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ACQUIRING THE SKILLS TO PAY THE BILLS

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ABSTRACT

Key words: Sight-reading, mental-practicing, piano, Eliazer, Kramer, transposing, score-reading, improvising.

This documents my attempts to become a better sight-reader and a faster learner. I proceed by examining literature and interviewing professional musicians and I discover that score-reading, transposing, sight-reading with other musicians, sight-reading frequently and increasing the difficulty of the material, improvising, and improving sense of rhythm are ways to improve sight-reading. I also discover that Karl Leimer's visualization technique and mentally reviewing a score to solve irrational rhythms and organize practice are methods of mental practicing that can lead to faster learning. Among the techniques I use are rhythm exercises, work on transposition, and work on score-reading. In addition I sight-read the Mozart and Beethoven sonatas and sight-read with other musicians to increase the volume and difficulty of the material. My sight-reading improved somewhat but time constraints prevent me from giving substantial results.

Table of Contents

Personal Background

I am twenty-four years old and have been studying music in institutions of higher education since I was seventeen. After high school, I studied piano and composition for two years at *Cégep Vanier* (*Cégep* is a compulsory two year specialized education programme before university in Quebec). Following this, I began my bachelor's in piano performance at the *Conservatoire de musique et d'art dramatique de Montréal* and I completed it at the *Musikhögskolan i Piteå.*

When I was nine, I chose to start taking piano lessons but I did not spend much time practicing until I was sixteen, when I decided to audition for *Cégep*. As a result, my repertoire at this point was limited. It consisted mainly of Bach two-part inventions, a few movements from Mozart sonatas, two Chopin waltzes, and a handful of short pieces from the Royal Conservatory of Music exams. I also lacked a basic understanding of and feeling for rhythm. I had rarely practiced with a metronome and I was quite oblivious to keeping a beat. Rhythmic values more complex than quarter notes, eighth notes, and sixteenth notes, were mere guesswork to me.

Although I expanded my repertoire while studying at *Cégep* and university over the past six years, I never focused on learning quickly. I would usually have two semesters to prepare a recital programme, while chamber music and accompaniment would vary from term to term. Sometimes I gave concerts in the middle of a semester but they were events that I organized when I was feeling sufficiently prepared to perform. While studying this way has benefited me by giving me ample time to focus on interpretation, it has led me to feel unprepared for the demands of a career in music in which one often has very little time to prepare.

Even though I have had limited experience preparing music quickly, I do not consider myself to be a slow learner. Nonetheless, I believe that the problems I encounter while practicing a piece often take too long to solve. This is probably the result of a lack of groundwork in my musical education; I am a poor sight-reader, my sense of rhythm is still very weak and I am terrible at improvising. While I have a very good understanding of music theory and a functional piano technique, my ability to play music at sight and more specifically fast music or music with complicated rhythms leaves much to be desired. Faced with these problems, I recognize my ability to learn a piece of music (even difficult ones) but I am much less convinced that I can play the piano.

Purpose

The aim of this project is to document my attempts to become a better sight-reader and to learn music more quickly. Learning music faster does not mean speeding up the interpretative process. Instead, it means that one becomes more efficient at learning the 'shell' of a piece. This entails being able to play through the piece accurately at or close to final tempo and from memory (depending on the material i.e. solo work or chamber music).

My desire to become a better sight-reader stems from my view that weakness in sight-reading is often related to fundamental problems in playing an instrument and I thought that identifying and working on my problems with sight-reading would result in an overall improvement in my piano playing. In addition, I believe that practicing music away from one's instrument can save time and accelerate learning and so I also examine mental practicing.

This paper attempts to answer the following questions: What are my problems with sight-reading? How can I improve my sight-reading? What are the benefits of mental practice? How can I practice mentally? How has trying to answer these questions resulted in any improvement in my playing?

Method

I proceed by taking a critical look at my weaknesses and finding and applying strategies to diminish them. These strategies are derived from books and articles about mental practicing and sight-reading, and from my interviews with professional musicians. I discuss the material I have gathered in order to outline different ways to work on my problems. Finally, I use the strategies and discuss their effectiveness while making use of audio recordings of my playing.

Learning a Piece

Proficiency in note-reading and rhythm, together with a good technique, are required to learn music quickly. A good indicator of these abilities is sight-reading. If I have one week to learn Chopin's *Fantasie Impromptu* and I sight-read it perfectly at performance tempo, then note-reading, technique, and rhythm are obviously not problematic. I can then begin to memorize it or

to focus on interpretation without worry. If, however, I sight-read it poorly, note reading, rhythm, and technique may be problematic. Could I not read the music efficiently? Did I not recognize the harmonies/musical patterns? Did my eyes react too slowly? Did the polyrhythms or the speed of the piece throw me off?

I believe difficulties in sight-reading can reveal problems with playing an instrument that result in slower learning. Even though I may struggle with rhythm when I have sufficient time to learn a piece, the scope of the problems only becomes clear when I sight-read. By trying to solve them, I hope to become a more well-rounded musician and a faster learner. In fact, it has been shown that better sight-readers are able to learn a piece faster on repeat run-throughs than weaker ones.[1]

Sight-Reading

This section provides an overview of sight-reading at the piano, explains the problems associated with sight-reading, and offers ways to solve them. In doing so, the mechanics of reading, the importance of sight-reading, and the definition of sight-reading are discussed.

Definition

In their article, 'Sight-Reading', Andreas C. Lehmann and Victoria McArthur describe sight-reading as 'performance with little or no rehearsal', and say it 'involves perceptual skills (decoding note patterns), kinesthetic skills (executing motor programs), and problem solving (improvising and guessing)'.[2]

In this paper, the term sight-reading will refer to the performance of pieces that have not been rehearsed. It will also be used to describe the performance of a piece that was rehearsed so long ago as to render the preparation seemingly negligible. However, even these preparations have a certain value in that they allow the performer to anticipate upcoming events in the piece, as does a musician with a good ear who sight-reads a piece that he has heard before. Consequently, it is not necessary to differentiate between performance with little rehearsal and performance with no rehearsal at all.

Why is it Important?

It is very hard to be a professional musician if one cannot learn music quickly. The pianist who is able to play through an opera will be hired, while the pianist who needs to memorize the score for the first rehearsal is not likely to be chosen. Pianists who are able to sight-read songs or sonatas will be asked to play chamber music, while those who have only one piece memorized will not be considered.[3] Accompanists and rehearsal pianists are deluged with so much music that it is not only impractical but arguably impossible to function as one without being proficient at sight-reading. Sight-reading is also important because of what it reveals about a pianist's skills. For instance, a pianist may think that he has a solid rhythmical foundation because he manages to keep a steady beat after months of practicing a piece. However, if when he sight-reads, he struggles to maintain the same rhythmical proficiency, evidently his rhythm is not well grounded and requires improvement.

While I stress the importance of the mechanical aspect of playing, it is not my intention to minimize the importance of musicality. After all, the best sight-readers are the most accurate and musical sight-readers. Nevertheless, if a digital sounding pianist who sight-reads with ease and a more musical pianist who requires a lot of time to learn new music both applied for a job, I believe that the digital sounding musician would likely prevail.

Is it Trainable?

In *The Pianist's Approach to Sight-reading and Memorizing*, Beryl Rubinstein claims that proficiency at sight-reading is not restricted to musicians who have a natural talent for it. Intelligence and education can frequently substitute for talent, and she maintains that enough intelligent practice should allow a weaker sight-reader to acquire as much fluency in sight-reading as pianists who are naturally skilled at it.[4] According to Lehmann and McArthur, sight-reading is trainable and differences in ability can be explained by differences in the musician's experience and repertoire.[5] They cite a study showing that sight-reading ability is associated with the amount of time devoted to 'accompaniment related activities' and the breadth of the pianist's accompaniment repertoire.[6] It also found that when someone sight-reads regularly but without changing the level of difficulty, his performance will not improve, but when it is combined with conscious training efforts, whether by increasing the level of difficulty or building repertoire, it

likely will.[7]

Intuitively, it is not surprising that sight-reading can be improved through training. After all, sight-reading is basically performance without practice and from personal experience, I know that performance skills are trainable.

Effective sight-reading is the mark of a well-grounded musician.[8] However, sight-reading differs from regular performance in one very significant respect: the use of the eyes. It is standard practice that the performance of piano music (at least solo repertoire) is done from memory. This allows the performer to do what he pleases with his eyes. Sight-reading, on the other hand, demands that the eyes always follow the score and so they cannot be used to guide the placement of the hands. If, for years, a pianist has only been working towards the goal of playing from memory, it should not come as a surprise if his playing collapses while sight-reading when his eyes are called upon to work in an unfamiliar way. Despite the fact that sight-reading comes naturally to some musicians, one cannot expect that proficiency in it will be acquired only through practicing to perform; the differences between performance and sight-reading are too great.

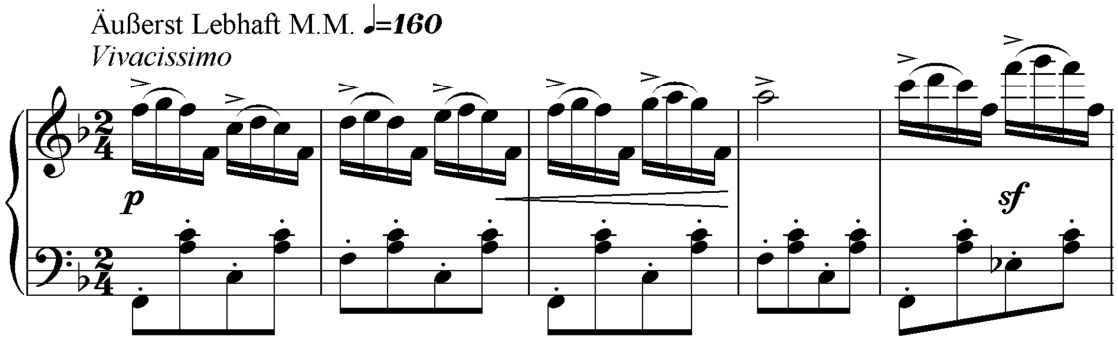
The Mechanics of Reading

Fluency in reading, words or music, is a result of recognizing word or note groups rather than single words or notes. The groups are frequently found in the same order and thus stand in 'easily recognizable relationships to each other'.[9] When reading a sentence, rather than reading one word at a time, the reader groups words together and understands them because of their familiarity and adherence to grammatical rules he has learned.[10]

A reader's field of vision includes things which are in focus, as well as things which are unclear because viewed peripherally. To see a whole image, the eye makes between four and six large and small movements, ocular saccades, per second. For every saccade, the focus changes from one point of fixation to the next[11] and in each focus the eye picks up four or five characters/words.[12] The brain then puts the image together and makes it coherent.[13] The brain controls the eye's movements without conscious intervention; the only movement the reader controls is the slow passage from one side of the page to the other. The short-term memory of the

brain forgets all the information after about one fifth of a second.[14] Since better sight-readers can grasp more information in a fixation, they require fewer of them. Weaker sight-readers focus on single notes, while better sight-readers focus their attention across line and phrase borders. Better readers also look further ahead in the score but also return to where they are playing.[15]

The mechanics of word reading are simpler than those of note reading, as success in the former only demands use of the eyes and brain, while 'in the latter, the eyes and brain serve only to create an impulse which must be accomplished through muscular action by arms, wrists, and fingers'.[16] Nonetheless, impressive feats of sight-reading can be accomplished. Consider the beginning of *Traumes-Wirren* by Robert Schumann:



With a metronome marking of 160, the tempo of this piece is very fast. If one were to play it with a metronome set to 150 (to simplify the arithmetic), one would play through a measure in four-fifths of a second (60/150=0.4 and 0.4*2=0.8). Therefore, the saccades, which take place about five times a second, equal the time it takes to play two sixteenth notes (four fifths of a second to play a measure means one fifth of a second to play an eighth note or two sixteenth notes). Given that one saccade takes in around 'four or five characters/words and short-term memory last only a fifth of a second, the eye is still moving about twice as fast as the fingers'.[17]

From this it is evident that good sight-reading is playing what has been seen, as one does not play notes when the eyes perceive them. In a way, facility at sight-reading is playing from memory.[18]

Eyes 1----2----3---4----1----2----3----4

Fingers 1----2----3----4----1----2----3----4

The pace relationship between the eyes and fingers changes with the tempo of a given piece. At slower speeds, the eyes only need to be slightly ahead of the fingers, while faster speeds require

a greater distance between the two. Both the eyes and fingers must advance smoothly with rhythmic regularity.[19]

Why is it hard?

Sight-reading in itself is not extremely difficult. Proficiency is expected of professionals and students in orchestras, as they are often required to sight-read material at rehearsals. In *Remedial Sight-reading for the Piano Student,* Sidney J. Lawrence comments that after two or three years of study, many students of woodwinds, brass, or strings can sight-read faster than they can actually play. Their situation is similar to that of fluent language readers, 'they must hold back the speed of their visual perception to permit the physical performance'.[20]

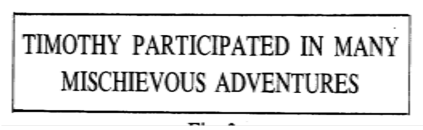
The situation of piano students differs from that of other instrumentalists with similar musical abilities. A typical piano student reads music slowly and under much duress. It is only possible for these students to play fluently by repeating a piece until it is incorporated into their muscle memory. This is not sight-reading.[21]

Lawrence believes that too much emphasis is placed on aesthetic values before the 'simple raw physical know-how' is taught.[22] Music is presented 'as though it were a recitation of a Shakespearean soliloquy rather than as a language which one speaks and reads in daily communication'.[23] In spoken language, attempts are made to improve the literary tastes of the public but only after a person has learned to read properly. No one thinks of forbidding someone to read because he may never cope with great poetry. Similarly, the first goal 'in piano education must be to train the student to sight-read piano music as he would read a book'.[24]

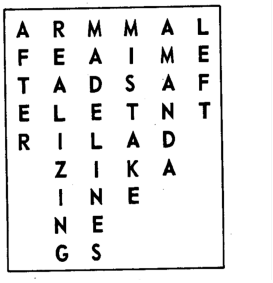
Just as the ability to read English indicates a general command of the English language, proficiency in sight-reading piano music implies a general command of the keyboard. Being able to play a number of pieces well, however, does not imply the same level of mastery.[25] In fact, according to Rubinstein 'too many students learn to play pieces on the piano without actually learning the instrument itself'.[26] Many students practice by mindlessly repeating motions, just as many people repeat a few foreign phrases without ever learning the language.[27] 'Intelligent physical result [...] must be preceded by intelligent mental cause'.[28]
It is interesting to ask why other instrumentalists find it easier to sight-read than keyboardists.

Lawrence attributes their difficulty to the vertical reading of two staves.[29] Musicians who only read one staff use their eyes much like they do when reading a book. Pianists need to be effective vertical readers and this requires special training.[30]

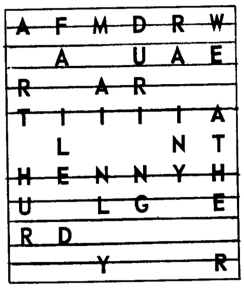
The following experiment demonstrates the difficulty of vertical reading. Ten teen-aged students took part in a study, in which they were asked to read the following sentence, printed in large letters on a four by four foot cardboard, aloud:[31]



The average time it took to read this sentence was three seconds. Afterwards, the same task was performed on the following sentence:[32]



The average time for this reading was twelve seconds. Finally, in order to emulate a group of notes, the letters of each word were separated at random on staff lines:[33]



The average reading time in this test was greater than twenty-one seconds, which was seven times longer than the initial horizontal reading.[34]

The reading times in this experiment are quite long. Perhaps this is the result of the sentences being written on a 4x4 foot cardboard rather than an A4 sheet, on which the entire image could be easily seen. Nonetheless, the experiment points to difficulties in vertical reading, a problem

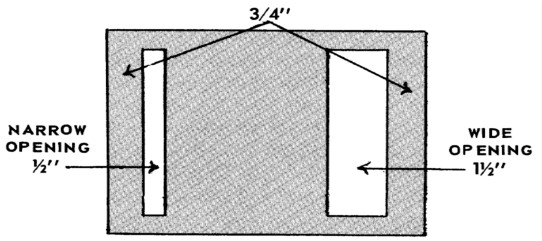
the pianist faces when sight-reading.

There are of course, piano students who are very strong sight-readers. How does their reading differ from that of weaker sight-readers? This question was investigated in a project at the Harbor Conservatory, which documents and compares the skills used by both strong and weak sight-readers.[35] It found that stronger and weaker sight-readers used their eyes much differently. The above average reader 'reads each vertical column of notes as one unit' and 'sees each block of notes as a single symbol'.[36] The average reader, however, tries to read both clefs together as separate lines and struggles in the same manner as one attempting to read two parallel lines of print simultaneously.[37] The above average sight-reader's comprehension of the printed group of vertical notes are almost immediately associated with the image of the matching notes on the keyboard. Furthermore, he will display a kinesthetic feeling of hand and finger placements which allows him to keep his eyes on the music.[38] 'The average reader mentally turns each vertical group into a horizontal or oblique position, actually reading one note at a time'.[39] The average reader also tends to look at his hands more frequently and unconsciously tries to retain an image of the notated music instead of the keyboard so that he can limit his need to look up.[40]

Sight-reading at the piano is not only difficult because of vertical reading. It is difficult because it relentlessly tests one's technique, sense of rhythm, and if one is adept at the foregoing, it tests one's musicality as well. These observations may be obvious but are just as real as the difficulty attributed to vertical reading. It is difficult to play a piece note/accurately without practicing it and it is hard to play things like polyrhythms without practicing them. This probably explains why the ability to sight-read implies a general command of the keyboard. One may learn to play five against three in Scriabin's *Fantasie op.28* without developing a general ability to play this polyrhythm. However, the presence of such an ability is confirmed by being able to accurately sight-read a piece in which the polyrhythm occurs.

How to Improve

To remedy problems with vertical reading, Lawrence suggests an exercise involving two people and an 'Eye-Focus Screen'.[41] The Eye Focus Screen is basically a piece of cardboard with two vertical slots cut out, one bigger than the other:[42]

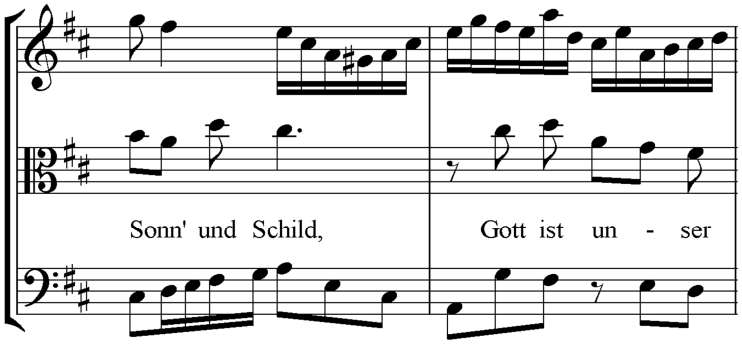


The Eye Focus Screen allows the student to focus on vertical reading, once with a narrow field of vision and then with a wider one, while the teacher moves the screen. Using the Eye Focus Screen enables the student to isolate his problem with vertical reading and to improve his playing.[43] It seems, however, that the Eye Focus Screen is aimed at less experienced students, as the problems Lawrence describes are rather basic e.g. reading chords linearly rather than as a single unit. The Eye Focus Screen may merit significant attention but it seemed likely to be more beneficial to use exercises on vertical reading devised for more advanced players, an example of which is score-reading, as discussed by Spillman in *Sightreading at the Keyboard*.[44]

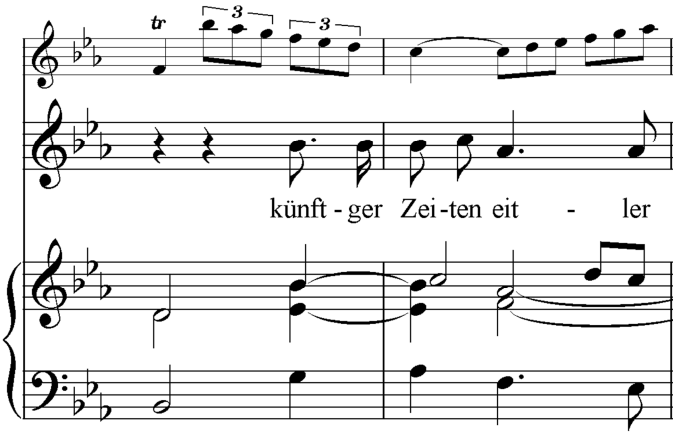
Score-reading

Score-reading, which refers to reading pieces for several instruments, is an excellent way in which to broaden one's vertical vision because it involves reading more than two staves. I imagine that after being able to read an orchestral score or a string quartet at the piano, sight-reading piano music should come as a relief. Score-reading can also include reading music with an *obbligato* line.

In the next example,[45] from *Gott ist unser Sonn' und Schild!* by J.S. Bach, one reads the left hand of the piano or the *basso continuo*, along with the *obbligato* line,[46] which is intended for oboe. The two staves are separated by the singer's part, which creates a larger gap between the staves played by the left and right hands, thus helping to expand one's vision.



Another example[47] of expanding one's vision through playing with an *obbligato* line can be seen in *Künft' ger Zeiten* by Handel:



In this case, one should read the piano part and the *obbligato* line, which is intended for violin, while a singer performs the vocal part. Subsequently, one should determine the following.[48]

- Was the rhythmic flow of the piece maintained?
- Was the pianist able to hop between the staves?
- Was enough time given to the singer?
- What was left out of the *obbligato* line and was the performer content with this result?

Score-reading is also useful because it requires one to read C-clefs (one could not read an orchestral score or a string quartet without being able to read different C-clefs).[49] The ability to use C-clefs is particularly useful when it comes to transposition, an integral skill for accompanists and a sure way to improve sight-reading.

Transposition

Transposition and sequence are the most common devices of repetition in music. Consequently, learning to transpose will improve one's sight-reading. In this respect, 'familiarity with chord progressions and modulations in all keys is essential'.[50] 'As a matter of practical common sense, a key involving six sharps or flats is no more difficult than one involving none, the basis of facility in all of them consisting of a sense of tonality and a recognition of key'.[51] Sense of tonality stems 'from aural expectation of tone sequence, either major or minor'. This expectation is the same for C-major and G-flat major. I presume that people with perfect pitch can hear different qualities in those keys but the relationship between the chords, i.e. dominant-tonic, remains the same, though the visual and physical elements may prove to be more difficult in some keys than others. The equal feeling of comfort in all tonalities is of fundamental importance in sight-reading because it brings about 'a natural and spontaneous adjustment to harmonic progression and modulation'.[52] It is possible to learn a piece in any key but proficiency in sight-reading suggests 'mental comfort with regard to the aural, the ocular, and the tactile in going from one chord to another, and from one tonality to another, it implies action taken correctly without conscious effort'.[53] Interestingly, familiarity with all keys is attained by practicing transposition, yet being proficient at transposition requires this familiarity. One understands different keys better when one views music in one tonality and plays it in another since one must extensively examine the relationship between the chords.

Another reason transposing is useful is that singers often ask accompanists to accommodate them by playing a song up or down a tone. A practical application of transposing is that it expands one's 'ability to analyze and think while the music is in progress'. [54] Using ways of transposing that stress analysis and listening will surely improve one's sight-reading.

There are several ways to transpose: by ear, with C-clefs, and by interval. To work on transposing by ear, one can simply select random notes at the piano and begin a familiar melody or an easy memorized piece.[55] To transpose using C-clefs, one must learn the different clefs. When one has learned them, one should look at the music one wants to transpose and imagine it is written in the clefs that correspond to the key in which one wants to play.[56] The ability to do this will be helpful in reading orchestral scores, as many of the instruments use clefs foreign to pianists. The final approach to transposition is by interval. This method makes one feel on edge.

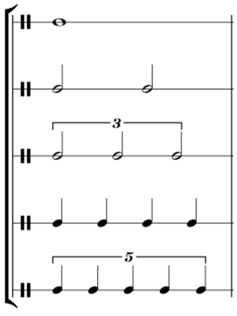
It requires one to nudge the notes up or down a specific interval, to imagine them in a different place on the page. [57] Beryl Rubinstein advises against interval transposing: 'Transposing by eye only, through ocular knowledge of intervals, will prove complicated, cumbersome, mentally fatiguing'.[58] Of course, it is not necessary to continually use a specific method of transposition; one can combine all of them while transposing a piece.

Clearly, sight-reading is also improved by practicing sight-reading. When practicing sight-reading, one should try to maintain rhythm and meter, refrain from stopping because of errors, leave out parts if necessary, get to the notes even with incorrect fingering, and avoid looking at one's hands because this disrupts visual contact with the score.[59] General sight-reading problems include miscalculating sizes of melodic and harmonic intervals. The interval size problems can be diminished by saying the interval names and scales before playing them.

Rhythm

There is a strong connection between rhythmic ability and sight-reading performance. Problems with rhythm and maintaining tempo and meter may be improved by tapping rhythm alone, by writing counts in the score, and by reading practice which involves a metronome.[60] Spillman suggests an exercise to help maintain tempo that entails familiarizing oneself with the different subdivisions of a beat. In this exercise, one simply taps the beat and vocalizes the different subdivisions.[61] For example:

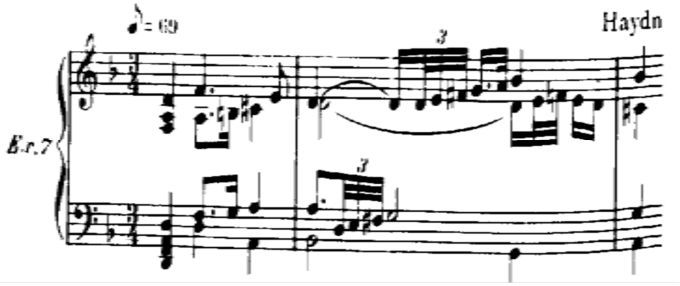
|one
|one-two
|one-two-three
|one-two-three-four
|one-two-three-four-five
etc.[62]



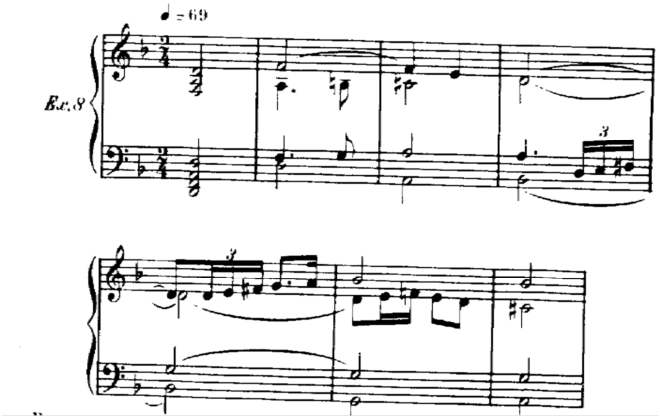
One should also reorganize the subdivisions. One should go from three in a beat, to seven in a beat, to two in a beat, etc. After completing this exercise, one should reflect upon which subdivisions were problematic and on whether one was able to make the subdivisions equal within the beat.[63]

Respect for time values is an attribute of a well-grounded musician, and one cannot hope to

become an expert sight-reader without being well-grounded.[64] Many students think that sixteenth notes are to be played fast and are thus harder to play than eighth notes and quarter notes etc.[65] This is simply not the case, as eighth notes in one piece are frequently played as fast or faster as sixteenth notes in a different piece. Students are often confused by the presence of smaller note values and they falsely believe that 32nd notes and 64th notes require great dexterity which they do not possess. For example:



But when the same music is written with larger time values and fewer notes in a measure it seems easier:[66]



In reality both examples are the same and it is only the unfamiliarity of the smaller values which makes the first one seem more complicated.

> Fear, which is a thorny barrier in the path of accomplishment, is largely the result of strangeness. The difficulties which it engenders are in large measure illusory. The conquering of fear is the outcome of the conquering of strangeness; the latter can be achieved only by frequent contact and the easy understanding which frequent contact produce.[67]

It may be that sight-reading is problematic because it is not practiced and is therefore unfamiliar. I have always been reluctant to sight-read and consequently never devoted any practice time to it. When I do sight-read, it strikes me that I am unable to process information at the speed which playing the piece requires. This may be the result of a lack of understanding of the piece since I

have found it helpful to analyze the score before beginning to sight-read. There are accounts of famous pianists who have learned and memorized large works by simply studying the score. This suggests how some musicians, myself included, place too much emphasis upon the physical aspect of practicing.

Mental Practice

Mental practicing is practicing away from one's instrument. It is valuable because it allows one to go over the score with the utmost concentration, without the physical and emotional constraints of performance. Gyorgy Sandor recommends looking at the score and associating musical passages with technical solutions.[68] Doing this allows the mind to engrave the associations between the visual material and the motoric activities with great ease and in turn allows the replaying on the piano to unfold smoothly.[69]

Karl Leimer, a piano pedagogue, taught his students to use mental practice in order to memorize a piece before playing it.[70] He stresses the importance of listening critically to one's own playing and of having complete control over one's touch on the keyboard.[71] To do this, one needs a precise understanding of the piece to be played and 'it is essential, therefore, before beginning with the practice of the piece, to visualize the same, whereupon, if this has been done thoroughly, [one] shall be able play it correctly from memory'.[72] To accomplish this in a short time, the memory must be trained through 'systematic logical thinking'. Having developed this skill, one is able to prepare technical execution in such a way that the piece can be performed 'perfectly' without practicing on the instrument. Walter Gieseking, a pianist who was able to memorize with astonishing speed, used this method to learn new music, often while traveling.[73] Because of his singular talent, Gieseking may not be the most convincing example of this method's usefulness. However, Leimer reports that some pupils of his have been able to memorize and play pieces well after practicing away from the keyboard.[74]

To demonstrate the method, Leimer analyzes a simple one page etude. He reviews it thoroughly, explaining what takes place in the left hand and the right hand. This analysis contributes an understanding of the form of the composition and after doing it, one should then be able to write down the etude from memory.[75] Leimer then does a similar analysis of J.S. Bach's two-part invention in C major':

> First we must again inform ourselves as to time and key signatures-4/4 and C major. The motif begins on the second sixteenth note of the first beat and consists of four tones gradating upwards, and then two descending thirds, ending with a leap to the fifth (dominant). This last leap of a fifth is very frequently altered as the invention progresses. The motif appears literally with the second quarter of the third beat in the lower voice. Hereto are added in the upper voices the eighth notes
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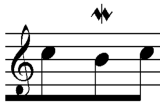
> 
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> as a counterpoint. The first motif is repeated in the second measure, in the upper voice, from G, thus forming
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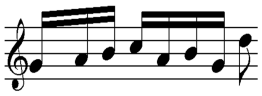
> 
>
> with the leap of a fifth to the last note, D. In the same measure the lower voice is approached by a leap from the last note of the previous measure, to the fifth belonging to the motif, followed by another note and octave lower, in counterpoint. [76]

Leimer continues with a detailed analysis of the piece until the seventh measure, where the first section of piece ends with cadence in G-major. Once the student is able to play the first section in correct time the student should then focus on touch. I am not going to deal with Leimer's discussion of touch because the restructuring of my technique is another project altogether. However, it is worth noting that practicing very slowly, playing each note evenly, and practicing only a few measures at a time will, according to Leimer, lead to perfect execution.

Leimer's method is probably more effective if one is a decent sight-reader, after all, if one has memorized a piece before playing it, one still needs to be proficient at sight-reading in order to perform it successfully. Last year, without knowledge of Leimer's method, I spent a few days analyzing the first movement of Beethoven's second sonata and tried to memorize it before playing it. While I did not manage to memorize it completely, my insight into the movement's language and structure allowed me to learn it very quickly. I practiced it for five days and was then able to play it from memory, although not at performance tempo and not without mistakes. My positive experience with visualization leads me to believe that further practice of visualization would be beneficial. I would argue that by memorizing scores before playing them, one is able to assimilate and process important information more quickly while sight-reading.

Improvisation

When sight-reading, one is often faced with the task of faking, a form of improvisation that entails simplifying what is to be played. In faking, one ignores the exact details of what is written and replaces them with educated guesswork or playing by ear.[77] Spillman suggests that one can improve faking by trying to improvise in the style of different composers.[78] Doing this will also make one more familiar with composers' styles, improve analysis skills, create freedom at the keyboard, and help one 'gravitate more naturally to correct and appropriate harmonies and figures while reading'.[79] He seems to imply that acquiring this ability will make sight-reading feel more natural because it will enable the reader to anticipate what is coming in the piece. It also seems evident that being able to improvise in different styles will make it easier to learn and memorize a piece, as one's understanding of its style will probably be more sophisticated than it would be otherwise. Spillman sets out the following exercises of improvisation in different styles:[80]

The Style of Mozart[81]

- Look at a melody written by Mozart and cover the accompaniment with a piece of paper.
- Read through it once thinking of harmonies outlined and implied, cadences, etc.
- Play the melody again but add something to the left hand: What did you play? Could you always play the left hand? Were the harmonies appropriate?
- Think about what figures Mozart uses for accompaniment and try them.
- Take away paper and see how it is written: is the accompaniment predictable? What energy level is in the accompaniment.
- Do the opposite. Improvise a melody under given accompaniment.

This style of improvising is closely related to sight-reading in two ways. First, few of us can read all the notes in every composition the first time around and if our playing is not to collapse rhythmically, we have to use our memory-inspired inventiveness to fill in the gaps. Second, the human brain reads by scanning for clues that fit into its vocabulary. The more we know what to expect in Mozart, the better we can read a new piece by him.

The Baroque Style[82]

- Select a suite by Bach or Handel.
- Play through the score as well as you can and pay attention: what cadences are used? How often do the harmonies change? How many voices are there? What motivic figures are used?
- When this has been internalized play until the first cadence.
- Then improvise the next section, trying to match and balance what the composer has done in the first section.
- Reflect on where you succeeded or failed.
- Repeat the exercise and always go forward. Do not restart on every beat even if it does not sound as good as you would like.

The Style of Brahms[83]

- Find a selection of Brahms with which you are unfamiliar. Choose something chordal but not necessarily block chords.
- After the first reading, read it again. This time, examine it carefully, taking note of the compositional choices: How frequently do the harmonies change? How many seventh chords are there and which kinds? Which melodic motives are used? How constant are the rhythmic devices?
- Next, invent a harmonic progression that sounds Brahmsian.
- Place a melodic figure over it and proceed to develop your idea. If he answers four bar phrases with four bar phrases try to emulate him.
- Reflect.

Interviews

I conducted, recorded, and transcribed the following interviews between October, 2011 and February, 2012. I chose to interview four professional musicians with a view to soliciting advice about learning music quickly, sight-reading, and mental practicing.

The first interviewee was the pianist Bernt Wilhelmsson, my teacher at the University of Gothenburg and a regular performer of solo and chamber music. The second was Erik Risberg, the orchestra pianist for the Gothenburg Symphony Orchestra. The third was Mieko Kanno, a teacher at the Durham University and a violinist who placed first in the *Rodolfo Lipizer Competition*. The final interviewee was Magnus Ricklund, a musical coach at the University of Gothenburg who is recognized for his ability to transpose music at sight.

The interviews took between twenty-five to forty minutes and were conducted in a conversational manner. I structured the interviews using the following questions:

- Do you learn music quickly?
- Have you ever worked on learning music quickly? If so, how?
- How is your sight-reading?
- Have you worked on sight-reading? If so, how?
- What are your views on mental practicing?
- Do you analyze music that you are learning? How do you do this and how is it helpful?
- What is your most efficient approach to learning new music?
- Do you have any suggestions for someone who wants to learn faster?
- Do you employ any specific methods when you need to learn a score quickly?
- Do you write down fingerings?
- Does your approach to music that has to be learned quickly differ from music that you can learn at your own pace?

It should be noted that because of the conversational nature of the interviews, not every question was put to every interviewee.

Bernt Wilhelmsson Interview

Wilhelmsson has become a faster learner over the years because of the amount of music he has played. Frequent playing and extensive repertoire allows him to transfer technical solutions from one piece to another. The pressure imposed by time constraints also accelerates his learning. When Wilhelmsson does not have much time to prepare a piece, he finds himself more focused while practicing and is thus able to learn faster. For example, he learned Liszt's, *Un Sposalizio,* in one month for a concert that was to be broadcast on Swedish radio. While *Un Sposalizio* is not a particularly difficult piece from a technical standpoint, one month is not a long time given that in eight minutes of music to memorize, much thought and control are required. To prepare for the concert, Wilhelmsson read the score away from the piano. He analyzed the structure of the piece, its harmonic language, and the way its themes change. While he read the piece, he visualized himself performing it. He believes that reading the score away from the piano enhanced his ability to memorize it.

To learn music quickly, one needs to organize one's time. One should play through the piece and identify the problem areas. Wilhelmsson says that sometimes there is not enough time to learn a difficult part exactly as written, in which case, it may be necessary to remove notes that are not important for the structure of the piece/passage. Another option when time is short is to exaggerate the expressive side of the section and play it slower, provided it sounds convincing. According to Wilhelmsson, many musicians practice too quickly when faced with severe time constraints. One needs to practice slowly in order to pay sufficient attention to detail. At the same time, one should not practice more than required. If the slow movement of a piece does not pose a problem, one need not practice it. It is not necessary to over prepare. It is also important not to be stressed while practicing. Instead of thinking that music is something which involves struggle, the musician should permit himself to be absorbed by the music and to be fascinated by it.

Wilhelmsson insists that he is not an exceptional sight-reader, but maintains that his sight-reading has been greatly enhanced by abundant preparation and performance. Accompanying singers and performing chamber music has also been helpful in this regard.

Erik Risberg Interview

As an orchestra pianist, Risberg often has to learn music quickly. Aside from playing in the orchestra, Risberg's duties include accompanying soloists, auditioning for the Gothenburg Symphony Orchestra and accompanying the Symphony's choir. When Risberg is accompanying for auditions, he often receives the music the night before. He says that the only way for him to learn a difficult piece overnight is to play through it at tempo several times. On his first reading, Risberg will not stop to solve any problems. On subsequent readings, he might work on a few problematic passages, write some fingering, rewrite some harmonies, and decide where to fake.

Risberg has worked on learning music quickly and found that reading through a score and identifying the difficult parts, planning what to fake, and doing a harmonic analysis helped his sight-reading. He describes himself as having been a 'lousy' sight-reader when he was nineteen: he could not even sight-read through *The Swan* by Camille St-Saëns. Because of Risberg's poor sight-reading, a friend of his suggested that he sight-read through all the Beethoven sonatas. He did. The results were awful at first, but after a few weeks, he noticed improvement: his eyes started moving more to the right while sight-reading. In the course of the Beethoven sonata 'experiment', Risberg did not use a metronome and tried to continue playing through problems whenever they occurred. If he encountered a passage that he could not play, he would just try to play the right rhythm in the correct area of the piano. Risberg says that rhythm is the most important aspect of sight-reading and because of this it is helpful to sight-read with other musicians. To underline the importance of rhythm, Risberg explained that if he is sight-reading in an orchestra rehearsal and plays a wrong note, the worst thing the conductor will do is give him a scornful look. However, if he makes a mistake with the rhythm, everyone has to stop playing. After two months, when Risberg had completed sight-reading the sonatas, he said that he had come a long way from being unable to sight-read *The Swan*.

A teacher of Risberg's introduced him to an exercise to help him internalize polyrhythms. The exercise focuses on three against four, which Risberg says is the key to learning all polyrhythms. One puts the rhythms far apart in one's body. For instance, one walks four and claps three, thus one internalizes the two rhythms. Once one has mastered three against four, Risberg says that all the other polyrhythms are easy. It is like riding a bicycle, once you learn, you never forget.

Risberg once memorized a piece (the Webern variations) before beginning to physically practice. Although doing this enhanced his confidence and left him certain that he would never have memory lapses while playing that piece, he has not done so again because, by his own admission, he is too lazy. Risberg is a strong proponent of writing down a score from memory or at least getting one's memory to the point where this is possible. In fact, if Risberg cannot go through an entire piece in his head, he does not dare play it from memory. It is also helpful to analyze the score before playing it by heart because muscle memory fails us when we are nervous or something unexpected occurs.

Through experience, one learns not to practice more than is necessary. When Risberg knows a passage he will not practice it. When he was younger, he used to play a lot when he practiced but now he goes straight to the problems. If there are a number of difficult bars on a page, he often knows that they have a single source of difficulty, such as a thumb-under motion. A former teacher of Risberg's said that playing the piano is about two things: learning to listen to oneself and learning to practice. Listening to oneself does not come automatically, it is an art. As for learning to practice, Risberg is still doing that.

Mieko Kanno Interview

Ole Lützow-Holm, a composer and a teacher at the University of Gothenburg, told me that Kanno was once asked to replace a violinist in a very difficult contemporary piece three weeks before the concert. The piece was so complex that he and others were amazed that she performed it successfully. When he asked Kanno how she managed it, she said she spent the first week reading through the score without playing it on the violin.

When practicing mentally, Kanno first reviews the score to get an overview of the piece. She compares her work with mental learning to that of a conductor who goes over a score to get a better understanding of how the piece sounds before rehearsing with the orchestra. As Kanno reviews music mentally, she organizes her practice time, noting the sections that will require more work. She finds approaching new pieces this way much more efficient than playing them through from beginning to end, a practice which would impose an additional set of difficulties, such as, figuring out what the left and right hands must do. Kanno also uses mental practice to decipher complicated rhythms before attempting them on the violin. When she replaced the

violinist, she spent a lot of time clarifying what the irrational rhythms would sound like by reviewing them mentally. Kanno says that rhythm is often the source of difficulty in a musical piece. Kanno does not go over physical motions during mental practice because she is not entirely sure what motions will be required until she attempts the piece on the violin. Kanno attempts to memorize music away from the violin, and says that mental practicing enhances memorization because it makes her more aware of how a piece is structured how its material develops.

Mental practice saves time in ensemble work, even when the piece is simple. It enables one to anticipate the phrasing of other instrumentalists or the *rubato* a singer may use. Invariably, this reduces rehearsal time. Kanno also says that spreading out her practice time makes it easier to learn a piece. If she needs ten hours to learn a piece, spreading the ten hours over ten days will yield her better results than spreading them over two.

Kanno is a good sight-reader. The important things in sight-reading, she says, are the ability to continue playing despite wrong notes, the ability to look one or two bars ahead, and the presence of a strong inner pulse. While sight-reading, one has to be able to keep up and continue riding the musical momentum. In this regard, sight-reading is similar to musical dictation: one has to keep up.

Apart from using mental practice to enhance efficiency, Kanno suggests that one should not get used to playing wrong notes. When a musician makes a mistake, he should always try to determine why it occurred. Responding to a mistake by reflexively going back two bars and playing the part over is likely to result in the same mistake.

Magnus Ricklund Interview

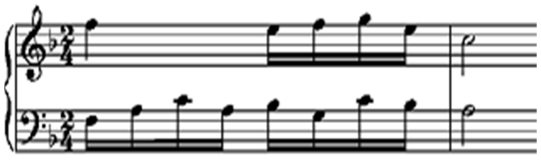
Magnus Ricklund has worked as a musical coach at the University of Gothenburg for the past thirty years. Given the amount of repertoire he is obliged to learn, it comes as no surprise that Ricklund is, as he describes himself, a proficient sight-reader. Like many self-taught musicians, Ricklund began playing the piano by ear and only later started taking lessons. He preferred to play without sheet music and this had a negative effect on his sight-reading. When Ricklund started playing the organ, he was required to read three staves of music and once he became

accustomed to this challenge, reading piano music was easy by comparison and his sight-reading flourished.

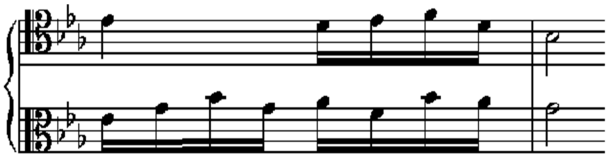
Accompanying other musicians also improved his sight-reading. When Ricklund was a student at the University of Gothenburg, the hired accompanists only played during exams and concerts. Consequently, the piano and organ students were asked to rehearse with instrumentalists and singers. The abundance of music he was called upon to play forced Ricklund to practice sight-reading regularly with other musicians. In so doing, he was compelled to play continuously and his sight-reading improved considerably. Ricklund has not devoted a lot of practice time to scales or arpeggios and rarely writes fingerings in the score. In fact, in 2010, when he suffered a hand injury and could not make use of his little finger, he was amazed that he was automatically able to adapt his fingering to compensate for the loss.

As an accompanist, Ricklund stands out for his ability to transpose music at sight. If a singer is feeling sick or tired, Ricklund will play the music in whichever key they feel comfortable. Apart from having a good ear, Ricklund attributes this skill to his study of score-reading. His familiarity with clefs enables him to play a piece in any key. For instance, to play example 1 a tone lower, one need only imagine the treble clef as a tenor clef and the bass clef as an alto clef (see example 2). Imagining the clefs is not sufficient, one would also have to imagine the correct key signature and play in the correct range.

1)



2)



In the same way that being able to read three staves of music enhances sight-reading, so does the ability to transpose insofar as it increases one's capacity by creating a more difficult task to perform.

Ricklund also thinks that score-reading is valuable, since reading several staves at once broadens one's vision. He suggested that I read and work through, *Preparatory Exercises in Score-reading*

by R.O. Morris and Howard Ferguson, a book that contains examples of music in unfamiliar clefs with two to four staves. We continued our discussion in more detail in lessons on transposing, sight-reading, and score-reading.

Summary/Discussion

The interviews and literature provided me with ideas and advice on how to practice more efficiently, learn more quickly, and work on sight-reading. Some of the common threads in the interviews are that rhythmic stability is important in sight-reading, that sight-reading improves through repetition, that it improves significantly through practice with other musicians, and that it requires one to focus on looking ahead. These themes are also reflected in the literature on sight-reading. Ricklund, Spillman, and Rubinstein suggest practicing score-reading and transposing as ways to improve. Most of the interviewees use mental practice in one form or another, although their methods are different than Leimer's. Kanno was the only one to draw parallels between musical dictation and sight-reading. The interviewees and the literature stress rhythmic stability as the most important factor of sight-reading: Risberg suggested an exercise devised to conquer polyrhythms, Spillman suggests an exercise to aid with subdividing the beat, Rubinstein discusses becoming familiar with foreign note values, and Kanno discussed dictation as a way to get better at keeping up with the flow of music. Both the interviewees and the literature suggest sight-reading in an ensemble as a way to train maintaining a steady beat. Improvising in different styles may help train rhythmic stability because succeeding at it requires being acutely aware of a given pulse. If one were to play a waltz from a score, it would be possible to give the impression of playing in 3/4 time without actually feeling three beats per bar, simply by mimicking the written music. However, if one were to try to improvise a waltz while ignoring the pulse, one would certainly fail. Maintaining rhythmic stability through improvisation cannot always be reconciled with Spillman's improvisation exercise. Improvising melodies in the style of Mozart over a given accompaniment is not likely to aid the development of rhythmic stability because the pulse is laid down in the written accompaniment figure. However, using Spillman's instructions on improvising in the Baroque style or the style of Brahms is likely to help because one only needs to look at the music prior to improvising. Perhaps a better way of training rhythmic stability through improvisation is to improvise in any given style without looking at the music beforehand. This enables one to improvise without being influenced by the accompaniment or melodic figures, which may result in less focus being

put on the pulse. The ability to do this, however, would seem to require fluency in improvisation, which in my case has yet to develop.

After sight-reading the Beethoven sonatas, Risberg noticed that his vision had expanded: he was looking more to the right while sight-reading. Ricklund and Spillman found that score-reading or simply reading music for more than two staves is an effective way to broaden one's vision. These two strategies complement each other. Score-reading focuses on expanding vertical vision, whereas sight-reading piano music frequently results in the expansion of horizontal vision. The main difference between the strategies is that score-reading puts direct emphasis on vision expansion through the addition of staves, while sight-reading piano music alone does not. One would likely have more success in expanding horizontal vision by making a conscious effort to look forward. Other strategies one can use are sight-reading while accompanying other musicians or while using a metronome. These create situations in which sight-reader must constantly to look ahead to keep up. Using these strategies one can eventually grasp more information in one fixation while sight-reading.

Risberg and Kanno differ in their approaches to learning music quickly. Risberg attempts to play the music at final tempo from beginning to end and then starts to work on problems that he encountered. Kanno begins by looking at the score to understand the structure of the piece, to make sense of complicated rhythms, and to organize her practice time. These two methods of practicing are used in different situations. Risberg spoke of having only one night to learn an accompaniment, while Kanno talked of having several days to learn a piece. Like Kanno, Wilhelmsson reads through the score mentally in order to get a better understanding of the structure of the piece and he organizes his practice time as a way to learn more quickly. However, unlike Kanno, Wilhelmsson does not do this through mental practice. He says that one should play through the piece, identify where the problems lie, and find solutions to them, or ways around the ones that cannot be fixed. Wilhelmsson and Risberg both believe one need not practice parts that do not present problems. Kanno and Wilhelmsson both stress accurate practice. Kanno advises against getting used to playing wrong notes; Wilhelmsson advises against practicing too quickly: practicing slowly results in playing more accurately.

My readings and interviews made me aware of strategies that would help to improve my sight-

reading, make me a faster learner, and a more versatile pianist. At this point, I prepared a list of tasks to perform. These tasks and my reasons for selecting them are as follows:

- Sight-read through the Mozart sonatas and the Beethoven sonatas.
- Practice Risberg's rhythm exercise.
- Practice Spillman's rhythm exercise.
- Practice rhythmic *solfège*.
- Play in ensembles or accompany singers more frequently.
- Organize my practicing.
- Practice improvising.
- Use mental practice.
- Learn to transpose.
- Learn to read pieces for ensembles (more than two staves).
- Practice correctly and slowly.

I wanted to try Risberg's Beethoven sonata experiment because it was so helpful to him and because it would require me to sight-read difficult music regularly. Since Risberg advised against using the Beethoven sonatas because of their difficulty, I decided to begin with the Mozart sonatas because they are not too technically difficult and because their rather straightforward harmonic language would allow me to focus on looking ahead. Furthermore, their relative simplicity would force me to dispense with the notion that my poor sight-reading was the result of technical demands. More specifically, their simplicity would allow me to see my problems more clearly. I would spend several months working on the problems that presented themselves and then proceed to the Beethoven sonatas. Since Lehmann and McArthur claim that one improves sight-reading by increasing the difficulty of the material one reads, I believed the Beethoven sonatas would help me improve. My primary goals while sight-reading were to play the correct rhythm and to keep up with the beat, and because my sense of rhythm was weak and I

had difficulty maintaining tempo, I would use a metronome.

I would work on rhythmic *solfège* to isolate my problems with rhythm. Essentially rhythmic *solfège* is sight-reading away from the piano, which like mental practicing, would allow me to practice without the distractions of playing the instrument.

Further exercises in rhythm would include Risberg's polyrhythm and Spillman's subdivision exercises. Polyrhythms often take me a long time to learn and I hoped that Risberg's exercise would make them second nature to me, thus saving me the need to relearn them in new pieces. Spillman's exercise would also be helpful because I often fail to keep a steady beat when going from one subdivision to the next.

Spillman's improvisation exercises would make me more familiar with the styles of different composers and help me become more adept at faking. In addition, learning to improvise may also train rhythmic stability. These considerations alone made improvising worthy of attention. However, the most important reason was that not being able to improvise made me feel incomplete as a musician. It was hard to consider myself a musician if, after a few weeks on vacation, I would forget my repertoire and could not play. I did not feel that I knew my way around the keyboard, and I wanted to be able to communicate through my instrument without requiring months to become fluent again. I did not believe that improvising would ever be as satisfying as performing a masterpiece but not being able to do the former made it hard to fully appreciate the latter.

As a result of Wilhelmsson's claim that one learns more quickly under pressure, I began to seek out more ensemble work. I suspected that having people depend on me would create a stressful environment. Doing ensemble work, I would inevitably have to sight-read at some rehearsals or play without having practiced much. This could prove to be helpful because it would aid rhythmic stability and help the expansion of horizontal vision.

Ricklund's idea of creating more difficult environments to improve sight-reading interested me. Indeed, I recall only feeling comfortable playing pieces at final tempo after having practiced them at a faster tempo. I thought that if I learned to read more than two staves at once, than

reading piano music would surely be easier; if I could sight-read music decently while imagining different clefs and key signatures, then sight-reading under regular circumstances would also seem simpler. Even if transposing did not improve my sight-reading, it would still provide me with a skill that would make me a more well-rounded musician.

Process

The following sections are meant to document the process up to the point of completing my thesis. The entire process of improvement, however, is ongoing and not all of the methods and strategies discussed in the background could be explored in the time frame given for this paper. Therefore some of the proposed methods will not be discussed further. The methods that will be discussed are as follows: sight-reading the Mozart sonatas, lessons with Magnus Ricklund, rhythm exercises, sight-reading with other musicians, technical exercises, and Beethoven sonatas. Sheet music that corresponds to the recordings in the Mozart and Beethoven sections can be found in the music examples section.

Mozart Sonata Experiment

This section aims to identify consistent problems which I experienced while sight-reading and to offer solutions to them by using:

- A recording of me sight-reading the first movement of Mozart's third sonata (*mozart.mp3)*, one of my worst my readings of the Mozart sonatas, and therefore an indicator of what I needed to improve.
- A text in which I discuss my reading of all the sonatas.
- Reflections or spur of the moment feelings that I experienced while sight-reading the third sonata or while listening to my recording.

Each page of this section is divided into three parts with reflections at the top, a time-line corresponding to the recording with added comments in the middle, and a more thought-out text at the bottom of the page. The goal while sight-reading this sonata was not to play musically or to hit all the right notes rather to always look ahead, to always continue playing, and to attempt to play the correct rhythm. I sight-read the sonata with a metronome set at a speed that was difficult but did not feel impossible for me to play. This was considerably below performance tempo.

- The metronome caused me to feel nervous and unbalanced.
- Could not keep calm even while only focusing on rhythm.
- Trying to play the right notes often threw my rhythmic sense off, as did the unease I felt from the metronome.

I omit the trill because it is likely to throw me off.	The faster passages cause me to get scared and freak out. As a result, I do not play the correct rhythm.	In order to keep playing I leave out some faster notes and an entire bar of the left hand.	I leave out the left hand because I cannot think at the rate that the metronome is going. I think I should have been able to play 32nd notes even if I only repeated the same four notes.
00:01	00:36-00:39	00:48-01:01	00:55-01:04

Over a period of three months I sight-read all the Mozart sonatas. While sight-reading, I made a conscious effort to look ahead by a few bars, never to stop, and to be more concerned about playing the correct rhythms rather than the correct notes. For the most part, I used a metronome and set it to a tempo that was difficult but not too hard for me to play at. The metronome was never higher than the performance tempo. On occasion, I sight-read without a metronome to see the difference. Sight-reading without a metronome was a lot more comfortable. My heart stopped pounding and I was able to play more accurately but I slowed down when I came to difficult parts. This suggested that I should continue to use a metronome because being able sight-read at an unchanging tempo is an important skill that must be trained. It is important to have a strong rhythmic foundation because it will help keep one calm while playing unfamiliar music. One of my problems with rhythm was a tendency to rush: I became nervous and rushed during fast passages, slow movements, and when triplets appeared after a succession of sixteenth notes. I also left out most of the ornaments except for long trills because I was not familiar with the ornaments and they often distracted me from the beat.

- The metronome is my enemy.
- I played the wrong chord shortly after I began the repeat of the exposition...such a simple mistake can only be caused by lack of concentration.
- Concentrate more.
- Unstable.

Too much pedal.	I am very nervous and I am leaving out a lot of notes.	I manage to play a few more note in the faster passages but it is equally unmusical and rhythmically unstable.	I attempt the fast left hand passage to no avail.	Too much pedal.	I manage to play a few more correct notes in the repeat.	Why do I have more difficulty with the scale-like passages in the left hand? I am left-handed.
01:07	01:06-01:36	01:58-02:38	02:36-02:244	02:50	02:47-03:20	03:50-03:52

When I came across difficult passages that I could not play accurately, I tried focusing on the easier hand (usually the left) and either played completely wrong in the harder part or only the notes that appeared on the beat. If the passage was repeated, I would attempt to play more of the difficult part. Sometimes I would manage to play it all.

Unlike Erik Risberg, I did not notice an improvement in my sight-reading after completing the sonatas. Instead, I became much more aware of my problems. I consistently overused the pedal, I found it difficult to maintain a strict tempo, and I lacked coordination. Overuse of the pedal was most likely a result of my listening being encumbered because I was nervous. Maintaining a strict tempo was problematic because many of the difficulties disappeared or were less apparent when I turned off the metronome and focused less on the beat. Being nervous contributed to the problem. During fast passages, I would lose control because I became nervous and lost awareness of the beat. Perhaps my greatest problem was coordination.

During difficult passages, I told myself not to think of the notes and just to play the correct rhythm. Doing this, I felt my fingers were not in place on the keyboard, as if they were off by a centimetre. This made me feel uncoordinated and unable to play the correct rhythm or the correct notes.

- I need to fix my problems with stability.
- The state of the beginning would be acceptable if there was noticeable improvement by the end of the movement.
- I should focus on intentionally leaving things out on first play through that I will add in repeat.
- How many of these problems are caused by the metronome?

I am ignoring more trills because they make me lose awareness of the beat.	Take my foot off the pedal before I cut it off.	My left hand during the repeat of the development is a bit better but the thirds are still pathetic.	I stop playing because I am confused.	I finally try to play the trill. Now I understand why I did not before.	I am clearly not looking ahead enough because this is the third time that I've missed this passage in the left hand.
04:10-04:18	04:30	06:42-06:54	07:36-07:38	07:48	08:17-08:19

For instance, in a passage where the left hand is *alberti* bass (a broken chord accompaniment pattern) in eighth notes and the right hand is a scale figure in sixteenth notes, I told myself to try to follow the general direction of the line and focus on playing the correct rhythm. When I did this, my hands were unable to follow the orders and felt clumsy. They felt as if they did not know how to strike the notes and I felt as if I hardly knew how to play the piano. I felt as if my fingers were just on the surface of the instrument, that they did not fit into place. I imagined myself as a guitar player whose fingers could not strike the middle of the frets.

This sensation is similar to one that I felt while practicing a jazz improvisation exercise called the spider. In this exercise, one plays random notes with both hands but makes an effort to make each hand independent. The figures in both hands should not follow the same direction or rhythm. As one gets better at this, one can try giving more specific orders, for instance, chord progressions or imitation, to the hands. This exercise was surprisingly difficult because my hands instinctively wanted to work together. I only tried this exercise a few times but the sensations I felt were so very similar to those I had when sight-reading, I concluded that using the spider exercise to improve coordination could greatly benefit my sight-reading.

- Would my sight-reading be better if I were a better improviser?
- Will my sight-reading improve by practicing scales, arpeggios, and other technical exercises?
- I can understand what I need to play when looking ahead (harmonically, motivically) but it doesn't always transfer to my fingers.
- My results are best when I keep looking ahead. I am surprised at how much information my mind retains.
- This is a disaster.

I need to learn how to play rhythmically correct while hitting wrong notes. I must feel comfortable playing the rhythms, just like when I worked on the spider improvisation exercise.	I feel very unbalanced and nervous because of the insistence of the metronome.
08:34-08:42	08:47-09:05

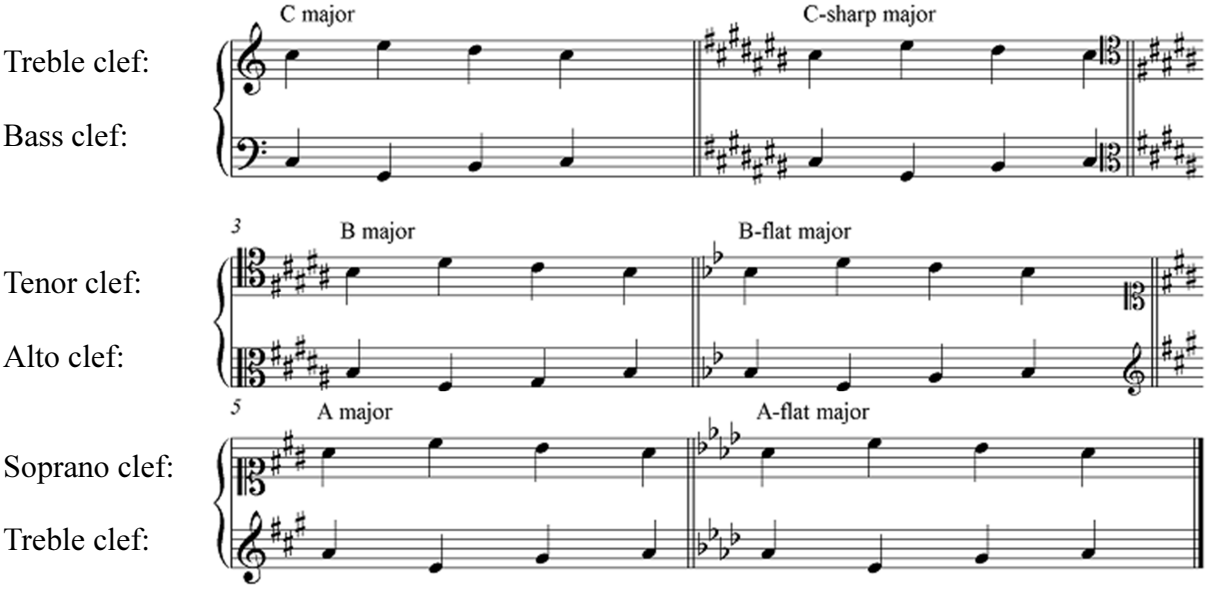
Sight-reading with a metronome has made me realize how similar the skills associated with sight-reading and improvisation are. Both skills involve getting something done in the structure of real time. When improvising, the clock is always ticking and one needs to think 'on one's feet'. It is the same with sight-reading. If the metronome is ticking and I have to play a very difficult passage, then I need to find a solution right away. The pulse is always present and one must always play on its terms. One cannot be intimidated by it. This is not the same as with solo performance because while the beat and pulse are always present, one has had much time to internalize them. It is the difference between living the music and reliving it.

Lessons with Magnus Ricklund

This section discusses the work done with Magnus Ricklund during private lessons on transposing and score-reading. It reviews the materials and methods used to work on transposing and score-reading, the difficulties involved, and the positive effects they had on my performance. The examples given represent only a small part of the work we did, as I practiced on a regular basis in preparation for the lessons.

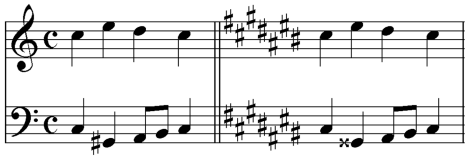
Transposing

Much of the work in transposing was done using Morris and Ferguson's, *Preparatory Exercises in Score-reading*. This book contains music for two to four staves using mainly three C-clefs: the tenor, the alto, and the soprano. Gaining fluency with these clefs would allow me to play a piece in six tonalities. For instance:

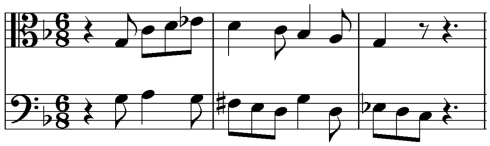


To transpose a piece five times, I would also need to be fluent in substituting accidentals and ranges. Substituting ranges means playing in a different octave than written. For instance, the right hand of the B-major example sounds a minor ninth lower than the one written in C-major, whereas the left hand of the B-major example sounds a major seventh higher. To play the C-major example a semitone lower, I would always have to imagine an 8va line on the tenor clef (the right hand) and an 8vb line on the alto clef (the left hand). Substituting accidentals is a bit more complicated. If one were to transpose a piece form C-major to C-sharp major and came

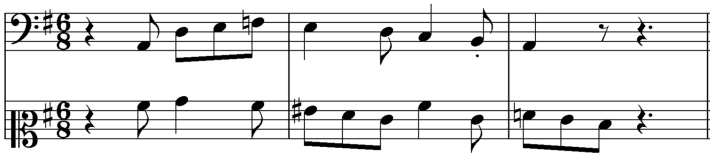
across a G-sharp in the notated music, then one would have to substitute the sharp sign for a double sharp sign. This is because G is already sharp in C-sharp major (see example below).



For our first lesson, I prepared the first section of *Preparatory Exercises in Score-reading,* which focuses on learning the alto clef and only contains music for two staves in which the alto clef is either paired with the bass clef, the treble clef, or another alto clef. Although I was somewhat familiar with the alto clef because I studied the viola for a few years when I was younger, these exercises were extremely mentally taxing. Surprisingly, this proved to have a positive effect. Since so much of my attention was spent on deciphering the alto clef, I was forced to quickly scan ahead to see what was written in the more familiar clef (provided that the example was not for two alto clefs). For instance, by the time I had finished playing the first bar of the example below,[84] I knew what my left hand had to do for the next two bars and I was able to concentrate more on my right hand. I was surprised at how much information I was able to pick up and retain in a single glance.

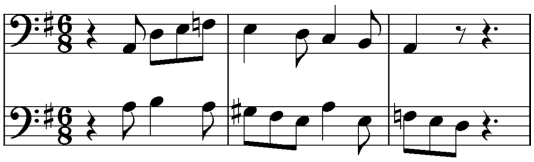


After playing through the first exercise, Ricklund asked me to play the first eight bars one tone higher. If one were to do this strictly by clef-swapping, one would imagine the alto clef (the right hand) to be a bass clef and the bass clef (the left hand) to be a mezzo soprano clef.

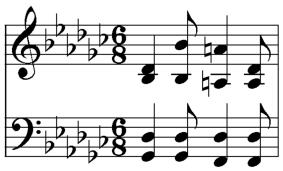


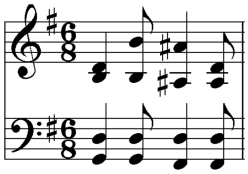
Unfortunately, I was not familiar with the mezzo soprano clef. Needless to say, I did not visualize it. Instead, I transposed the left hand by interval, that is to say, I imagined the notes to be one tone higher.

Had I been familiar with the mezzo soprano clef, I am confident that transposing this excerpt would have felt more secure. Transposing the left hand by interval caused me to feel on edge because I had to concentrate so intently. The right hand was also a problem because imagining it to be written in the bass clef made it seem to be in a lower register than the left hand. The image below shows how I imagined the music to be written.

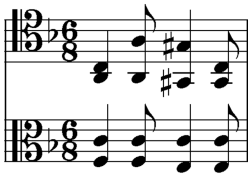


Apart from Morris and Ferguson's book, we also worked on transposing with songs. I began by sight-reading Grieg's, *Med en Primula Veris*, which I did well, apart from making a few mistakes due to my unfamiliarity with G-flat major. After sight-reading it, he asked me to transpose the song a semitone higher and a semitone lower. Transposing one semitone higher or to G-major was rather straightforward because I only needed to imagine a different key signature and substitute accidentals (i.e. A-natural in the notated score is A-sharp when playing in G major, see examples below). In a sense, playing it in G-major was easier than playing it in the original key because I am more familiar with G-major.





Transposing it down a semitone was harder because I had to imagine the right hand in the tenor clef, with which I was not very familiar, while thinking of the left hand in the alto clef.



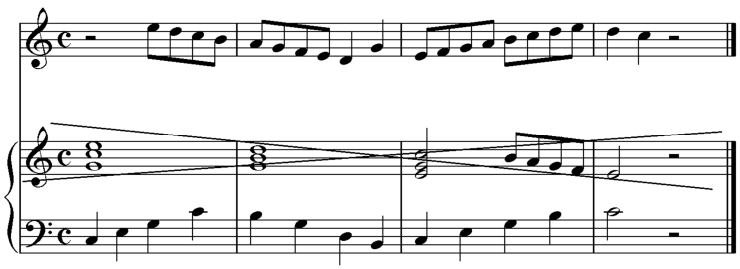
Ricklund told me to practice transposing various songs up to one whole tone higher and lower. While doing this, I combined switching clefs and thinking harmonically because it is often easier to think of, for instance, a II-V-I progression in a different key rather than switching clefs. To clarify, the beginning of *Med en Primula Veris* was easy to transpose simply by thinking of a

tonic chord that goes to a dominant in first inversion with a raised fifth. Transposing to tonalities with a lot of flats or sharps proved to be more difficult than transposing to ones without. This came as no surprise since I also had a harder time sight-reading music with a lot of accidentals. It did not take too many play-throughs in different keys for the songs to become more or less memorized, which led me to wonder if I could memorize solo pieces faster and more securely by transposing them.

Transposing by using C-clefs and by thinking harmonically each has its merits. I imagine if one were to transpose a very complex piece, it would be easiest to use C-clefs but if one were to transpose an atonal piece, it would be impossible to do so by thinking harmonically. However, transposing by thinking harmonically has made me familiar with the more 'difficult' tonalities and has begun to give me a better tactile awareness of the keyboard. I believe that learning to transpose by thinking harmonically can also one in classical improvisation, where one must have tactile familiarity with the keyboard and be able to think of harmonic progressions in real time. Transposition using C-clefs seems to be most beneficial for accompanists who may need to transpose for singers or be proficient at reading the clef from which an instrumentalist is playing. Transposing by thinking harmonically strengthens the areas which I believe are lacking in my musical background. Consequently, I have stopped transposing with C-clefs. However, I have not dispensed with C-clefs because reading them proficiently can be useful in score-reading.

Score-reading

Ricklund introduced score-reading to my lessons when he asked me to sight-read music for a solo instrument and piano accompaniment. To do this, I had to play the left hand of the piano accompaniment and also play the solo instrument part with my right hand. This is essentially the same as Robert Spillman's exercise that involves reading music with *obbligato* lines. To clarify, here is a fabricated example that is comparable to what Ricklund asked me to play:



Reading like this caused my vision to expand vertically. It also developed my horizontal vision because I was unaccustomed to this type of reading and needed to look ahead in order to prepare. While doing this, Magnus Ricklund noticed that I was focusing much less on my left hand than my right hand. I tried to shift my focus but found it very difficult. When I did, I noticed that I had less control of my left hand and my sight-reading soon deteriorated. This surprised me because I am left-handed.

Other exercises contained music for three or four staves which proved to be extremely mentally taxing because one piece could include up to four different clefs. I did not do the exercises with the soprano clef because I was sufficiently challenged by the alto and tenor clefs. Once again, I had to look ahead in order to prepare myself. When I learned an exercise, I was able to notice a change in my vertical vision because I could see all the staves as one unit. However, playing an exercise without much practice resulted in sporadic vertical vision: I would jump between the different staves rather than look at all of them at once.

Despite the initial struggle with the score-reading exercises, I realized, once I had practiced them, how easy they were. Had the examples been reduced to the treble and bass clefs, I would have been able to sight-read them accurately. The mental agony when beginning a new exercise and the eventual enlightenment upon completion were similar to my experiences when working on complex solo pieces. It could take weeks to unscramble one but eventually I stopped feeling overwhelmed and consequently, the next piece at that level of difficulty would be a bit easier.

I think that score-reading has begun to expand my vision and to increase my ability to think analytically while playing. This will undoubtedly have a positive effect on my sight-reading and I can already see signs of improvement. It also seems clear that learning to score-read proficiently will make it easier to learn a complex solo piece. This is particularly true of late Romantic music, where it often seems as if pieces were originally intended for orchestra. I am not yet a proficient score-reader and consequently cannot comment on the effect it has had on my work with solo music.

Rhythm Exercises

Aside from sight-reading with a metronome, I practiced rhythm by doing Erik Risberg's polyrhythm exercise and Robert Spillman's subdividing exercise.

Risberg's exercise did not have a profound effect on me. Putting two rhythms in different parts of my body (e.g. one hand and one foot) seemed as difficult as putting them in the same part of my body (e.g. a rhythm in each hand). Furthermore, Risberg's suggestion of walking one rhythm and vocalizing the other did not challenge me because I could easily ignore the pace at which I was walking and focus on the other rhythm. When I had problems, I turned on the metronome, alternated between each subdivision and slowly brought them together. For instance, if I was struggling with three against four I did this:

Right hand:	1 2 3 4	silence	silence	1 2 3 4	1 . . .	1 2 3 4	1 2 . .	1 2 3 4	1 2 3 .	1 2 3 4
Left hand:	silence	silence	1 2 3	silence	1 2 3	1 . .	1 2 3	1 2 .	1 2 3	1 2 3

Doing this at a slow tempo was most productive because it allowed me to hear if the subdivisions were accurate. Once I had a better understanding of the subdivisions, putting them together was not difficult because I could focus on each one. This suggested that my problems were rooted in subdividing and led me to focus more on Spillman's exercise.

I began working on Spillman's exercise using a metronome at forty beats per minute. When changing subdivisions consecutively, I was inaccurate with quintuplets, septuplets, and octuplets. When jumping from one subdivision to the next, for example, from three to five, I was inaccurate with triplets, quintuplets, septuplets, and octuplets. Upon doing the exercise a second time, my performance was more fluid. I ceased to have problems with triplets but did not feel secure with the other odd subdivisions. I also noticed that I had more difficulty descending consecutively than ascending. Finally, after doing the exercise for a few minutes and becoming suspicious of my success, I decided to change the tempo to fifty beats per minute. I skipped the consecutive counting and began jumping from one subdivision to the next. I immediately started having difficulty and my suspicion was confirmed: I had not been feeling the beat, I had only counted enough to memorize the lengths of the subdivisions for forty beats per minute.

I continued to work on the exercise from time to time and eventually stopped having problems with triplets. My understanding of subdivisions up to four became solid. As a result, I internalized sextuplets and octuplets because it was easy to think of them as twice the speed of triplets and quadruplets. Quintuplets and septuplets, however, always felt guessed. Even though I sometimes vocalized them accurately, I was unsure of whether or not I knew what I was doing. or was lucky. I believe that my problem stems from thinking of quintuplets as a bit faster than quadruplets and of septuplets as a little slower than octuplets.

Sight-reading with Other Musicians

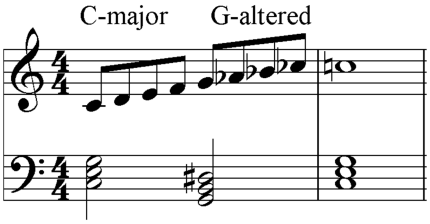
In order to sight-read with other musicians, I played Mozart and Beethoven symphonies arranged for four hands with a colleague and I sight-read various arias at opera students' lessons.
My colleague and I sight-read the symphonies once a week for four months. Each session lasted about an hour, during which time we alternated between the upper and lower parts after every movement. The main problem I had was focusing on my left hand during fast passages. Maintaining tempo did not prove to be problematic even though we sometimes played very fast. It was also much easier to look forward while playing with others than it was when sight-reading alone, using a metronome. Having a musical force pushing me forward rather than a mechanical one removed much of the stress that I felt when sight-reading the Mozart sonatas.

I sight-read at opera students' lessons for seven months. During this time, the number of lessons I attended varied from six, forty-five minute sessions a week to one session, or occasionally none. During the first three months, I read through most of *Cosi Fan Tutte* (I also practiced parts of it). For the remaining four months, I sight-read different arias, mainly from operas by Mozart, Verdi, and Puccini. Naturally, I sometimes read the same aria on more than one occasion and each time this happened, I noticed improvement. In fact, after working on *Cosi Fan Tutte*, I noticed that my sight-reading of Mozart arias had improved considerably. I had a much better understanding of the style: I could follow the coloraturas, anticipate tempo changes, and fake my way through difficult sections more skillfully. I am pleased to say that these attempts at sight-reading were much more successful than the Mozart sonatas. Rhythm, however, was still the main problem but sight-reading with other musicians rather than with a metronome made it less problematic. Maintaining tempo was also easier in this setting because it was adjusted to the musical flow and not set in stone by the rigidity of the metronome.

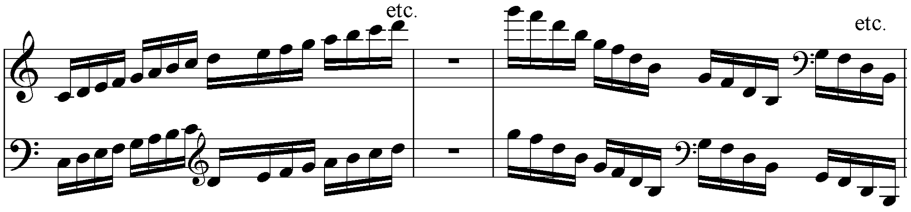
Technical Exercises

In order to be better prepared for playing music at sight, I practiced a number of technical exercises, including scales, arpeggios, broken chords, and dominant sevenths. Unfortunately, my work with them has not been significant enough to yield significant results. However, I occasionally felt better prepared when a technical pattern that I had practiced appeared in an aria that I was sight-reading. I am certain that continuing to work on them will save me time in the future but at the moment I do not feel I have internalized them well enough to say that they have had a significant impact on my performance. Technical exercises can sometimes feel mechanical. They are predictable and therefore do not involve the problem solving that one faces while sight-reading. More often than not, technical patterns appear in music but with a twist. Perhaps a G-major scale will begin, but an alteration will appear, or a series of broken C-minor chords will take off only to switch to ones in F-minor. For this reason, once I have internalized the exercises, I think it will be more beneficial to practice them as do jazz musicians.

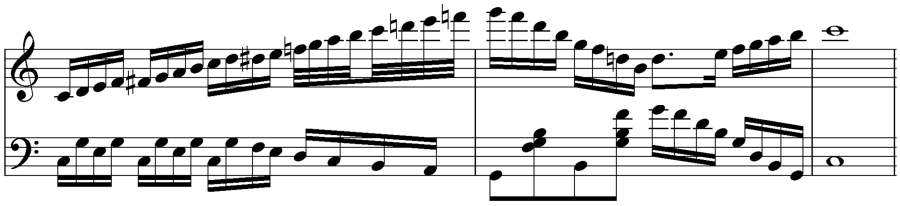
When I took a course on jazz improvisation, I was advised not only to practice ascending and descending scales but to skip notes, alternate rhythms, accompany with the other hand, and even to change scales midway (the example below shows a C-major scale turning into a G-altered scale).



Practicing technical exercises in jazz is about practicing improvisation because that is precisely where one will make use of the exercises. The same consideration should be made in classical music. While it is necessary to practice technical exercises in order to develop technique, applying them to improvisation will develop the problem solving skills that are needed in sight-reading. Rather than always practice scales and dominant sevenths like this:



Perhaps a more practical way to practice would eventually be like this:



This is just a made up example of how one can improvise using common devices in classical music. By approaching scales, arpeggios, chords, broken chords, and dominant sevenths in this way, one is faced with a number of problems to solve. For instance, how do the accidentals found in the ascending C-major scale affect one's choice of fingering? Working on technical exercises in this way also allows one to use different patterns in each hand and thus improves coordination. For instance, in the first bar, the left hand is playing *alberti* bass while the right hand is playing a scale. Obviously, one first needs to be fluent with technical exercises in a normal setting. For this reason, I have not yet begun to try this extreme but possibly worthwhile idea.

Beethoven Sonatas

In this section, I describe my attempt to sight-read the Beethoven sonatas and reflect on the process. I discuss recordings of my sight-reading in order to illustrate the problems that I encountered and to determine whether any of the strategies that I employed improved my sight-reading. I also describe the evolution of my approach to sight-reading the sonatas.

Sonatas 1, 3, 4, 5, and 6[85]

After each sonata, I had to remind myself that the goal of this project was not to be able to play all of the notes at sight: that would never happen. I floundered up to the sixth sonata trying to do this and while I was sometimes successful in easy passages, the more difficult ones left me stuck and dumfounded (*dumfounded.mp3*). It was a mistake to set out to sight-read a complete sonata in a single sitting. The sessions for the third and fourth sonatas were approximately fifty minutes long and by the time I reached their last movements, I was so exhausted that I could hardly play. A better approach, one which I eventually adopted, was to sight-read more frequently for shorter periods of time.

I quickly became annoyed with my left hand. In passages where the same material was stated in

both hands, the right hand was acceptable, while the left hand was an abject failure (*questionanswer.mp3*). I succeeded at playing scale-like passages with my right hand, however, whenever these passages appeared in the left hand, my fingers stumbled over the notes because I was unaware of the proper fingering (*questionanswer2.mp3*). My vision did not encompass enough of the lower staff and when I tried to focus on it, my playing would fall apart. During long periods of fast music, my playing also deteriorated because I became very nervous and started to rush. I did not know how most of the ornamental turns should be played and when I attempted them, I lost control of the beat.

Because I wanted to play as many correct notes as possible, I took sonatas one, three, and four at relatively slow tempi (*slowtempo.mp3*). By the fifth sonata, I decided to take faster tempi in order to practice thinking quickly but this was not completely successful because I was still focused on playing as many correct notes as possible.

Finally, it occurred to me that before playing, I should read through the score to allow me to decide on which problems to focus and on how to deal with difficult passages. Up to this point, the main problems I faced were the incompetence of my left hand, a loss of control during fast passages, ornamental ignorance, loss of pulse when attempting to play turns or short trills, and an unwillingness to simplify difficult passages.

Sonatas 7-14

In the seventh sonata I tried to focus on my left hand, but despite my efforts, I often paid more attention to my right. The recording (*notenoughattentionlefthand.mp3)* shows how the sixteenth note rhythm in the left hand fell apart when I got distracted by my right hand. When I managed to focus on my left hand, I was often unable to play with my right because I could not keep track of what was going on. Perhaps this occurred because my vision encompassed less when I had the lower staff as a focal point rather than the upper one. This encouraged me to work on increasing the span of my vertical vision and invest more time in score-reading.

After several catastrophes, I wondered if I was sight-reading too quickly. The fact that Risberg took the sonatas at fast tempi did not mean that it was the right approach for me. Still, I thought there was something to be gained from pushing my limits. I hoped that my situation was

analogous to that of an out of shape man, who in trying to lift heavy weights, struggles in the beginning but achieves fitness in the end.

The second movement of the seventh sonata underscored my inability to keep a beat. This is a slow movement in 6/8 time, for which I set the metronome to twenty-eight beats per minute. For the most part, I could not keep in time with the metronome because I was merely trying to guess when the next beat would arrive instead of thinking of the subdivisions *cantkeepaslowbeat.mp3*).

After reviewing my recordings, I realized that I was using excessive amounts of pedal and not playing musically. I believe that using the metronome had much to do with my lack of musicality. There is a clear difference between my recording of the second movement of the *Pathétique* sonata while using the metronome (*pathetique2ndmovewithmetronome.mp3*) and my recording without the metronome (*pathetique2ndmovementwithoutmetronome.mp3*). It could be that a slower tempo and a second reading of the movement resulted in a better quality of playing, however, I think it is more likely due to the fact that I no longer felt nervous and under pressure.

I was clueless when it came to playing keys with more than four flats. The recording of the beginning of the first movement of sonata 12 in A-flat major (*Sonata12AbMajor.mp3*) and the recording of a variation in A-flat minor (*Sonata12AbMinor.mp3*) further into the movement demonstrates this. Despite the variation in A-flat minor being simpler than the beginning of the movement, my playing was inferior because of my unfamiliarity with the key.

I did not read the first movement of *The Moonlight Sonata* because I had played it before. After finishing the final movement, I realized something had to change. My failure to sight-read at fast tempi caused me to recognize a weakness in my technique: I do not have a good way of learning to play fast. While I am able to play quickly, I only succeed at doing this after I have internalized the physical movements by slow practice and built up my speed gradually increasing the tempo over weeks or months. Though fast sight-reading forced me to deal with this issue, I was left stumbling through the sonatas trying to sight-read faster than I could think.

Sonatas 15-20

For the first the movement of the fifteenth sonata, I employed a different strategy: I set the

metronome at a slow tempo (fifty beats per minute) and focused on looking ahead. At last, I was accomplishing something. I was not nervous, I could focus my attention on my areas of weakness, and I could see improvement in my horizontal vision from score-reading and transposing. When I came to the end of the exposition, I chose to repeat it but increased the speed of the metronome to seventy. I made more mistakes but my horizontal vision was being tested. At the recapitulation, I increased the metronome to ninety-five. Starting with a slow tempo was helpful because it left me in control and able to count the subdivisions.

Beethovensonata20mvt1.mp3 records my approach. I began the sonata at fifty beats per minute and increased to sixty at the repeat of the exposition. In some of the sonatas, I increased the tempo more than twice in a movement but in this one, I felt sufficiently challenged after increasing it a second time. The first section of the recording sounds unstable because I sometimes lost sense of the beat and started rushing or slowing down (for example, the beginning, around 1:00, and around 2:10). Interestingly, when I raised the metronome to sixty, I achieved a better flow. It did not matter that I had to play faster because I was already familiar with the music. I think this is a testament to the effectiveness of this method. If my experience is anything to judge from, my playing would have been inferior had I begun the sonata at sixty beats per minute. I would have been nervous right from the start and in all probability, my playing would not have stabilized as I advanced through the movement. Because I started slower, I could concentrate on the music and not become overwhelmed or nervous when I increased the speed.

Sonatas 21-32

There is no need to discuss my reading of the rest of Beethoven's sonatas, as my method for working on them and the problems I experienced remained the same. The sonatas increased in difficulty and sometimes were so hard that I had to play with one hand or fake the more difficult parts. After struggling through the *Waldstein,* the *Appassionata,* and the *Hammerklavier* sonatas, I came to the conclusion that the Beethoven sonatas were a bit too challenging to serve as sight-reading material for me. Perhaps it would have been wiser to start with something like the Clementi sonatinas, but then I would have missed the opportunity to actively experience the genius of the Beethoven sonatas.

Conclusion

I started this project because I was unsatisfied with my ability to sight-read and did not feel significantly prepared for a career in music. During my musical upbringing, I only focused on interpretation and was never taught to learn music quickly. As a result, I could learn pieces but was left feeling as if I did not know how to play the piano. It was as if I had learned to run before I had learned to walk. In hopes of overcoming my difficulties, I decided to do research on sight-reading and mental practice. I wanted to identify my problems with sight-reading and find ways to fix them. Furthermore, I thought that my problems with sight-reading could be related to fundamental problems with playing the piano and that working on my weaknesses could enable me to learn faster and become a better musician. I found a similar attitude to the type of musical upbringing I had in the literature I encountered. For example, Lawrence thinks that musical education should initially emphasize groundwork more than aesthetic values,[86] while according to Rubinstein, 'too many students learn to play pieces on the piano without actually learning the instrument itself'.[87] These claims showed me that there was some basis for my views and gave me confidence that my problems were not insoluble. My research showed that the ability to sight-read depends largely on the experience of the performer and can be trained by developing a number of skills and capacities. A greater span of vision, sense of rhythm, ability to transpose and improvise can all benefit one's sight-reading.

Lehman and McArthur say sight-reading improves through repetition and through an increase in the difficulty of one's repertoire.[88] I acted on this by undertaking to sight-read the Mozart and Beethoven sonatas. The inspiration for the Beethoven sonatas came from Risberg, whose sight-reading had improved considerably after he had read through them. The Mozart and Beethoven sonatas provided an abundance of increasingly difficult material. To cope with the difficulty of the Beethoven sonatas, I began to mentally review the scores and decide on what to focus before beginning each sonata. I also used a metronome to train rhythmic stability; I began at a slow tempo and gradually increased it as I played through the sonata. Working this way reduced the amount of stress I felt and broke the relationship in me between nervousness and sight-reading.

I felt even less nervous when I sight-read with other musicians, which seemed a more effective in training rhythmic stability than using a metronome and is a practice recommended by Spillman,

Risberg, and Ricklund. Feeling less nervous, I would look ahead more and began to notice an improvement in my sight-reading.

I did additional work in rhythm using Spillman's subdividing and Risberg's polyrhythm exercises. Rhythm is my greatest problem and is one which could be considered a fundamental impediment to playing the instrument. Though I continue to struggle with rhythm, I believe that I improved. Certainly, my ability to keep a steady pulse while sight-reading has increased, as has my ability to subdivide, but, more importantly, I have acquired tools to reduce my difficulties with rhythm.

The need to expand vertical and horizontal vision is a recurring theme in the research I conducted. Lawrence, in particular, focuses on difficulties in sight-reading piano music that arise from difficulties with vertical reading. I became aware that vertical reading was a problem for me when I noticed that the lower staff was often not in my field of vision. To improve, I practiced score-reading, a technique suggested by Ricklund and Spillman. It is interesting that score-reading also trained my horizontal vision because I had to look ahead in order to decipher the unfamiliar C-clefs. Although my work with score-reading was not extensive enough to determine the scope of its possibilities, I feel my span of vision increased as a result.

At the same time that I worked on score-reading, I trained my horizontal vision by transposing (a technique that Rubinstein, Ricklund, and Spillman consider useful) using C-clefs and thinking harmonically. Apart from broadening horizontal span, transposition increases familiarity with the various tonalities, which according to Rubinstein, is of fundamental importance in sight-reading.[89] It was only by thinking harmonically that my familiarity with all the tonalities increased. Although I recognized the benefits of transposing using C-clefs, in the end, I felt my weaknesses were more likely to be addressed more effectively by thinking harmonically, so I practiced transposing mainly in this manner.

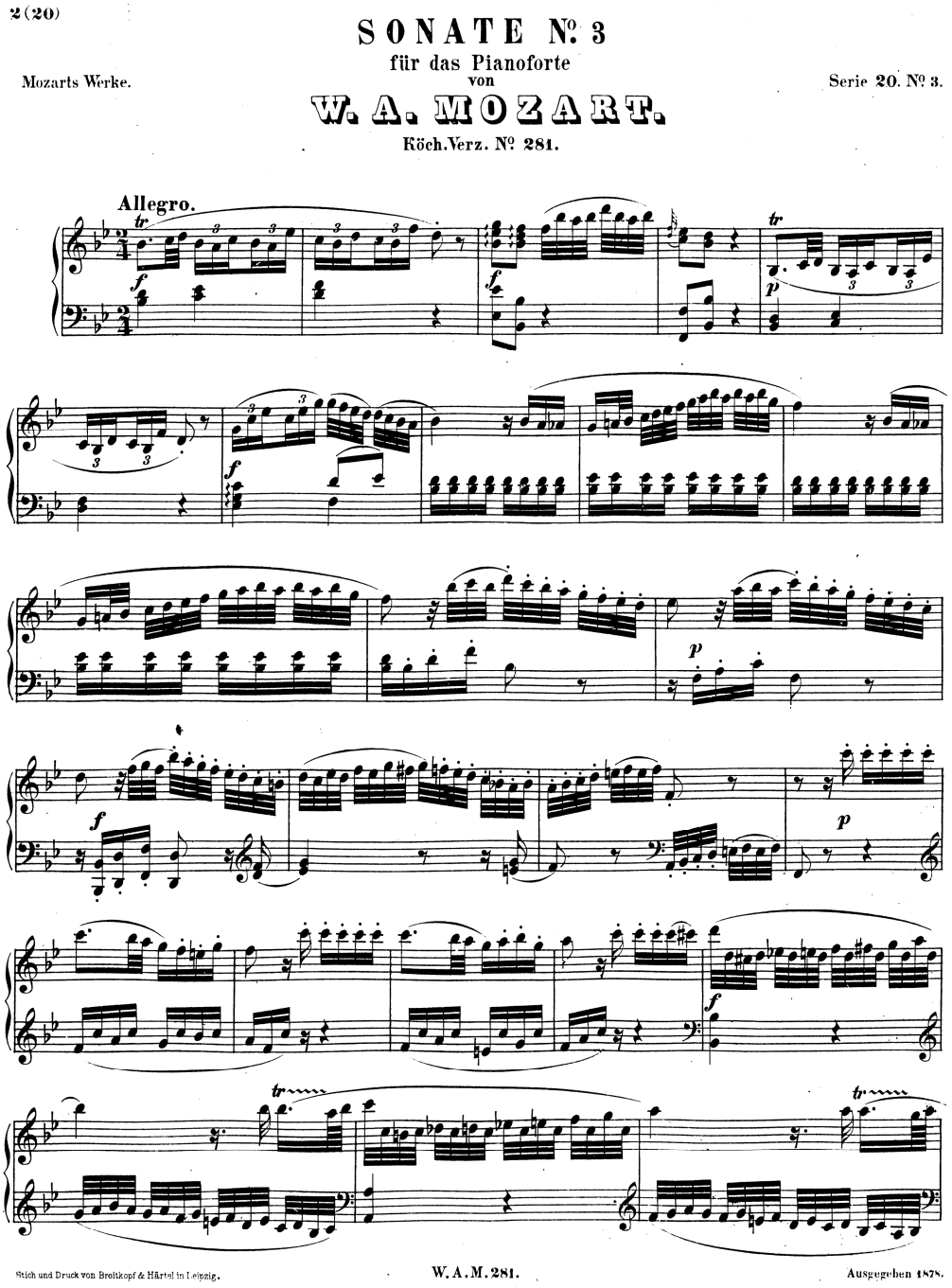
Finally, mental practice using Leimer's method of visualization or Kanno's method of reviewing the score can lead to faster learning, can help one organize one's practice time, and can help one to gain a better understanding of the music.

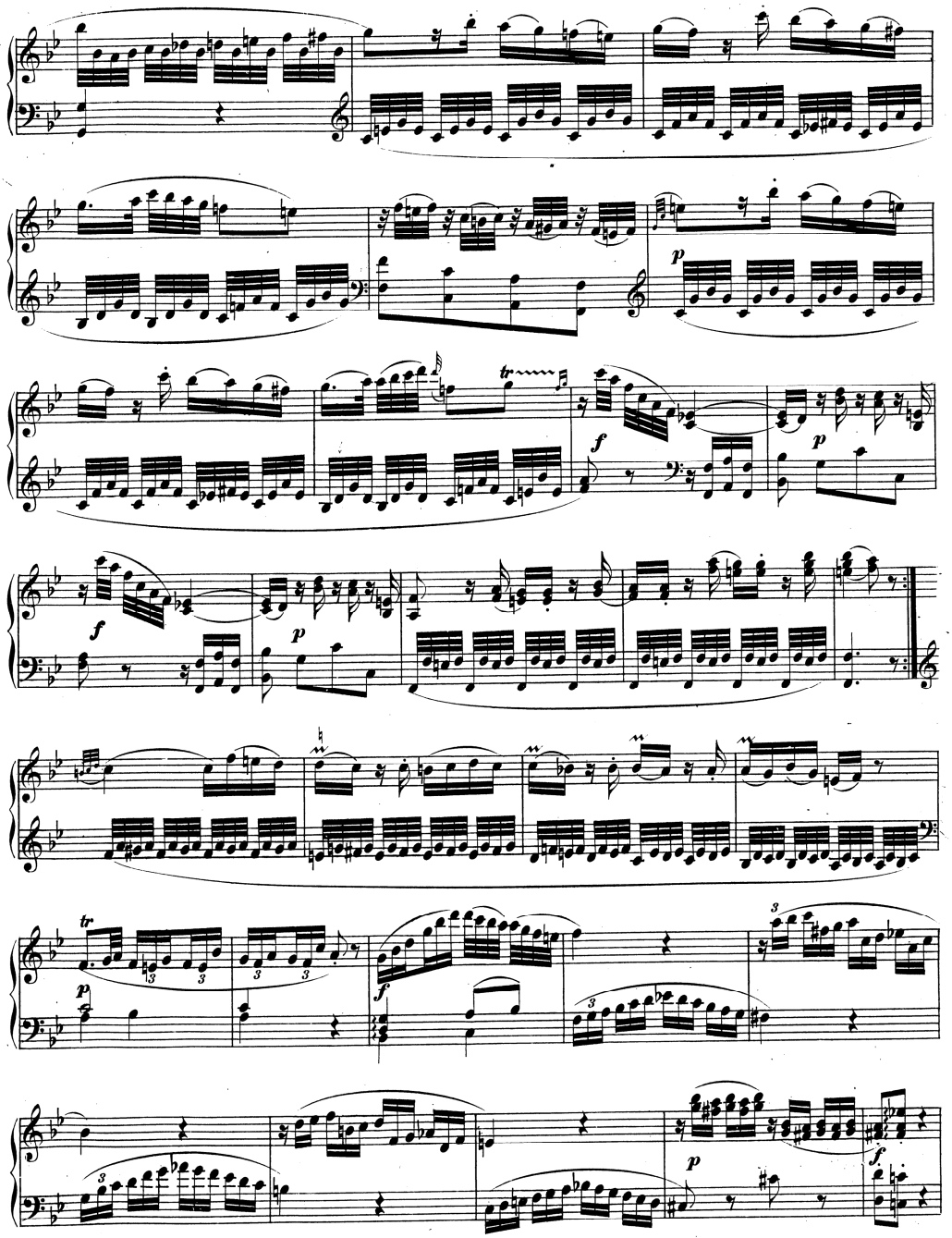
It is still too early to say whether I have become a faster learner as a result of this project. Nevertheless, a considerable amount of work went into it. After sight-reading all of the Mozart sonatas, the Beethoven sonatas, a number of their symphonies, most of *Cosi Fan Tutte*, and numerous arias by various composers, I can confidently say that I have played more music at sight in the past year and a half than I have worked on in my entire life. Lack of time prevented me from putting into practice some of the suggestions I came upon while doing my research; however, I do not think that this is a failing on my part, as it was clear from the earliest stages of this project that this work would have to be continued far beyond my completion of the master's program for it to bear significant fruit.

While much of the work in this project has focused on 'technical' elements of music, I believe that its implications for my artistic development are more significant. Improving my musical groundwork will enable me to start learning pieces with fewer obstacles and thus allow me to develop more meaningful interpretations. Moreover, artistry is more than mimicry; it is more than having a strong emotional connection to music without being fluent in it. Fixing the problems that I confronted in this work should help me acquire fluency in music and thus lead to a greater connection between me and the piano. If I succeed, this project will have allowed me to become the artist I wish to be.

Music Examples

1) Mozart.mp3[90]

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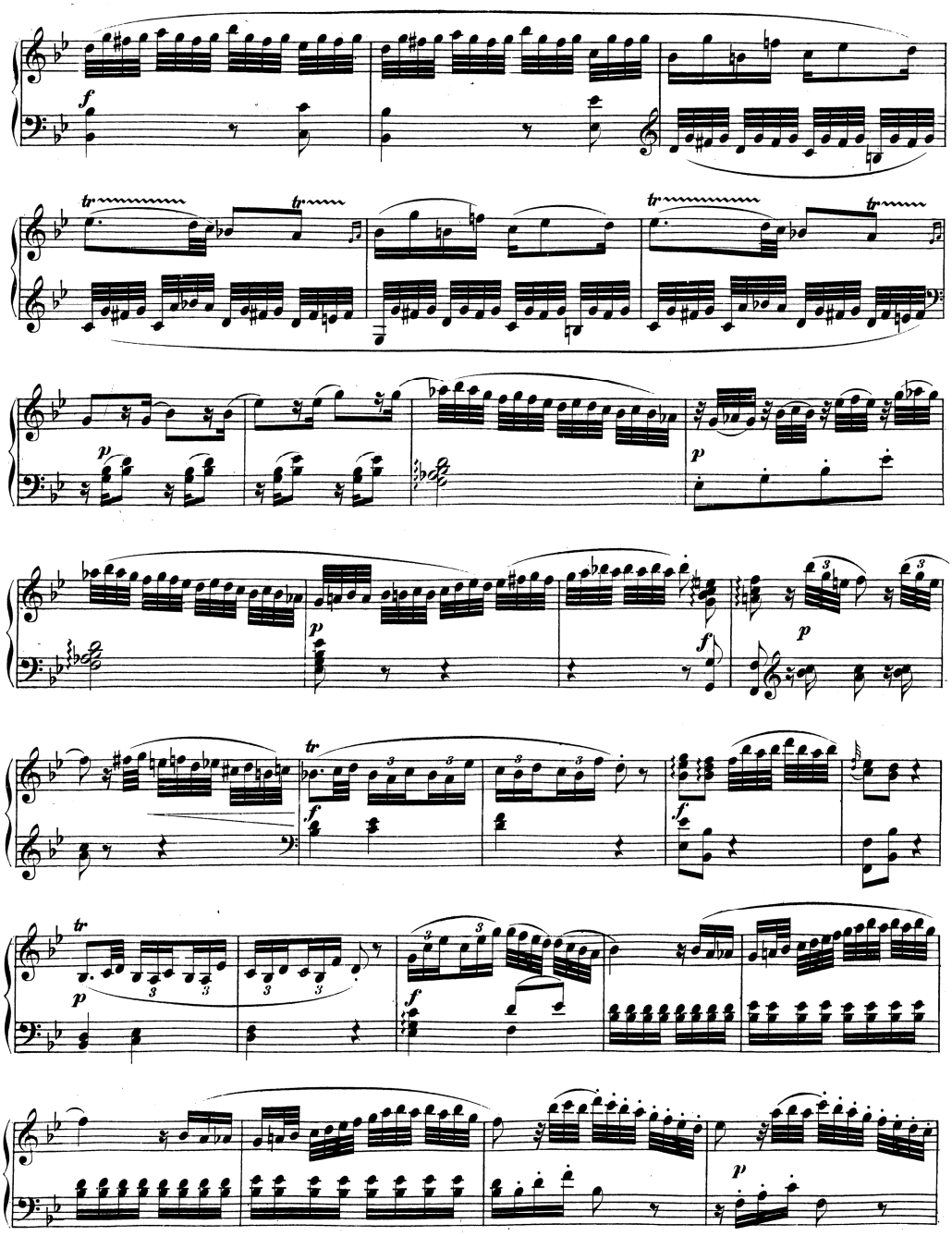
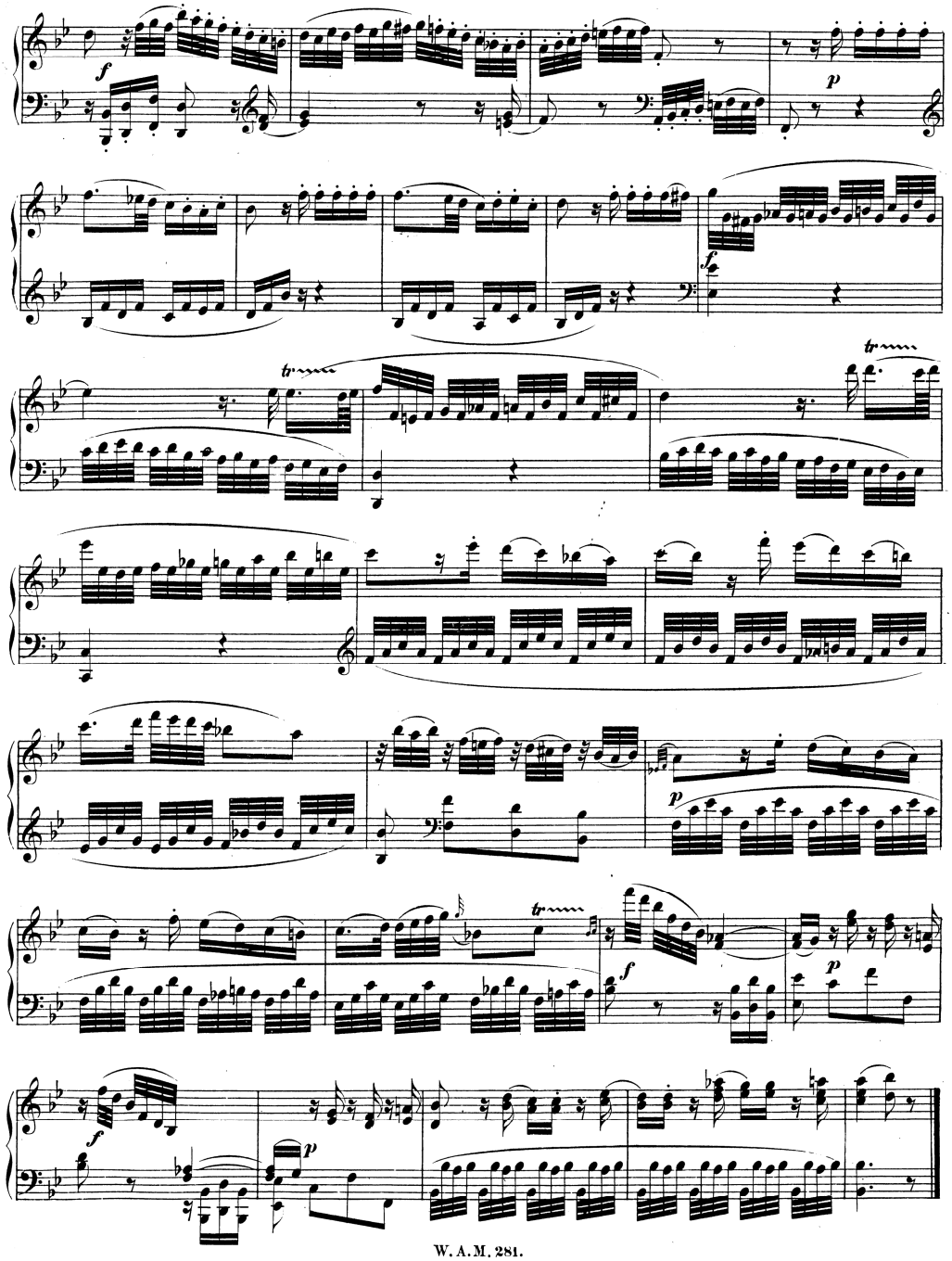
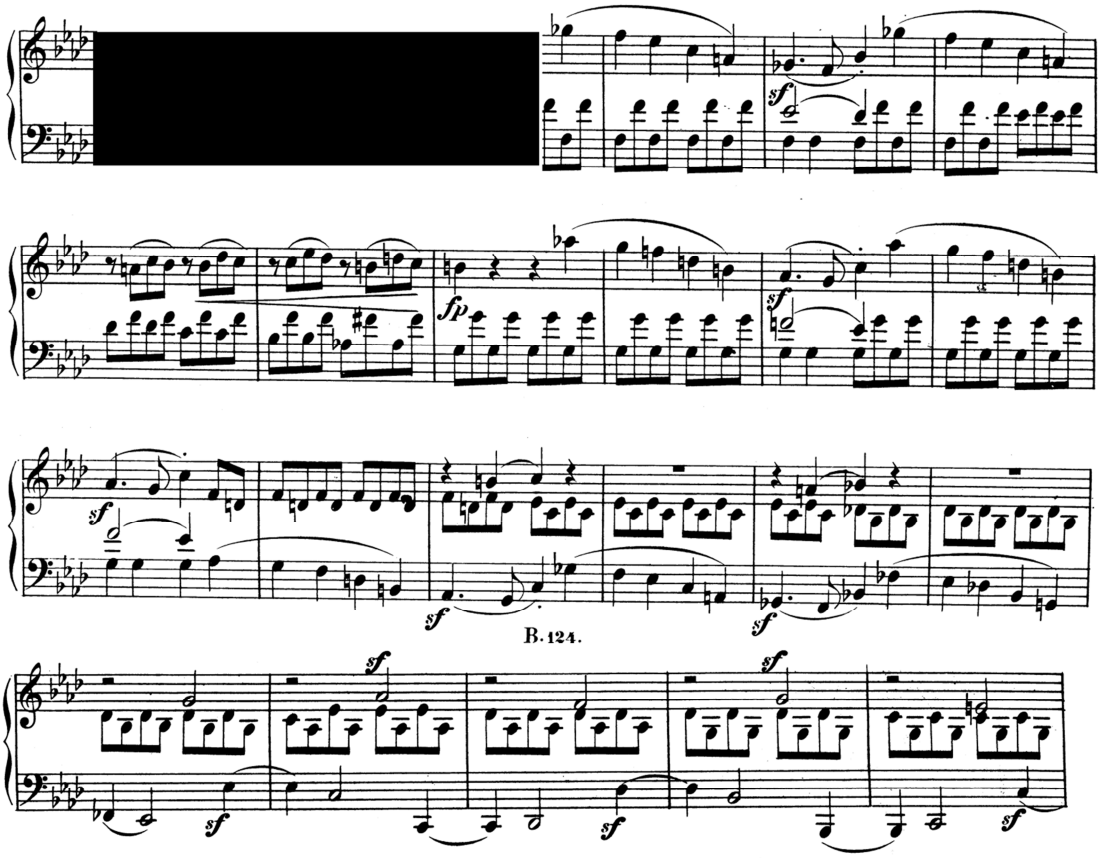
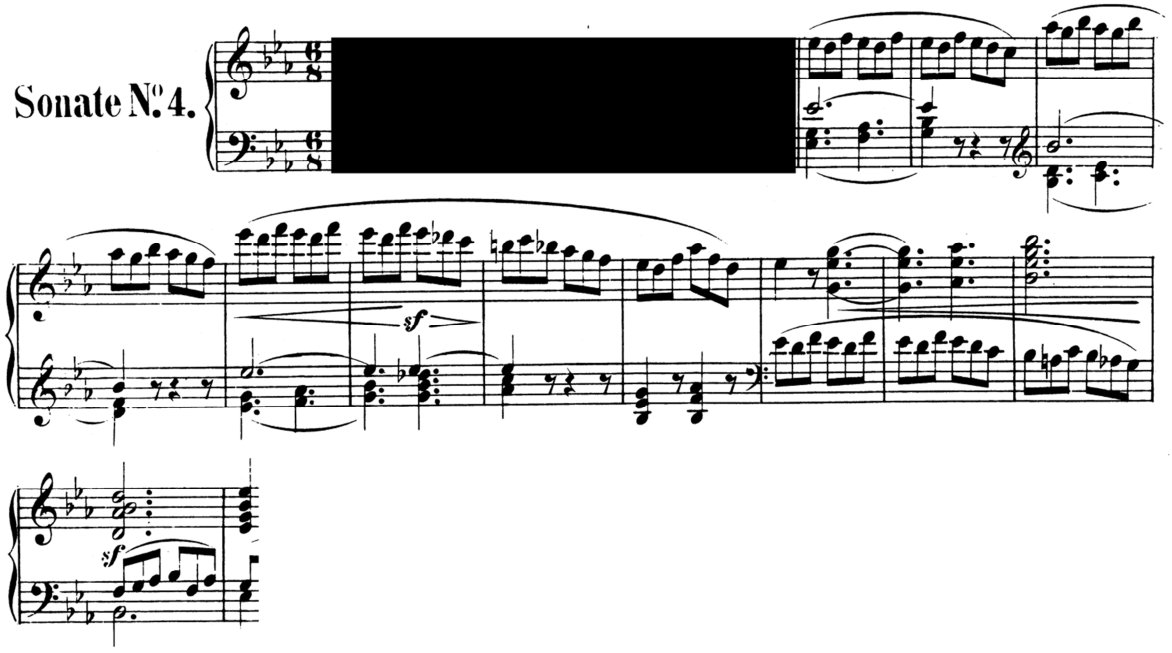




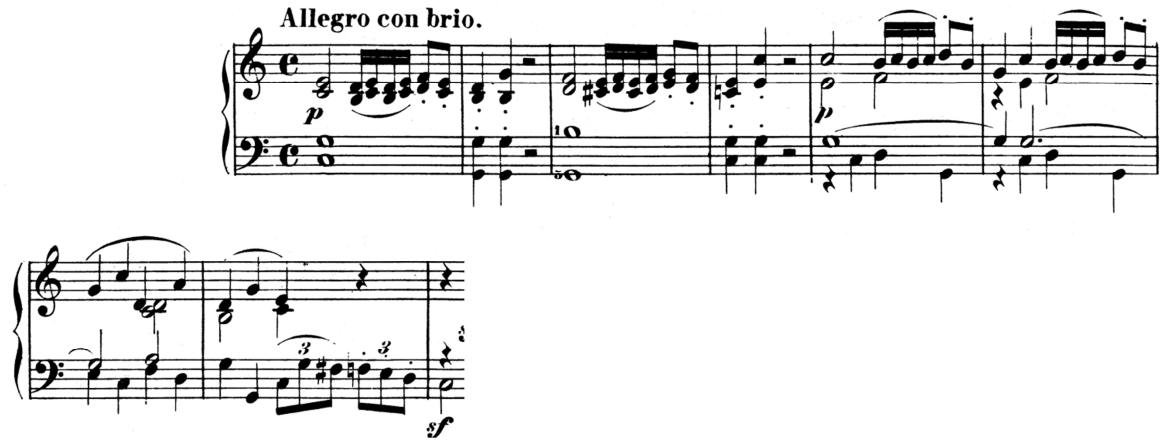
2) QuestionAnswer1.mp3[91]



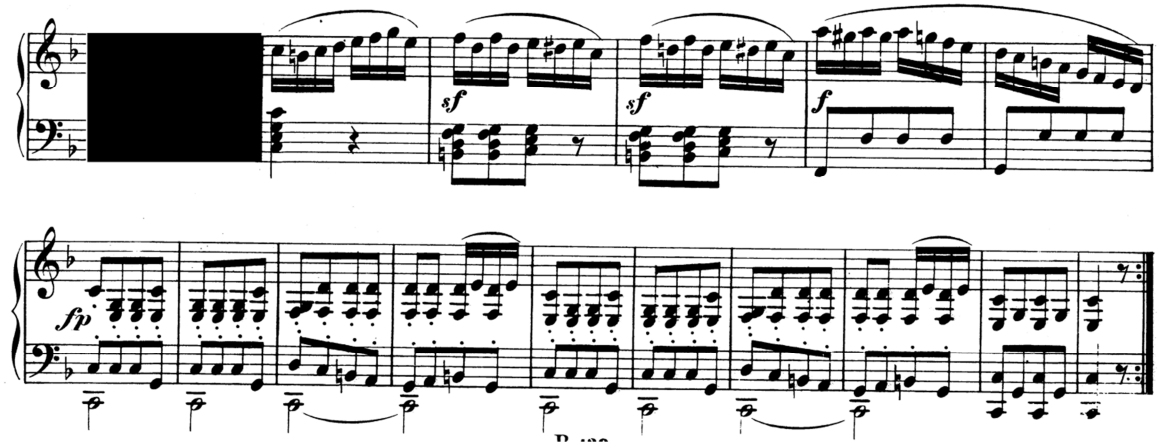
3) QuestionAnswer2.mp3[92]



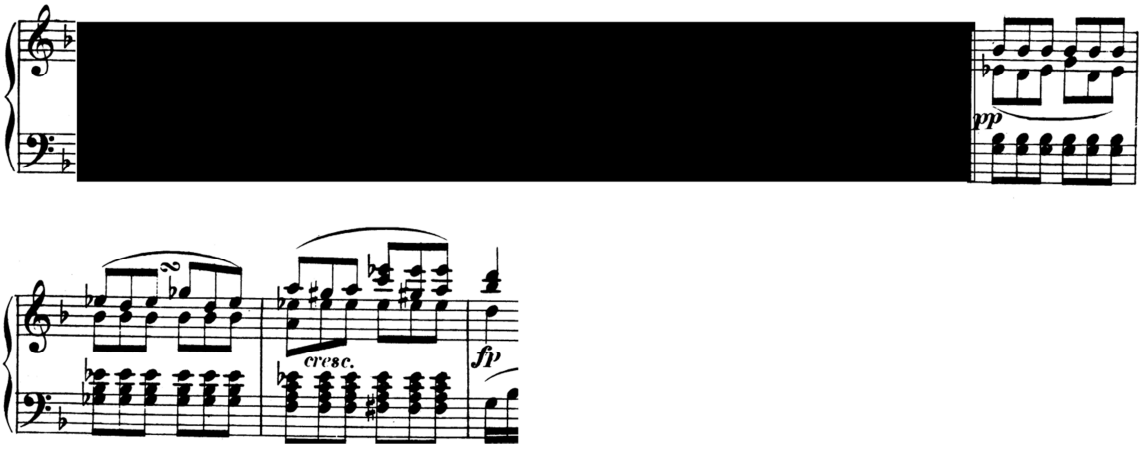
4) Slowtempo.mp3[93]



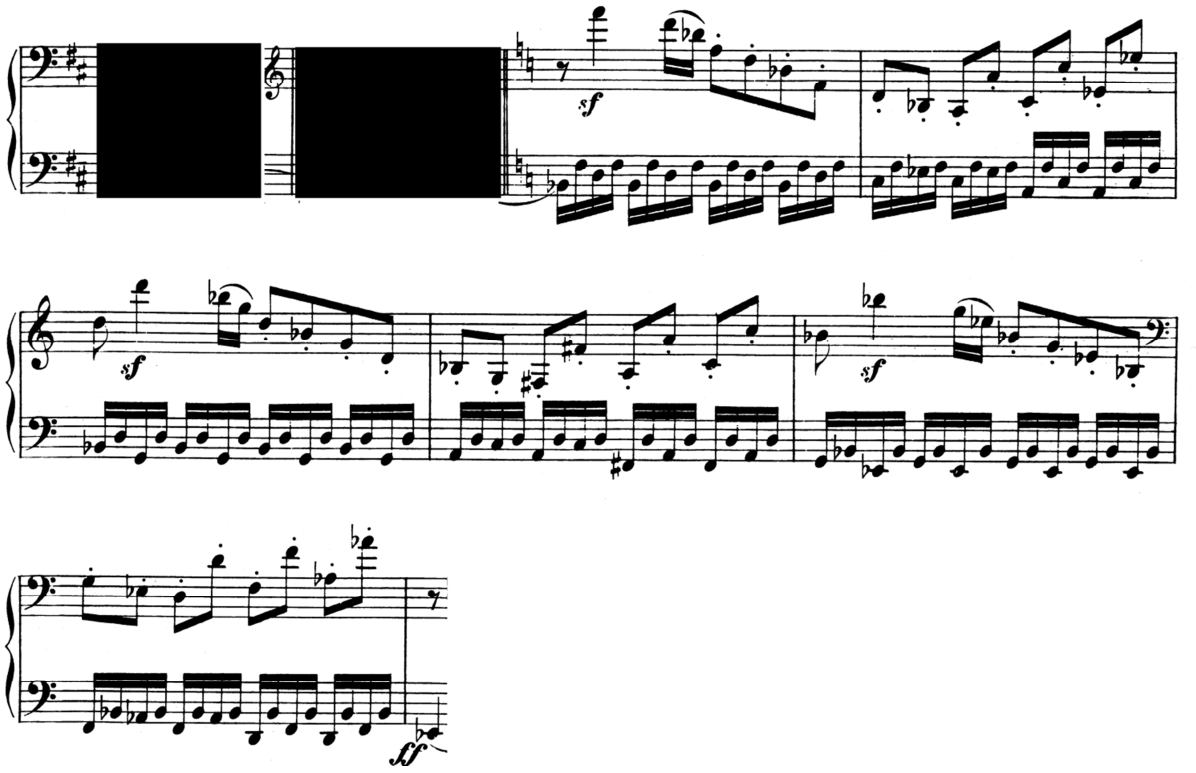
5) Dumfounded.mp3[94]



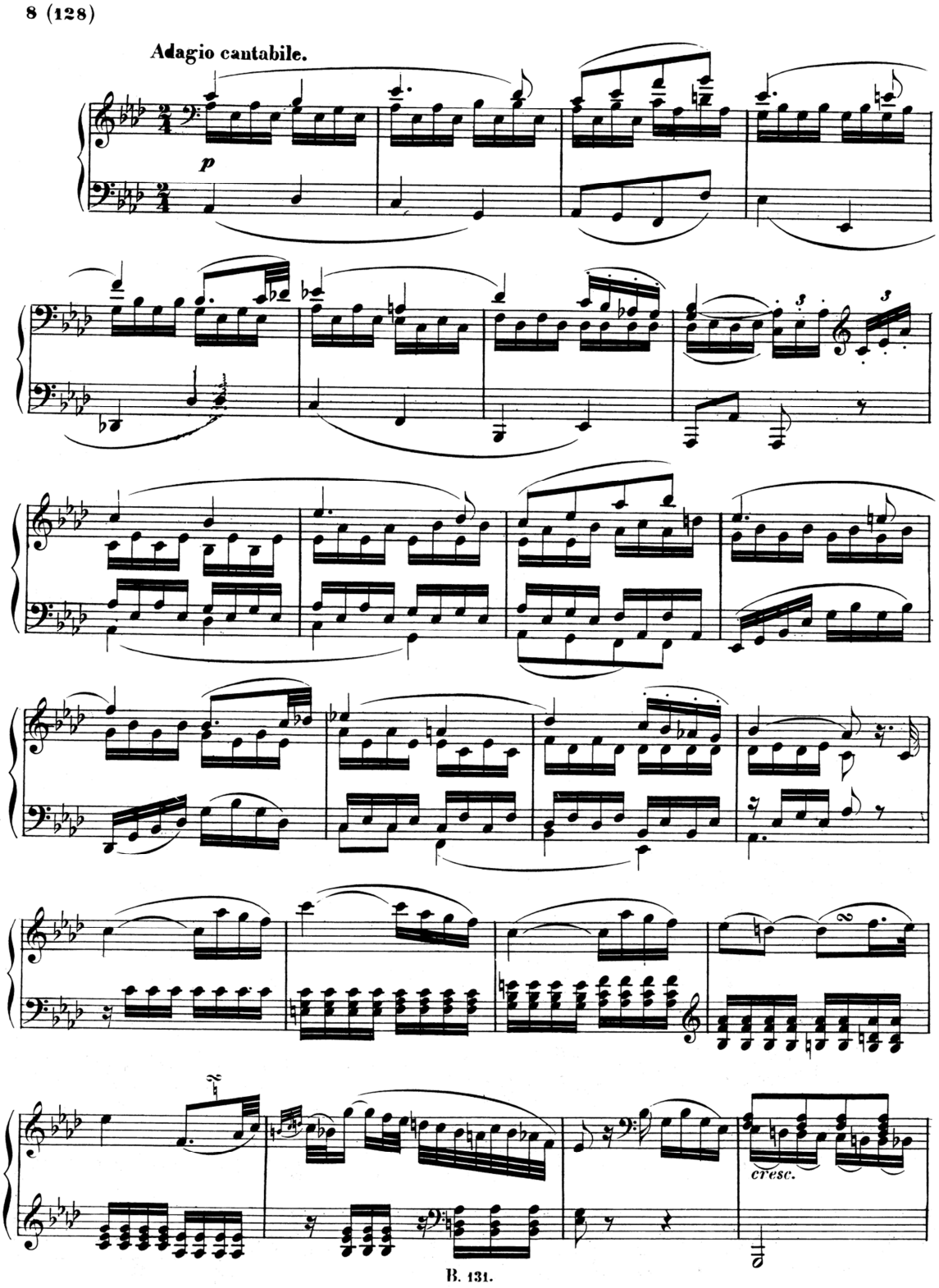
6) CantKeepaSlowBeat.mp3[95]

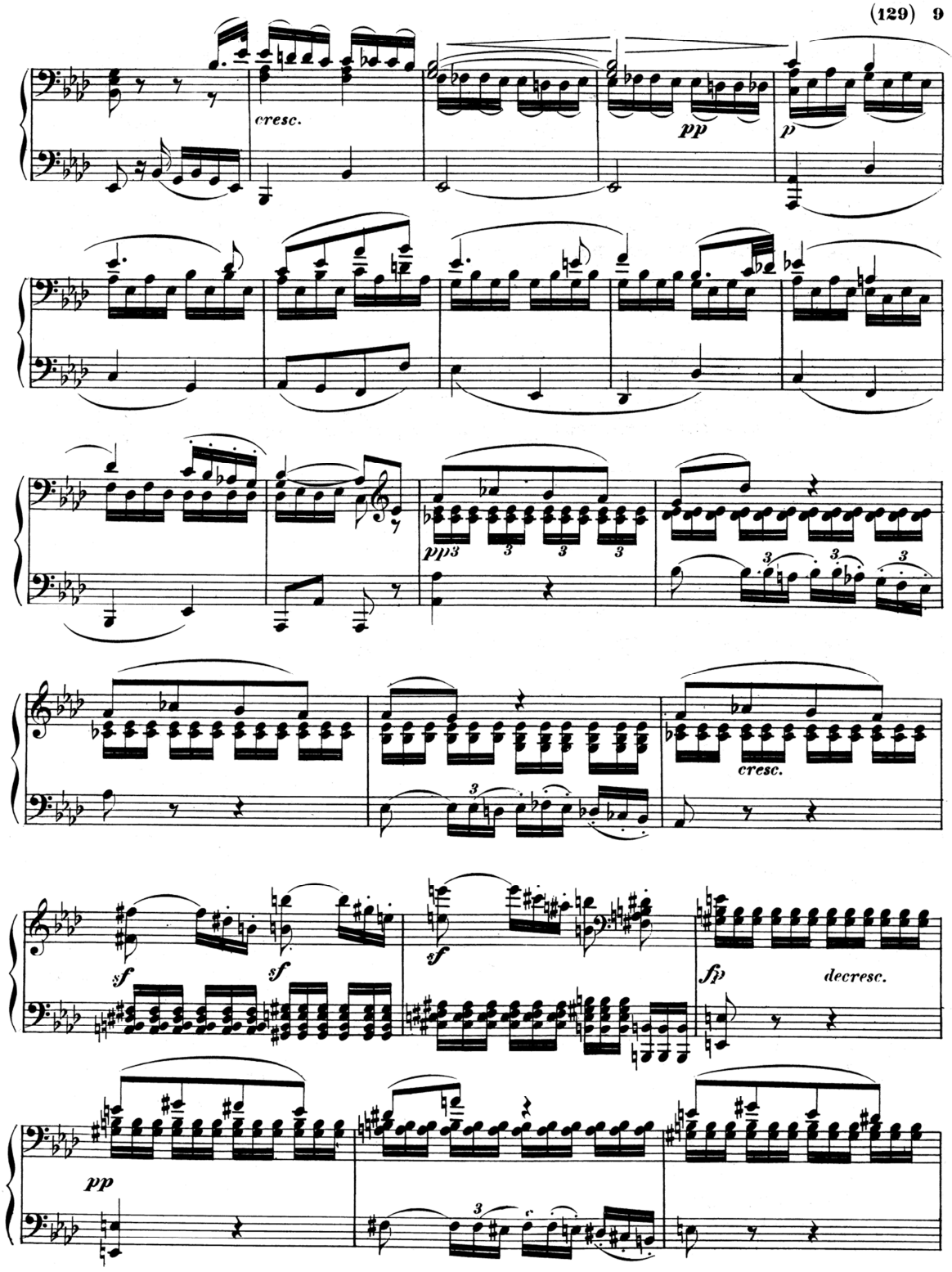


7) NotEnoughAttentionLeftHand.mp3[96]



8) Pathetiquemvt2withmetronome.mp3/Pathetiquemvt2withoutmetronome.mp3[97]





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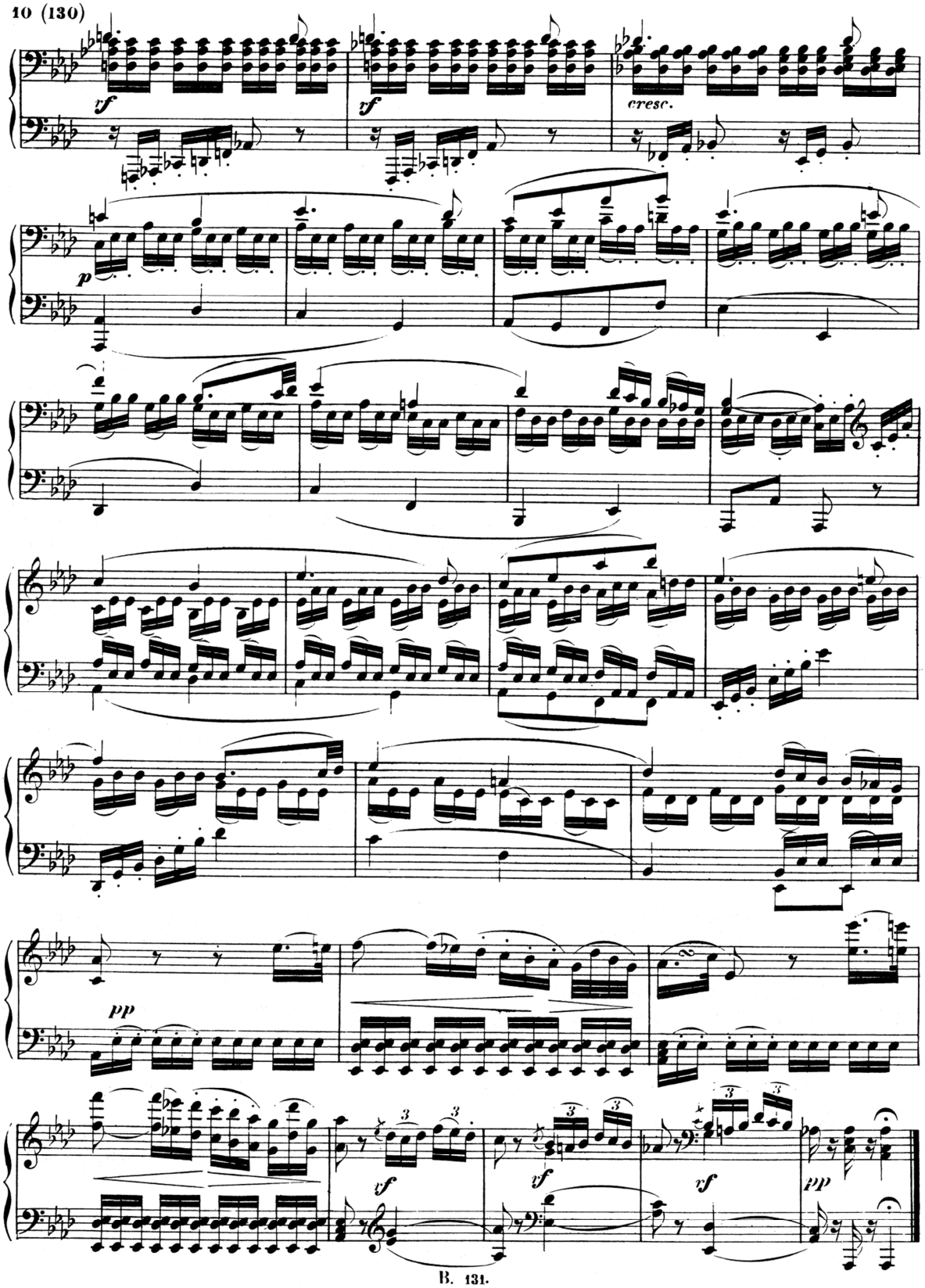
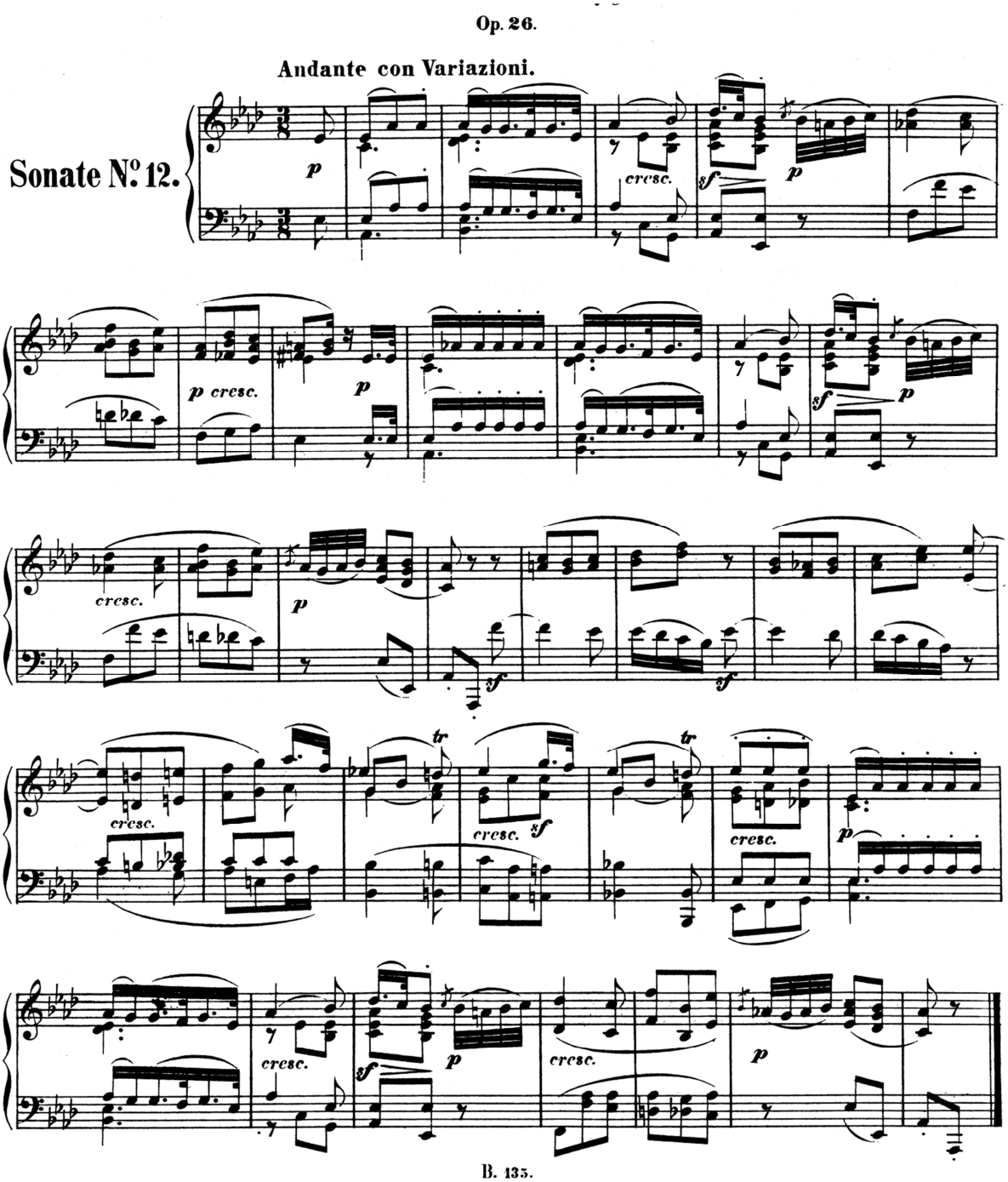
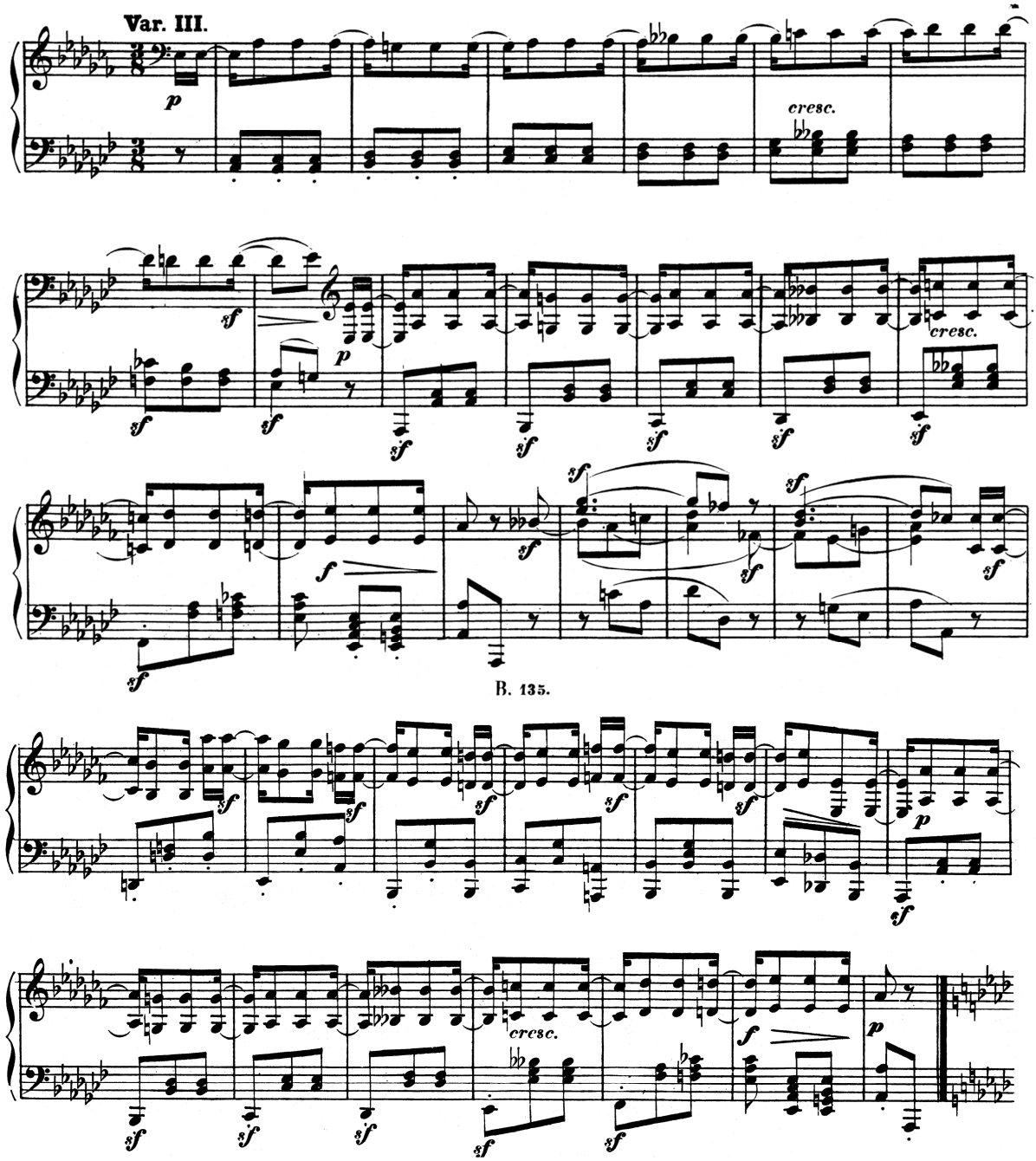

cresc.

9) Sonata12AbMajor.mp3[98]



10) Sonata12AbMinor.mp3[99]



11) Sonata20mvt1.mp3[100]

ZWEI LEICHTE SONATEN

für das Pianoforte

von

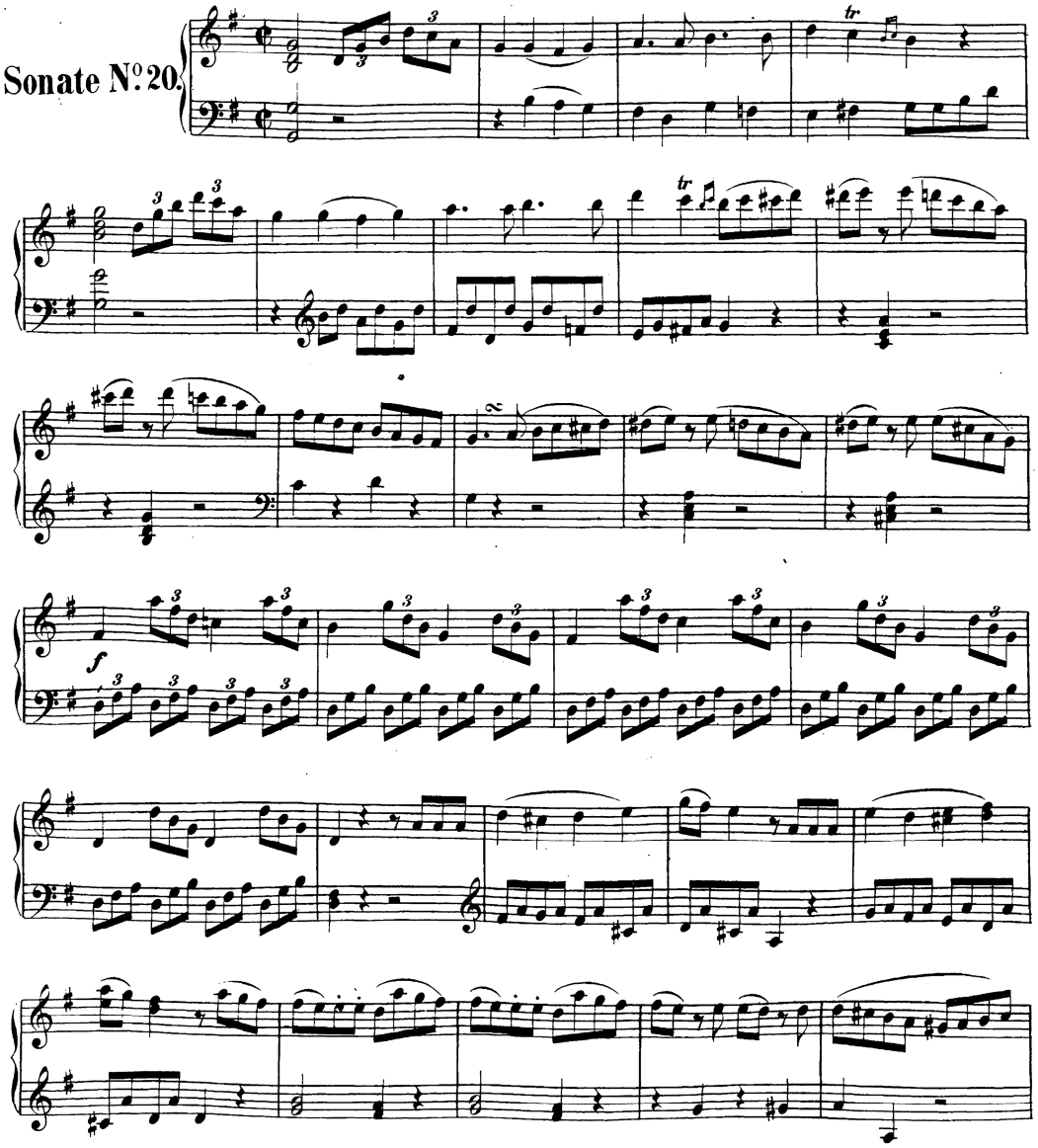
L. VAN BEETHOVEN.

Beethovens Werke. Serie 16. N° 143.

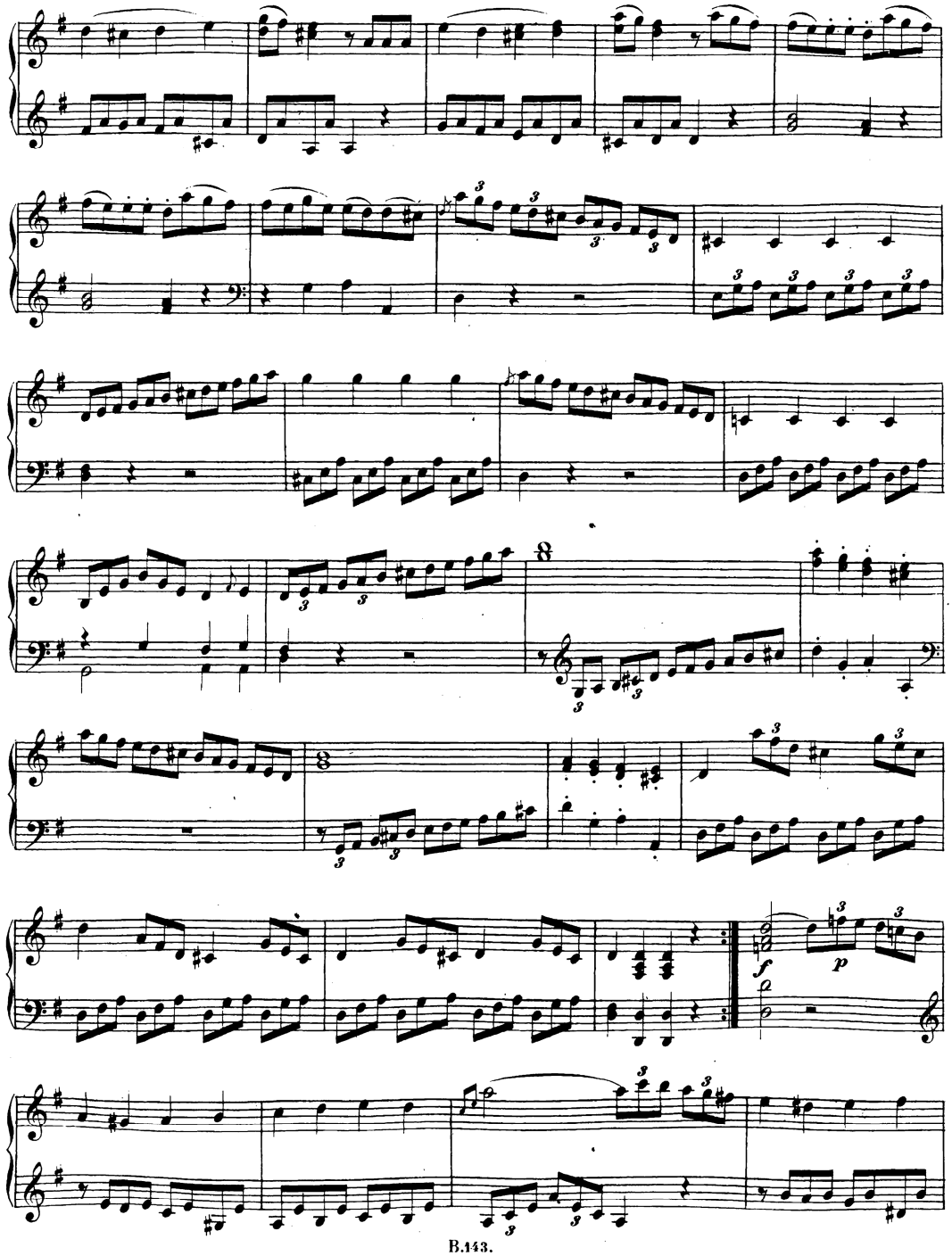
Op. 49. N° 2.

Allegro ma non troppo.

Sonate N°. 20.



Original-Verleger: C. Haslinger qm Tobias in Wien. B. 143. Stich und Druck von Breitkopf & Härtel in Leipzig.



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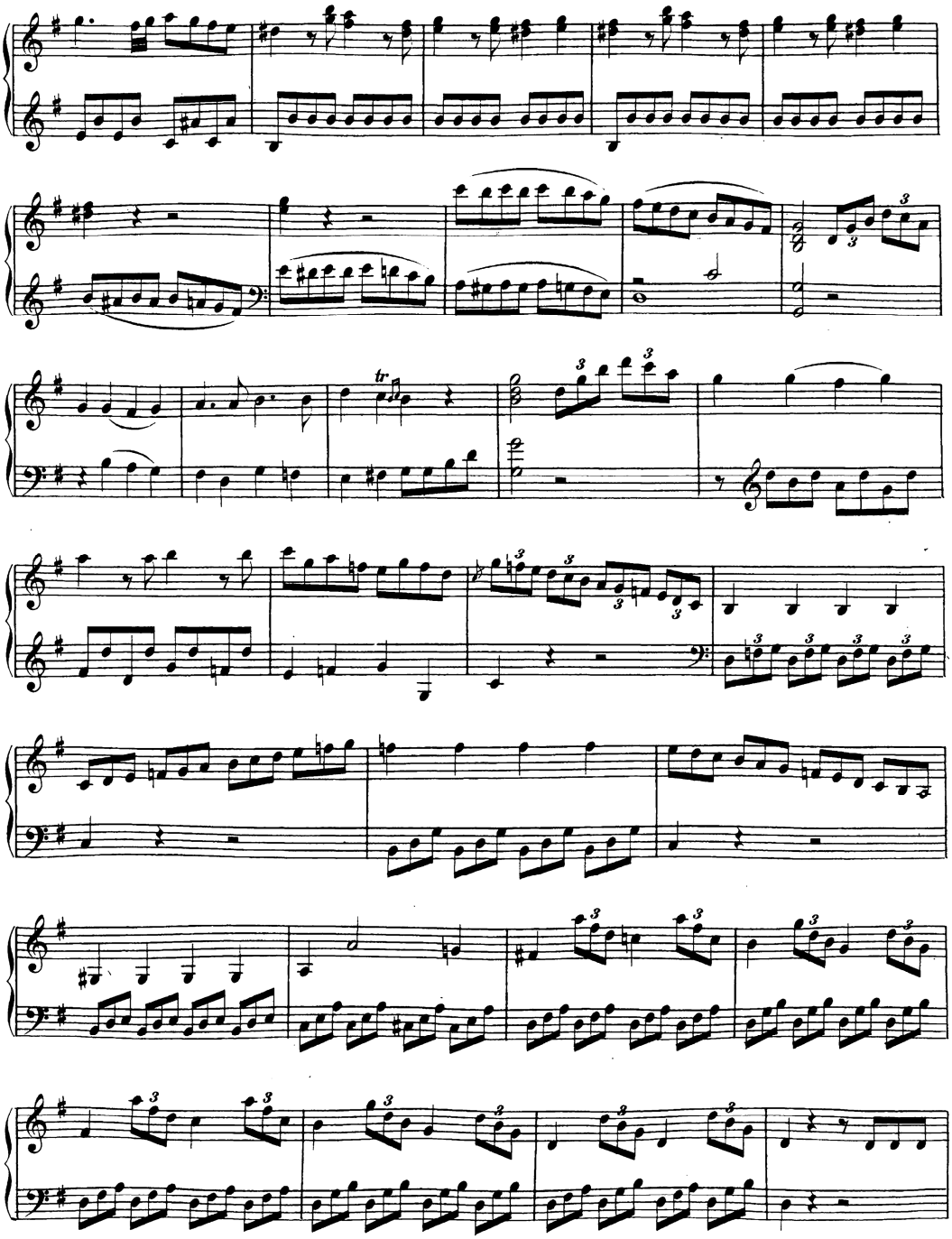

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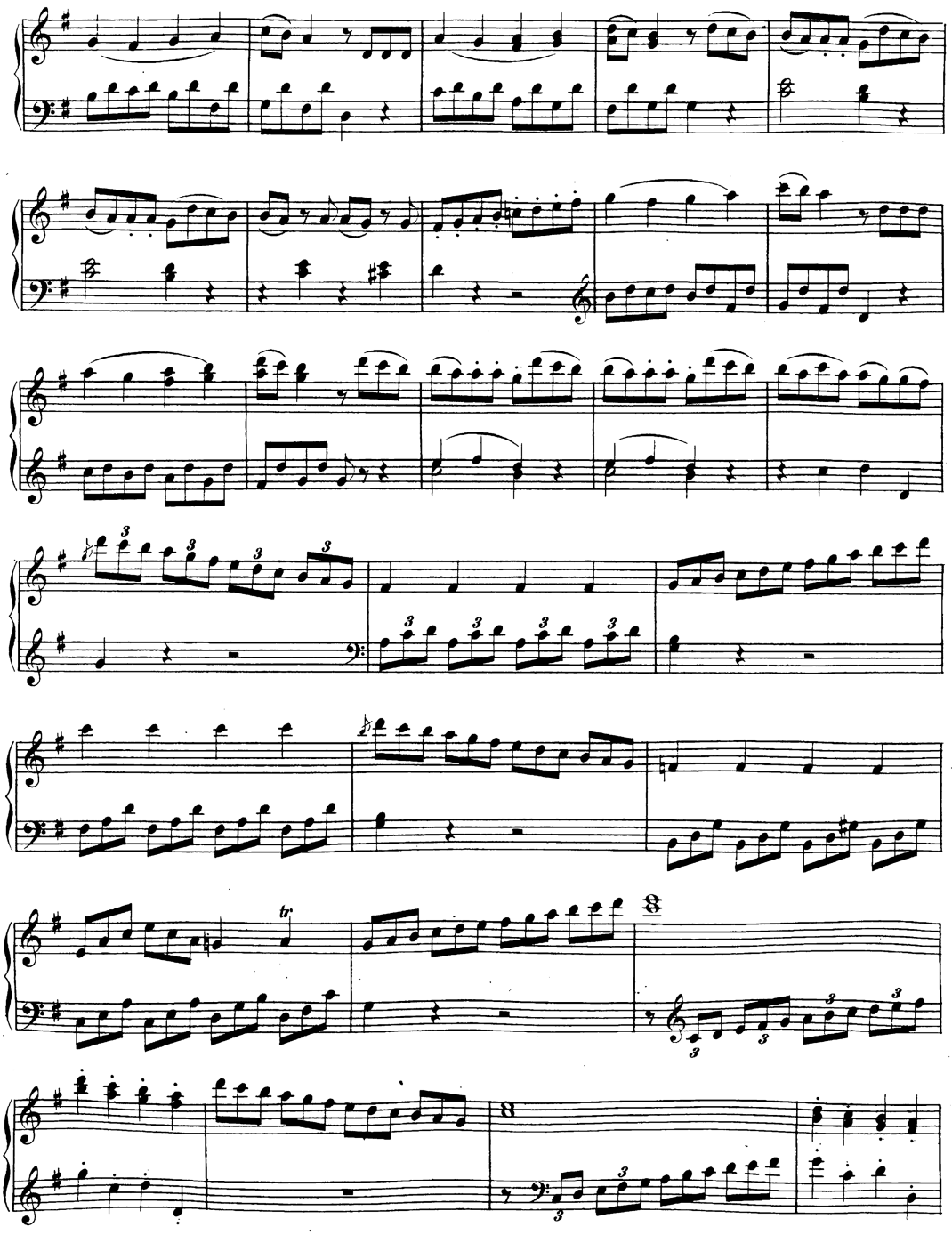

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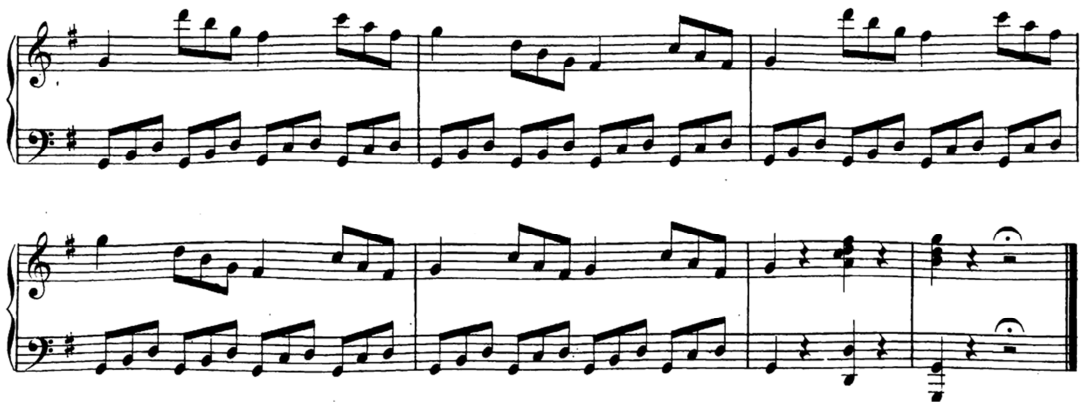

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[2] Ibid., 135.
[3] Robert Spillman, *Sightreading at the Keyboard* (New York: Carl Fischer, inc., 1990), 2.
[4] Beryl Rubinstein, *The Pianist's Approach to Sight-reading and Memorizing (*New York: Schirmer Books a Division of Macmillan, inc., 1950), 8.
[5] Lehman and McArthur, 143.
[6] Ibid., 143.
[7] Ibid.
[8] Rubinstein, 12.
[9] Ibid, 7.
[10] Spillman, 7.
[11] Lehman and McArthur, 137.
[12] Spillman, 15.
[13] Lehman and McArthur, 137.
[14] Spillman, 8.
[15] Lehman and McArthur, 139.
[16] Rubinstein, 7.
[17] Spillman, 15.
[18] Rubinstein, 10.
[19] Ibid., (including diagram).
[20] Sidney J. Lawrence, *A Guide to Remedial Sightreading for the Piano Student: A Study in Corrective Teaching Techniques and Procedures* (Hewlett: Workshop Music Teach Publications, 1964), 17.
[21] Ibid., 18.
[22] Ibid., 15.
[23] Ibid.
[24] Ibid., 15-16.
[25] Rubinstein, 27-28.
[26] Ibid., 27.
[27] Ibid., 27-28.
[28] Ibid., 28.
[29] Lawrence, 21.
[30] Ibid.
[31] Ibid, 31.
[32] Ibid., 32.
[33] Ibid.
[34] Ibid., 33.
[35] Ibid., 28.
[36] Ibid.
[37] Ibid., 29.
[38] Ibid., 28.
[39] Ibid., 29.
[40] Ibid., 29-30.
[41] Ibid., 51-56
[42] Ibid., diagram taken from page 52
[43] Ibid., 60.
[44] Spillman, 56.
[45] Ibid., 171.
[46] Ibid., 59.
[47] Ibid., 168.
[48] Ibid., 59.
[49] Ibid., 57-60

[50] Rubinstein, 27.
[51] Ibid., 19.
[52] Ibid.
[53] Ibid., 20.
[54] Spillman, 48.
[55] Ibid, 49.
[56] Ibid., 52.
[57] Ibid., 54.
[58] Rubinstein, 27.
[59] Lehman and McArthur, 145.
[60] Ibid., check.
[61] Spillman, 68-69.
[62] Ibid., 69.
[63] Ibid., 68.
[64] Rubinstein, 12.
[65] Ibid., 14.
[66] Ibid., 14-15.
[67] Ibid., 15.
[68] Gyorgy Sandor, *On Piano Playing: Motion, Sound and Expression* (Belmont: Simon & Schuster Macmillan, 1995), 187.
[69] Ibid., 190.
[70] Walter Gieseking and Karl Leimer, *Piano Technique* (New York: Dover Publications, inc., 1972), 11.
[71] Ibid., 10.
[72] Ibid., 11.
[73] "Walter Gieseking," Wikipedia contributors, accessed November 18, 2012, http://en.wikipedia.org/wiki/Walter_Gieseking.
[74] Gieseking and Leimer, 11.
[75] Ibid., 18.
[76] Ibid., 23-25.
[77] Spillman, 41.
[78] Ibid.
[79] Ibid., 47.
[80] The language I use to describe the exercises is essentially Spillman's.
[81] Spillman., 42-43.
[82] Ibid., 43-44
[83] Ibid., 44-45.
[84] Howard Ferguson and R.O. Morris, *Preparatory Exercises in Score-reading* (New York: Oxcord University Press, 1931), 1.
[85] I did not sight-read the second sonata because I had recently played it.
[86] Lawrence, 15.
[87] Rubinstein, 27.
[88] Lehman and McArthur, 143.
[89] Rubinstein, 19.
[90] Wolfgang Amadeus Mozart, 'Sonata no. 3 in B-flat major' in *Wolfgang Amadeus Mozarts Werke, Serie XX: Sonaten und phantasien für das pianoforte* (Leipzig: Breitkopf & Härtel, 1878), 20-23, accessed March 21, 2013, International Music Score Library, http://petrucci.mus.auth.gr/imglnks/usimg/c/cf/IMSLP56312-PMLP01834-Mozart_Werke_Breitkopf_Serie_20_KV281.pdf
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[94] Ludwig van Beethoven, 'Sonata no. 6 in F major' in *Ludwig van Beethovens Werke, Serie 16: Sonaten für das Pianoforte, Nr.129 (*Leipzig: Breitkopf & Härtel, 1862), 99, accessed March 21, 2013, International Music Score Library, http://javanese.imslp.info/files/imglnks/usimg/3/35/IMSLP243121-PMLP35850-Beethoven__Ludwig_van-Werke_Breitkopf_Kalmus_Band_20_B129_Op_10_No_2_scan.pdf

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[97] Ludwig van Beethoven, 'Sonata no. 8 in C minor' in *Ludwig van Beethovens Werke, Serie 16:Sonaten für das Pianoforte, Nr.131 (*Leipzig: Breitkopf & Härtel, 1862), 128-130, accessed March 21, 2013, International Music Score Library, http://conquest.imslp.info/files/imglnks/usimg/e/ee/IMSLP243128-PMLP01410-Beethoven__Ludwig_van-Werke_Breitkopf_Kalmus_Band_20_B131_Op_13_scan.pdf

[98] Ludwig van Beethoven, 'Sonata no. 12 in A-flat major' in *Ludwig van Beethovens Werke, Serie 16:Sonaten für das Pianoforte, Nr.135 (*Leipzig: Breitkopf & Härtel, 1862), 189, accessed March 21, 2013, International Music Score Library, http://petrucci.mus.auth.gr/imglnks/usimg/4/4f/IMSLP243298-PMLP01454-Beethoven__Ludwig_van-Werke_Breitkopf_Kalmus_Band_20_B135_Op_26_scan.pdf

[99] Ibid., 191-192.

[100] Ludwig van Beethoven, 'Sonata no.20 in G major' in *Ludwig van Beethovens Werke, Serie 16:Sonaten für das Pianoforte, Nr.143 (*Leipzig: Breitkopf & Härtel, 1862), 117-121, accessed March 22, 2013, International Music Score Library, http://conquest.imslp.info/files/imglnks/usimg/e/ee/IMSLP51745-PMLP01473-Beethoven_Werke_Breitkopf_Serie_16_No_143_Op_49_No_2. pdf