



MALMÖ  
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# Time Signatures in Modern Music

*Is it really a necessity or just obsolete?*

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## 1. Abstract

In the beginning of the 20<sup>th</sup> Century with the emergence of a new musical language as the Second Viennese School (Alban Berg, Arnold Schoenberg, and Anton Webern) took over, suddenly music pushed forward and away from traditional harmony, rhythm and even notation. Music started to lose its traditional feel of patterns, cadences and regularity and instead embraced new complexity, as composers started to avoid time signature patterns, tonal melodies, and harmonies.

Throughout this thesis, new experimental notation methods were analyzed in a way of confronting the traditional way of using bar lines and time signatures. Avant-gardists such as Witold Lutosławski formulated their own way of expressing this new, modern, and more complex idiomatic music. Furthermore, I describe my own thoughts, perception on my piece *Butterflies* for Norrköping Symphony Orchestra as well as interviews with people from different areas within the spectrum of this theme. A clear view of the genuine necessity why time signatures were traditionally used in contrast to what music has nowadays evolved.

## Keywords

Time signatures, Free Notation, Modern Music, Witold Lutosławski, György Ligeti, composition, quantitative/qualitative rhythm

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## 2. Introduction

This thesis will bring out discussions on what modern music composers must reflect on regarding the usage of time signatures. Before writing a new piece, a new musical idea, gesture, pitch, or rhythm, one should evaluate the pros and cons of having a time signature.

The work design and structure are based upon a number of interviews with participants that were chosen in different fields such as, conducting, composition and performers of the thematic area.

As a composition student and composer, I have always tried to refuse the persistence that teachers, orchestras, and conductors have to enforce the tradition that centuries of music history may or may not apply to the music we are writing today. Most of the music written since the beginning of the 20<sup>th</sup> Century until today diverged significantly from what was written before. As my teacher Bent Sørensen reflects on my interview with him when asked about his view on free notation [...] *my general thoughts are that it's possible. It can be a good idea. I just think the composer should be very aware about why he/she uses it.* (Sørensen, 2023)

One could say that embracing this narrative could generate new types of questions, or even be slightly controversial. With this thesis, I engaged myself into more philosophical questions or barriers that a simple question of notation could evoke. Is there a meaning behind the notated time signature? What is the real necessity of using it? Should we force ourselves to use it? Are there enough reasons to explain its usage?

Time signatures were, and still are a common procedure when approaching music notation by composers. With modern music a new paradigm arrived relegating to complete obsolete the real function of the time signature.

Unlike the other forms of art that manifest by working with space, music utilizes and strongly depends on time. *Rhythm is music's pattern in time.* (Crossley-Holland, 2023). As music history shows us, the architecture of the European music started in ancient Greece where side-a-side both poetry and music were considered an equal art. Music started to have a deeper qualitative rhythmic meaning, when the poetic metre (prosody) established the foundation for the music rhythm expression. *Until the 12th Century, church music was virtually limited to unadorned plainchant.* (Crossley-Holland, 2023) meaning that music was mostly a mouth-to-mouth dialect that possessed no strong structure or rules. As polyphony started to raise, composers started to encounter some difficulties regarding the organization of the rhythms, mostly to accomplish the simple parameter of having the different voicing parts together. To solve this problem the rhythmic metre was adopted. With this, a huge turn in music rhythmic expression started as music stress, beats and consequently a succession of various equal musical groupings took power on the hierarchy of most important matter.

Since then, multiple advances in music notation took place. The poetic metre gave place to the creation of the so-called time signature where [...] *notated metre represents a pattern of accented and unaccented beats within a bar.* (Gould, 2011) It's meaning became the extremis of the qualitative rhythm where the music became accentuated in such places characterized by the time signature fraction, such for example, a 4/4-time signature would mean that the first and third beats of the bar would be where the music should stress, whereas the second and fourth beat become the so-called "weak beats" where no stress should be applied.

As the music history took its normal course, a peak was reached with this rule of subdivision of the music in bars and stresses. The music of W. A. Mozart and his contemporaries was, in fact, the music that fulfilled to its maximum the proper definition of qualitative rhythm. The factor of the melody and rhythm becoming a whole, translated into Mozart's most standard melodic cadences, such as his typical time divisions that with all certain distinguish him from the ones of later times such as Prokofiev or Wagner. [...] *Mozart's melodic rhythm is much more regular than Prokofiev's.* (Crossley-Holland, 2023)

But *for some composers the implied hierarchy of accent within metre is not relevant, and they use barring solely for convenience* [...] (Gould, 2011) specifically the second Viennese school with Arnold Schoenberg as a main character in this list of composers, this now traditional thinking and way of notation started to pull out some divergences to some point. The music evolved into such a new world of pitches, mathematical calculations, and precise structures that it started to turn its back to the music that one was once used to listen in the past. Suddenly, the stresses of the time signatures were no longer there, the melodic lines together with the rhythmic structures were no longer a foundation on which one could rely. A total new and modern era of music started and suddenly it became contradictory the existence of such a traditional way of notating that, not only limits one's music to a point, but as well that tradition should start to give way to new ways of notating such music. Somehow the music became more complex however, in some way, closer to the beginning of its creation than of after.

Theoretically, metre appears to be without stress accent, and certainly much polyphonic music of a later period, such as the masses of Giovanni Pierluigi da Palestrina, has an almost stressless flow. (Crossley-Holland, 2023)

Some composers started to get away from the tradition and finding new ways to express their musical ideas. One could state that "free time" started on the Gregorian chants, when no time signature was written and the musical ideas of the Gregorian chants were performed without any kind of guidance, stressed beats or whatsoever. But "free time" or "free notation" started with experimentalists in the 20<sup>th</sup> Century, with names such as Witold Lutosławski, George Crumb and others that are going to be addressed and discussed later on.

In contrast, some composers from the 20<sup>th</sup> and 21<sup>st</sup> Century as well are going to be discussed as means to state a point of the real necessity of the time signature usage. The reasons behind those decisions are up to each individual composer, but the necessity of debating about maintaining such traditional ways of notation are of significant importance for the music of today.

Clearly one could debate the use of time signatures in any kind of music, musical gesture, musical texture, musical narrative, musical context. Such parameters can of course have characteristics that involve and need the use of such notation. But one can distance himself from such a long distant tradition that limits not only our ability as composers to write our ideas more freely, but slowly and unconsciously starts to narrow our minds to a point that the real usage of such notation becomes a tradition and not a necessity.

### 3. Inquiry Aim

As a composition student I have always struggled to find an answer to why some genres of music are written with metre or time signatures. Of course, one can find in music of great composers such as W.A. Mozart, W. Beethoven or even I. Stravinsky the reason time signatures are chosen and established as standard notation.

It was after I studied the scores of G. Ligeti on pieces such as *Lux Aeterna* or *Lontano*, that I started wondering myself why the necessity of using such standard notation as the time signatures. The music does not reflect the real sense and feeling of such music mentioned before, so I took it personally and decided to invest some time and put effort into the writing of this thesis.

In modern music, is the time signature a real necessity?

Hopefully, this thesis can open new ways of notating music, innovative approaches, innovative ideas, and standards. The future generation of composers should not be restricted to the usage of traditional time signature notation, just because they are told to or taught to. One can and should have different opinions, different ideas of the music that one wants to write.

## 4. Method

### 4.1. Inquiry

For the determination of this thesis, a combination of two methods was employed: interviews with several different individuals that were all related to this area of expertise and in parallel, a piece of music composition that included all my ideas of time-less music and related reflections on the matter.

Questions were made in an informal approach to two composition students, two composition teachers and one conductor. The purpose of these interviews was to show from each one's own perspective side, their personal reflections on the subject.

So, after all the previous chapters where hopefully this thesis displayed, enlightened, and possibly inspired, a detailed approach to my piece *Butterflies* must be explained. Before starting immersing into the details of the time-less technique I used, I find it necessary and interesting approaching all little details when constructing this work of music.

In 2022 for my second master's degree year, I got to know that as a part of my program's projects for the year, I had the opportunity to write an orchestral piece for the Norrköping Symphony Orchestra.

In the Autumn of 2022, I had just finished my piece for solo 'Cello *If there's a Heaven...* and I was overwhelmed by the musical result of the piece, as well as with some musical ideas I've managed to accomplish. Therefore, I was filled with inspiration to write this next piece for orchestra, and I started to recall emotions from my past. I remember stopping almost in every frame of my memoirs to enjoy every second of it, as if I were re-living the moment. That one moment when one sees and feels love for the first time...

The new music was flowing in my head, as easily as I was experiencing that moment from the past and recreating it. *Butterflies* was the name. *Butterflies* was the feeling.

The score has only one movement. The excitement and at the same time, the fear of writing for a full orchestra, was somehow wonderful.

I also wanted to see if I could highlight every single detail that was on my mind when recreating that emotion. So, every decision was obviously a challenging process, as the different colours and sonorities an orchestra can have, generates difficult decisions when one has to find a way to express himself. But after numerous trials and errors, I found the sonorities I was looking for to help and recreate that emotion.

The music is based on abstract textures I always have on my mind. In some moments one can feel devoured by slow harmonic structures that grow inside oneself, but as one can be overwhelmed by these



harmonies, it can quickly change into more dark, severe, and harsh sonorities. But nevertheless, the music breaks out and solves itself into a slow section one can relate from the beginning.

In the first sketches that I have written out, most of the music couldn't or shouldn't fit inside a time signature or bar line. The music material itself was so fragile, and at the same time so organic and malleable that if I would place myself in a situation where I should be 'forced' to write it in a traditional way, hence recurring to time signatures, I just knew from the start that wouldn't sound the way I imagined. It's not only a question of breaking the chain from the traditional ways of notation, as previously mentioned, one can also feel personally detached to from a musical point of view. It's a query of psychological and philosophical aesthetic point of view that somehow all this time has been growing inside myself expecting me to produce a sort of solution.

After writing most of my preliminary version of the piece, I approached the conductor Michael Bartosch that advised me: [...]

The musicians have three things they need to know. What, how and when. What to play – pitches, left hand for strings. How – legato, staccato etc. When to play – this is where free notation usually causes problems. This is the problem you need to solve. (Bartosch, 2023)

Therefore, I just needed to find a way to put all the music in a system that in theory could work safely for every musician. I took into consideration what Michael Bartosch said:

[...] There is a huge difference between wind players, who always are solo, and strings, who normally play as a group. A solo player usually only needs to know when to start, but a group will need some kind of guidance to be able to play together (if that is desired). It is easy to mark when a part starts, but also consider when to end a passage. (Bartosch, 2023)

That was the moment I started to differ from Lutosławski's idea of free time. I didn't feel that my music suited the way he notated his own scores. There are several examples of Lutosławski's music displaying his usage of boxed notation, where I somehow feel disconnected with. I believe in a continuous and hypothetical musical narrative where the music just keeps developing throughout the timeline, without the need of repetitions or loops. In some way I feel related to a well-known writer from Portugal, José Saramago (1922-2010). He was the recipient of the 1998 Nobel Prize in Literature, and Saramago's experimental style often features long sentences, at times more than a page long. He used periods sparingly, choosing instead a loose flow of clauses joined by commas. Many of his paragraphs extend for pages without pausing for dialogue. That's somehow how I can relate my own aesthetic and essence in music.

The music in the beginning of the piece has a texture based harmonic function that slowly develops throughout the string orchestra until it reaches its natural climax with the woodwinds at the top register. The material is performed inside each section within the string orchestra, with the difference being that

each player is somehow considered a soloist. All sections will be out of synchronization and so, naturally, the music written for the sections will become increasingly soloistic as the time progresses. At some point in the music, the rest of the orchestra will join this textural harmonic music, adding their own flavour and colour, contributing to the butterfly musical effect I imagined in my head.

Recurring to some more advice on the conductor's side:

The system I use and have found most effective is the way Leif Segerstam uses in his first 100 diary sheets. The score is structured in separate parts, every part starts with a letter in a square box. These will be shown by me with my right hand. The music between the letters are divided in numbers, in circles. I show these with my left hand. I can show up to nine (even ten) numbers with one hand, then a new letter is needed. These signs, both letters and numbers, can be used to signal a start or a stop of a part/passage. Indeed, it can signal any kind of change, like dynamics or tonal material. I think it is a good idea to write all numbers in all parts, but in order to make it understandable use full circles for the players that the sign applies to, and dotted circles for "need to know" parts. (Bartosch, 2023)

Following this, I started using this system and somehow adapted it to what I thought were the real needs for my music. Therefore, as I wrote on the performance notes of my piece *Butterflies*, the ad libitum/no time signature sections are not conducted. The beginning of each section is marked with a rehearsal letter. Then, several numbers up to five (5) are shown by the conductor's right hand, which corresponds in each rehearsal letter to five cues that are given to the musicians. Left hand should be used for tempi and control of the orchestra. In consequence, the placing of notes one above the other in the score does not necessarily mean that they are played simultaneously. However, in the conducted sections marked with regular time signatures, all the rhythmic values are precise: the notes appearing vertically in line are to be played simultaneously, as well with the pure feeling of the time signature written. Each individual part has the information about the closest number and letter cues so that each individual performer can feel secure if the music is approaching their own cue, or some other different instrument/section of the orchestra.

My own reflection upon this system is that I can still have absolute control of the musical values such as pitch and rhythm, in a way closer to the control a composer can have if the music were to be written with time signatures and bar lines. The colossal difference for me is the absolute psychological, aesthetical, and philosophical hidden part in this quite sensitive detail that can make a huge difference in a composer's music when approaching it without time signatures. In a written interview I did with one composition colleague of mine, Veronika Krøll Voetmann wrote:

I tend to write my pieces in 4/4, but nothing about the music is in a 4/4 feel, and it is purely for practical matters that the music has a time signature. However, I do think greatly about when things happen in relation to each other, and that the timing is important for the flow of the music. And therefore, the conductor's counting becomes important too. So, I guess that there is a kind of underlying metric feel.

On the other hand, it wouldn't matter if I notated the piece in 2/4, 3/4 or 1/4 or changed the time signature every second bar. (Voetmann, 2023)

In this way I hope the piece I wrote for the Norrköping Symphony Orchestra as well as this thesis can somehow hopefully make this little absolute psychological, aesthetical, and philosophical hidden part a revelation for musicians, composers, and conductors in the future of music.

## 5. From the past

### 5.1. On Renaissance music (Giovanni Pierluigi da Palestrina)

The necessity of diving into the beginning of the music development comes naturally, since there is nothing like a diamond on its pure form, without any impurities attached.

A história da música ocidental parte da composição melódico-linear, criando a polifonia do contraponto, isto é, a arte de unir várias linhas melódicas em um todo só, processo do qual surgiu a harmonia, ou seja, um sistema de ordem que tem por objetivo a formação e o encadeamento de acordes e caracteriza a produção musical desde o século XVII à primeira metade do século XX, aproximadamente.

Não há, por isso, nada mais lógico do que seguir a evolução natural do desenvolvimento da linguagem musical [...] (Koellreutter, 1996, p. 8)<sup>1</sup>

The counterpoint composition in the Renaissance music started with the creation of the Organum, approximately in the 9<sup>th</sup> Century – 12<sup>th</sup> Century. (Koellreutter, 1996)



Figure 1 - Excerpt from Organum Melismático (Koellreutter, 1996)

[...] all music from the start of history, from Gregorian chants to Palestrina is without bar lines [...] (Storm, 2023) states my teacher Staffan Storm, from an interview I did with him about this matter. There is nothing new when we talk about free notation and no bar lines in Renaissance music since this

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<sup>1</sup> The western music history starts with the melodic-linear music composition, creating the polyphony of the counterpoint, that being, the art of merging several melodic lines in a whole, from which harmony was created, so, a system with the purpose of creating and formulate cadences and chords, process which characterizes the musical production from the 17<sup>th</sup> Century to the first half of the 20<sup>th</sup> Century, approximately. There is no other logic reason than following the natural evolution of the music language development [...] – Translated from Brazilian-Portuguese. (Koellreutter, 1996)

was already a current procedure at this time. The music was mainly transmitted in oral form, and when written, the free musical form, characteristic of this kind of music, was never able to fit in bar lines.

There are several examples in the music history, specifically in the Renaissance era from where one can observe that the music itself is expressed with such freedom that one cannot feel any meter implied. The first huge rational counterpoint written work may be the *Notre dame Mass* from Guillaume de Machaut (1302-1377), a four-voiced full mass, from the gothic period, that [...] *parcialmente composta na base de uma série de ritmos (isorritmia) que lembra a técnica dodecafônica de Schoenberg*.<sup>2</sup> (Koellreutter, 1996, p. 9)

Therefore, in the music of Palestrina, one can similarly identify lack of metre in his music.

A acentuação métrica – precursora dos futuros tempos forte e tempo fraco – de cada voz individual é livre, isto é, os acentos não ocorrem em períodos simétricos e estritamente regulares e dependem da acentuação das palavras. (Koellreutter, 1996)<sup>3</sup>

So, we can clearly observe that in the Renaissance music until Palestrina, it was already a characteristic of the period. The freedom in the musical narrative, could not be written in any other form. There are clearly reasons to believe that the music was written in a way that surpasses any level of fixed boxed bar lines, or anything that was developed afterwards.

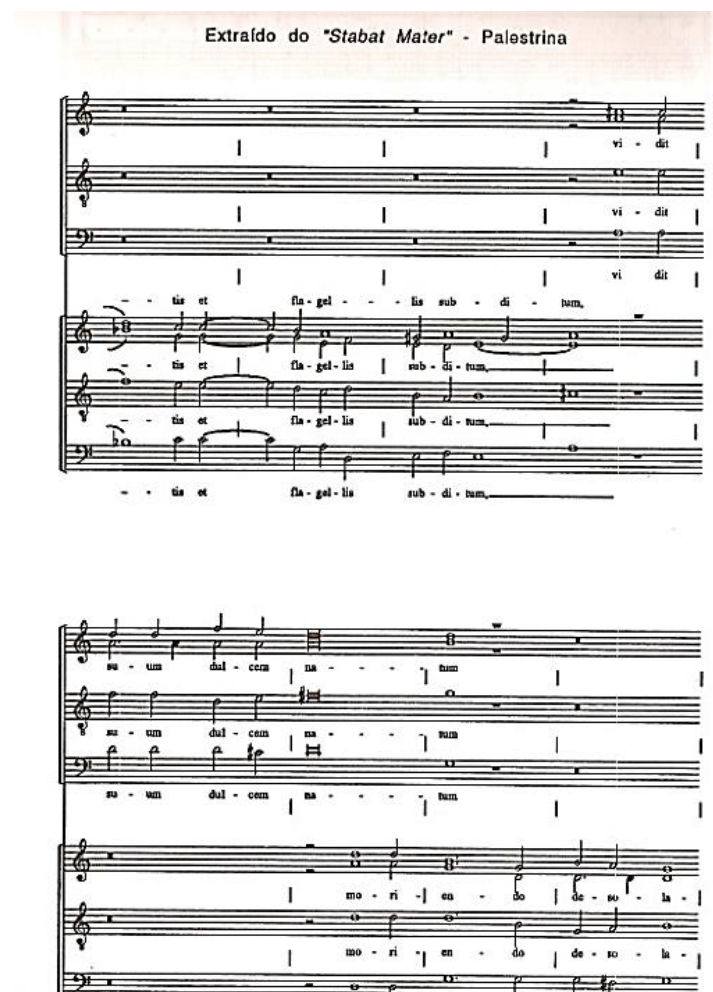


Figure 2 - Excerpt from "Stabat Mater" - Palestrina (Koellreutter, 1996)

<sup>2</sup> [...] partially composed from a rhythmic series (isorhythm) that resembles the dodecaphonic technique from Schoenberg. Translated from Brazilian-Portuguese (Koellreutter, 1996)

<sup>3</sup> The meter accentuation – the foundation of the soon called strong and weak beats – each individual voice is free, that being the accents don't occur in symmetric and strictly regular periods, and they depend on the text accentuation. Translated from Brazilian-Portuguese (Koellreutter, 1996)

## 5. From the past

### 5.2. On Classicism (Wolfgang Amadeus Mozart)

After the maximum musical exponential that happened during the era of Baroque music came the Classicism, that increasingly persisted with the traditional notation. The real definition of time signature *composers for whom the hierarchy of accent is relevant will select one time signature in preference to another to determine the placing of such implied accents.* (Gould, 2011, p. 151) was achieved with the Classicism music.

The music from this time cannot be detached from this type of notation. The melodic structures as well as the musical harmonic functions work toe-to-toe with the time signatures respective accents. One can clearly distinguish in every piece of music which is the time signature applied in it, since the harmonic flow and the melodic cadence works fluently to achieve that purpose.

This maxim was ultimately achieved with W.A. Mozart and his music. One could look at all the composer's repertoire and with full assurance clearly see that all his music is written with all these traditional and structural patterns.

For example,  $\frac{3}{4}$ ,  $\frac{6}{8}$  and  $\frac{12}{16}$  are of equal bar length (twelve semi-quavers) but  $\frac{3}{4}$  has three stresses,  $\frac{6}{8}$  has two stresses,  $\frac{12}{16}$  has four stresses [...] (Gould, 2011, p. 151)

*A time signature will be associated with its specific beat stresses unless the musical content contradicts them.* [...] (Gould, 2011, p. 151)

One can take for example the *Sonata no. 12 in F*, written in  $\frac{3}{4}$ :



Figure 3 - Excerpt from W.A. Mozart, *Sonata no. 12 in F* (Mozart, 1783)

The time signature in this genre of music has a complete functional purpose. The real function of the  $\frac{3}{4}$  serves as a true metre, the first beat has a strong accent, and the two final beats serve as weak beats. One can also clearly see by focusing on the melodic phrase that the last beat serves as an upbeat to the first strong beat of the following bar. My former teacher, sir Christopher Bochmann always said in my individual lessons with him that the rhythm considered in this kind of music is called “qualitative

rhythm.” According to him, there are two different forms of rhythm per se: The “qualitative rhythm” and the “quantitative rhythm.” The former basically materializes in every piece of music since approximately 17<sup>th</sup> until the 19<sup>th</sup> century, where parameters such as the melody phrasing, time signature, metre, cadence, harmonic structure are guided by the idea of direction, resolution and naturality. (The latter is going to be developed in the next chapter.) So, according to this way of thinking, Mozart’s music is guided naturally by the time signatures, and one cannot imagine such sound world without the pure feeling of the metre and resolution. Mozart’s rhythmic patterns cannot be quantified but qualified instead.

## 5. From the past

### 5.3. On Modern music (György Ligeti)

Modern music. The reason behind all the arguments, questions, and writings in this thesis. As mentioned before, the reason of this thesis was to be able to open new discussions and innovative approaches to music notation, but can overlap the latter and for sure contribute, hopefully, for healthy debates in the future between all fields of the music education. From a composition student to orchestras of a hundred musicians and conductors. From teachers to departments and music schools.

Personally, this matter can surpass the simple question of using or not time signatures. It can perhaps, in some way be a question of music psychology, musical aesthetic, or even philosophical but, that is for sure something for the future to tell.

There are always different approaches to the concept of “modern music.”. For this thesis the concept of modern music will be the music that breached the traditions from the past. Music that started with the minds of A. Schoenberg and “his” Second Viennese school, to music that is still made today as we draft this thesis. Of course, music genres that continue with the traditional structures, following the considered normal and standard procedures in music, should not be included in this thesis’s concept of “modern music” for the simple fact that all the traditional rules and true purposes of the conventional notation should obviously apply to.

To follow my point let us take for example *Lux Aeterna*, a piece for a 16-part mixed choir, written by György Ligeti in 1966. According to my teacher Staffan Storm, in my interview with him he stated that:

[...] in the 1960’s you got a lot of pieces that were notated in seconds. It was always tempo 60, but it was with bar lines for practical reasons. The only reason why it’s in  $\frac{4}{4}$  is that this is a pattern that the conductor is used to. So, it’s more “time beating” than “bar beating.” I think he (G. Ligeti) also states in some of his scores that it has nothing to do with a heavy 1, lighter 2, less heavy 3 and lighter 4. It has nothing to do with that rhetoric of bars and timing. It’s just a beating of equal seconds [...] only for practical reasons. To write it in  $\frac{3}{4}$  perhaps, since it’s a bar normally connected to waltz, it would be more difficult to be freed from the pattern, but it could have been  $\frac{5}{4}$  or  $\frac{6}{4}$  etc. [...] (Storm, 2023)

The mentioned piece was all written in a  $\frac{4}{4}$  bar, has an approximate length of 10 minutes and one has to wait until bar number 12 to notice one of the voices starting on the second beat of the  $\frac{4}{4}$ . The music flows continuously, with no feel of gravity to what pulse is defined. Then again, all this is accurate:

Notated metre represents a pattern of accented and unaccented beats within a bar. For some composers the implied hierarchy of accent within metre is not relevant and they use barring solely for convenience:



for the practical purposes of conducting, for co—ordination in uncondacted music and to facilitate reading rhythm in manageable bar lengths. Accents are notated where they are required, but otherwise the beginning and subdivisions of the bar are not intended to be stressed. Such scores should indicate that bar lines are for co—ordination only and have no function as metric accentuation. Ligeti notes this in some of his scores (see, for example, the Chamber Concerto and *Ramifications*). (Gould, 2011, p. 151)

One can already observe that time signatures are obsolete in this type of music. They do not offer anymore the real purpose that they served hundreds of years before. Are these time signatures only written for practical reasons? Are they there to serve a purpose that no longer applies? Yes, and yes. For the same reason I asked my teacher Bent Sørensen what are his thoughts on Ligeti's music:

No, I don't think it would be a huge difference (on Ligeti's music without time signatures or written with other different time signatures) because the beats are just pointing out so that they (musicians) are together. Because if they come on the second beat or the third 16<sup>th</sup> note [...] it doesn't really matter. The whole idea is that the conductor is just a metronome. When you start a metronome at tempo 60, the metronome doesn't know if it's a  $\frac{4}{4}$  or  $\frac{3}{4}$ . So, it's basically a metronome. So, no I don't think it would make a big difference, I just think that  $\frac{4}{4}$  has a very good shape for a conductor. If it's a  $\frac{2}{4}$  it's very difficult, because there are only 2 beats.  $\frac{3}{4}$  is ok and  $\frac{5}{4}$  is problematic. [...] The  $\frac{4}{4}$  is the time signature that all musicians grew up with. If you go up to the music history and make a competition with  $\frac{2}{4}$ ,  $\frac{3}{4}$ , and  $\frac{4}{4}$  I think  $\frac{4}{4}$  is probably going to win. [...] even in contemporary music. [...]. Ligeti's music would still be the same. (Sørensen, 2023)

Certainly, music that functions with quantified rhythm completely differs from music that by contrast uses qualitative rhythm. Quantitative rhythm highlights the rhythm's purpose on mathematical calculations by the composer, on a structure level or even on a more detailed level such as small rhythms in a musical cell. The significance of the long and continued musical discourse gets over the classical obsession with resolution and cadence. The purpose of the modern music is to some level, abstract. Whilst the purpose of the music that came before completely relied on traditional and patterned musical objects.

Deviation from the notated rhythms was not desirable in a style in which the periodic beat of the meter was no longer felt to pulsate beneath the rhythm of the sounds superimposed upon it. (Behrman, 1965, p. 58)

## 6. From today's music

This section is not particularly about today's music. In fact, to the present-day music got so disperse and diverse that one can no longer feel that there is this "unique" and "specific" style or genre that fits all. Music evolved quickly, almost exponentially. This section serves as a foundation that one can extrapolate from. One can assess it more as "what can we take from all the music history background and add/improve to the music of today."

No other aspect of contemporary notation is more desperately in need of fundamental revision than that of rhythm. Most of today's rhythmic structures are far more complex – as well as rigid, or, conversely, free, and flexible – than the pulse-generated and pulse-dominated rhythms of the past. Conventional notation always presupposes pulse; it knows only regularities and irregularities of metric pulse. It does not provide adequate means for the precise notation of pulse-less, a-metrical rhythmic structures or of controlled *ritardandi* and *accelerandi*. (Stone, 1963)

Firstly, for the intention of clarity and secondly, to acknowledge one composer that was somehow the great inspiration for the writing of this thesis. Unfortunately, in my perspective, there is no co-relation whatsoever with the composer and today's music. Sadly, his notation techniques and ideas were somehow forgotten or not pursued anymore. Witold Lutosławski was in fact the orchestrator of new ways of notation that until his time were unthinkable. When discussing this matter with the conductor for my piece *Butterflies* by the Norrköping Symphony Orchestra, Michael Bartosch, he stated that *Lutoslawski is very interesting, but I would say that he is an early adopter*. (Bartosch, 2023)

W. Lutosławski's music scores show how much we can accomplish with free notation and barless music. He is a world recognised composer for his avant-garde music and notation and the starting point of this written thesis was studying his scores. Questions as *how can one free himself from the chains of bar lines? How can traditional trained musicians play together with a new view on music and notation?* and much more started to come up by looking at this composer's music. He invented a new path, that he developed with precise and impeccable uniqueness. By his own words:

The idea emerged accidentally. By 1960 I had accumulated a mass of musical and technical ideas not yet 'materialized'.... Ideas which could never release themselves, so to speak. [...] And yet it was not clear to me how my ideas were to be translated into action. Well, one day I happened to hear a fragment of the American John Cage's Second Piano Concerto on the radio. [...] only a few minutes did it last that I went on listening to the music – all of a sudden, I became conscious that the ideas I had accumulated were bound to find an outlet owing to devices which I had not yet used. The decision was taken instantaneously. I gave up all the earlier projects and began to compose my *Jeux vénitiens* for orchestra. [...] Thus, I began to use an element of fortuitousness. 'Limited' (or 'controlled') aleatorism

is used in the first movement of *Jeux vénitiens*, partly in the third movement, and throughout the fourth movement.

W. Lutosławski then continues and explains he's own view on the difference that one has to see on 'Aleatoric music':

[...] keeping firm control over pitch organization, or – to put it differently – over harmony. Otherwise, I would have never made any use of it. So, Cage's conception of aleatorism did not interest me – it was alien to me both philosophically and musically. It was just an impulse for me to be able to find my own way of utilizing some elements of fortuity. [...]

## 7. Conclusion

This thesis has discussed how influential a time signature and a bar line can be in a composer's music. The subject's importance to the organization of pitches, rhythms and harmonies cannot, and should not, be detached from the genre of music being used. It may be imperative to some styles like in modern music, as approached in this thesis, but the intention of this thesis's argument should not fit in any kind of anti-time signature movement. After all, music is diverse. Music should have all the tools needed for its creation and should not limit its own creators. Meaning having evolved pitch material, harmonic functions or not, the notation tools at a composer's disposal should not be restricted to traditional guidelines that, for some, can feel like unbreakable barriers and/or lead to "auto-pilot" decisions. For me as a composer, every decision should have its meaning. A decision can be philosophical, aesthetic, or even at some point in the details such as pitch material and based on rhythms and time signatures/bar lines. During the approach of this theme to my dear composition colleagues and teachers, I could notice that it was an important discussion. Personally, I find the topic to be one of the most important matters in the modern aesthetic notation, hence my decision to write this thesis.

In modern music, is the time signature a real necessity? It depends on the material the composer has in mind so that it can be dependent on those time signatures, and absolutely not related to the lack of meter that some modern music focus on. It doesn't mean an obligatory rule that one has to write without time signatures, but instead, it should not force yourself as a composer to write with those notation guidelines if one does not feel the necessity to.

Many different points of view should be taken in consideration. I take for instance the example of my former teacher Sir Christopher Bochmann's music. His music being highly modern, in my opinion, does not mean that himself as a composer should force his way into this way of notating. I myself cannot imagine how his music could work under the lack of these parameters. His way of inserting each music cell into different time signatures, or as he calls them "containers," it's part of his own music language. His  $11/8$  time signatures are felt with the true nuances of the time signature itself and could never be taken out of the equation. But for sure there are numerous examples in contemporary/modern music repertoire in which I genuinely believe these aspects and parameters could and should have been taken into consideration. Needless to say, I truly respect composers who chose and have their own music systems and mechanisms that work around different time signatures. Therefore, the reason of this thesis is somehow to show the reader that aesthetics and psychology are as important as taking these traditional imposed ways of notating one's music.

Are those who defend it aware of the fact that those are dated traditional ways of notating? I personally don't think so. There are a lot of reasons that can lead to this particular problem. It can be a problem in

the roots of the music education and could be a lack of development in the area of notated rhythm since the evolution of music started in the 21<sup>st</sup> Century. On the other way, while discussing this with my teacher Staffan Storm, he also mentioned the problems of modern technology as a barrier to this problem. Notation programs were created to facilitate the composer's work in many ways such as quickness, accessibility, and more, but instead they started to be in control of the music that a composer could or would like to write. Concretely, all of the notation programs composers have at their disposal nowadays are created in a way to make the work quicker and easier. With predefined parameters comes limited creativity as predefined time signatures take out the originality and uniqueness a composer could have in his/her own mind. Fortunately, I have never stopped writing music by hand, so it never limited my creativity.

On a closing note, I would like to address that this is a not so explored subject. Therefore, I think it is of urgent matter to review the notation processes in music notation, especially in rhythm. Music evolved in such a way that one should not be forced to write music based on old traditions. Music is an art and a universal language, and each individual perceives it differently. Every composer has a unique voice or struggles all his life to find it. Every listener can decode the same work of art in various different ways. Therefore, I terminate my thesis with an excerpt from an interview with the Portuguese writer José Saramago:

E um dia José Saramago reinventou a sua escrita. Aconteceu quando trabalhava no romance “Levantado do Chão”. De repente as palavras não “tinham pressa de chegar”, o discurso ordenava-se naturalmente, sem seguir as regras da pontuação. Foi de repente e sem ser pensado, conta o escritor durante a entrevista a Ana Sousa Dias. Percebeu que tinha encontrado a sua voz, e construiu todos os futuros romances nessa singular oralidade, usando apenas a vírgula e o ponto, sinais de pausa, como lhes chama. (Saramago, 2005)<sup>4</sup>

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<sup>4</sup> And one day José Saramago reinvented his way of writing. It happened when he was working on his novel “Levantado do Chão”. Suddenly, words had no rush, and the discourse was naturally structured, without following the punctuation rules of the language. It was out of a sudden and without given too much thought, tells the writer during the interview with Ana Sousa Dias. He realized that he had found his own voice and wrote every future novels in that particular orality, using only the comma and the period, signals of pause as he calls them. (Saramago, 2005)

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