



ORBIS FACTOR

Gregorian Mass for string ensemble

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The piece emerged as part of a collaborative project between composition students and the Langhaugen videregående skole string orchestra, in February 2022.

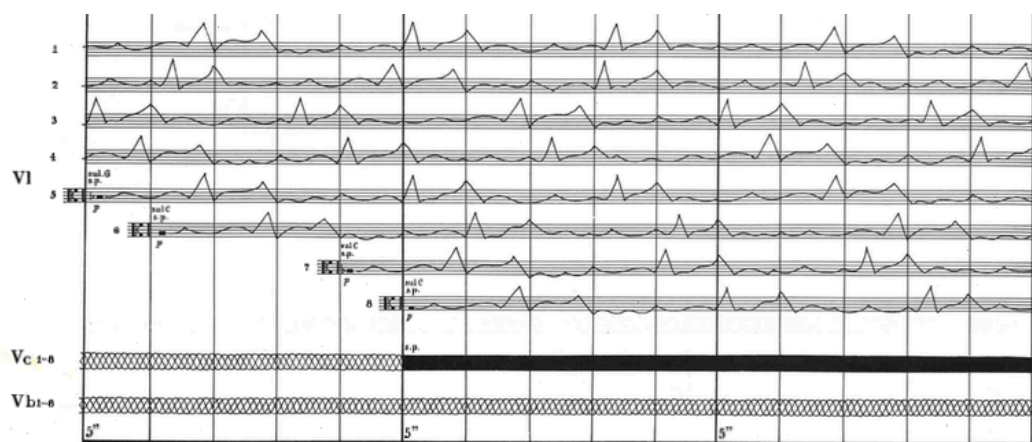
For this piece I wanted to experiment with elements that have recently caught my attention, such as the orchestration of unisons, and how to use them as the main compositional material; the relationship between microtonal textures, tonal or atonal chords, and modal melodies; the creation of something new, taking old musical material as the starting point; the observation of the limit between a literal transcription and a complete distorted interpretation of a pre-existing material; the search for maximum expressiveness through musical simplicity; the juxtaposition between a free notation and a metered notation; the search for the essence of the musical material through the construction of very short forms.

Taking Penderecki, Greenwood And Kurtág As A Reference

In order to answer these questions, to a certain extent, I began to look for musical references that had similar instrumentations. I started by analyzing *Polymorphia* (1961)¹, for 48 string instruments, by Krzysztof Penderecki, in which I observed the textures that Penderecki

¹ Krzysztof Penderecki. *Polymorphia*. (Celle: Hermann Moeck Verlag, 1963).

generates with these great masses of strings, but above all, I was intrigued by the process in which he gradually builds and transforms them. Also, it was interesting to observe the peculiar way in which the strings are grouped or divided, which helps to control and modify the sound densities. Another important point is the use of extended techniques, with which the entire work is basically composed, which immediately leads us to the problem of notation. *Polymorphia* is an interesting work in various aspects, but I consider that the notation is one of the elements that stand out the most, and it is mainly because Penderecki, due to his search for sound, was forced to abandon the traditional notation system, and chose to develop a new graphic notation, which as an interesting fact, was inspired by encephalograms (see example 8).



Example. 8 *Polymorphia* (1961)², by Krzysztof Penderecki. Excerpt

This piece then led me to Jonny Greenwood's *48 Responses to Polymorphia* (2011)³, which expands on several of Penderecki's ideas. One of the aspects that most interested me was the multiple ways in which Greenwood goes from dense clusters to C major chords. Each time this chord appears, it is heard in a different way, because it is surrounded by microtonal textures, and atonal melodies that make these contrasting musical systems fresh every time they appear. Another element that I would like to highlight in both pieces is the use of unison. Penderecki uses it to create "active" rests, unlike Greenwood, who uses it, especially in the 4th movement: *Three Oak Leaves*, as a starting point, and contrasts it with the large glissando gestures.

² Penderecki, 1963

³ Jonny Greenwood. *48 Responses to Polymorphia*, for 48 strings. (London: Faber Music, 2011).

To conclude with the musical references, I analyzed the string quartet *Officium Breve* (1988-89)⁴, by György Kurtág. In this piece Kurtág manages to express so much into such a small space, not necessarily through complexity or sheer density, but rather by bringing the musical ideas to their core. *Officium Breve* is a piece that sounds new in many respects, but is also strongly tied to tradition. And I say this, not only because he uses quotations from his two great influences, Webern (*Kantate II*) and Szervánsky (*Serenade for Strings*), as its main material, but also because the piece is strongly charged with a historicized religious character, largely because it is a requiem for these two composers. An example of this is the quasi-medieval musical material of the second movement, which seems to hark back to the time of Gregorian chant. Another important aspect for me was to observe the use of the tonal and rhythmic unison in movement XI, which, unlike Penderecki and Greenwood, Kurtág uses as the main element, giving it a highly expressive character by contrasting it with dissonances.

The image displays two pages of a musical score for string quartet. The left page is the 2nd movement, featuring a 'perdendosi' (fading away) marking and a 'pizz.' (pizzicato) section. The right page is the 11th movement, marked 'Sostenuto' and 'quasi f. dolce, sonore, tenuto'. Both movements are written for four staves, likely representing the four strings of a quartet.

Example 9. 2nd (left) and 11th (right) movement from *Officium Breve* (1988), by Kurtág

Finally, I think it is important to highlight the way in which Kurtág uses the material from Webern and Szervánszky, and that even quoting literally, as he does in the last movement, brings with it an important challenge. Since adapting it to such a brief form, the composer finds the essence of the material within the multi-movement form. Kurtág does this in an exceptional way, and this was also what I tried to do in my own piece.

⁴ György Kurtág. *Officium Breve*, Op. 28, for string quartet. (Budapest: Editio Musica Budapest, 1995).

Gregorian Chant As Main Musical Material

First of all, when composing this piece, I decided to use Gregorian chant as a starting point, since ancient music, from any culture, has always been of special interest to me. I remember that a while ago I took two years of Gregorian chant, and one of the masses that we used to chant was the *Orbis Factor*⁵. Perhaps the personal connection that I have with this mass, and the fact that melodically it caught my attention, was the main reason I chose it.

I decided to use the text as a structure, in different ways for each of the four movements:

I. Kyrie

The first movement, *Kyrie*, is the only one in which I use the entire text, because it is the shortest one in the mass. Here I wanted to experiment with long slurred phrases, with the relationship between microtonality and modality, with the use of long glissandi, with the relationship between vibrato and non vibrato, and with timbral changes between sul ponticello and sul tasto. In this movement I followed the chant linearly, and oscillated between literal interpretation and a distortion of the chant, breaking the melodic lines with glissandi in the form of a canon (see example 10), with microtonal chords, or with exaggerated vibratos.

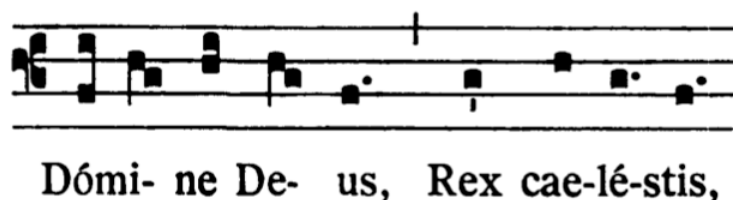
The image shows a musical score excerpt for three violin parts (Vln. 4, 5, and 6) in 7/4 time. Each part features a long glissando marked 'nat' and 'fp' (fortissimo) leading to a 'ff' (fortissimo) section. The parts are labeled with fingerings: (2+5) for Vln. 4, (3+4) for Vln. 5, and (1+6) for Vln. 6. The score ends with a 'p' (piano) section and a 'm.s.p' (mezzo-soprano) section.

Example 10. "I. Kyrie" (glissandi breaking the melody), excerpt

⁵ In *Gregorian Missal, Ordinary Sundays*. p 113

II. Gloria

The next movement, *Gloria*, is the longest in the Gregorian Mass, so in contrast, I decided to make it the shortest movement in my piece, exploiting the use of unison as the main material, and like Kurtág and Greenwood, presenting it in contrast with dissonances and glissandi. To decide the number of notes and the pitches, I took the main melodic motif of the chant, which appears seven times in the *Gloria*, generally accompanied by the words *Dómine Deus* (see example 11), and extended it into six long measures of 4/2 and 5/2.



Example 11. Gloria motive, from the *Orbis Factor* mass.

III. Sanctus

For the Sanctus, I use only the sections of the chant in which the phrases *Sanctus Dóminus Deus*, and *Hosánna in excélsis* appeared. Here, unlike the Gloria, there are several solo sections, where the chant is presented almost literally. This movement is a form of response from the *Kyrie*, where I also play with glissandi (in *Kyrie* in cannon, and in *Sanctus* in tutti), with vibratos that become trills, and with microtonal melodies. To change the timbre, and make it more opaque in contrast to the previous movements, and especially to the following movement, all the strings will play with sordina, and the violins will play the entire movement on the IV string.

IV. Agnus Dei

Finally, in the *Agnus Dei*, I make use of harmonics, which are presented in the foreground at the beginning, and gradually will become the background, on which the chant, in pizzicatos, will be presented in the foreground. The melodic line is made up of the sections where the words *Agnus Dei* appear in the original chant. This movement, as a response to *Gloria*, is made up of only eight bars of 4/2.

Notation

To conclude, I would also like to mention that one of the elements that I was interested in exploring was the problem of notation, and how it may or may not change the sound result. Is it possible to convey the same temporal sensation of Gregorian chants through a more specific and measured notation? And on the other hand, is it possible to create specific sonorities with a measured pulse through free notation? Which of the two is more effective? That is why I decided to juxtapose these two types of notations, a free one (*Kyrie* and *Sanctus*), inspired by Kurtág and Medieval notation, and a more traditional or measured one (*Gloria* and *Agnus Dei*).

ORBIS FACTOR lasts around 8:15, and has not been recorded yet. It will be performed by the Langhaugen videregående skole string orchestra on the 12th of June 2022.

Recording: <https://www.youtube.com/watch?v=FgG5WVovFEc>

Score:  **ORBIS FACTOR_V2_Score.pdf**

References

Greenwood, Jonny. *48 Responses to Polymorphia* (for 48 strings). London: Faber Music, 2011

Kurtág, György. *Officium Breve, in memoriam Andreae Szervánszky, Op. 28* (for string quartet). Budapest: Editio Musica Budapest, 1995.

“Orbis factor.” *Ordinary Sundays, Gregorian Missal*, 113. Corpus Christi Watershed.
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Penderecki, Krzysztof. *Polymorphia* (for string orchestra). Celle: Hermann Moeck Verlag, 1963.