the example above, we see how the teacher used proximal and distal levels: instead of explaining with words

how to expose the energy of the ninth, he departed from this particular detail (the proximal level) to account for the whole passage within which the ninth functioned (the distal level). Thus he was expecting the student to understand the detail in relation to the whole, exclusively according to the sounding music, which acted like a language with its own unique content. If we remove the played parts from the above example, the analysis would make no sense. This also means that the teacher had to adjust these tacit messages to what the student would be able to understand. Analysis via the music itself may also be seen in relation to Schön's concept *reflection-in-action* (Schön, 1987). When playing music becomes an integral part of his otherwise verbal explanation, the teacher's reflection takes place simultaneously with this action, which causes him problems with continued verbalization. Being in a musical flow inhibits his ability to reflect and verbalise.

As mentioned, analysis via *rhythmical, meaningless syllables* on exact or approximate pitches lent an instrumental function to a verbal action. Let us revisit the example in figure 1. The pitch in this example was approximate, but it was nevertheless obvious that the first quavers were broken triads, the triplets were in a stepwise descent, and the last quavers were repetitions of the same pitch. The teacher introduced many nuances into his 'performance', save for the actual pitches. And though the 'text' is meaningless, the syllables are not arbitrary. Each triplet is gathered within the word *dideli*. Because the last syllable in this word starts with the consonant *l*, the beginning of a new triplet becomes explicit upon the return of the consonant *d*. The descent concludes on the first quaver in bar three, which also begins with the consonant *d*. All of the quavers, both in the first and the last bar, have in common that their words consist of three letters, with a 'broad' vowel in the middle, and the consonant *m* in the end. The first word in the last bar fulfils a kind of transitional function: it marks the end of the descent in the previous bar but also links to the quaver motif in the last bar. We might also notice that the first words in all three bars are given additional weight via their opening consonants. The first bar starts with the Norwegian consonant *j* (*y*), which is 'heavier' than the airy *p* that follows. In the second bar, the aforementioned *d* is introduced. And in the third bar, the word *dum* makes a contrast both to the previous words and those that follow.

Summed up, then, the nonsense syllables chosen here in fact carefully contribute to the point being made by the teacher, perhaps better than if he had simply played the melody on an instrument in the first place. This underlines the power of verbal communication, even in a situation like this, as expressed by Molander (1990). I consider this too a way of using tacit knowledge: the message delivered by the teacher through his syllables contains no understandable words, only musical expressions. All

is implicit and explained through the music and here again, the student must know the codes to understand the message.

## 4.2 Phases

Not only *how*, but also *when* the teachers introduced analysis was of interest to me during these lessons. As mentioned in paragraph 3.1, I divide the working process into four different phases: a *learning* phase, an *interpretation* phase, a *memorising* phase and a *concert* phase. I will now present examples of the last three.

In the first example, the music in question was rather new to the student. The student was able to play the piece with the right notes but lacked an adequate overview of its musical qualities, thus suggesting the interpretation phase of the process. The student and the teacher analysed the music together and determined the form of the piece to be ABA. They also identified the different themes in the piece and marked their locations. This knowledge supplied a basis for the interpretation of the piece.

In the next example, a student played a short piece that was composed in a post-tonal musical language. During the lesson, the teacher exercised the student's memory, directing the student in an analysis of the way intervals were used in the piece in repeating patterns. As a result, the student was able to play the piece by heart.

Lastly, one of the students was preparing a piece for a concert the following week. In this lesson, the teacher focused upon the upcoming concert situation, emphasising, for example, the importance of playing loud enough to reach the back of the room. Still, analysis was used to reinforce the points being made; the vignette describing analysis via the music itself, extracted above, was in fact taken from this same lesson.

### 4.2.1 Reflections

Clearly, analysis can contribute to very different phases of the working process involved with learning a piece of music. Analysis even occurred in the performance phase, when instead one might expect utter absorption in the musical flow and its emotional expression. In this connection, I will introduce one teacher's questions to his student (my translation): 'What does it mean to you to see that phrasing slur? What do you think, seeing it? What do you have to do to make me experience it?' With these three questions, this teacher sketches out the whole working process, from the first confrontation with the score to the interpretation of the music in performance. The teacher assumes that reading the score *means* something to the student and makes him *think*. This thinking generates an interpretation of the music and a performance, letting an audience (here: the teacher) experience what this music



has meant to the student. In this example, there are no obvious barriers between working cognitively and working emotionally with the music—one way of working leads directly to the other. While this teacher started with the score, then moved to the musical interpretation, one could imagine the process done the other way around as well, following Bruner (1977): one starts by following one’s intuition, but one always checks it using analysis. This also recalls Rink’s (2002) notion of ‘informed intuition’. Hence, analytical work is relevant to every point in the working process with a piece of music, so long as the analysis is connected to the music’s interpretation.

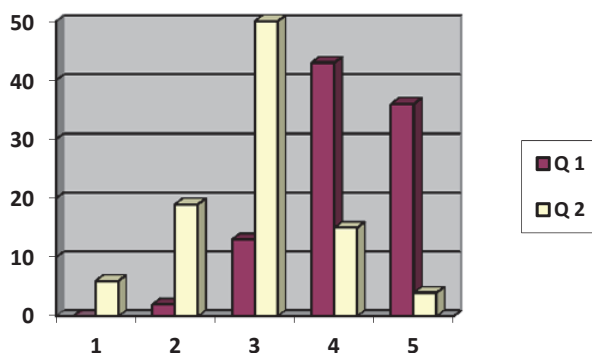
### 4.3 Findings study 2: Survey among the students

In the following section, I will present some of the findings from the questionnaire answered by the students.

#### 4.3.1 Use of analysis

The two first questions concerned the student’s personal view of analysis. In question 1, the students were asked to what degree they thought analysis of the music they were playing would be beneficial. Results appear in the dark columns in figure 2, ranging from not very useful (1) to very useful (5). 84 per cent of the students ticked 4 or 5, meaning that they considered analysis very useful.

In question 2, the students were asked to what degree they themselves analysed the music they were playing. Results appear in the light columns in figure 2, and here 53 per cent ticked 3, the alternative in the middle, and slightly more students ticked the two lower options than the two higher ones. Most of the students, then, ticked in the lower part of the scale.

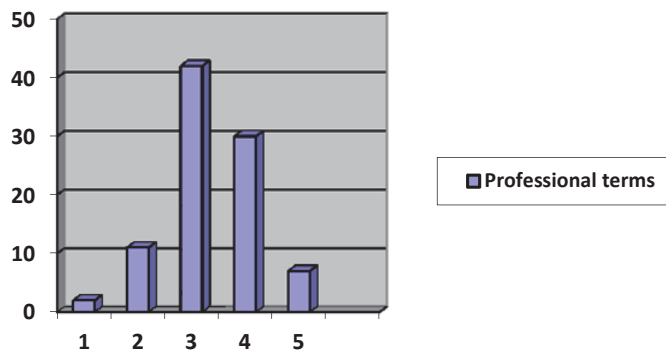


In addition, twenty-eight students commented on question 1, and twenty of these comments were positive, along these lines: ‘You get a better overall picture of the piece of music’; ‘[Analysis is] informative and makes you notice details’; ‘It is important regarding what is happening in the music, and it makes it technically easier on my instrument when I know what happens in the music’; ‘It contributes to the interpretation work to obtain a good presentation that feels natural to the audience’; ‘It gives an overview that helps a lot in terms of the hours spent learning the music, and it takes more to forget something you have learned systematically’.

Here are some comments on the second question: ‘Not enough!’; ‘I can hear what it is, but I cannot label it’; ‘I am good at analysing when having a lesson with my teacher, but not by myself when practicing’.

#### 4.3.2 Use of professional music terms

In question 4, the students were asked to what extent they used professional music terms when working with music on their main instrument. The results are shown in figure 3.



Altogether, ninety-two out of ninety-four students responded here, and categories 3 and 4 received the largest number of marks at seventy-two, which amounts to 78 per cent of the total.

#### 4.3.3 Attitude towards the use of analysis and professional music terms

Question 13 asked whether the students used analysis and professional music terms like their instrumental teacher did, like their aural training teacher did or in their

own way. Fully 80 per cent responded that they used analysis and professional music terms in their own way, and 16 per cent acknowledged their instrumental teacher's usage.

#### **4.3.4 Reflections**

The results of question 1 indicate that the students are very interested in analysis, which is a pleasant surprise, given the introductory episode and the students' statements. The students also applaud several particular aspects of analysis: it gives an overview of the music but also allows one to notice details; it makes the instrument technique easier; it is important to the interpretation process; it helps one to memorise the music more quickly. Responses to question 2 indicate that the students think they do too little analysis themselves, and the comments for this question give the impression that the students feel they should improve their competence in analysis. Comparing the responses to questions 1 and 2, I began to wonder why the students were not better at analysis when they valued it so highly. I will return to this issue later. An evaluation of the responses to questions 2 and 4 indicates that the students think they use more professional music terms than analysis as such.

Because performance is these students' major activity in their educational programme, one might expect them to work in the same way as their instrumental teachers, yet responses to question 13 indicate that most of the students thought they used analysis and professional music terms in their own way. It may be that these students make use of knowledge from different subjects in their educational programme to form their individual applications of analysis and professional music terms. If this is the case, it is good news, because all subjects in an educational programme are meant to contribute to a whole that is greater than the parts.

#### **4.4 Findings study 3: Group interviews with students**

In this section I will refer to some of the findings from the group interviews and in particular those opinions that were thoroughly argued or shared by several students.

##### **4.4.1 Advantages and disadvantages by analysis**

To start the interview and form an early impression of the students' attitude towards analysis, I asked them to describe its advantages and disadvantages. Among its positive aspects, analysis was seen to be a structuring and timesaving means of working, a help when working alone, a help for building good sounding chords, a tool for

transferring knowledge, and a help regarding both an awareness of and an ability to perform music.

Disadvantages included the following, in the words of some of the students: 'It may be negative to look at the music in blocks —here comes a subdominant and now it is a Ss7 [ii7]—because then you cannot think of the musical entirety'; 'If it is analysed too much, the music may become theoretical. You should not lose your very first impression and experience of the music from when you listen to it for the first time. If you know everything too precisely, the mystery of the music may disappear'; 'If your analysis is wrong, it may cause you trouble'.

#### **4.4.2 When should one be analysing?**

I asked the students *when* in the working process with a piece of music they thought analysis would be beneficial. Most of those who answered this question preferred to do analysis relatively early in the process—in fact, as soon as they were able to play it through. One of them even said that one should analyse the music *before* one was able to play it, just after listening to someone else play it. Two of the chordal instrument players thought one should continue to analyse throughout the working process with the piece; one added, 'You may change your mind, which requires a new analysis'.

Two of the melodic instrument students also mentioned when one should *not* try to analyse: when playing together with others. This is because one cannot combine analysis with feelings: when playing, one is in an emotional flow; when analysing, one undertakes a cognitive process. A chordal instrument player also commented that one should not analyse while improvising; one should just feel something and then do it. However, an analysis might well be useful after the improvisation.

#### **4.4.3 What should be analysed?**

I asked the students what musical elements they thought might be analysed, and there was a notable difference in the answers from the students of melody instruments and those of chordal instruments.

The former students mentioned form, rhythm, style, dynamics, sonority, melody and phrasing as elements to be analysed. When I pointed out that they had not mentioned harmony, one of them said that harmonic analysis depended on the situation; it was important to pay attention to harmony when playing with others, for example, in chamber music, in order to obtain good intonation.

One of the chordal instrument students said that one should analyse everything and then go deeper into the things one wanted to emphasise. Another thought that

nearly everything one can find in a score can be analysed, including dynamics, tempo and the symbols over and under the notes, as well as the phrasing.

#### **4.4.4 Use of professional music terms**

Several students said it was not a problem if things were expressed in different ways in different subjects. One of them compared this to dialects, which one can understand even when they are different from one's own. Others pointed out that each instrumental teacher should have the freedom to express himself as he liked, as this was part of his personality, and personality was thought relevant to instrumental teaching. In addition, though, several of the students thought consistent professional music terminology should be used in the lessons for several reasons: to avoid misunderstandings; to introduce students to the international musical language they need to master when attending master classes or studying abroad; and to serve as a link among the subjects in the educational programme.

#### **4.4.5 Analysis and professional music terms in the educational programme**

What then, would be the best situation regarding the use of analysis and music terminology in the educational programme, according to the students? Some said they thought of analysis in the aural training lessons and analysis in the instrumental lessons as two different things. In their opinion, the analysis in aural training must not be too theoretical but instead should remain connected to playing one's instrument; instead of listening and writing down the music, then, one could listen and then *play* the music. One should play by ear in the aural training lessons, by using one's instrument for imitation and improvisation to experience analysis in a practical form, connected to one's instrument. It also would be rewarding if one could bring the score of the piece one is working on for analysis in the aural training lessons. Alternatively, each student could choose and conduct an analysis of a piece of music for the aural training group. If all of the students in the group are playing the same piece in the student orchestra, one could work with this piece in the aural training lessons as well.

The instrumental teacher, the students insisted, should be able to teach not only technically on the instrument but also analytically with the music. If the instrumental teacher taught all or part of what is now the subject of harmony in the curriculum, the students would receive more concrete assistance in the practical transference of the analysis to their own instruments. One student added, 'Because theory has its origin in the music itself, it is necessary to work through the sounding music to understand

the theory'. The students also thought it would be important to see the instrumental teacher using analysis, as a model for how to use it themselves.

#### **4.4.6 Reflections**

The students' positive attitude towards analysis in the interview reinforced the findings from the questionnaire about its usefulness. Indeed, all of the comments regarding potential disadvantages included reservations: 'it may be negative'; 'if analysed too much'; 'if your analysis is wrong'. If such conditions could be avoided, there would probably be no disadvantages to analysis at all.

As mentioned above, the students meant that the analysis should originate in the music and follow one's first hearing/playing of it; hence the music must be experienced before the analytical work could start. Asked when not to analyse, the students drew a distinction between working cognitively (playing by oneself) and working emotionally (playing with others) and favoured music analysis in the former context. I found this to be a remarkable conclusion, because it seems to exclude negotiating based on analysis in, for example, a chamber music rehearsal. It also contradicts Bruner's (1977) opinion about the advantages of letting cognitive and emotional work happen alongside one another.

When asked which musical elements in the music should be analysed, students were most interested in those that were directly connected to their particular instruments and ways of playing. The elements mentioned by the melodic instrument players affected their contribution to the overall musical work and tended to disregard harmony, even as an underpinning to a melodic line. The chordal instrument players, who tend to play from the complete score, found that everything should be analysed.

The students' view on professional music terms were divided in personal and professional considerations. On the one hand the students displayed a willingness to allow teachers considerable personal freedom when using professional music terms; on the other hand the students also acknowledged such terms' professional advantages.

The students' statements about aural training and performing being quite different when it comes to analysis are worth remarking upon as well. In my opinion, this conclusion may arise from situated learning. The cultures of aural training and performance training are rather different, which causes problems for students who try to link them. Their proposals attempt to redress this, with the overall aim of making analysis practical and usable regardless of teacher or subject area.

## 5. Discussion

### 5.1 Main findings versus the research question

In this section I will present my main findings, sorted under two different headings, according to what I observed in the teachers' lessons and what I learned directly from the students.

*The teachers' way of doing music analysis:* The instrumental teachers I observed did music analysis in many phases of the working process, and their way of analysing seemed especially adjusted to the instrumental subject. The use (or not) of words was uniquely vital to the instrumental teachers' analysis. Professional terms occurred to a rather small degree.

*The students' view on music analysis:* The students thought music analysis was important and wanted to improve their ability to analyse. They thought that music analysis should be practical and linked to performance, and that the teachers in aural training and performing should be models for how to analyse practically. They also thought that the use of professional music terms was important.

My research question was: *Can music analysis function as a bridge between aural training and performing in higher music education?*

Based on the findings presented in this article, I would certainly give an affirmative answer. However, it does appear that this is *not* the situation at the moment; changes would have to be put into effect to overcome the cultural differences between the two subjects.

The instrumental teachers I observed did a lot of music analysis, but their ways of analysing were mostly different from what is expected in aural training, according to the curriculum for the latter. But is this really a problem as such? Some previous research has focused on ways to encourage and prepare instrumental teachers to analyse theoretically by giving them different tools or methods (see Ward, 2007; Rink, 2002; Aitken, 1997). However, the most important issue, in my opinion, is not *how* the music analysis is carried out, but *that* music analysis is actually being done. The instrumental teachers' ways of analysing most likely derived from the demands of the performing subject, which means that they would likely lose something important if they were to be changed. Still, it is possible that improvements could be made.

The students acknowledged the importance of analysis yet admitted that they did too little of it. What could be the reasons for this? Did their subjects not include enough analysis? Were they not learning how to analyse? Did different approaches to analysis in different subjects confuse them?

Let me start with the first possibility: there is not enough analysis in the students' subjects. Though I encountered a lot of analysis when I observed the four instrumental

teachers there were differences among them regarding the amount of analysis. These teachers were chosen for the project because they had expressed interest in analysis; the episodes from their lessons therefore are examples of how music analysis *may* appear in instrumental lessons. Other instrumental teachers might not have such an interest and hence do less music analysis in their lessons.

As to the possibility that the students are not learning how to analyse, Vaughan (2002) claims that one should look for a means of analysing that suits the individual student best, rather than looking for a means of analysis that suits the music best. Though this sounds attractive, in my opinion this is not a way to go. The music is indeed the central issue, and students must learn different ways of approaching the music in terms of analysis, according to the style of the music, not the needs of the student. Researchers have looked at more usable ways of analysis (for example, Mawer, 2003; Bresler, 2009); here I will draw special attention to Lehmann, Sloboda and Woody (2007), who stress that discussions involving the students are important to the learning process. According to these authors, the verbal characterisation of what is heard leads to a greater awareness of the music, and hence a more effective learning process that makes possible transference of knowledge: 'Only what you consciously attend to can be effectively learned and transferred to other contexts' (2001:96). According to Nielsen (1998), labelling is an important part of the learning process, and the students here mentioned use of professional music terms as important. Certainly the use of professional music terms makes it easier to transfer analytical knowledge from one subject to another.

Regarding the possibility that students are bewildered by the range of possible approaches to analysis, we must confront the prospect of situated learning. According to Brown, Collins and Duguid (1996), learning is strongly connected to the subject where learned, for example through activities and concepts used. This is likely also the situation *within* the instrumental subjects as well, because the interviewed melodic instrument players had a different focus for their analyses than the chordal instrument players did. One would think that analysis would be more transferrable between the subjects if the students tended to analyse not only their own part in the music, but rather the entirety of the music by using a score, looking for their own part in relation to the rest of the music. Differences in analysis are not only attached to what to analyse but also to how to analyse it. The students wanted music analysis to be practical and linked to their instruments, with the teachers in aural training and performing serving as models for how to analyse in this way. Through such a practical approach, the link between the subjects would probably be more obvious, because the analyses are connected to a common aim: the interpretation of the music.



## 5.2 Conclusions

Let me conclude this section by summing up certain improvements to the link between aural training and performing through analysis, based on my findings in this study:

- There should be analysis in both subjects.
- The analyses should use a certain amount of professional music terms.
- The analyses should be practical and linked to the instruments.
- The students should be involved in working out the analyses.
- The teachers within the two subjects should function as models for how to make and use good, practical analyses.

In addition, there are three main conditions that must be satisfied regarding a successful analytical bridge between aural training and performing:

(1) Recognising *the importance* of analysis in both aural training and performing lessons.

(2) Recognising *the different ways* in which analyses are done in the two subjects.

(3) Cultivating *the dialog* between theoretical and instrumental teachers, the aims of which should be

- To share information about the status of analysis in the subject areas.
- To nuance the ways in which analyses are done, by being more practical in aural training lessons and more formal in instrumental lessons.
- To improve the learning outcome for students who take both subjects.

These efforts should not be confined to aural training and instrumental lessons alone.

## 5.3 Method limitations

The methods used in this project, despite the abundant data, had certain weaknesses. In my observation of the instrumental teachers, it was clear that the students were at very different musical and technical levels; they were playing different kinds of music from different musical periods; and they were in different phases of their work with the music. These factors may have influenced how the teachers treated the students and what they focused on, meaning that my overall picture of instrumental training might be incomplete. The simple fact that I was present at the lessons may also have affected the teaching; on one occasion in particular, I felt that the student was affected

by my presence. The teachers, however, assured me that their lessons were just like they always were.

In terms of the questionnaire, there were definitions with examples in order to preclude misunderstanding. Even so, some of the students commented that they did not understand some of the questions. Still, these comments were so few in number that they did not affect the overall results.

To strengthen the study, I would like to have involved more students in the group interviews as well.

#### 5.4 Implications and further research

This study shows that the distance between the aural training subject and the performing subjects is rather large when it comes to the use of music analysis. Listening to the inspiring thoughts from the students, however, introduces the possibility of improvement. Changing the situation requires an appreciation of the nature of the present differences and a willingness to exploit each subject's strengths to the advantage of the other. Communication between teachers across the subject boundaries is vital. By learning about the ways in which our colleagues understand and practice analysis, we also learn about our students, who must relate to different opinions and styles of their various teachers.

Further investigation of some of the areas touched upon by this study might encompass the results of using everyday language versus professional music terms when analysing music, and the most beneficial positioning of analysis in the working process with a piece of music.

As mentioned earlier, one of the students claimed that analysis make the mastery of instrumental technique easier. According to Ward (2007), many instrumental teachers are mainly concerned with teaching instrumental technique in their lessons, and therefore fear that analysis might take too much time in the lessons. However, if there is some consistency in the student's comment, working with analysis and technique hand in hand in an instrumental lesson may be advantageous.

As we have seen, music analysis can appear in different forms in different subjects, and the challenge is to build bridges between such forms within an educational programme, to the manifest benefit of the students. I will leave the last word, then, to one of the interviewed students, speaking on this topic: 'When you have graduated, you should be a musician, not just an instrumentalist'.

## Acknowledgement

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