

# In the beginning was..., za simfonijski orkestar i udaraljke

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Jakopović, Sara

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SVEUČILIŠTE U ZAGREBU

MUZIČKA AKADEMIJA

I. ODSJEK ZA KOMPOZICIJU I TEORIJU GLAZBE

SARA JAKOPOVIĆ

*IN THE BEGINNING WAS...,*  
ZA SIMFONIJSKI ORKESTAR I UDARALJKE

DIPLOMSKI RAD



ZAGREB, 2023.

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DIPLOMSKI RAD

Mentor: red. prof. art. Berislav Šipuš

Studentica: Sara Jakopović

Ak.god. 2022./2023.

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3. \_\_\_\_\_

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PAPIRNATA KOPIJA RADA DOSTAVLJENA JE ZA POHRANU KNJIŽNICI MUZIČKE  
AKADEMIJE

## **Sažetak**

Cilj ovog rada jest pružiti analitički uvid u autorsku skladbu *In the beginning was...*, za simfonijski orkestar i udaraljke. Skladba će biti sagledana iz različitih aspekata, a sve kako bi se opisao skladateljski glazbeni jezik.

**Ključne riječi:** *In the beginning was*, simfonijski orkestar, udaraljke, analiza

## **Summary**

The aim of this work is to provide an analytical insight into the author's composition *In the beginning was...*, for symphony orchestra and percussion. The composition will be viewed from different aspects, all in order to describe the composer's musical language.

**Key words:** *In the beginning was*, symphony orchestra, percussion, analysis

## **Predgovor**

Zahvaljujem svom mentoru, red. prof. art. Berislavu Šipušu na svim sugestijama i podršci tijekom izrade diplomskog rada, kao i na svemu naučenom tijekom studija Kompozicije. Također, zahvaljujem svim profesorima, bliskim osobama i kolegama koji su me podržali u dosadašnjem glazbenom obrazovanju te poticali moj razvoj i napredak.

Život umjetnika pun je izazova, stoga se s velikom zahvalnošću prisjećam svake lijepe interakcije s osobama koje su me inspirirale, motivirale i koje su u mom životu ostavile snažan trag.

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## 1. Uvod

Tijekom studija Kompozicije imala sam prilike okušati se u skladanju za različite sastave te istražiti različite instrumente i njihove mogućnosti. I dok svaki sastav ima svoju problematiku, može se činiti kako simfonijski orkestar kao golemi muzički korpus sa sobom donosi i proporcionalnu problematiku. Ipak, u upotrebi simfonijskog orkestra vidim izuzetan potencijal i čitavu paletu timbralnih nijansi. Simfonijski orkestar čini se prikladnim za svečanu prigodu diplomskog ispita, no istovremeno obvezuje na stvaranje skladbe dostojne ovakvog grandioznog sastava. Premda svako razdoblje u povijesti glazbe nudi svoju definiciju „dostojnog“ i „kvalitetnog“, moj cilj prilikom skladanja djela bio je istražiti različite zvukovne mogućnosti *tutti* ansambla, ali i kombinacija između pojedinih instrumentalnih sekcija.

Dodatni izazov predstavlja sekcija udaraljki koju sam odlučila istaknuti u ovoj skladbi – raznovrsnost udaraljki, proširene tehnike te zvukovne mogućnosti ove sekcije nagnali su me da ju kroz ovu skladbu istražim i nerijetko stavim u prvi plan. Uz instrumente koji se uvriježeno smatraju udaraljka, u svojoj skladbi često grupiram sve instrumente koji u tom momentu izvide perkusivni efekt – primjeri toga su upotreba klavira kao udaraljke, gudači u kontekstu *Bartok pizzicata*, udarac po žicama harfe, ali i perkusivni efekti u puhačkoj sekciji kao što su *slap*, *tongue ram* i sl.

### 1.1. Utjecaji

U skladanju, a vjerujem i u ostalim umjetnostima, neporeciv je utjecaj povijesnog konteksta. Sve što sam naučila tijekom studija na mene je ostavilo trag, a pred kraj studija posebno me zaintrigirao spektralizam. Naglasak na fizikalnim svojstvima zvuka<sup>1</sup> i tonskih visina sugerira znanstveni pristup u procesu stvaranja, što se isprva može činiti krutim i distanciranim od umjetnosti. Jasno, fizikalna svojstva zvuka uvijek su prisutna, neovisno o

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<sup>1</sup> Joshua Fineberg, *APPENDIX I. Guide to the Basic Concepts and Techniques of Spectral Music*. Overseas Publishers Association, 2000., str. 81-82



pristupu umjetnika. Razmišljanja sam da znanstveni pristup može pružiti bolje razumijevanje i kontrolu prilikom stvaranja te dodatno osnažiti umjetnički aspekt skladbe – o tome svjedoče opusi mnogih spektralista, poput Gérarda Griseya, Tristana Muraila i Kaije Saariaho.

U skladbi *In the beginning was...* prisutne su spektralističke tendencije, no ističe se i težnja naslijeđu hrvatske skladateljske baštine koja obiluje muzikalnošću, inventivnošću i zanimljivim zvukovnim situacijama.

## 1.2. Općenite ideje

U posljednje vrijeme glazbu promatram, između ostalog, kao stimulans. Glazba je zvučni podražaj koji stimulira osjetilo sluha, kao što boje stimuliraju osjetilo vida, začini osjetilo okusa itd. Možda je takvo razmišljanje rezultat moje sinestezije, no smatram da ovakav pristup zvuku, na trenutak odriješen poetičnog i apstraktnog, nudi konkretna rješenja u procesu stvaranja suvremene glazbe, koja se sve više udaljava od klasične tradicije utemeljene na tonalitetnim zakonitostima. Kako stvoriti muzikalnu, uzbudljivu glazbu koja je lišena teme, važnosti tonskih visina, tonaliteta i klasične harmonije? Spektralistički pristup glazbi nudi neke od mogućih odgovora. Sve prethodno navedeno, naime, sadrži zakonitosti na koje se lako osloniti prilikom stvaranja. Bez toga, logično je da će dramaturgija djela ovisiti o ostalim glazbenim sastavnicama poput ritma, timbra i registara. Smatram da promatranje glazbe kao stimulansa naglasak stavlja upravo na dramaturgiju koja se ostvaruje svjesno, a ne tek kao slučajni rezultat ostalih glazbenih sastavnica.

Znanost i umjetnost čine se dijametralno različitima, no oboje odlikuju zakonitosti, istraživanje i znatiželja. Njihova simbioza vidljiva je, između ostalog, u elektroničkoj glazbi, a osnovne koncepte, kao i pristup u stvaranju, nastojala sam primijeniti u svojoj skladbi.

## 1.3. Naziv djela i naslovi stavaka

Skladba *In the beginning was...* ima četiri stavka:

I. *The Big Bang*

II. *The String(s) Theory*

III. *Plucking Constant*

IV. *Dark Matter*

U naslovima stavaka ističu se pojmovi koji su poznati u znanosti, a vezani su uz postanak svemira.

I. *The Big Bang* [Veliki prasak]

II. *The String(s) Theory* [Teorija struna]

III. *Plucking Constant* - igra riječi na Planckovu konstantu

IV. *Dark Matter* [Tamna tvar]

Zanimljivo je da ovi pojmovi postoje i u glazbenom kontekstu, što sam iskoristila ne samo kao humorističnu igru riječi, već i kao sugestiju na spektralizam koji također objedinjuje dva svijeta – znanost i umjetnost. Nema potrebe detaljno objašnjavati spomenute pojmove – ne samo zato jer su popularni, već i zato jer ih ne želim dovoditi u vezu s muzičkim sadržajem na programni način. Poput kakvog spektograma, ili pak poteza kistom, naslovi stavaka su polazišna točka koja utječe na glazbene sastavnice djela. Tako će prvi stavak biti poticaj za gromoglasne *tutti* momente te udaraljkaški ostinato; drugi će stavak naglasak staviti na gudače i ostale žičane instrumente; treći stavak oponaša konstantno trzanje žice, dok će se u četvrtom stavku istaknuti duboki registar.

Osim toga, naslov djela spojen s naslovom prvoga stavka zvuči kao oksimoron, *In the beginning was... The Big Bang* [U početku bijaše... Veliki prasak] a sve kako bi se ponovno sugerirala dualnost, spoj dvaju kontrastnih elemenata.

## 2. Analiza skladbe *In the beginning was...* - elementi stila

### 2.1. Izostanak teme u tradicionalnom smislu; tematski materijali

U skladu sa spektralističkim tendencijama, pokušala sam stvoriti skladbu bez teme u tradicionalnom smislu. Stoga se može govoriti tek o tematskim materijalima koji tijekom skladbe neprestano doživljavaju svoju transformaciju. Riječ je o svojevrsnim intervalskim ćelijama koje se tijekom skladbe javljaju rastavljeno ili kao dio akorda, no čija jezgrovitost, kao i same intervalske osobitosti, sprječavaju nastanak teme u tradicionalnom smislu. Uostalom, tema podrazumijeva horizontalno promišljanje, dok spektralizam stavlja naglasak na vertikalni aspekt skladbe. Jasno, horizontalno promišljanje prisutno je u vidu ritamskog razvoja dionica

#### 2.1.a. Notni prikaz ritamskog razvoja dionica u skladbi *In the beginning was...*

te u situacijama unisonog kretanja.

The image displays a page of a musical score, page 5, featuring a variety of instruments. The score is organized into systems. The first system includes Piccolo (Pic.), Flute (Fl.), Oboe (Ob.), Clarinet in A (C.A.), Clarinet in Bb (Bb Cl.), Clarinet in C (Cl.), Bass Clarinet (B. Cl.), Bassoon (Bsu.), and Contrabassoon (Cbss.). The second system includes Horn (Hr.), Trumpet (Tpt.), Trombone (Tbn.), Bass Trombone (B. Tbn.), Tuba (Tub.), Timpani (Timp.), Snare Drum (Cm.), and Violin (Vln.). The third system includes Percussion (Perc.), Bass Drum (B. D.), Tom-tom (T. D.), Cymbal (Cym.), and Glockenspiel (Glock.). The fourth system includes Clarinet in C (Cl.), Piano (Pno.), Horn 1 (Hr. I), and Horn 2 (Hr. II). The fifth system includes Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), and Cello (Cb.). The score shows a unison movement across several instruments, with notes and rests clearly visible on the staves. The notation includes various musical symbols such as clefs, time signatures, and dynamic markings.

2.1.b. Notni prikaz unisonog kretanja u skladbi.

Postupnom gradacijom, razvojno tretiranje tematskih materijala zasigurno je doprinijelo dramaturgiji djela. Pritom treba naglasiti kako nije riječ o prokomponiranoj formi skladbe – prisutna razvojnost rezultat je ekonomičnosti materijala. Izvrstan primjer toga jest četvrti stavak u kojemu se jednostavan interval male sekunde

The image displays a musical score for the fourth movement, titled "Misterioso 2/4". The score is arranged in a vertical column of staves, grouped into three sections. The first section includes Flute, Clarinet in Bb, Bass Clarinet in Bb, Bassoon, Contrabassoon, Horn in F, Trumpet in Bb, Trombone, and Bass Trombone. The second section includes Tuba, Timpani, Cymbals, Vibraphone, Multiple Basses (Bass Drum, Tom-tom, Snare, Cymbal), Glockenspiel, Chimes, and Piano. The third section includes Harp 1, Harp 2, Violin I, Violin II, Viola, Violoncello, and Double Bass. The notation shows a simple interval of a minor second (two adjacent notes) in the bassoon part, which is then repeated or varied in other instruments, illustrating the developmental treatment of this thematic material.

2.1.c. Notni prikaz tematskog materijala male sekunde u četvrtom stavku.

kontinuirano nadograđuje slijedeći principe aditivne sinteze,

The image displays a musical score for a symphony orchestra, illustrating the concept of additive synthesis through a gradual buildup of sound in the fourth measure. The score is organized into systems of staves, each representing a different instrument or section. The instruments listed on the left side of the score are: Flute (Fl.), Oboe (Ob.), Clarinet in A (C.A.), Clarinet in Bb (Bb.Cl.), Clarinet in C (Cl.), Bassoon (B.Cl.), Bassoon (Bsn.), Double Bass (Cbass.), Horn in F (Hr.), Trumpet (Trp.), Trombone (Tbn.), Percussion (Perc.), Violin (Vln.), Viola (Vla.), Cello (Cel.), Double Bass (Cbass.), Percussion (Perc.), Trumpet in D (Hr. D.), Trombone (Tbn.), Cymbal (Cym.), Glockenspiel (Glock.), Cello (Cel.), Percussion (Perc.), Percussion 1 (Pp. 1), Percussion 2 (Pp. 2), Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), and Double Bass (Cbass.). The score shows a series of chords that become increasingly complex and dense over time, illustrating the concept of additive synthesis. The music is written in a 4/4 time signature and features a series of chords that are built up gradually, with each measure adding more notes and instruments to the texture. The first measure is relatively sparse, while the fourth measure is the most complex, featuring a dense cluster of notes and instruments. This illustrates the principle of additive synthesis, where sound is created by adding individual components together.

2.1.d. Notni prikaz gradacije tematskog materijala male sekunde u četvrtom stavku uz pomoć aditivne sinteze.

a sve kako bi na kraju skladbe u vertikali zazvučao kromatski total, odnosno potpuni zvučni spektar.

The image displays a musical score for a full orchestra and strings. The score is organized into systems of staves. The instruments listed on the left side of the score are: Flute (Fl.), Oboe (Ob.), Clarinet in A (C.A.), Clarinet in B-flat (B.C.), Bassoon (Bsu.), Contrabassoon (Cbas.), Horn in F (Ho.), Trumpet (Tpu.), Trombone (Tbn.), Bass Trombone (B. Tbn.), Tuba (Tba.), Snare Drum (Timp.), Cymbals (Cim.), Violin (Vln.), Viola (Vcl.), Double Bass (B. D.), Trumpet in C (T.C.), Clarinet in C (Cln.), Glockenspiel (Glock.), Cello (Ccl.), Bassoon (Bsu.), Horn 1 (Ho. 1), Horn 2 (Ho. 2), Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), and Double Bass (Dh.). The score shows a complex arrangement of notes and rests across these instruments, culminating in a chromatic total at the end of the piece.

2.1.e. Notni prikaz kromatskog totala u akordu, IV. st.

U četvrtom stavku, gore prikazani akord rezultat je razvojnosti intervalske ćelije – idejom aditivne sinteze ostvarena je vertikalna dimenzija stavka. Ipak, riječ je o akordu identičnom onom iz prvog stavka:

The image displays a detailed musical score for a large orchestra. The score is organized into four measures. The instruments listed on the left side of the score include: Flute (Fl.), Piccolo (Pic.), Oboe (Ob.), Cor Anglais (C.A.), Bassoon (Bb Cl.), Clarinet (Cl.), Bassoon (Bb Cl.), Bassoon (Bb Cl.), Clarinet (Cl.), Horn (Hr.), Trumpet (Tpt.), Trombone (Tbn.), Bass Trombone (B. Tbn.), Tuba (Tub.), Timpani (Timp.), Cymbals (Cym.), Violin (Vln.), Viola (Vla.), Violoncello (Vcl.), Double Bass (B. Cl.), Tuba (Tub.), Snare Drum (Cym.), Cymbals (Cym.), Gong (Gong), Cymbals (Cym.), Percussion (Perc.), Trumpet (Tpt.), Horn (Hr.), Trombone (Tbn.), Bass Trombone (B. Tbn.), Tuba (Tub.), Violin (Vln.), Viola (Vla.), Violoncello (Vcl.), and Double Bass (B. Cl.). The score shows a complex arrangement of notes and rests across these instruments, with some instruments having multiple staves. The first measure shows a chord structure, and the subsequent measures show the development of this structure.

2.1.f. Notni prikaz akorda u prvom stavku.



Za razliku od prvog stavka u kojemu je spomenuti akord predstavljen *in medias res*, četvrti ga stavak polako izgrađuje – identičnost prvoga i posljednjega akorda u skladbi pokušaj je da se, unatoč razvojnosti materijala, osjeti zaokruženost forme na makrorazini.

Dramaturška zanimljivost četvrtoga stavka vidljiva je u neočekivanim intervencijama – dinamičnim prekidima inertne teksture. I dok je glavnina četvrtog stavka u četveročetvrtinskoj mjeri, spomenute intervencije razbijaju metar svojim nepravilnim složenim mjerama.

The image displays a musical score for the fourth movement, showing a change in meter. The score is written for a full orchestra and includes parts for Flute, Oboe, Clarinet, Bassoon, Trumpet, Trombone, Percussion, Violin I, Violin II, Viola, Cello, Double Bass, and Piano. The score is divided into four measures, with the first measure showing a change in meter from 4/4 to 3/4.

2.1.g. Notni prikaz izmjene mjera u četvrtom stavku.

This page of a musical score, numbered 11, illustrates a change of meter in the fourth measure. The score is arranged in a grand staff format with multiple systems of staves. The instruments listed on the left include Flute (Fl.), Oboe (Ob.), Clarinet in A (C.A.), Bassoon (B.C.), Clarinet in Bb (Cl.), Bassoon in C (B.C.), Bassoon (B.), Clarinet in Bb (Cl.), Trumpet (Tpu.), Trombone (Tbn.), Bass Trombone (B. Tbn.), Trombone (Tbn.), Timpani (Timp.), Snare Drum (Cm.), Viola (Vla.), Violin (Vln.), Violin II (Vln. II), Violin I (Vln. I), Violoncello (Vcl.), Double Bass (Kontrabass), and Double Bass (Dbl.). The score shows various musical notations, including rests, notes, and dynamic markings, across four measures. The change of meter is indicated by a double bar line in the fourth measure, where the time signature changes from 4/4 to 3/4.

2.1.h. Notni prikaz izmjene mjera u četvrtom stavku.

Riječ je o materijalu trećeg stavka,

The image shows a page of a musical score, likely for a symphony, focusing on the first three measures of the third movement. The score is written for a full orchestra, including woodwinds, brass, strings, and percussion. The notation is dense, with many notes and rests across multiple staves. The key signature is one flat, and the time signature is 3/4. The score is divided into measures by vertical bar lines.

2.1.i. Notni prikaz tematskog materijala trećega stavka.

a čija razvojnost podrazumijeva promjenu timbra, odnosno prelazak s klavira i čeleste na set udaraljki.

Vrijedi izdvojiti materijale trećeg stavka. Na samom početku, unisono kretanje repetirajućih tonova

III.  
The Plucking Constant

The image displays a musical score for the piece "The Plucking Constant" (III.). The score is organized into systems of staves for various instruments. The tempo is marked as "Nervoso 2=140". The score is divided into four main sections, each starting with a measure of repeating notes. The instruments included are:

- Flauto
- Fino
- Oboe
- Clarineti in Sol
- Clarineti in Fa
- Bass Clarinet in Fa
- Sassoni
- Contrabbassi
- Violini I
- Violini II
- Violoncelli
- Trieste
- Violone
- Violonchello
- Multiphonization on
- Bass Drum
- Tam tam
- Cymbali
- Cymbali
- Chickens
- Chitoni
- Fiumi
- Harpe I
- Harpe II
- Violini I
- Violini II
- Viola
- Violoncelli
- Double Bass

The score shows a complex arrangement of repeating notes across these instruments, with some instruments like the Flauto and Fimo having more active parts in the first section. The notation includes various dynamics and articulation marks.

2.1.j. Notni prikaz repetirajućih tonova u trećem stavku.

razvija se do akordičke strukture koja je najčešće građena od intervala kvarte, septime ili sekunde.

The image displays a page of a musical score, specifically the third measure of a piece. The score is arranged in a standard orchestral format with multiple staves for different instruments. The instruments listed on the left side of the page are: Flute I, Flute II, Oboe I, Oboe II, Clarinet in A, Clarinet in Bb, Bassoon I, Bassoon II, Horn I, Horn II, Trumpet I, Trumpet II, Trombone I, Trombone II, Trombone III, Timpani, Cymbals, Violin I, Violin II, Viola I, Viola II, Violoncello, and Double Bass. The notation includes various musical symbols such as notes, rests, and dynamic markings. The third measure is highlighted, showing a complex chordal structure primarily composed of intervals of thirds, sevenths, and seconds, as described in the text above.

2.1.k. Notni prikaz akordičke strukture u trećem stavku.

Tijekom trećeg stavka prisutno je razvojno širenje intervala, pa tako nastaje specifični niz tonskih visina u prikazanom ulomku



2.1.1. Notni prikaz intervalskog niza u trećem stavku.

Uporno ponavljanje spomenutog niza u dionici klavira prilika je za različite timbralne situacije u kojima se istražuju orkestracijske mogućnosti.

The image displays a page of a musical score, page 16, featuring two systems of staves. The first system includes woodwinds (Piccolo, Flute, Oboe, Cor Anglais, Bassoon, Clarinet, Bassoon, Clarinet), brass (Horn, Trumpet, Trombone, Tuba, Snare Drum, Cymbal, Triangle, Gong, Bass Drum, Tom-tom, Cymbal, Gong), strings (Violin I, Violin II, Viola, Violoncello, Double Bass), and Percussion (Percussion 1, Percussion 2). The second system includes Percussion, Flute I, Flute II, Violin I, Violin II, Viola, Violoncello, and Double Bass. The score shows various musical notations including notes, rests, and dynamic markings.

2.1.m. Notni prikaz intervalskog niza u trećem stavku.

Fl.

Ob.

C.A.

Bb.C.

C.

B.C.

B.

Cb.

Hr.

Tpt.

Tbn.

B. Tbn.

Tub.

Timp.

Cym.

Vln. I

Vln. II

Vla.

Vcl.

Db.

2.1.n. Notni prikaz intervalskog niza u trećem stavku.



This page of a musical score, numbered 18, features a large ensemble of instruments. The score is organized into several systems of staves. The first system includes Flute (Fl.), Oboe (Ob.), Clarinet in A (C.A.), Bass Clarinet (B.C.), Clarinet (Cl.), Bass Clarinet (B.Cl.), Bassoon (Bsu.), and Contrabassoon (Cbas.). The second system includes Piccolo (Pic.), Trumpet (Tpu.), Trombone (Tbn.), Bass Trombone (B. Tbn.), and Tuba (Tba.). The third system includes Timpani (Timp.), Snare Drum (Cim.), Violin (Vln.), Viola (Vcl.), Cello (Cvl.), Double Bass (Konk.), and Contrabass (Cob.). The fourth system includes Piccolo (Pic.), Horn 1 (Hp. I.), Horn 2 (Hp. II.), Violin I (Vln. I.), Violin II (Vln. II.), Viola (Vla.), Violoncello (Vcl.), and Double Bass (Bsu.). The score shows various musical notations, including notes, rests, and dynamic markings, across these instruments.

2.1.o. Notni prikaz intervalskog niza u trećem stavku.

## 2.2. Zvučni spektar

Izostanak teme pruža priliku da se istaknu ostali aspekti glazbe. Poigravanje različitim registrima i timbralnim odnosima donosi interesantne zvučne senzacije. Tijekom skladbe nastojim slušatelja provesti kroz različite registre, a njihova izmjena nerijetko je glavni alat u postizanju napetosti. Posebno je to vidljivo u drugom stavku, koji obiluje različitim registrima, teksturama i timbralnim situacijama. Visoki registar flažoleta, kao i boja gudača u kombinaciji s visokim registrom udaraljki, rezultirat će nježnim, ugodnim zvukom, gotovo šumom. Uvidom u partituru jasno je da je uvijek riječ o disonantnim akordima, no unatoč tome odabir registra i kombiniranje specifičnih instrumentalnih sekcija rezultirat će različitim akustičkim fenomenima. Srodno odnosu konsonance i disonance, drugi stavak donosi izmjenu ugodnih, odnosno mekih te oštih, odnosno grubih zvukova. Početak drugog stavka, kao i kraj, obiluju teksturama u visokom registru.

The image displays a page of a musical score, page 20, featuring a high register texture. The score is organized into several systems of staves. The instruments listed on the left include Flute (Fl.), Oboe (Ob.), Clarinet in A (C.A.), Bassoon (B.C.), Bass, Cello (Cello), Horn (Horn), Trumpet (Tpt.), Trombone (Tbn.), Timpani (Timp.), Snare Drum (Cud.), Violin (Viol.), Viola, Violoncello (Vcllo), Double Bass (Cb.), Percussion (Perc.), Horn 1 (Hr. 1), Horn 2 (Hr. 2), Violin I (Viol. I), Violin II (Viol. II), Viola, and Double Bass. The score shows a complex texture with many notes and rests, particularly in the high register of the strings and woodwinds. The notation includes various musical symbols such as notes, rests, and dynamic markings like *ppp* and *pp*.

2.2.a. Notni prikaz tekstura u visokom registru, II.st.

Središnji dio drugoga stavka donosi kontrastnu situaciju – duboki, tamni registar postignut različitim proširenim tehnikama. Premda statičan, središnji dio stavka koji obiluje oštrijim zvukovima, donosi napetost u odnosu na početak stavka.

The image displays a page of a musical score for a symphony orchestra. The score is arranged in a standard format with multiple staves for different instruments. The instruments listed on the left side of the score are: Flute (Fl.), Oboe (Ob.), Clarinet in A (Cl. A.), Bass Clarinet (B. Cl.), Clarinet in Bb (Cl.), Bassoon (B. Sn.), Contrabassoon (C. Sn.), Horn in F (Hr.), Trumpet in F (Tr.), Trombone in F (B. Tr.), Trombone in Bb (Tr.), Timpani (Timp.), Cymbal (Cym.), Violin I (Vln. I.), Violin II (Vln. II.), Viola, Violoncello (Vcl.), and Double Bass (Db.). The score shows a deep, dark register in the lower strings, with a prominent bass line in the Double Bass part. The music is characterized by a static, dark texture with sharp, dark sounds, creating a sense of tension. The score is written in a standard musical notation with various notes, rests, and dynamic markings.

2.2.b. Notni prikaz tekstura u dubokom registru, II.st.

22

Flu.  
Fl.  
Ob.  
C. A.  
B. Cl.  
Cl.  
B. Cl.  
Ba.  
Cb.  
Hr.  
Tpt.  
Tbn.  
B. Tbn.  
Tpt.  
Cl.  
Vln.  
Vln.  
Vcl.  
Kb.  
Hr.  
Tpt.  
Tbn.  
B. Tbn.  
Vln. I  
Vln. II  
Vln.  
Vcl.  
Kb.

und Engen beröhlt,  
sprach er auch  
und Engen beröhlt,  
sprach er auch  
und Engen beröhlt,  
sprach er auch  
und Engen beröhlt,  
sprach er auch  
und Engen beröhlt,  
sprach er auch

2.2.c. Notni prikaz tekstura u dubokom registru, II.st.

Fl.

Ob.

C. A.

B. Cl.

Cl.

B. Cl.

Bsn.

Cbass.

Hr.

Trp.

Tbn.

B. Tbn.

Tuba

Timp.

Cm.

Vla.

Vcl.

B. D.

T.

Cym.

Glock.

Cng.

Perc.

Hr. I.

Hr. II.

Vln. I.

Vln. II.

Vla.

Vcl.

B.

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2.2.d. Notni prikaz tekstura u dubokom registru, II.st.

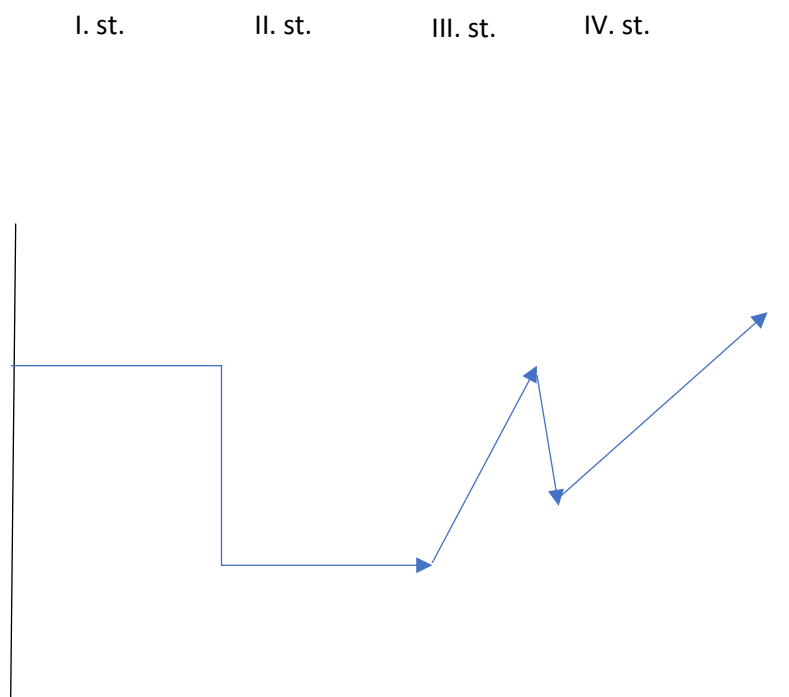
Stoga će povratak na A dio stavka, odnosno visoki registar, poslužiti kao katarza stavka u dramaturškom smislu, a sve zahvaljujući suprotstavljanju različitih registara.

The image displays a musical score for an orchestra and voices. The score is organized into systems, with each system containing multiple staves. The instruments and voices are labeled on the left side of the score, including Flute (Fl.), Oboe (Ob.), Clarinet (C.A.), Bassoon (B.C.), Trumpet (Tr.), Trombone (B. Tr.), Tuba (Tu.), Snare Drum (Timp.), Cymbal (Cim.), Violin (Vln.), Viola (Vla.), Violoncello (Vcl.), Double Bass (Kon.), Horn 1 (Ho. 1), Horn 2 (Ho. 2), Violin I (Vln. I), Violin II (Vln. II), Viola, Violoncello, and Double Bass. The score shows a complex texture with various musical notations, including notes, rests, and dynamic markings such as *ppp* (pianissimo) and *pp* (piano). The texture is particularly dense in the high register, as indicated by the caption.

2.2.e. Notni prikaz tekstura u visokom, kraj drugoga stavka.

### 2.3. Dramaturgija

Premda se dramaturgija često ostvaruje kao rezultat djelovanja različitih glazbenih sastavnica, u ovoj skladbi slučaj je obratan. Glazbene sastavnice uvjetovane su postavljenom, odnosno unaprijed planiranom dramaturgijom. U nastavku slijedi prikaz napetosti u vremenu kroz četiri stavka.



Na mikrorazini, svaki stavak ima vlastiti dramaturški razvoj. Prvi stavak donosi neprestanu energičnost i pokretljivost od početka do samog kraja stavka. Drugi stavak služi kao kontrast prvome. Minimalnim sadržajem, zvučnim bojama i teksturama postiže se smanjenje napetosti u odnosu na prvi stavak. Treći stavak donosi zanimljivosti u dramaturškom pogledu. Nakon pokretljivih situacija



The image displays a page of a musical score, page 26, featuring two systems of staves. The first system includes woodwinds (Flute, Oboe, Clarinet, Bassoon, Contrabassoon), strings (Violin I, Violin II, Viola, Violoncello, Double Bass), and percussion (Timpani, Cymbals, Snare Drum, Triangles, Chimes, Gong, Cymbal, Tom-tom). The second system includes strings (Violin I, Violin II, Viola, Violoncello, Double Bass) and percussion (Timpani, Cymbals, Snare Drum, Triangles, Chimes, Gong, Cymbal, Tom-tom). The score shows various musical notations including notes, rests, and dynamic markings.

2.3.b. Notni prikaz pokretljivih situacija u trećem stavku.

te izrazito ritmičnih intervencija

The image displays a page of a musical score, likely for an orchestra and strings. The score is organized into systems of staves. The instruments listed on the left side of the page include: Flute (Fl.), Clarinet (Cl.), Bassoon (B. Cl.), Oboe (Ob.), Horn (H. Cl.), Trumpet (Trp.), Trombone (Tbn.), Timpani (Timp.), Snare Drum (Cym.), Cymbal (Cym.), Glockenspiel (Glock.), Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), and Cello/Double Bass (Vcl./Cb.). The score shows rhythmic interventions in the third measure, with various notes, rests, and dynamic markings (e.g., *f*, *mf*) indicating the intended performance. The notation is complex, with many notes and rests across the staves, suggesting a dense and rhythmic passage.

2.3.c. Notni prikaz ritmičnih intervencija u trećem stavku.

stavak bi opravdano mogao završiti repetirajućom gestom u 102. taktu.

71

Fl.

Ob.

Cl. A.

Cl. Bb.

B. Cl.

B. Cl.

Trp.

Tbn.

B. Tbn.

Tbn.

Timp.

Cym.

Vln.

Vla.

Vcl.

B. Cl.

Tuba

small waves  
on the rocky  
edge of the sea  
with a strong breeze

2.3.d. Notni prikaz mogućeg završetka trećega stavka.

Ipak, skladateljska odluka da nakon toga uslijedi apoteoza u vidu sporog odlomka rezultirala je neočekivanim raspletom stavka.

The image shows a page of a musical score, likely for a symphony. The score is written for a full orchestra and includes parts for various instruments: Flute (Fl.), Oboe (Ob.), Clarinet in A (Cl. A), Clarinet in Bb (Cl. Bb), Bassoon (B. Cl.), Horn (Hr.), Trumpet (Trp.), Trombone (Tbn.), Percussion (Perc.), Violin (Vln.), Viola (Vla.), Cello (Cl.), and Double Bass (Db.). The score is in a slow, grand style, with many long notes and dynamic markings such as 'pp' (pianissimo) and 'mf' (mezzo-forte). The music is in a key with one flat (Bb) and a 3/4 time signature. The score is divided into measures, with some measures containing long, sustained notes. The overall mood is solemn and majestic, consistent with the description of an 'apoteoza' (apotheosis).

2.3.e. Notni prikaz apoteoze u trećem stavku.

Po uzoru na elektroničku glazbu, spomenuti odlomak oponaša alate dostupne u mnogim računalnim programima za obradu zvuka. Akord koji je razvučen, zaustavljen u vremenu podsjeća na manipulaciju zvuka pomoću alata *time stretch*, *freeze* ili pak *GRM Tools Evolution*.

Nakon kratkog smirenja na kraju trećeg stavka, četvrti stavak donosi neprestanu gradaciju napetosti do gromoglasnog *tutti* na samom kraju.

## 2.4. Dinamika

Premda je neporeciva važnost dinamike u ostvarivanju karaktera glazbenog sadržaja, u ovoj skladbi dinamika je stavljena u drugi plan. Minimalistički, blokovski građena, čini napetosnu konstantu na koju će utjecati ostale glazbene sastavnice, poput registara, ritma itd.

## 2.5. Vertikalna sastavnica

U skladbi *In the beginning was...* ne može se govoriti o harmonijskom jeziku u klasičnom, tradicionalnom smislu. Ipak, ne može se poreći postojanje vertikalnog razmišljanja tijekom svih stavaka. Akordi ovdje nisu u službi funkcija, već su poput zamišljenih spektograma u kojima se ističu različite parcijale (također zamišljenog) alikvotnog niza. Posebno je to vidljivo u četvrtom stavku, u kojemu akord nastupa kao jedinstvena zvučna masa, čija je boja rezultat koncepta aditivne sinteze:

The image displays a page of a musical score, page 31, showing a vertical view of the score in the fourth measure. The score is organized into systems of staves. The instruments listed on the left side of the page are: Flute (Fl.), Oboe (Ob.), Clarinet in A (C. A.), Clarinet in Bb (Bb Cl.), Bassoon (B. Cl.), Bassoon (Bsn.), Contrabassoon (Cbass.), Horn in F (Hr.), Trumpet (Tpt.), Trombone (Tbn.), Trombone in Bb (B. Tbn.), Trombone (Tbn.), Timpani (Timp.), Snare Drum (Cym.), Triangle (Tri.), Violin I (Vln. I), Violin II (Vln. II), Viola (Vla.), and Cello/Double Bass (Cb.). The notation includes various musical symbols such as notes, rests, and dynamic markings. The score is presented in a vertical layout, with the measure number '4' indicated at the top left of the first staff.

2.5.a. Notni prikaz vertikale u četvrtom stavku.

Zanimljiv je ulomak četvrtog stavka u kojemu tonovi akorda ne nastupaju istovremeno, no intervalskim razmacima podsjećaju na alikvotni niz neke tonske visine.

The image displays a musical score for the fourth movement, featuring a sequence of chords across various instruments. The score is organized into systems, with each system containing multiple staves. The instruments listed on the left include Flute (Fl.), Clarinet in B-flat (Cl. Bb), Bassoon (Fag.), Trumpet (Tr.), Trombone (Tbn.), Violin (Vln.), Viola (Vla.), Violoncello (Vcl.), Double Bass (Kontrabaš), Piano (P), and Double Bassoon (Kontrabas). The score shows a series of chords that are not played simultaneously but are spaced out in a way that suggests a sequence of intervals, characteristic of an aliquot series. The notation includes various musical symbols such as notes, rests, and dynamic markings.

2.5.b. Notni prikaz umjetnog alikvotnog niza u četvrtom stavku.

## 2.6. Ritam

Ritamska dimenzija prisutna je tijekom cijele skladbe, a posebno u prvom stavku *The Big Bang*. Nametljivim ritamskim *ostinatom* u udaraljka postiče se neumorna energičnost koja priliči prvome stavku. Zanimljivost ritma i metra prvi stavak duguje upotrebi indijskih ritmova koji su fascinirali i Oliviera Messiaena, a koji je kategorizirao i opisao svih 120 ritmova, poznatih kao *Deçî-Tâlas*<sup>2</sup>. Svi ritmovi preuzeti su pak iz pete knjige *Samgîta-Ratnâkara*, u kojoj je autor prvi puta kategorizirao i naveo indijske ritmove<sup>3</sup>.

Prema kraju stavka ritmovi su sve složeniji, a u nastavku slijede redni brojevi prema *Deçî-Tâlas* tablici, njihovi nazivi te mjera prema redosljedu pojavnosti:

### 115. Sarasvatikhantabharana (7/8)

#### 2.6.a. Notni prikaz ritma.

### 113. Kaladhvani (8/8)

#### 2.6.b. Notni prikaz ritma.

<sup>2</sup> Melody Baggech, *An English Translation of Olivier Messiaen's Traité de Rythme, de Couleur, e t D'ornithologie*, disertacija, The University of Oklahoma, 1998., str. 303.

<sup>3</sup> Olivier Messiaen, *The Technique of My Musical Language*, Editions Musicales, 1944., str. 14-15



## 120. Çârngadeva (11/8)

Musical score for Çârngadeva (11/8). The score includes staves for Timpani (Timp.), Conga (Cong.), Vibraphone (Vib.), Percussion (perc.), and Bass Drum (B. D.). The percussion parts feature a rhythmic pattern of eighth notes, with a forte (*ff*) dynamic marking.

2.6.c. Notni prikaz ritma.

## 105. Candrakalâ (16/8)

Musical score for Candrakalâ (16/8). The score includes staves for Timpani (Timp.), Conga (Cong.), Vibraphone (Vib.), Percussion (perc.), Bass Drum (B. D.), Tom-tom (T-t), Cymbal (Cym.), Glockenspiel (Glock.), Celesta (Cel.), and Piano (Pno.). The percussion parts feature a rhythmic pattern of eighth notes, with a forte (*ff*) dynamic marking. The piano part features a complex rhythmic pattern of eighth notes.

2.6.d. Notni prikaz ritma.

## 88. Laksmica (17/8)

Musical score for Laksmica (17/8) showing percussion parts: Timpani, Conga, Vibraphone, Percussion, B.D., T.A., Cym., Cym., and Glockenspiel.

2.6.e. Notni prikaz ritma.

## 93. Ragavardhana (19/8)

Musical score for Ragavardhana (19/8) showing percussion parts: Percussion, B.D., T.A., and Cym.

2.6.f. Notni prikaz ritma.

Trinaestosminska mjera (13/8) koja počinje u 37. taktu nema indijsku inačicu, no može se objasniti kao retrogradna Candrakalâ kojoj nedostaju prva i posljednja ritamska vrijednost (3+3+3+2+2). Svi navedeni ritmovi su razvijani tijekom stavka i slobodno varirani, a često se javljaju u augmentaciji u odnosu na ritam prikazan u Deçî-Tâlas. Kompleksnost ritmova i mjera suprotstavljena je naizgled jednostavnom formalnom planu prvoga stavka. Naime, svaka mjera traje točno dvanaest taktova, što sugerira tradicionalnu pravilnost u izgradnji forme. Ipak, svaki nadolazeći ulomak od dvanaest taktova sve je duljeg trajanja u odnosu na prethodne. Na taj način se i protok vremena u glazbi relativizira te podvrgava manipulaciji.

Ostali stavci skladbe ne služe se indijskim ritmovima, već donose lažnu reminiscenciju na prvi stavak u vidu ritmičnih perkusivnih solističkih intervencija, poput klavirskih pasaža u trećem stavku,

Musical score for piano (Pno) showing a passage in the third movement.

2.6.g. Notni prikaz klavirskih pasaža u trećem stavku.

ili pak udaraljkaških ulomaka u četvrtom stavku,

The image displays a musical score for the fourth movement, featuring percussion and piano parts. The percussion section includes Timpani (Timp.), Conga (Cong.), Vibraphone (Vib.), Percussion (perc.), Bass Drum (B.D.), Tom-tom (T.-t.), Cymbal (Cym.), and Glockenspiel (Glock.). The piano part is divided into Cello (Cel.) and Piano (Pno.). The score is written in 4/4 time and consists of four measures. The percussion parts are marked with various rhythmic values and dynamics, while the piano parts feature melodic lines with slurs and dynamic markings.

2.6.h. Notni prikaz klavirskih pasaža u trećem stavku.

u kojima brze izmjene mjera unose pokretljivost i nepredvidljivost.

### 3. Zaključak

Cilj ove analize jest pružiti uvid u elemente skladateljskog stila koji, gledajući ukupno, daju jasniju sliku o skladateljskim tendencijama i namjerama prilikom stvaranja. Svaka moja dosadašnja skladba tijekom studija služila je učenju, razvijanju i njegovanju vlastitih interesa – isto se može reći i za ovu skladbu. Znatiželja me odvela u svijet spektralizma koji me fascinirao brojnim mogućnostima, a koje sam željela istražiti u vlastitoj skladbi. Tijekom procesa stvaranja, privukao me do tada još nedovoljno istraženi teren proširenih tehnika na instrumentima, tehnološke mogućnosti koje nudi područje elektroničke glazbe, kao i izazov da u skladanju objedinim umjetnički i znanstveni pristup. Nadam se da će ovi elementi rezultirati zvučnim podražajima koji su slušatelju zanimljivi te za kojima će rado posezati. Smatram da završetkom studija ne prestaje učenje – velika mi je želja nastaviti se razvijati i napredovati, a vjerujem da će i moj stil sazrijevati iskustvom i njegovanjem skladateljskog poziva.

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