

CHAPTER NINE

TOPICS AND PERFORMANCE IN PÉTER EÖTVÖS'S VIOLIN CONCERTO *SEVEN* (2007)

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In: Julian Hellaby (ed.), *Musical Topics and Musical Performance*,
Routledge, London and New York, 2023, p.200-223.

ISBN: 978-032-11085-1

DOI: 10.4324/9781003218340-10

Introduction

To write an article about a piece of contemporary music relating to musical topics and their performance represents a great challenge, since the interplay of relationships between classic and twentieth-century topics would be an entirely new task, and to find different interpretations of a contemporary work would require considerable effort.

I would like to face this challenge with the help of a very expressive piece by the Hungarian composer Péter Eötvös (born in 1944) who wrote his *Seven: Memorial for the Columbia Astronauts* in 2006 (revised in 2007), a piece for violin and orchestra, which was commissioned by the Lucerne Festival Academy Orchestra and the NHK Symphony Orchestra Tokyo. Péter Eötvös (2007) explains his ideas behind this composition and he describes his sources of inspiration on his website.

The Columbia disaster on 1 February 2003 was a dramatic incident which moved me very deeply. Especially the television image of an empty astronaut's helmet which had been found intact in a field among numerous pieces of debris that symbolized to me the tragedy of this disaster that claimed the lives of seven people shortly before the return of the space shuttle to earth.

For a long time, I had thought of writing a violin concerto. Against the background of the tragic events concerning the 28th Space Shuttle Mission, I took up this idea again: the violin concerto as a musical dialogue between soloist and orchestra seemed to me particularly suited to lend musical shape to the memory of the killed astronauts. Each of the seven astronauts has been given a personal dedication cadence [cadenza]. Even the representation of their characters is reflected in the composition, for example by reminiscences of the musical cultures of Kalpana Chawla, the Indian-born American female astronaut, and of Ilan Ramon, the first Israeli in space.

The number 7 determines the musical and rhythmic structure of the work, describing at the same time the basic principle of the composition: 49 musicians are divided into 7 groups; apart from the solo violin there are 6 further violins arranged in the concert hall. They are like seven satellites or souls sounding and hovering in space. The violin concerto *Seven* is a very personal monologue and the musical expression of my sympathy towards the seven astronauts who lost their lives while exploring space

in fulfilment of a fundamental dream of mankind (Péter Eötvös, official website, *Seven*).

The composer and his interest in space exploration

To understand Péter Eötvös's particular emotions when confronted with this tragic event, we should mention his general interest – as a composer – in space, in the cosmos, and in the evolution of knowledge in astrophysics. He was 17 years old when he witnessed the first manned flight into space undertaken by the Soviet cosmonaut Yuri Gagarin in 1961. Under this stimulus, he wrote a piano piece entitled *Kosmos*, a piece to which he would return several times (1979; 1985; 1999: new version for one or two pianos). His impressions as a creator and composer are given on his website (1999).

As with Gagarin's space flight the world suddenly opened up, appearing "infinite". The piece begins with a musical "Big Bang" followed by the succession of the stages and episodes of the development of the cosmos. The long trill sounded in triple forte is the "oscillating axis of the universe", continually expanding, then shrinking during the piece. "Comets" breakthrough the musical space, accompanied by chords evoking constellations and descending "asteroid-scales". A "space-ship floating between solar systems" passes before us, then the music becomes entangled in a "cloud of meteorites". The space journey breaks off twice, interspersing the music with short passages from Bartok's *The Night's Music*. [Cycle "*Out of Doors*", 4th movement]. Finally, the certitude of transience conquers even cosmic perpetuity – the piece ends a quarter of a second before the next "Big Bang" (Péter Eötvös, official website, *Kosmos*).

In her study on *Kosmos*, Marie Laviéville (2013) explains the composer's general interest in the study of space.

If the first human flight in space, symbol of the opening towards a totally unknown universe, is at the origin of this singular musical project, Eötvös also seems to have been strongly influenced by a conference given by György Marx (Hungarian astrophysician) on the theory of the Big Bang, a conference he attended in the early sixties in Budapest. From this lecture, he retained two principles essential to the structuring of the piece: on the one hand, that the universe is in perpetual recommencement, and on the other hand, that it is unstable and bound to propagate and shrink. *Kosmos* is thus a work in which the notions of cyclicity but also of process will prove to be crucial. Opening with the stylization of the "Big Bang" (an event added only in the most recent version of the work), the piece is based on the expansion and contraction of the universe, before ending "a quarter of a second before a new Big Bang" (p.243).

Eötvös's interest in the discovery of space and the cosmos has also manifested itself in the composition of other pieces such as *The Gliding of the Eagle in the Skies* 2011 (for orchestra or chamber orchestra), *Multiversum* 2017 (for orchestra and two organs) or in a transposed and more personal manner: *Psychokosmos* 1994 (for cymbalum and orchestra), *Levitation* 2007 (for two clarinets, string orchestra and accordion).

Background information of composition: the Columbia disaster

To understand Eötvös's approach and creative process in composing *Seven*, it is worth recalling some of the articles and book chapters he read concerning the Columbia space shuttle disaster, which involved the spaceship known as STS-107¹. He studied the entire file *Background information on the Columbia Space Shuttle Mission STS-107* given by NASA in 2003. [Accessed by him on 18th March 2004]². He also read important articles in Hungarian on the explanation of the disaster and on the description of the crew ('Lángok a légtérben' ['Flames in airspace'] which appeared in the *Reader's Digest* supplement, March 2005 (in Cabbage and Harwood, 2004). On the other hand, he investigated all the presentations given of the seven members of the Columbia crew on the NASA website (2004), as well as for the other astronauts, using their family names (no longer available online). [Accessed by P. Eötvös on 18th March 2004]. These descriptions give a short outline of their lives, their motivations, their main interests, and quote some of the things they have said. These pages may have helped the composer in creating the image of their character, of their personality and of their background. He also read all the accounts of the shuttle tragedy published in Hungarian – for example the article in *Origo* printed on 2 February 2003, 'Megsemmisült a Columbia ürrepülőgép' ['The Columbia space shuttle has been destroyed'] and the piece by Dancsó and Szentpéteri (2003), 'Két hónappal a tragédia után' ['Two Months after the Tragedy'] (accessed by the composer: 19th November 2005).

To recreate the tragic setting of the explosion, we quote only the brief NASA commentary by Jennifer Troxell given in 2004 and read by the composer.

The Columbia STS-107 mission lifted off on January 16, 2003, for a 17-day science mission featuring numerous microgravity experiments. Upon re-entering the atmosphere on February 1, 2003, the Columbia orbiter suffered a catastrophic failure due to a breach that occurred during launch when falling foam from the External Tank struck the Reinforced Carbon panels on the underside of the left wing. The orbiter and its seven crewmembers (Rick D. Husband, William C. McCool, David Brown, Laurel Blair Salton Clark, Michael P. Anderson, Ilan Ramon, and Kalpana Chawla) were lost approximately 15 minutes before Columbia was scheduled to touch down at Kennedy Space Center. This site presents information about the STS-107 flight, as well as information related to the accident and subsequent investigation by the formal Columbia Accident Investigation Board (Introduction, NASA History Division).

In reproducing the photo of the crew here, we are following Eötvös's idea of commemorating the tragic fate of these seven fully enthusiastic young people who were very passionate and excited to take part in this human adventure which would have advanced our knowledge of aerospace (Figure 9.1).

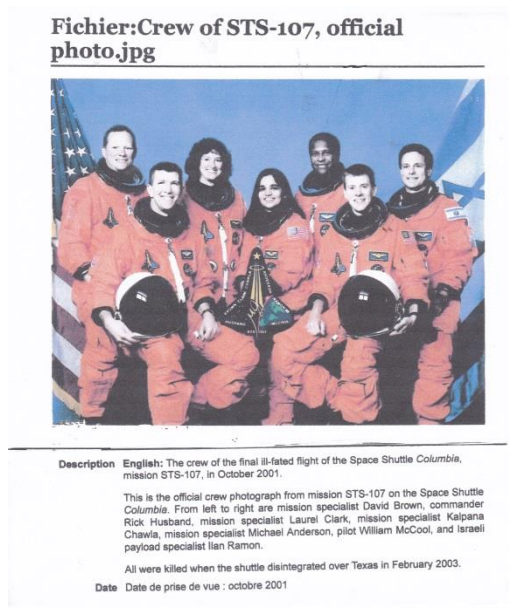


Figure 9.1. Photograph of the crew of the Columbia space shuttle, October 2001.

When we study all these publications, we understand that Péter Eötvös had a clear view, a precise idea and also a complete and detailed picture of the narrative of the Columbia catastrophe. This narrative can be seen as a kind of programme, in the sense of programme music familiar from nineteenth- and twentieth-century music.

First, we summarise his main intention by quoting the composer's account to the author of this chapter: 'the piece is an affectionate tale: the expression of affection and farewell towards these seven young and sympathetic people who, in the prime of their lives, were victims of the space accident' (personal communication, 20th October 2020). This account resonates closely with a passage already quoted from his website: 'The violin concerto *Seven* is a very personal monologue and the musical expression of my sympathy towards the seven astronauts who lost their lives while exploring space in fulfilment of a fundamental dream of mankind.'

These comments transmit a special signification: the tribute of the composer to these young heroes takes the form of a subjective response, a very personal reaction, even if some elements of the musical form might allow us to think of a depiction or a sketch of the movements of the shuttle in outer space, according to different configurations. The composer's imagination is supported by the utmost freedom to create scenarios, images, characters and physical or dynamic models corresponding to different moments and different phases of the disaster.

The structure of the work is free, consisting of two main parts. A commentator on the piece has described it as 'a true symphonic poem *concertante* having two parts of almost equal length, the first part presenting four cadences' (or cadenzas). The first part is dedicated to the seven astronauts in four sections [2 persons + 1 person + 2 persons + 2 persons]. 'The second part begins, after an introduction by the soloist, with noise-events repeated 18 times (four vertical dome cymbals rubbed, scraped as they turn, representing the four rockets of the shuttle and their launch). This section is followed by a short orchestral episode which simulates space, its continuity and its emptiness (loss of control, desperate descent), then

other cadences (three in total) depict anguish, agitation, despair, resignation (interspersed with a new episode of the same chanted noises, repeated 14 times, then episodic again, in attenuation, then further on, again repeated 14 times); the extreme end of the piece is made up of mixed, almost confused feelings ... time seeming to be suspended. The solo violin part describes a moving figure that recalls the gestures of a desperate convulsion' (in Huber, 2008). The composer explains that this last and very upsetting image of the piece expresses – when hearing the alto flute and the solo violin duo (bars 180-235) – ‘the act of Mother Earth who mourns and welcomes the remains and relics of the astronauts’ (personal communication, 20th October 2020). The commentary by László Tihanyi (2014) for the Budapest Music Centre’s CD, *Concertos of Péter Eötvös* is also of relevance.

In this study I will concentrate mainly on the first part of the work (about 11 minutes out of a total of 22 minutes), as it contains almost all its principal musical ideas and many important musical motives and topics including musical archetypes and/or musical rhetorical figures. Almost all of them are explored and developed afterwards in the second part of the piece.

The question of topics and of archetypes in *Seven*

If we analyse the structure and meaning (the sense, the signifying elements) in the first part of *Seven*, we can distinguish two different groups of expression or the signified:

1. Those which we can call “musical universals”, which concern physical phenomena, the movements in space, those that correspond to the phases leading up to the tragic event: the launch (called “start” by the composer), the rise, the acceleration, the elevation of the shuttle; the rotation of the four rockets³, followed by the actual explosion itself; the various components of the shuttle seeming to hover high in the atmosphere; or the fast movement of those elements in space (as they vaporise and scud through the sky); then the fall and horrifying disintegration of the shuttle with its debris raining down through the atmosphere.
2. Those which we recognize as topics, which express the human emotions that arise as the composer witnesses the tragic fate of these heroic astronauts: lamentation, mourning, weeping, (see for example the passacaglia (first cadenza) or the dirge that has an almost Middle-Eastern melodic style (fourth cadenza); the feeling of being chased or pursued and the sensation of some perpetually moving thing that is beyond our control (*perpetuum mobile*); the speaking style (*parlando*), the interrogating, hesitating style; the dramatic, almost rhetorical questioning completed or not with an answer; the walking pace or style: the innermost, alienated feelings of the lonely man walking through a strange space (a theme also used by Bartók); the fearful impact of threat (again, a theme explored by Bartók).

The first group, that of universals has been described by musicologists working in the field of sound naturalism (such as François-Bernard Mâche) or those who publish articles and books in bio-musicology (such as Niels L. Wallin), or who have examined the issue of musical universals and/or TSUs (Temporal Semantic Units).⁴ It would be useful at this juncture to give a brief summary of these points that have been covered in relevant articles written by Mâche.

Presentation of musical archetypes by Mâche

1. In his article ‘Le son et la musique’ (1963) he presents the main archetypes:
 - i) birth; ii) growth; iii) extinction; iv) association; v) dissociation.

2. In his article 'Universaux en musique et musicologie' (2018 [1997]), he points to two major categories (the formal and those involving the musical imagination):

A. *Formal categories*

- Musical scales (tetrachord and octave moduli and their acoustic and physiological sources)
- Narrative models such as crisis, enumeration, conflict, evolutionary variation, *etc.*
- Physical models such as crashing waves, ebb and flow of the sea, echo, aquatic runoff, burst, call, *etc.*
- Opposition of background/figure (*soli-tutti* in responsorial forms, accompanied melody, orchestral planes, near and far, *etc.*)
- Repetition (*ostinatos*, refrains, repeats, *Lied* forms, bar form, *etc.*) as a universal genotype

B. *The categories of musical imagination. (What kind of universality can we find in the characters and in the frequency of associations?)*

- Sexual symbolism (masculine-feminine in rhythms, contours and accents; organological taboos *etc.*)
- Cosmological symbolism (hours, seasons, cardinal points, astrology, *etc.*)
- Emotional characters (ethos, colours, circumstances, *etc.*)
- Social characters (castes, ceremonies, gender hierarchies, sacred-profane distinction, *etc.*)
- Associations between the acoustics of the biotope and the music played there (pp. 188–189).

3. In his article 'Archetype' (2001), Mâche identifies "dynamic patterns":

- accelerated/slowed down (with possible ecstasy or paroxysm)
- response or echo;
- iso-rhythmic ostinato; (see: "innate", pp.78-79)
- polyphonic pentatonic drone;
- patterns of conflict, canon (counterpoint, tiling, fugue, imitation, micro-polyphony)
- sensory-motor experiences, e.g. rocking (marine) (p. 39)
- repetition, refrain

4. Typology of sections of musical works developed by Márta Grabócz (2013), based on the analysis of the pieces of Mâche.

A. Birth/extinction

- anabase*, ascent; ii. *catabase*, fall, descent; iii. music of genesis, groping for/in departure;

B. Growth

- approach; arrival from afar; ii. growth, increase (of sound space, dynamics, *etc.*);

C/ Different forms of stasis:

- vegetation; ii. nature in vibration; iii. gesticulation;

D/ Positive or negative climaxes

- extreme accumulation of tension (explosion of materials);
- confrontation between different instrumental forces or layers/levels;
- negative expressive texture or climate (sea storm, great depth, *etc.*);

iv. climax as ecstasy, as ritual paroxysm, *etc.*

As to the second group of the signified, that of the topics, it is assumed that readers of this chapter are familiar with definitions of the term “musical topics”⁵ given by Leonard Ratner (1980), Raymond Monelle (2000), Robert Hatten (2004) and Eero Tarasti (2012) and others, and we will therefore not need to quote them here. On the other hand, as we will see, we will need to employ – especially in the case of Eötvös’s music – the terms “musical trope” and “troping” that were first defined by Robert Hatten in 1994.

TROPE: figurative meaning in music. TROPING involves a species of creative growth that goes beyond the typical articulation of expressive types and their implied hierarchy. Troping akin to metaphor occurs when two different, formally unrelated types are brought together in the same functional location so as to spark an interpretation based on their interaction (p. 295).

In his book on *Interpreting Musical Gestures, Topics, and Tropes*, Robert Hatten (2004) dedicates a whole sub-section to the issue of ‘Topical opposition and Troping’ wherein, by speaking about Schubert’s piano sonata in E-flat major (D. 567, first movement), he mentions the ‘hybridization of style types’ which is ‘a phenomenon of style growth that can be predicted systematically’ (p. 16). In the same book, the fourth chapter is devoted to ‘The Troping of Topics, Genres, and Forms: Bach, Mozart, Beethoven, Schubert, Schumann, Brahms, Bruckner, Mahler’ (pp.68-88). In its introduction, he gives a complex definition of troping in music:

Troping in music may be defined as the bringing together of two otherwise incompatible style types in a single location to produce a unique expressive meaning from their collisions or fusion (Hatten, 1994). Troping constitutes one of the more spectacular ways that composers can create new meanings, and thematic tropes may have consequences for the interpretation of an entire multimovement work. Topics are style types that possess strong correlations or associations with expressive meaning; thus, they are natural candidates for tropological treatment (p. 68).

Whilst analysing Eötvös’s *Seven*, I specifically noted the following topics from the history of western music but also from the musical world of Béla Bartók:⁶

1. The *lamento*, the funeral song;⁷
2. The pursuit, the chase (and/or the *perpetuum mobile* movement);⁸
3. The musical theme of walking in a static space (or walking which can be associated, in the sense of “troping”, with talking, with the oral expression (“*parlando*”) of a solitary human being);⁹
4. Phrases or strophes (i.e. a verse of four lines)¹⁰ in a form which accentuates the symmetrical structure of *question and answer*;¹¹
5. Another typical Bartókian topic evokes the expression of “threat” or “threatening” (see for example his works such as *The Miraculous Mandarin* or the ‘Preludio’ from the *Four Orchestral Pieces* (Op. 12/1)).¹²

Structure and topics (and/or universals) in the first part of *Seven*

1. *The first cadenza* (for astronauts Husband and McCool, pages 1-2, bars 1-20) relates to two types of expression: the introduction (bars 1–12) concerns the affect or topic of *lamentation*:

the melody of the solo violin plays two descending passages¹³ combined with glissandos, but its cadential bars outline a chromatic rise reaching a culmination point in bar 12. The metre corresponds to 7/4 and later to alternations of 3/4 and 4/4 metres. The solo violin is accompanied by six other violins who are placed or “spatialized” in different balconies of the concert hall, underlining the idea of orbiting satellites. The notes played by these six violins also reinforce the impression of falling by imitating the descent, but also play glissandos within the ranges of intervals of a sixth and an octave. The last ascending figures in the solo (bars 7–12) create an effect of consolation, contrasting with the lament of the opening section.

The second part of the first cadenza (bars 13-20) creates a *spatial dimension* leading us away from the topic of mourning: the *anabase* figures of the solo violin seem to sweep up the horn, trombone, trumpet, tuba and violin parts as if to produce the creation of a sonorous space: the tubas and trombones with the double basses ensure the threatening low register drone (A-flat), whereas the horns, violins and the solo cling to their high register B.

One affect or topic remains to be staged clearly at the end of the section: the noisy bass sounds must ensure the feeling of fright.

It can be observed that this first cadenza thus contains all the prescriptions of the *Hamburgische Dramaturgie* of G. E. Lessing (1767). It prepares the principal affects and sensations of the drama: ascension or rise, and its tragic outcome.

The topic of threat and its performance in the first cadenza

We can compare performances of this cadenza from the point of view of the last section: do they emphasise the premonition of danger and menace in the low register? Do they take into account the targeted or intended expressions of fear?

We have found two kinds of interpretations from this point of view (see the listing of six performances at the end of the article).¹⁴ Performances 1 and 5 (both conducted by Eötvös) emphasise the accentuation of the three clusters given by the trombones, the tuba and the double basses (bars 17–19, see Example 9.1): the threatening, forte, cluster effects that ends with the last accented low pedal note (A-flat) in the double basses. On the other hand, the interpretation by Patricia Kopatchinskaya (violin) and François-Xavier Roth (conductor-performance number 4) affords a more impressively sonorous effect: the whole section of ascending chords combined with noisy and disturbing low sounds concludes with a fortissimo spatial sound that has a vociferous impact. This version is, in the author’s opinion, more in keeping with the dramatic preparation – in Lessing’s sense – of the narrative of the third cadenza, as well as of the second part of the concerto.

The image shows a page of a musical score for the first cadenza of Eötvös's 'Seven', bars 16-20. The score is arranged in systems for various instruments: Hr. (Horns), Tr. (Trumpets), Tbn. (Trombones), Tb. (Tuba), Violin solo, Vln. (Violins), and Db. (Double Basses). The time signature alternates between 3/4 and 4/4. Dynamics are marked with *p*, *mf*, *f*, *ff*, and *sim.*. Performance instructions include *con sord.*, *(open)*, *(non div.)*, and *sul pont.*. The piece concludes with the instruction *attacca*.

Example 9.1. The topic of the opening of sound space and of threat in Eötvös's, *Seven*, first cadenza, bars 16–20.

The topics of pursuit and of spatial articulation in the third cadenza.

In the third cadenza we can follow the above-mentioned spatial/aerial processes: that of **1.** the shuttle's launch (bars 1–7); **2.** the acceleration, the filling out of the sound space with running figures (strings and the solo violin: the rise and fall of arpeggios, bars 8–16); **3.** the ascending process of the solo with *tutti* accompaniment leading to a climax: bars 17–23, and **4.** between bars 24–50, the emergence of a new topic may be observed: that of the *chase* or *pursuit*. The *tutti* section (without the solo instrument) features chromatic passages in different layers of the orchestra (five violas, harp, keyboard, bassoons, clarinets, alto flute, trombones, tuba, *etc.*) in a kind of disorderly counterpoint, as one group of instruments follows or pursues the others. The four gongs (bars 32–35) symbolise the firing up of the four rockets¹⁵. This section is an augmented, amplified and contemporary version of the “chase” scenes or “pursuit” style well known in the music of Béla Bartók (see end note 7, and Examples 9.2 and 9.3).

Flta. I, II

Obs. I, II

Clts. I, II in E \flat

Bass. I, II

I, III
Hrn. in F

II, IV

Trpt. I in C

Trb. III

S. Dr.

S. Vln.

Vln. I

160

Vivace, ca. 160

ff, risoluto

(con sord.)

senza sord.

senza sord.

sul pont.

Example 9.2. Topics of pursuit or chase in Bartók's Violin Concerto No. 2, first movement, bars 160–166.

The image displays a page of a musical score for an orchestra. The score is written in 4/4 time and consists of multiple staves for various instruments. The woodwind section includes Piccolo (2/3), Alto Flute (1), Oboe (1/2/3), Clarinet (1/2/3), Bassoon (1/2/3), and Horn (1/2). The brass section includes Trumpet (1/2) and Trombone (1/2). The string section includes Violin (1/5), Viola (1/5), and Double Bass (1/2/3/4). The percussion section includes Tubular bell and Gong. The score features complex rhythmic patterns, including sixteenth and thirty-second notes, and dynamic markings such as *mf*, *f*, and *ff*. There are also performance instructions like *arco* and *pizz.* for the strings, and *gliss.* for the harp and guitar. The score is divided into measures, with some measures containing multiple rests or specific articulation marks.

Example 9.3. The topic of orchestral pursuit or chase in Eötvös's, *Seven*, third cadenza, (*Tutti*), bars 29–32.

Starting at bar 51, we perceive a new phase in the staging of the drama. **5.** After the climax of the spatial rush of orchestral figures, another kind of pursuit begins: between bars 51–96 it is the violin that runs or walks in the high register, and which then gradually fills the sound space. This time the solo will be pursued by different instrumental groups (harp, clarinets, coil springs; later flutes, oboes; bass clarinet, *etc.* in bars 51–74). The scene corresponds to the “troping” of topics described by Robert Hatten: the expression of pursuit is completed or combined with the sensation of hovering, of a hesitant walk, expressing uncertainty, instability and questioning. This complex emotion that brings together two or three expressive types or topics (in the sense of troping) originates in the execution of the soloist’s highly virtuosic performance, and in the interludes affording new threatening effects.

This time the menacing accompaniments are presented in different ways. Bars 76–79 gradually create the progressive stacking of a dissonant cluster in the violas and violoncellos (F-sharp-G-sharp- A-C). These bars actually introduce the first very frightening moments (bars 80–83) which have a repeated cluster – and glissandos – in the violin, viola and violoncello parts (accented natural harmonics or fluting sounds) which create the effect of terrifying hammering and of reiterated metallic blows. These clusters are repeated here *seven* times, with the aim of interrupting the solo violin’s rapid passages, the intention being, presumably, to remind us of the explosion of the shuttle and the damage to the rockets (Example 9.4).

The musical score for Example 9.4 spans from bar 80 to 83. It features the following parts and markings:

- Picc. (3)**: Piccolo part, mostly rests.
- Fl.**: Flute part, mostly rests.
- Alt. (1)**: Alto Flute part, mostly rests.
- Perc.**: Percussion parts including Crotales (*ff*), Tubular bell (hard) (*mf*), Triangel (*f*), and Glockenspiel (*p*).
- E-Guit.**: Electric Guitar part with dynamics *p* and *mf*.
- Hrp.**: Harp part with dynamics *f* and *mf*.
- Keyb.**: Keyboard part with chords Cb, Bb and F#, Gb.
- Violin solo**: Solo violin part with dynamics *ff* and *mf*.
- Vln.**: Violin parts (1, 2, 3, 4) with dynamics *ff*, *f*, *p*, and *fp*. Includes markings like *trem. gliss.* and *ord.*
- Vla.**: Viola parts (1, 2, 3, 4) with dynamics *fp* and *f*. Includes markings like *ord.* and *pizz.*
- Vcl.**: Cello parts (1, 2, 3, 4) with dynamics *fp* and *f*. Includes markings like *ord.* and *pizz.*

Rehearsal marks **9/16** and **12/16** are placed above the Violin solo and Violin parts respectively.

Example 9.4. The topic of walking, of pursuit, interrupted by menacing and alarming clusters (with a clashing, hammering effect in violas and cellos) in Eötvös's *Seven*, third cadenza, bars 80–85.

Later, in bars 91–95, the same effects are repeated *fourteen* times (though this time marked *sul ponticello* in the strings). Then, 6. the solo violin's trajectory becomes irregular and unpredictable, its "spinning" figures are accompanied by the *catabase* of the strings (bars 96–107). 7. The closing bars of the third cadenza (bars 108–116) portray the disintegration of the shuttle and the hovering and falling of debris: the solo violin and the six other violins create a sort of "hocket-like" texture (Example 9.5).

Example 9.5. The topic of fragmentation, disintegration and of entropy in Eötvös's *Seven*, third cadenza, bars 108–116.

The musical scenario is unequivocal: the third cadenza offers the image of this infamous space disaster, with its entire process outlined in *seven* phases. To summarise for the purpose of comparing the performances, the key moments are as follows:

1. The shuttle's launch (with an introduction featuring several descending glissandi accompanied by the *anabase* in the solo violin -bars 1–7);
2. The acceleration, *the filling out of the sound space* with running figures (strings and the solo violin: rising and falling arpeggios (bars 8–16);
3. The ascending sequence of the solo with *tutti* accompaniment leading to a climax filling the entire sound space (bars 17–23);
4. The emergence of a new topic: that of the *chase or pursuit* employing progressively the whole orchestra, without the solo (pitting various instrumental groups against each other (bars 24–50);
5. Another kind of *pursuit* between the violin, that plays its high register and gradually fills out the sound space (its topic corresponding also to *hovering, questioning, hesitant walking*), and certain instrumental parts which "stalk" and "harass" it (bars 51–96); the violin's roaming in space is twice interrupted by the terrifying hammering of seven (later on, 14) clusters;
6. As a result of the previous actions, the trajectory of the solo violin's "escape" will be disrupted (bars 96–107);
7. The third cadenza ends with the image of disintegration, with the debris momentarily hovering and falling after the explosion (bars 108–116).

This is presented graphically in Table 9.1.

SECTIONS	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7
ACTIONS, CONTENT	The shuttle's launch with an <i>anabase</i> in the solo violin and several glissandi in the clarinet part	The acceleration, <i>the filling out of the sound space with running figures</i> (strings and the solo violin: rising and falling arpeggios)	The ascending sequence of the solo ...leading to a climax (entire sound space)	The emergence of a new topic – <i>chase</i> – confrontation of different instrumental groups	Another kind of <i>pursuit</i> between the violin and certain instrumental parts which “stalk” it. The violin's roaming will be twice interrupted by the menacing clusters	As a result of the previous actions, the trajectory of the solo violin's “escape” will be disrupted	End with the image of disintegration, of the debris hovering and falling after the explosion
BARS	1–7 (p. 5)	8–16 (p. 5–6)	17–23 (p. 6–7)	24–50 (p. 7–13)	51–96 (p. 14–21)	96–107 (p. 21–23)	108–116 (p. 24)
INSTRUMENTATION	Violin solo + clar., flutes, perc., harp, gong	Violin solo + flutes, ob., clar., perc., violas, cellos, double bass	solo with <i>tutti</i> accompaniment	<i>Tutti</i> orchestra without the solo violin	Solo, harp, clarinets, flutes, coil springs; “menace”= strings; etc.	Solo + 6 violins + harp; later flutes, strings, woodwinds, percussion instruments	Solo violin + 6 violins
TOPICS OR UNIVERSALS	<i>Anabase, launching</i>	Acceleration; <i>filling out of sound space</i>	<i>Anabase</i> , then culmination point (<i>full sound space</i>)	<i>chase</i> or <i>pursuit</i>	Levitation + pursuit/escape; hesitant running	<i>Catabase and threat</i>	<i>Disintegration and falling (catabase)</i>

Table 9.1. The seven phases of the third cadenza in Eötvös's *Seven* showing topics and instrumentations.

From this we can notice the complexity of the third cadenza. I shall compare three performances: numbers 1, 4 and 5 in the given list of interpretations.

The main sections in this cadenza are numbers 3 and 4 (mainly orchestral sections), number 5 (with the running peregrination of the solo violin in the “space” or “atmosphere”, stalked by certain groups of instruments) and number 7 which is the coda, showing the fragmentation, the vanishing remains.

Interestingly, by listening and comparing three performances, it may be said that they all carry out only partially – each in a different section – the lessons of the hermeneutical or semiotic (topical) analysis carried out above. Two of the three selected recordings are conducted by Péter Eötvös himself (number 1 with the soloist Akiko Suwanai, the violinist of the premiere in 2006 and of the BMC CD recorded in 2008; and number 5 with Patricia Kopatchinskaya, the soloist of the Naïve classic CD of 2012).

I would like to suggest here the best performative fulfilments of the above analysis according to two sections of the third cadenza. For example, sections 3 and 4 have some key moments which can be the “alarm” in the introduction of section 3 (alarming repetition of certain intervals by the solo, followed by a chromatic ascension – bars 16–19); or the filling out of the entire sound space with different instrumental groups and timbres in section 4 (bars 25–36); or the moment of pursuit or chase between the groups of *tutti* orchestra (bars 37–50).

In my opinion, the best performance of these two sections is given by version number 4: that of the Finnish Radio orchestra conducted by François-Xavier Roth, with Patricia Kopatchinskaya as soloist. In this video recording (see the YouTube link) the length of the whole third cadenza is 2’50” (longer than most of the recordings). This duration permits the performers to bring out and highlight all these confronting moments very clearly. This orchestral approach by the conductor permits the presentation of the dramatic evolution which leads the listener to the last stages of the drama: the crazy and wild running and the disintegration (sections 5–7).

In the performance of Akiko Suwanai and Péter Eötvös of 2008 (number 1 of the listing) the duration of the third cadenza is 2’36”. The quicker tempo does not enable the orchestra to present all the clashes or “conflicts” between, for example, the brass instruments in the low register and the other string or woodwind parts in section 4, or the alarms of section 3 and 4 which prepare for the pursuits.

As to section 5, featuring the peregrination of the violin solo in a hostile environment, the best interpretation is given, in my opinion, by Akiko Suwanai with the composer conducting (listing number 1). In this 2014 CD (originally recorded in 2008), the soloist is placed at the front of the stage, enhancing the sound from an acoustic point of view but also enabling her to lead the course of events. The violin’s sound, its melodic formulas and virtuosic passages are very well put forward in the recording, and the violinist articulates very clearly the ascending/descending or rotating passages. Thus, the solo instrument becomes here the main personality, the real protagonist of the musical scene, representing, so to speak, both the shuttle’s errant wandering in space, and also the emotion of high uncertainty supposedly experienced by the astronauts at critical moments. In this case, the famous “troping” of topics, the bringing together of two different signifieds, and thus the creation of a new meaning, is achieved thanks to the very astute performance on this CD.

The last section of the third cadenza is the scenario showing the disintegration of the shuttle. In my opinion, the only good performance of this moment is given in the 2014 version (Kopatchinskaya and Eötvös with the Bayerische Rundfunk). What is noteworthy here, is that the apparent disorganisation of the reminiscences and of the falling motives found in sections 5 and 6, thanks to this interpretation (the only one among the listed recordings), are metamorphosed in an organised sound picture: the motives showing the falling intervals in the five violins are presented as the *echoes* of the patterns played by the solo violin. The conductor, Péter Eötvös, suggests a real order while performing this entropy or disorganisation. Unfortunately, the other two performances don’t highlight this double signification and the perception experience of the listener in this last section is that of chaotic sound disorder.

Fourth cadenza: topics of the subjective sphere – troping and a series of variations

As mentioned above, the composer dedicated a personal cadenza to each of the seven astronauts, grouped in four parts according to the heroes (2+1+2+ 2). As he explains, ‘even

the representation of their characters is reflected in the composition, for example by reminiscences of the musical cultures of Kalpana Chawla, the Indian-born American female astronaut, and of Ilan Ramon, the first Israeli in space' (Peter Eötvös, official website, p.1). The posthumous tributes to these two people are given in the fourth cadenza (score, pp. 24-32, letters A to L).

If we are interested in identifying topics if the first part of the fourth cadenza, devoted to the Indian-born young woman, Kaplana Chawla (letters from A to E), once more that the task is not easy. The topics and significations (that is, different signifieds) overlap in a very complex manner. I shall now introduce these topics or style reminiscences and their troping, enabling new meaning to emerge out of their blending (see Example 9.6).

fourth cadenza (for Chawla and Ramon)

The score is divided into four systems. The first system is for Percussion (Perc.), with four staves (1-4) playing Tubular bell and Tubular bells. The second system is for Violin solo, with one staff. The third system is for Violins (Vcl.), with four staves (1, 2, 3 and 4, 5). The fourth system is for Double Basses (Db.), with four staves (1, 3 and 2, 4). The score includes various time signatures (6/8, 7/8), dynamics (ppp, mf, f, p), and articulations (pizz., arco, stacc., non rall.).

Example 9.6. Peter Eötvös, *Seven*, different topics and their troping in section A of the fourth cadenza (p. 24).

1. The rhythms in the solo part - creating a free flow of motivic articulations and tempos by combining the metres 9/16 and 6/8 (indicating in addition 7/8 in the accompaniment!). These are reminiscent of Indian *tâlas* (see *Drut Matta tâla* for 9/16; *Drut Dadra tâla* for 6/8; and *Rupaka tâla* for 7/8, etc.).¹⁶

2. The solo violin part formulates a kind of jumping in a fairly static space (see the pedal notes in the tubular bells, the first cello, the fourth double-bass; and the “cluster tremolo” given by the other cellos).

3. The score indication contradicts this jumping, hesitating expression: the solo part is ‘independent from the others’, its expression is *parlando* (later also *flautando*, then *ordinario*). This means that the peregrination topic in its static environment is associated not only with the Indian free metres, but to a “speaking” (or sometimes singing) topic. In Bartók’s music the peregrination topic with *parlando* accents is well known (see end note 9 and Example 9.7).

4. The fourth hidden style is the interplay of questions and answers. This topic is a highly “classic” one, but in the Hungarian music history Bartók and Kurtág dressed it up with a special importance, its origin being probably in the obligatory text pronunciation of the traditional Hungarian folksongs (Example 9.8).

But the layering or overlapping technique does not stop here.

5. The accompaniment underlines the percussion style (see the *pizzicato* and *molto declamato* indication in the first cello part, which gradually decreases the number of percussion-style quavers from seven to one during bars 3–9 of section A).

6. As to the pitch organisation, the probable use of the axis system should be noted (see the Ernő Lendvai’s works (2006) on Bartók’s language and pitch organisation). Each section (like those A, B, C, etc.) is composed of four melodic/rhythmic/motivic units, providing a question and answer combination. Here, the “question” means to end on a note of the dominant or subdominant axis, whereas the “answer” ends with a note of the tonic axis. For example, in section A, we have this combination of pitches, rhythms and gestures:

a) The first unit is in a hopping or bouncy rhythm in 9/16 featuring pitches F-sharp-C-F-sharp-A-E/F-C (where the tonic axis is A-C-F-sharp, and the notes E/F represent foreign notes, those coming from the dominant/subdominant axis).

b) The second unit uses a 6/8 metre but the expression is declamatory rather than that of a dance. The pitches are F-sharp-A-C-E/F-A-G-sharp, that is, the tonic axis with foreign notes (E/F), ending with a note of the subdominant axis (G-sharp). Interpreting units a) and b) as interconnected and, given the inconclusive ending on a note from the subdominant axis (G-sharp), the phrase-type formed is aligned with “question”.

c) The third unit of section A (with metre 9/16 and dance rhythm) broadens the use of foreign notes, borrowing them from the dominant and subdominant axis.

d) Continuing the same expressions (9/16 metre), the fourth unit uses mainly the pitches of the tonic axis, and the phrase ends on the real tonic note A, thus suggesting that units c) and d) together form an “answer” phrase.

Tempo I. 118 122

Fl. I
Obs. I, II
Clts. in A
Clts. in B
Bsn. I
Hn. I in F
Harp
S. Vln.
Vln.

Tempo I. 118 122

pp, *ppp*, *p*, *pp*, *ppp*, *p*, *pp*, *pizz*, *arco 3 Sole*

Example 9.7. Bartók, Violin Concerto No. 2, second movement (*Andante tranquillo*), variation 7, bars 118–121, showing the topic of peregrination or walking (and of *parlando* style) in the violin part, with a static background.

Allegro scherzando, ♩ = 112 83

Picc.
Fl. I
Trgl.
S. Dr.
Harp
S. Vln.
Vlns. I
Vlns.
Vcs.
D. Bs.

Allegro scherzando, ♩ = 112 83

p, *ppp*, *f*, *mf*, *p*, *pizz.*, *p*, *mf*, *p*, *mf*, *p*

sempre senza corda

p, leggero

Example 9.8. Bartók, Violin Concerto No. 2, second movement, variation 5 (*Allegro scherzando*), bars 83–86, showing the topic of question and answer.

Section A of the fourth cadenza contains four variations derived from the two types of units: that using the 6/8 “singing” metre (with question and answer), and that of rhythmic/dancing

units (with demisemiquaver anacruses). The variations in sections C, D and E combine all the above-mentioned units, and provide the solo violin part with a somewhat alienated, noisy accompaniment (sometimes with strange metallic colours). Section E prepares the new character: the “portrait” of the Israeli astronaut, Ilan Ramon which is constructed on an imitation of a lament song known in the Middle East, evoking perhaps also the characteristic glissando sound of the sorud (or sarangi) played in Nepal and Pakistan.

Despite this long description, it was not possible to outline sufficiently the great complexity of expression contained in this fourth cadenza which is around 5’42” in length. All the listed interpretations adhere to this duration (with a difference of 2–3 seconds). In my opinion, the best performance of this cadenza is offered by Akiko Suwanai conducted by Peter Eötvös (number 1 in the list). In her interpretation the curves and arcs of questioning/answering units, and the agitated rhythms of the 9/16 metre articulate well the stages of the variation form. The differences in the accompaniment parts are also well underlined.¹⁷

In my conclusion I can underline the new situation identified here in this contemporary music: it highlights the combining, the overlaying of two or more traditional topics. It depends on the knowledge of the historical topics of each performer to guide the listener in an appropriate direction, towards the recognition of traces from the past in the music of our own day.

End notes

¹ Space Transportation System No. 107.

² Documentation provided by P. Eötvös to M. Grabócz, October 2021.

³ See the orchestral score and the performance instructions for the use of the four gongs and metal sticks (as an imitation of the shuttle’s rockets firing up before launch): ‘Run a heavy thick metal stick in circles on the gong surface. Place the stick on the surface at 10 o’clock and move it in a full circle during a half note [minim]. The accents should not be beaten but be marked by tempo (around the 3 o’clock position). As for sounds and visuals, it is very important that the gongs are placed a bit higher than head height, with their surfaces pointing towards the audience. The sticks must be really heavy, otherwise the low frequencies of the instrument cannot be generated’. (Score indications, page 9, bar 32 of the third cadenza); score published by Schott, Mainz, London, 2007.

⁴ On this subject, see the books of François Delalande, Marvin Formosa, Elizabeth Rix, J.-L. Leroy *et al.*.

⁵ In the sense of traditional and typical musical formulas linked to their consecutive and invariant expression.

⁶ The author of this chapter has published articles on Bartók’s topics, and on topical analysis of Bartók’s works (2002, 2005, 2012, 2013).

⁷ See Bartók: *Two Elegies* Op.8b ; Op.12 *Four Orchestral Pieces/IV*: Marcia funèbre; *Four Dirges* for piano, Op. 9A; *Bluebeard’s Castle*, Sz.48 ; *Out of doors/IV*: The Night’s Music, Sz.81; *Concerto/III* : Elegia; *etc.*

⁸ See: Bartók: Suite for Piano Op. 14/III (Allegro molto); *Out of Doors/V*: The Chase Sz 49; solo violin sonata/IV: Presto; 2nd violin concerto/I -Risoluto (bars 252 ff; bars 346 ff.); viola concerto/I, bars 41ff; bars 160 ff; III: bars 66 ff.; *etc.*

⁹ *Out of Doors/IV*: ‘The Night’s Music’, Sz.81 (bars 18-33 and coda); 3rd piano concerto /I (beginning of the piano part); 2nd violin concerto/II, section ‘Comodo’; 6th variation (bars 105-117); *etc.*

¹⁰ In the case of folk tunes sung with a text.

¹¹ See in many pieces, for example: *Out of Doors/I* ‘With drums and pipes’; Suite for piano Op.14/ 2, Scherzo; solo violin sonata/II, Fuga: bars 61–71; bars 91–95]; movement III: ‘Melodia’; viola concerto/I (beginning: Moderato - viola part with pizzicato accompaniment); 2nd violin concerto/I ‘Risoluto’ (bars 56–67);

¹² See also in other works: viola concerto, end of the 2nd movement; 2nd violin concerto: first movement: *Vivace* [bars 92-102]; and the threatening passage evoked by the fanfare of brass instruments, bars 228 ff. and 241 ff., *etc.*

¹³ At the beginning, the descending notes are: G, F-sharp, E, D-sharp; // [A], G-sharp, F-sharp, E, D-sharp, C-sharp, C-natural; *etc.*

¹⁴ In this listing the interpretations which are available on CD or on YouTube are highlighted in bold.

¹⁵ See the composer’s communication (20th October 2021).

¹⁶ The indications of these rhythms were given to me by László Hortobágyi and I express my gratitude to him. Olivier Messiaen has described some of these rhythms (with 9/8 or 7/8, *etc.*) in his *Traité de rythme, de couleur et d’ornithologie*, Tome I, Paris, Leduc, 1994, p.277 and pp.331–336).

¹⁷ It was not possible to find on the international CD-market the other CD conducted by Eötvös, with the solo of Patricia Kopatchinskaya, but the excerpt heard in number 3 in the list suggests that this recording is also excellent from the difficult point of view of the fourth cadenza.

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Discography (performances of Eötvös's *Seven* corresponding to in-text listings)

1. 2008. *Concertos of Péter Eötvös*. Akiko Suwanai (violin), Péter Eötvös (conductor), Gothenberg Symphony Orchestra, BMC CD 170 (recorded Budapest, 30 March 2008).
2. 2008. Promenade concert, 27 August, London, Akiko Suwanai (violin), Susana Malkki (conductor) BBC Symphony Orchestra, (personal recording courtesy of Péter Eötvös)
3. 2012. *Bartók/ Eötvös/ Ligeti* (violin concertos) Patricia Kopatchinskaja (violin), Péter Eötvös (conductor), Frankfurt Radio Symphony Orchestra Ensemble Modern, Naïve V5285

4. 2013. **Patricia Kopatchinskaya (violin), François-Xavier Roth (conductor), Finnish Radio Orchestra**, <https://youtu.be/5wWZID-AYFE> (in two parts) [accessed 20th January 2022]
5. 2014. Patricia Kopatchinskaya (violin), Péter Eötvös (conductor), Bayerische Rundfunk, 8 February (personal recording provided by Péter Eötvös)
6. No date. Akiko Suwanai (violin) Péter Eötvös (conductor), Staatskapelle Dresden (rehearsal), <https://it-it.facebook.com> › videos (fourth cadenza only).

Score of *Seven*

Schott's website, perusal score, *Seven*. Schott Music <https://en.schott-music.com> › shop”).