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Journey into Space – an analysis

This analysis is drawn, in part, from my master's thesis (Marty 2012). It is also drawn from data that was not directly available in Trevor Wishart's writings and was the topic of an interview I did with him on March 15th, 2011 (Marty 2011a). I shall begin by presenting Wishart, his writings and his works in general, separating his early works (*Machine*, *Journey into Space* and *Red Bird*) from his later works. I shall then examine the poetics and poietics of *Journey into Space* before making an overall analysis of its form and a careful description of a short extract in order to illustrate how the work, as a kind of space-form, is necessarily attached to a particular listening behavior.

Trevor Wishart was born in Leeds (UK) in 1946 and began composing instrumental pieces using stochastic techniques. In the 1960s, the death of his father, who worked in a factory, led Wishart to consider expressing more concrete realities with his music (*ibid.*, p.83). He wrote his master's thesis about Xenakis in 1969 at the University of Nottingham and finished his doctorate in composition in 1973 at the University of York.

His work always seems to be on the fringe of music – this is especially the case with his first pieces, amongst which is *Journey into Space*.

One problem I have had in my own musical career is the rejection by some musicians and musicologists of my work on the grounds that 'it is not music'. To avoid getting into semantic quibbles, I therefore entitled this book *On Sonic Art* and wish to answer the question what is, and what is not, 'sonic art'. We can begin by saying that sonic art includes music and electro-acoustic music. At the same time, however, it will cross over into areas which have been categorised distinctly as text-sound and as sound-effects. Nevertheless, focus will be upon the structure and structuring of sounds themselves. (Wishart 1996, p.4)

He wrote two books about the theories and techniques of electroacoustic music (*On Sonic Art* (*ibid.*) and *Audible Design* (Wishart 1994)), several documents about his works (*Journey into Space Travelogue* (Wishart 1975), *Red Bird : a document* (Wishart 1978)

and most recently *Sound Composition* (Wishart 2012)) as well as two booklets containing musical games (*Sounds Fun* and *Sounds Fun 2*¹).

1. Composing

1.1. Before Red Bird

Wishart's first piece, *Machine: An electronically preserved dream*, which he finished in 1971, is akin to Walther Ruttmann's *Weekend* (1930) in that it uses industrial sounds in an audio montage. However, Wishart uses *voice* much more than Ruttmann – and this taste for voice, *utterance*, will become a key feature of his music. Furthermore, this work can be compared to Luc Ferrari's *Presque Rien n°1 ou le lever du jour au bord de la mer*, which was composed roughly at the same time, and in which Ferrari stages the morning soundscape of a fishing village in a somewhat surrealistic manner (Marty 2011b)² – although at first one may hear it as if it was a plain recording.

At this point Wishart's compositional technique relied mostly on improvisation, *objets trouvés* (another resemblance to Ferrari) and montage:

A lot of the work I did with the electroacoustics – because there was hardly any equipment here, there were just tape recorders, essentially – was to find objects or to get people to blow down scaffolding tubes, or all kind of things. Recording improvisations, which I structured in some way. And then editing those to make a piece: I call that music-montage. (Marty 2011a, p.84)

Other works of that period also relied on improvisation, notably *Journey into Space*, which was composed shortly after *Machine* (though *Journey into Space* was premiered in 1972, and *Machine* in 1973), then with *Red Bird* (1978) which closed this chapter of his work.

I think the pieces led up to *Red Bird*, where I crystallized the idea of using sounds in a mythological way. So instead of saying 'this is the sound of something', I thought 'this is a sound of something which probably represents something else, and I can work with it in a mythical world of sound transformation'. *Red Bird* distils that idea and develops it as far as it would go, from my point of view. The change really came after that, when I became more interested in sound transformation as a musical formal idea. (*ibid.*, p.86)

¹These booklets are not published anymore but can be obtained on Trevor Wishart's website: http://www.trevorwishart.co.uk/publ_bks.html.

²This parallel is limited by Ferrari's definition of the *presque rien* as a rural, not urbanized, place (Caux 2002, p.179), which radically opposes Wishart's *Machine*.

1.2. *After Red Bird*

Wishart then began to work on the *VOX-Cycle* where he explored the various qualities of the voice. This led to the composition of many pieces in which the voice was the main focus, whether it was used for referential content (the fundamentally living *utterance*), its linguistic content or its musical qualities.

Voice is still present in Wishart's latest piece, *Encounters in the Republic of Heavens* (2012), an octophonic work presenting vocal 'portraits' of people living in the north-east of England, around which electroacoustic 'instruments', made almost exclusively from the portraits' contents, evolve.

Wishart underlines the fact that we can understand what people are recounting, although their accents are sometimes so strong that even people living in the south of England would not understand them (Marty 2011a, p.100)! However, he emphasizes the importance of the sonorous and musical aspects through interpolations between 'instruments' and voices as well as through harmonic and rhythmic encounters which could evoke Steve Reich's 'speech melody'.

2. *Journey into Space* – po(i)etics

2.1. *Poetics and ideological origins*

It was the 1960s, when the people felt the society could change and was moving in a new direction – it did a tiny little bit, but not as much as people thought. I was interested in the idea of creativity from a political point of view. I felt that by creating things, people would learn that they can have an influence on the world, that they don't have to just do the things that they're told to do, or even to do things in the way you're supposed to do them. You can actually make something yourself. This was a slightly naïve idea, but essentially I had this idea of creativity as a form of political action. (Marty 2011a, p.90)

The idea of creativity is also linked to Wishart's conception of religion as a metaphor. In *VOX-5*, we hear the voice of Shiva (creator and destroyer of all things) – but we do not hear Shiva as an entity/deity, rather Shiva as the idea of an internal creativity of the world (*ibid.*, p.92). This interest in creativity as a means for development as well as a means for personal and political evolution was the reason Wishart used the word 'creavolution' in *Journey into Space*.

The piece was born out of a poem (“cupped garden”) written by Wishart after visiting a prehistoric cave. The poem begins as follows: “A sense of vast space.....of enormous life, the universe breathing” (Wishart 1975, p.4). Wishart wishes, after *Machine* as an “electronically preserved dream”, to realize another – musical and narrative – dream.

The work was composed as a whole. Wishart’s intentions

were that you start off in this mysterious world, you don’t know where you are, and then suddenly... oh yeah, it was a dream. But was it a dream? I’m not sure. Oh yes it was a dream. So that’s the strange thing: it was a dream, but was this a dream? That’s part of it, it’s not clear. It’s mythology. His journey is also mythological. (Marty 2011a, p.97)

Furthermore, *Journey into Space* “intrinsically opposes the ideological control of musical communication by a verbal-intellectual elite. It attempts to re-establish contact with a much wider audience which has been justifiably alienated from positivist music” (Wishart 1975, p.24). This view is quite dated – the 1960s saw the development of a schism between serial or algorithmic music and other genres, due to concerns about the perception and accessibility of ‘avant-garde’ musics. But even if Wishart is, today, much less extreme in this regard, we can see that the rejection of the ‘verbal-intellectual elite’ is an integral part of the poetics of *Journey into Space*, which is, at least, pertinent to the musical form. In fact,

the musical form is the articulation of one’s direct aural-experience throughout this lengthy journey. / *Journey into Space* as an aural experience could not be reconstituted from any written instructions, no matter how detailed. [...] It must be pointed out that in order to create the illusion of the direct recording of a dream-experience, it is necessary to focus the listener’s attention on the sound-world itself, and not on the processes which generated it. [...] Hence, when all has been said about the compositional procedures in *Journey into Space*, they should be of no concern to the listener in his assessment of the music. (*ibid.*, p.1, p.19)

2.2. *Making-of*

The work’s poetic background thus explained, we can see how Wishart realized it in the composition itself. We shall study the three points above: creativity as a potential development, the immensity of the universe (the journey) and reconciliation with the general audience.

Let us first offer basic insight: the work was first fixed on two LPs. It was performed for the first time in 1972 by Wishart on an octophonic system and was re-released by *Paradigm Discs* in 2002. *Paradigm Discs* separated the piece into three movements: 13’03” (‘Birth dream’), 47’30” (‘Journey’) and 18’18” (‘Arrival’). These movements were

not born out of Wishart's compositional ideas but out of the necessity to use several LPs which were limited to about one hour duration at the time (Marty 2011a, p.97). Since the work lasts approximately one hour and twenty minutes, the sectioning between 'Journey' and 'Arrival' was a technical contingency. Furthermore, the title of the last movement, 'Arrival', is not really suitable for the last movement according to Wishart, since *there is no arrival*. We are left there without a conclusion, without a point: "there isn't any natural conclusion where you can say 'Okay, I've got the point of life, yes' and tick the box (laugh)" (*ibid.*, p.95).

Let us keep the three-part segmentation for this analysis because it is relevant to the musical form of the work, as we shall see, and this segmentation is convenient in order to provide points of reference in the work.

2.2.1. *Creavolution*

In the piece, the word 'creavolution' is used in the context of interpolations and transformations between words. The 'being is becoming' polyphonic chant also is an example of this idea. Verbal meaning is thus used to reinforce Wishart's ideological message (Wishart 1975, p.13, p.20). However, language is never used without its sonorous value. For instance, in the chant, singers reduce consonants to the minimum and keep a rhythmic prosody. Words are also blended with sound, as in the combination of the semi-word "creavolu..." with the resonance of a bell.

Moreover, Wishart makes extensive use of improvisation to create the 'birth dream': two hours of stage improvisation, recorded through scaffolding tubes laid down in a concert room and directed towards several points in space (*ibid.*, p.4) in order to get soundscape-like spatiality, were reduced to fifteen minutes, forming the basis of the movement.

The link between life and creativity is connected to the idea of journey.

I suppose there are about three journeys going on. There's the journey getting up in the morning, going off in the car; there's the journey of life: you are born, you develop and so on; and there's the journey of discovery, which is some kind of mythological journey. These things are melded together in the idea of a universal journey. Life is a journey, which moves towards some kind of creative realization. That's the idea, except there's no realization, since when you come to the end the piece just stops. (laugh) That was a very conscious idea: the journey just stops. There isn't a conclusion. Because to have a conclusion would be to say he was searching and now he knows... so okay we can go away, there's nothing to learn anymore. Here I have to go through this journey, and suddenly I'm left here: that's a

metaphor for life. You're right here, and you set off for this journey. You don't know where you're going. (Marty 2011a, p.95)

2.2.2. Journey(s)

The composition of these three journeys is realized on several levels. The most trivial journey is that of the man who gets up and leaves for work in his car, illustrated by the recording of Wishart waking up, muttering "Bloody hell it's time to go already", showering while listening to the radio, getting out and leaving in his car. At this point he is still listening to the radio and we hear a simulated rocket countdown and takeoff – a reminder that man had recently walked on the moon (Apollo 11 was in 1969).

The second journey, that of life, is the topic of the 'birth dream', which is manifested through the notion of intra-uterine life and birth, and which closes with the newborn's cries that are accompanied intermittently by the sound of children singing. However, the journey of life is also developed in the recapitulation (at the end of the 'journey' part), which has a double function. The first is a musical function: this recapitulation is a re-exposition of musical material which occurs in the interest of the cognition of large-form; the second is a narrative function wherein life is reduced to its essence – birth, suffering, daily cycles (staged by the looping of the "driiiiing... time to go already"). This culminates in "the sequence of the bells that becomes the keys that unlock the doors: it's the 'revelation' through the opening of a door, and moving into a [physically and psychologically] different space" (Marty 2011a, p.94).

The third and last journey, that of mythological discovery, uses symbolisms and transformations which Wishart further developed in *Red Bird*.

Beginning with the strange breathing sound of 1-litre measuring flasks, the music must move towards greater articulateness; breathing sounds give way to flutes; a heart-beat to many drums; the emergence of 1/2 words, and so forth. (Wishart 1975, p.9)

Every referential sound carries with it some symbolism: the newborn's cries, the (church) bells³, the turning of the pages of a book, which Wishart uses again in *Red Bird*, etc. This allows for the distinction between two levels of symbolism: one can be verbalised and is conventional; the other is pre-verbal, experiential, parallel to the musical experience itself.

³ Let us mention that Wishart does not think of church bells as a religious symbol, but rather as a symbol for celebration or sorrow related to important life events (Marty 2011a, p.90).

2.2.3. Reconciling new music and the audience

The use of such symbolism, whether conventional or experiential, is one of the techniques used by Wishart to get closer to a more general audience, an audience that is less specialized in ‘contemporary music’. Nevertheless, the compositional techniques are no less sophisticated. For instance, the sequence of doors at the beginning of the ‘arrival’ part is pre-composed with serial methods, and is then adjusted empirically. Wishart clarifies that

the use of serial procedures in this case is NOT for any preconceived notion of their aesthetic/formal value in a piece of music but purely as one possible means to produce a texture of constant variety and yet overall balance. In fact some small adjustments (by editing) were made, to achieve a more aurally satisfactory result (Wishart 1975, p.16).

Referential sounds are also used in the interest of reconciliation, since such sounds keep the listeners on a narrative path. When asked whether *Journey into Space*’s form is more narrative than musical, Wishart answered as follows:

I don’t think so; I think it definitely has a musical shape. If you set it out as a narrative, like if someone tells you the story, it’s not very interesting. It’s a musical sound experience, it has the recapitulation, the developments; but it’s not polyphonic, it doesn’t have a lot of musical layers. (Marty 2011a, p.96)

Because Wishart thinks the work does not need multiple hearings to be apprehended in its entirety, he concludes that it is less interesting than his subsequent works.

2.3. A radio art work?

Is it still relevant, then, to categorize *Journey into Space* as an electroacoustic music composition, or would it be better categorized as a radio art work or a Hörspiel, for instance? Radio art is defined primarily by two characteristics: its form and its use of the sound material. Let us see how *Journey into Space* partially resonates with both of those requirements.

2.3.1. Listening to radio art

Because it has as context the domestic environment of the listener, a multiplicity of sounds, signs, external events inevitably interfere with radio art listening. In fact, the listening can be interrupted at any time by the irruption of an external event. Furthermore, if the act of listening is born out of “zapping”, there are chances that the listener might enter a program that has already begun its course. [...] Radio airing being a unique event, radio art listening does not presuppose a re-listening. Although it may be re-aired, recorded or stored at a later

time, a radio work is thus, by essence, a fleeting object. [...] The unicity of airing leads to some problems for the composer of a radio work. If, from a musical perspective, we consider that a work which can be deciphered on first listening denotes a kind of compositional poverty, this is different in radio art. In fact, the capacity to be understood during the first (and only) listening is, on the contrary, one of the conditions for a work to be considered as radio art. (Cohen 2005, p.153-154)⁴

Since, according to Cohen, radio listening is generally conceived as fragmentary, the work needs to show a fragmentary form that can be entered at any point without any particular problem, failing which the listener will switch stations or turn off his/her radio. The work itself is thus constructed on the principle of fragmentation (*ibid.*, p.155).

Regarding *Journey into Space*, the question may be asked: even if the work is mainly continuous (the first parts spread out with fairly long durations without any saliency), a macrostructural examination allows for a formal apprehension: breathing, the birth, waking up, space, the return to reality, space again, recapitulation, doors, music, anti-conclusion. In fact, the idea of fragmentation is relevant to Wishart's will to install an ambiguity between dream and reality. However, since this is only the narrative aspect of the work, we cannot conclude that the form is fundamentally radiophonic.

Wishart says that he "would like at least people listening from the beginning to the end. It's not an installation; it's a piece of music. It has a beginning, it has an end" (Marty 2011a, p.84). Nevertheless, he still finds the work to be too long (*ibid.*, p.93).

2.3.2. Sound material in radio art

In order to differentiate the kinds of sonic elements which [...] compose [the radio art work], we will draw inspiration from the cinema convention regarding the soundtrack: speech, noises, music. This convention seems useful, because the elements that coexist in a radio work are the same as in cinema. / But we will offer a slight variation as, instead of speech, we will talk of "human voice", and keep the same terminology (noises and music) for the others. (Cohen 2005, p.101)⁵

⁴ "Parce qu'elle a comme cadre l'environnement domestique de l'auditeur, une multitude de sons, de signes, d'événements extérieurs interfèrent inévitablement avec l'écoute radiophonique. En effet, cette écoute peut être interrompue à tout moment par l'irruption d'un événement extérieur. Enfin, si l'acte d'écouter est le fruit du zapping, il y a des chances que l'auditeur commence à écouter une émission alors qu'elle est déjà en cours de déroulement. [...] La diffusion sur les ondes étant un événement unique, l'écoute radiophonique ne suppose pas de réécoute. Bien qu'elle puisse être rediffusée, enregistrée ou stockée par la suite, une œuvre de radio est donc, par essence, un objet éphémère. [...] L'unicité de la diffusion pose certains problèmes au compositeur de l'œuvre radiophonique. Si, d'un point de vue musical, on considère qu'une œuvre que l'on peut déchiffrer totalement à sa première écoute dénote une certaine pauvreté dans les moyens compositionnels, il en va différemment dans l'art radiophonique. En effet, la capacité qu'a l'œuvre d'être saisie dès la première (et unique) écoute est, au contraire, une des conditions de son caractère radiophonique."

⁵ "Pour différencier les types d'éléments sonores qui [...] composent [l'œuvre d'art radiophonique,] nous nous inspirerons de la convention utilisée au cinéma pour désigner ceux qui font partie de la bande-son : parole, bruit,

It is interesting to note that Cohen speaks of ‘human voice’ (that is, any kind of utterance) instead of ‘speech’ – which is usually dominant in radio drama.

In this case, the term, ‘music’ designates mainly instrumental, non-diegetic music which often accompanies radio drama. However, in the case of radio art and Hörspiel, this is more complex because the diegesis is not necessarily unique anymore, having been replaced by a profusion of places and times. “These acoustic works tell no stories, at least not in the traditional sense. Only insofar as the listener’s own experiences and associations are triggered is a story created” (Schöning and Cory 1991, p.321-322).

Journey into Space fits well with this definition because it uses material as varied as:

- transformed speech (e.g. semi-words in resonances), raw speech (e.g. the waking up scene), expressive utterance (e.g. birth cries), chanting (e.g. “being is becoming”);
- ‘noises’, whether denotative (e.g. car horns, rocket, etc.), connotative (e.g. bells, keys, etc.) or musicalized (e.g. the little pitched bells in the middle of the ‘journey’ part);
- ‘music’ (e.g. on the car radio, in the ‘arrival’ part with the brass and woodwinds replacing the breathing sounds from the beginning).

2.3.3. Between music and radio art

(Nicolas Marty) *Journey into Space* seems to be more of a Hörspiel, a radio work. *Red Bird* too...

(Trevor Wishart) Yes. When they were written, no one wanted to put them on the radio, because they weren’t music, and they weren’t drama. They weren’t anything. Then somebody invented the new Hörspiel. (laugh) But they still wouldn’t put it on the radio, because there was the tradition of Hörspiel. (laugh). I worked with this world of sounds; it could be narrative, music, documentary, and all kinds of things. That was completely new at the time. This flow of ways of looking at it was quite interesting. I’ve always been interested in things that fall between categories. (Marty 2011a, p.97)

Today we are well aware that categories are malleable and that what we call ‘music’ may regroup enormously different realities. Might radio art then be qualified as musical?

Andrea Cohen proposes that characterizing a radio art work as musical would imply (Schaefferian) ‘reduced listening’ which would deprive the work of any significance or polysemy (Cohen 2005, p.172). I, for one, am convinced that the semantic and semiotic potentials of a work are in fact an integral part of music, rather than a residual part.

musique. Cette convention nous a semblé utile, non seulement parce que les éléments qui coexistent dans une œuvre de radio sont de la même nature qu’au cinéma. / Toutefois, nous proposerons une légère variante et, au lieu de « parole », nous utiliserons l’expression « voix humaine », tout en gardant la même terminologie (bruit et musique) pour les autres.”

Musicalization occurs on two levels in *Journey into Space* (just like in any other sound event). The first is the poietic level, where Wishart directs improvisations before mounting them together to create a piece, or when a bellmaker computes the size, form and matter of a future bell to design its sound. The second is the aesthetic level, where listeners bring their attention to what they are listening and, thus, organize their perceptive experience. The perception of Wishart's improvisation can be compared to the perception of the original series in a serial work: the improvisation will most certainly not be perceived as such, but it *will form the basis of the listener's perceptive organization*. Moreover, the sounds of wind or of the sea, organized in systems that lie beyond our human perceptive apprehension, are nonetheless musicalized during attentive listening.

We can conclude this discussion by saying *Journey into Space* may be a fairly rich radio art work or a relatively poor music work, depending on the listener's intentions and on the context of the listening.

2.4. Macrostructural analysis

Let us now examine the general form from a more 'objective' perspective.

2.4.1. Birth Dream

What becomes apparent when listening to the first 13 minutes of *Journey into Space* is the process form [**A** → **B**]. Entities and events evolve in an unchanging environment in which silence (whether real or suggested by reverberation) plays an important role. Density increases from state **A** to state **B**.

State **A** is a spatial setting constituted by the sound of breathing and metallic sounds which are interspersed with silence, reverberation and filtering. If one opts for a poetic interpretation, state **A** could be seen as the intra-uterine life of the baby-to-be. State **B** includes referential sounds such as a boat, a plane, a woman's utterances (as she gives birth?), a newborn's cries, the sound of children singing and church bells. The whole movement could then be interpreted as the transition from pre-birth to early childhood.

Furthermore, Wishart uses a 'concrete metaphor' in this section of the piece: the breathing sound, since it progressively includes water-like components, can be perceived as emanating from a human or a machine. If listeners are inclined to it and perceive both origins, they might conceptualize this by positing a similarity link between humans and

machines, although in my experience no listener perceives this without being informed of it.

2.4.2. Journey

With a 47 minute duration, the second part of the work is the longest. It presents three main states (**C**, **A'** and **D**) organized as follows: [**C** → **A'** | **C'** → **A''** → **D** —(**A***)→ **C''**].

A' and **A''** are variants of the first state of the work (the resonant, silent, spatial, eerie state) which include new material such as baby sounds and chants. **A*** is a transitional state which presents the same kind of characteristics.

C, **C'** and **C''** are 'trivial' recordings of actions. **C** is the waking up sequence, whereas **C'** presents the character stopping at a petrol station to refill his car before the atmosphere reverts to the eerie **A** state. **C''** closes this part with the return of the character unlocking and opening a door.

D is the recapitulation sequence, in which material from **A**, **B** and **C** is collated together in a way that forms the most articulated part of the piece, although it is not as abstract as **A**.

The first transition (**C** → **A'**) happens as the sound of the rocket taking off, which is first perceived as emanating from the car's radio, gradually becomes an abstract background drone for **A**. The return of **C'** is quite abrupt as **A'** disappears at approximately 24 minutes (half of this part) when we hear the beating of a heart, which also brings back **A''**. The discourse progresses towards the recapitulation **D** and returns shortly to **A** in order to recall **C** and close the movement (and the door).

2.4.3. Arrival

The third 'movement' is 18 minutes long and is the most heteroclitic regarding sound content and articulation. Nearly all of previous sound materials are present (**A**, **C**, and **D** return and sound materials from **B** are integrated), and new material is introduced (**E** and **F**). Roughly, the whole movement follows this schema: [**E** →(**C***)**A~** → **F** | **A°** | **D''**].

State **E** is the (serially-generated) sequence of doors. It evolves to another variation of state **A** through a singular door which may remind the listener of the trivial sequences (**C**).

As state **A~** evolves, the sounds of musical instruments (flutes and drums, then brass) replace sound objects. State **A** gradually gives way to state **F** with the return to sound objects (e.g. brass becomes car horns) in a fragmented and articulated discourse that

alternates between scenes, events and states. As opposed to **D**, **F** is not so much a recapitulation as it is an articulation.

After **F** has lingered on for some time – at which point the discourse may be perceived to be quite static even with all the ruptures – yet another variation of **A** can be heard with a spectrum denser than ever: little bells fly around and voices create a static harmonic background.

Finally, state **D** can be heard again, albeit in a much more fragmented way than the first time. Once we hear again the children singing with the church bells, which led in its first occurrence to the end of the ‘birth dream’ and to the ‘waking up’ sequence, we may sense that the end is fairly close. However, instead of a closing formula – whether a fade out or an articulation of any kind – Wishart cuts the sound off abruptly. At this point it is quite surprising, because it has never before happened in the piece.

2.4.4. Summary

Figure 1 summarizes the general form of *Journey into Space*. Grey arrows indicate ‘trivial’ recording passages. A straight line indicates a static temporality and a spatial / spectral articulation, whereas a curved line indicates directedness and syntactic articulation in the discourse. Grains indicate the density of events.

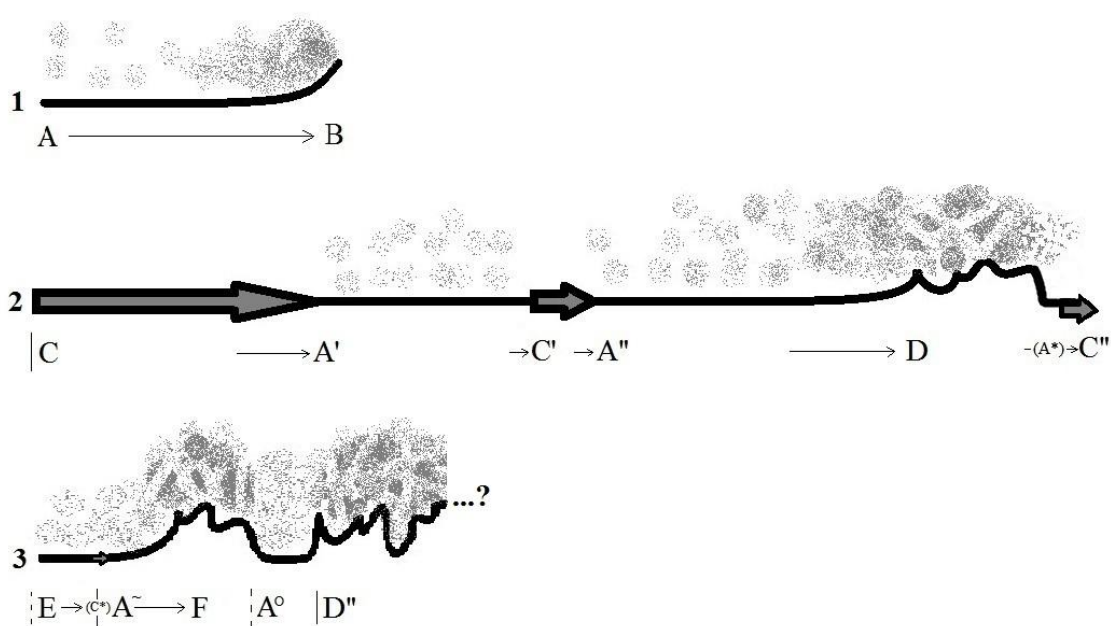


Figure 1. Overview of *Journey into Space*'s form

3. Analysis

Though it may be interesting to analyse the global form, it does not tell us how or why the various states are composed this way. Let us now concentrate on one sample, drawn from the middle of the ‘journey’ part – the **A**” state between 26’10” and 28’40”. Why call **A** a state rather than a part? How is it composed? How could people perceive it? What would they make of it? We need to devise a model of analysis in order to address these questions.

3.1. *Devising a model of analysis*

Defining perceptive units means being able to distinguish such units according to a typology. I shall define, here, four levels for the purpose of analysis, and shall devise a legend in order to score the sample. The model derives from my research in musical narrativity, therefore the names of the categories may sound a bit narratological.

3.1.1. Level 1 – ARTIFICIAL / ECOLOGICAL

The first level corresponds to the opposition between ARTIFICIAL and ECOLOGICAL units. I use the term ‘ecological’ in its psychological interpretation in reference to the *ecological frequency* of a sound morphology – i.e. the probability of the sound morphology being heard in the ‘real-world’⁶. It is thus a fairly subjective measure.

An ECOLOGICAL unit can be defined by a plausible spectromorphological behaviour, whereas an ARTIFICIAL unit can be subject to distortions and ‘unrealism’, whether in its attack, its sustain or its closing (e.g. some fades).

3.1.2. Level 2 – BEING / EVENT / ITEM — sustaining

I propose to distinguish between BEING and ITEM according to whether the perceptive unit is or is not related to an utterance – because *there is a specificity* to the perception of (animal / human) voice.

An EVENT is a perceptive unit whose sound system seems autonomous: it can be a group of BEINGS and/or ITEMS (the grouping may then hide individual identities) or it can

⁶ It is important to underline the difference between the *ecological* and the *anecdotal* character of a sound: anecdotal content has little to do with morphology. We may recognize the sound of birds under quite extreme distortion, for example – that would be an ARTIFICIAL unit with anecdotal content. Let us also say that the sound morphology of the raw recording of a train passing by is ECOLOGICAL, even if the train itself works on coal and is not eco-friendly.

be a unit in which sound energy seems to be self-contained (e.g. continuous wind sounds), etc.

I propose to follow Schaeffer (1998, p.444) and distinguish between three modes of sustaining sound: unsustained (e.g. percussion sounds), constantly sustained (e.g. violin bowing) and sustained via iterations (e.g. tremolos). An ITEM can adopt any one of the three modes, although iteration may nudge it closer to an EVENT because of the repetitive and abstract nature of the gesture. An EVENT can be sustained either iteratively (e.g. granular sounds) or continuously. A BEING is sustained continuously because it needs to be able to produce sound. Reflections and reverberations belong to a particular case that defines space rather than perceptive units, although in some even more particular cases they might be articulated and become units themselves.

I shall use a dichotomy here to define whether a unit is LIVING or STEADY, that is, whether it contains significant spectral and/or spatial evolution or not.

3.1.3. Level 3 – [MUSIC ↔ SOUND]

The third level will consist in deciding if the unit can be described as ‘musical’ (e.g. as having a salient internal organization or relying on the traditional musical parameters – rhythm, pitch, etc.) or if it is ‘sonorous’ (e.g. it hides the human hand which placed it there, as in the case of most BEINGS).

3.1.4. Level 4 – [EXISTANT ↔ FRAME]

I chose to represent the distinction between figure and ground using Stéphane Roy’s “categories of stratification” (Roy 2001, p.306): *figure*, *fulcrum* (which accompanies the figure), *foreground*, *accompaniment* (of the foreground), *polar axis* (tonic or complex), *movement* and *ground*.

The distinction is made ‘by ear’ in a somewhat subjective manner with regard to objective criteria like volume, liveliness and context.

3.1.5. Added values – (SPEECH) and (SIGNAL)

Another important component is SPEECH, which will indicate the semantic significance of a linguistic unit (or the absence / ambiguity thereof) emanating from a BEING.

Lastly, I would like to include (in a fairly poetic perspective that I think relates to the piece subjected to analysis) the SIGNAL value: in the case of non-vocal sounds, SIGNAL represents the denotations / connotations of sounds and is thus absolutely subjective.

3.1.6. Graphics

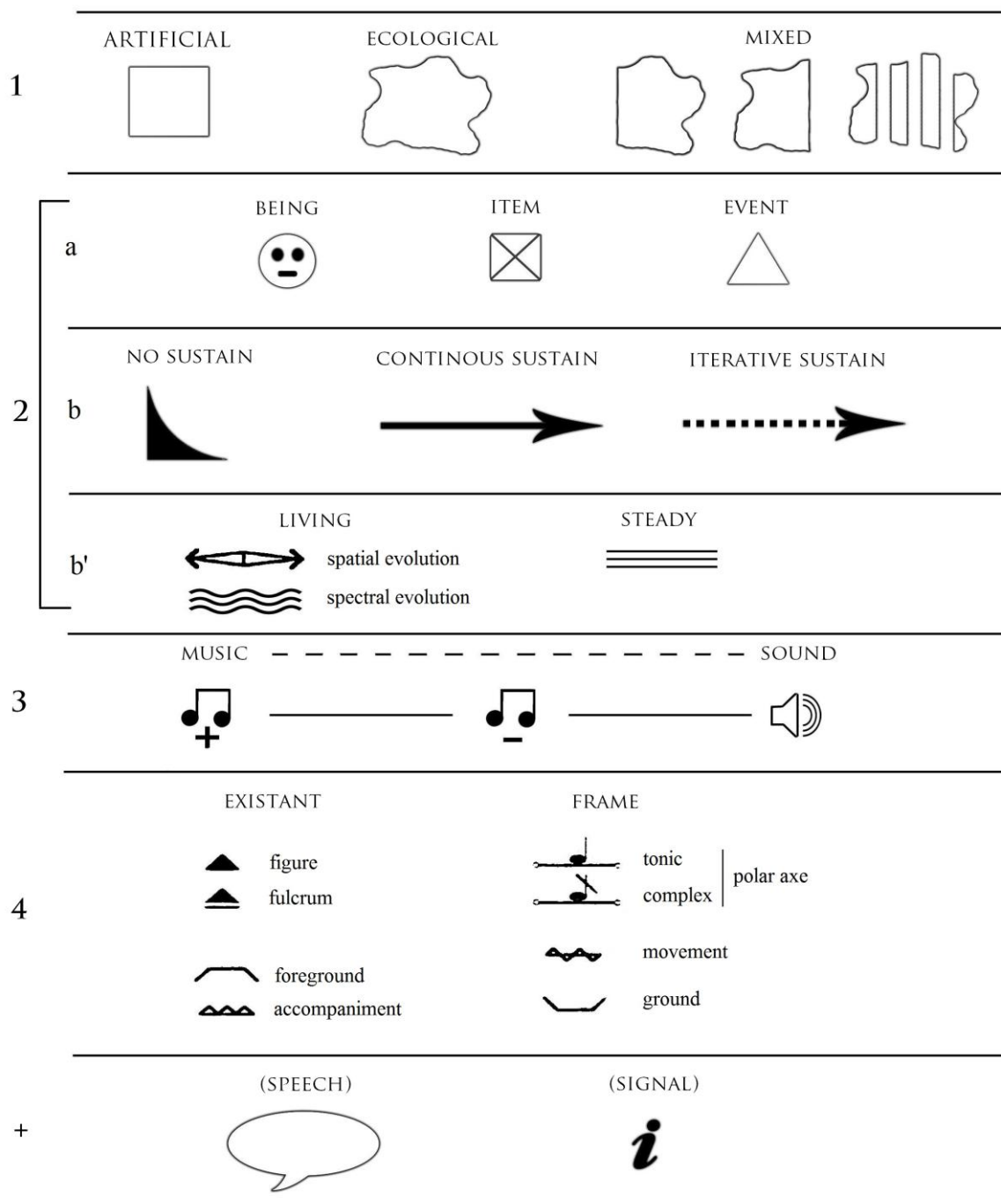


Figure 2. Graphic notation

Using the notation presented in Figure 2, I shall be able to represent all perceptive units according to criteria which seem relevant to the current analysis. Additionally, pitch will be roughly represented in the vertical dimension and time in the horizontal dimension.

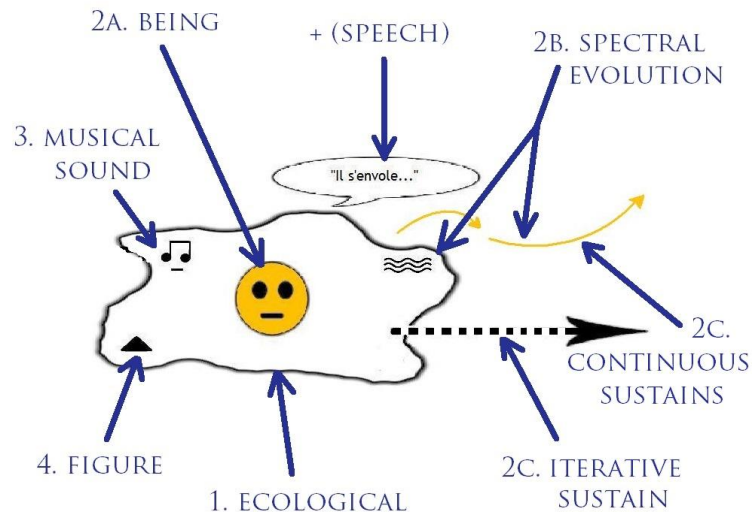


Figure 3. Use of the graphic notation

Because this model is very specific (it has been developed with the *Journey into Space* sample in mind), it must be said that it is clearly not adapted to the analysis of pieces pertaining to genres other than radio art, phonography, anecdotal music, soundscapes or real-world electroacoustics. However, it may be interesting to see what the analysis of absolutely ‘abstract’ music reveals.

3.1.7. Space-time semiotics

Rather than use Semiotic Time Units (Favory 2007, p.52), I shall use the formal analysis model of Lasse Thoresen, which seems more systemic and straightforward:

At the basis of the study of organic form as an aural phenomenon is the subdivision of the music’s temporal unfolding into segments; we have termed such segments time-fields. [...] Time-fields are related to the traditional concept of a musical phrase, period or sentence. (Thoresen 2010, p.83)

Thoresen develops a notation for time-fields and their interpolations. This notation, just as that which follows it, is extremely comprehensive and a quarter of the symbols (at most) would generally suffice to analyze a full piece of music. I shall not use the notation for interpolations between time-fields here because it will not be useful in analyzing our extract.

The model is close to the STU in that it proposes the idea of a time-oriented, form-building function. Thoresen underlines the possibility for a neutral function – which corresponds roughly to the two STU “Without Direction” – i.e. the ambiguity in the parameters’ evolution does not allow for the definition of directedness. Lastly, Thoresen develops a notation regarding the function’s *goal attainment*: that is, the function may point (towards the future) and be developed without surprise until its completion –or it may be ruptured before attaining its goal. Its closure and directedness are then compromised.

Number of time-field levels	Designation	Graphic Notation	
		In full	Shorthand
Field depth 0	Object-field/ Field ₀		
Field depth 1	Phrase-field/ Field ₁		
Field depth 2	Sentence-field/ Field ₂		
Field depth 3	Form-field/ Field ₃		





Time-fields (*ibid.*, p.86)

Form-building Function	Emphasis of Form-building Functions		
	Average (primary)	Faint (secondary)	Emphasised
<i>Presence-oriented</i> (static tendency)			
<i>Forward-oriented</i> (increasing tendency)			
<i>Backward-oriented</i> (declining tendency)			

Time-oriented functions (*ibid.*, p.87)

Form building Function	
<i>Neutral</i>	

Neutral function (*ibid.*)

Designation	Notation	Definition
<i>Goal attainment</i>		A forward-oriented function attains its expected goal.
<i>Blunted goal attainment</i>		A forward-oriented function attains its goal but different dimensions arrive at different points in time.
<i>Suspended goal attainment</i>		The expected goal of a forward-oriented function is first suspended, but arrives later.
<i>Goal evasion</i>		In full goal evasion the goal is not reached.
<i>Partial (goal evasion)</i>		In partial goal evasion it is not reached fully or not in the way expected.

Goal attainment in forward-oriented functions (*ibid.*)

3.2. Analysis

Since it was impossible to analyze the whole piece due to its length, I chose a 2'30'' extract⁷ that I found relevant to the piece. The extract is drawn from an **A** state, the most present during *Journey into Space*.

[journey_sample.wav]

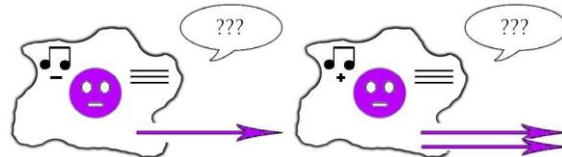
3.2.1. General data

The extract presents us with twelve different perceptive units: 2 BEINGS, 7 ITEMS (5 of which appear only once) and 3 EVENTS (one appears as background, while the other two appear at the end of the extract).

Amongst these units, 6 may be considered as having more or less salient SIGNAL values. For instance, I easily recognized the sounds of a newborn babbling, the ticking of a clock, a heartbeat and a car passing by, and a little less easily the sound of pages being turned in a book and someone's footsteps resonating in a stairwell. Incidentally, in a listening

⁷ (26'10'' - 28'40'' in "journey") I added a short fade in and fade out since the extract was to be used in a listening experiment (Marty 2014).

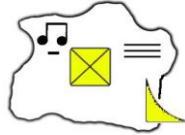
experiment of mine (Marty 2014), where all listeners recognized the baby, the same could not be said for the the sounds of the clock, the heartbeat and the car. Still, I would like to keep the poetic content of my first analysis. I will refer to sound units using quotes (the ‘newborn’, the ‘gong’, etc.) rather than writing “the sound of...” each time, because this seems to be in concordance with the very referential, anecdotal nature of the extract.



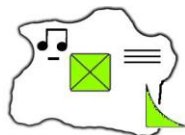
1. BEING – STEADY, CONTINUOUS SUSTAIN – MUSICAL SOUND / MUSIC – (INCOMPREHENSIBLE SPEECH)



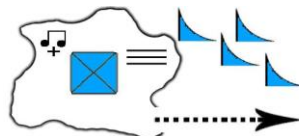
2. BEING – ITERATION OF SEVERAL LIVING, CONTINUOUS SUSTAINS – SOUND / MUSICAL SOUND / MUSIC – (SIGNAL – NEWBORN)



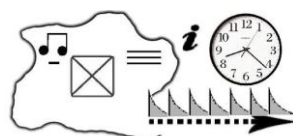
3. ITEM – STEADY, NO SUSTAIN – MUSICAL SOUND



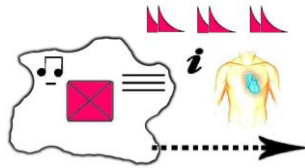
4. ITEM – STEADY, NO SUSTAIN – MUSICAL SOUND



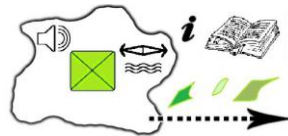
5. ITEM – ITERATION OF SEVERAL STEADY SOUNDS WITH NO SUSTAIN – MUSIC



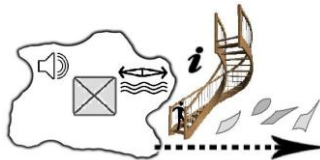
6. ITEM – ITERATION OF SEVERAL STEADY SOUNDS WITH NO SUSTAIN – MUSICAL SOUND – (SIGNAL – CLOCK)



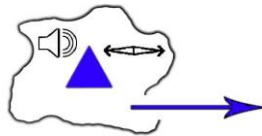
7. ITEM – ITERATION OF SEVERAL STEADY SOUNDS WITH NO SUSTAIN – MUSICAL SOUND – (SIGNAL – HEARTBEAT)



8. ITEM – LIVING, ITERATIVE SUSTAIN – SOUND – (SIGNAL – BOOK)



9. ITEM – LIVING, ITERATIVE SUSTAIN – SOUND – (SIGNAL – STEPS, STAIRCASE)



10. EVENT – LIVING, CONTINUOUS SUSTAIN – SOUND



11. EVENT – STEADY, CONTINUOUS SUSTAIN – MUSIC

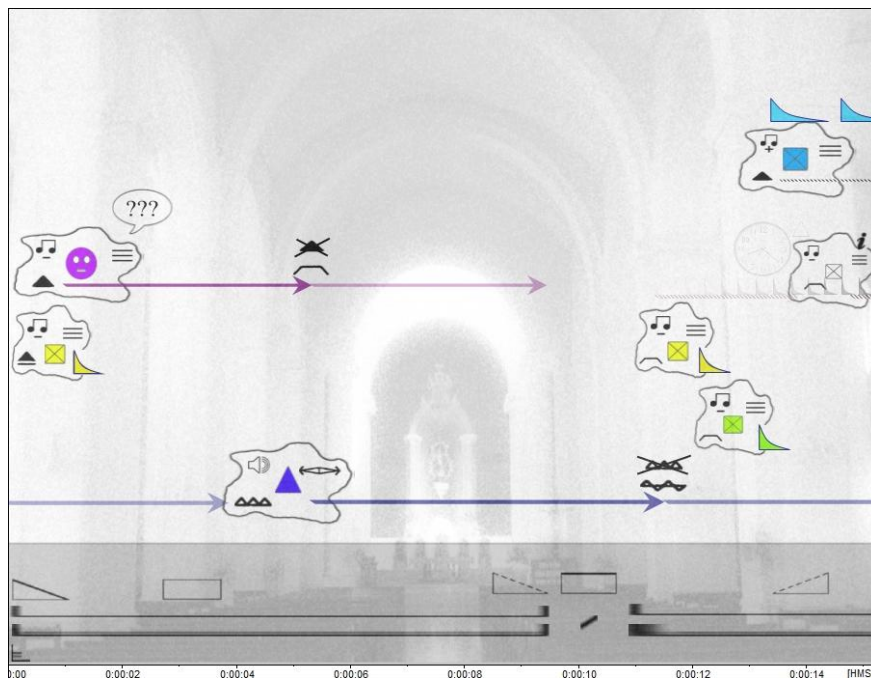
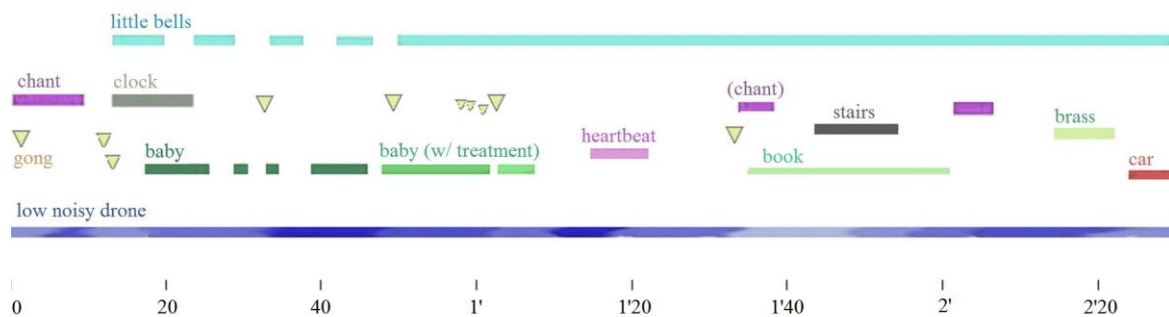


12. EVENT – LIVING, CONTINUOUS SUSTAIN – SOUND – (SIGNAL – CAR)

In terms of time semiotics, I find throughout the extract that Wishart tends to put the emphasis on the present rather than on directed gestures which contain tensions and

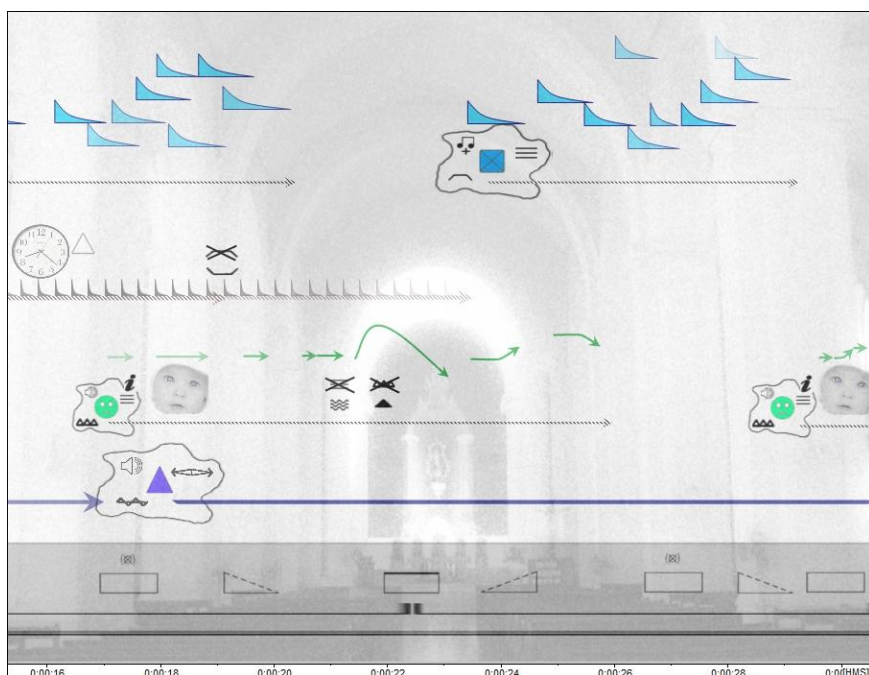
resolutions. The only oriented functions that are salient are the backward-oriented functions corresponding to the ‘gong’ (at the beginning and middle of the extract) that are accompanied by chants with decreasing loudness. In fact, listeners do seem to remember the musical form as a space-form made up of sound units (the ‘newborn’, ‘drone’ and ‘little bells’) rather than sections or parts (Marty 2014).

3.2.2. Chronological description

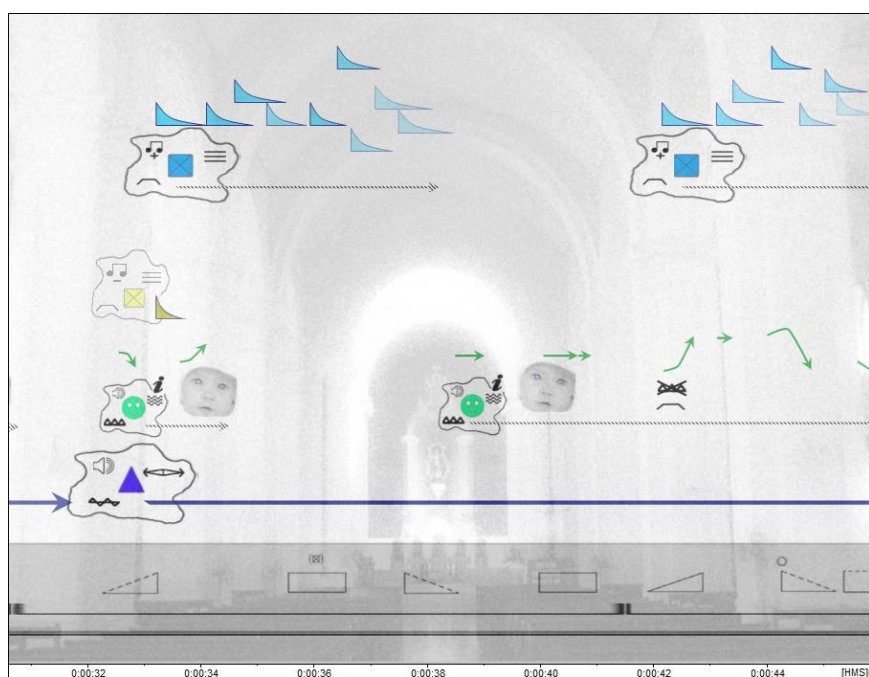


Acousmograph – 1/10

The sample begins with an incomprehensible pitched ‘chant’ introduced by a metallic (fluted) attack – the ‘gong’ –, while the low and noisy background ‘drone’ is installed. The ‘gong’ is repeated and introduces the fade in of the ‘clock ticks’ and the first instance of the ‘little bells’ which is present throughout the extract.

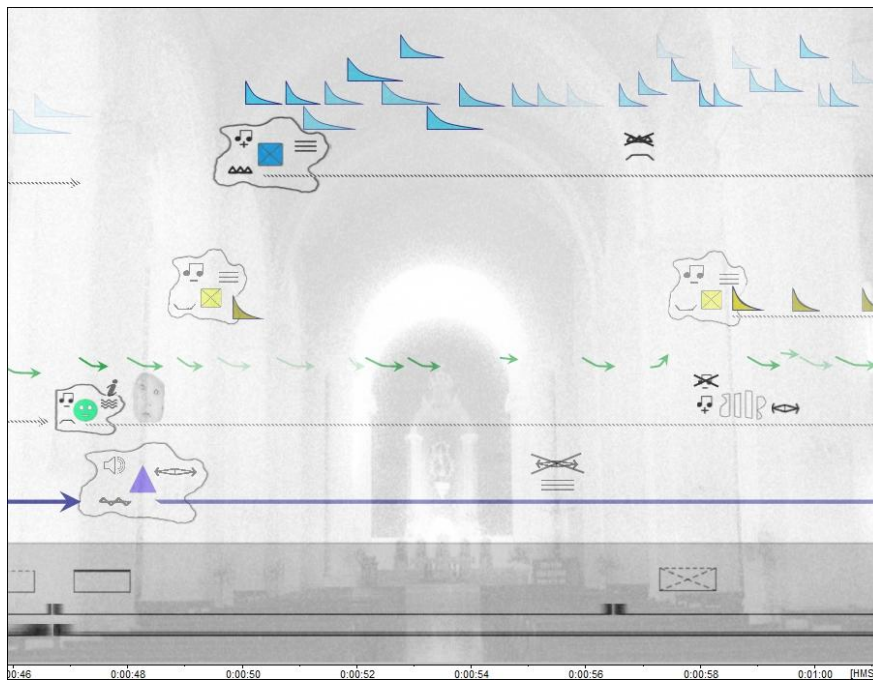


Acousmograph – 2/10

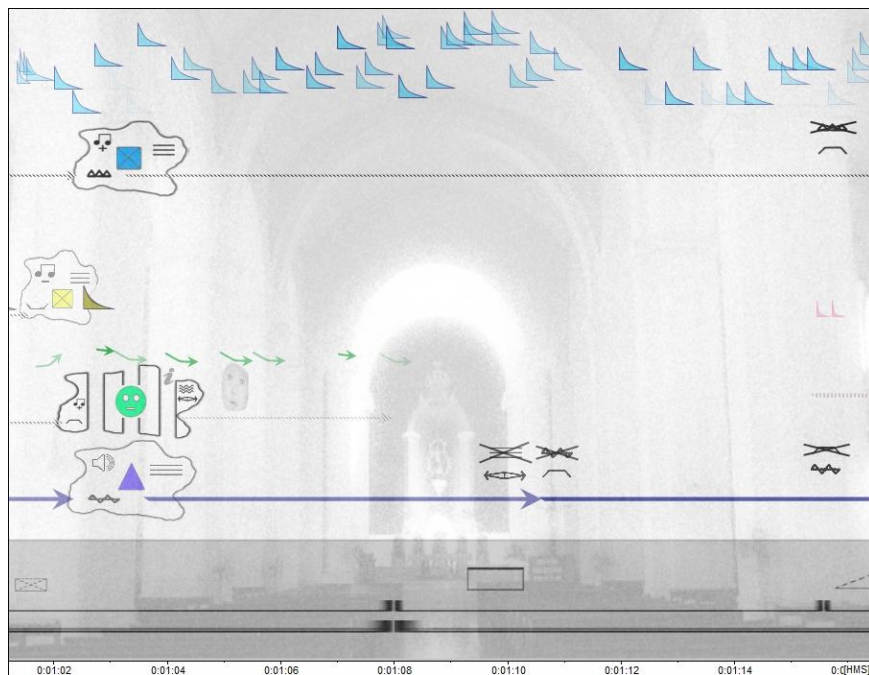


Acousmograph – 3/10

During the melodic play of the little bells and the fade-out of the ticking clock, we begin to hear the babbling ‘newborn’. After having experimented freely with his voice, the ‘newborn’ seems to mimic the melodic line of the ‘little bells’ (at 0’25”). This is followed by a game of alternation, between the babbling ‘newborn’ and the ‘little bells’, which culminates at 0’44” when the ‘newborn’ reaches its highest pitch in the extract.



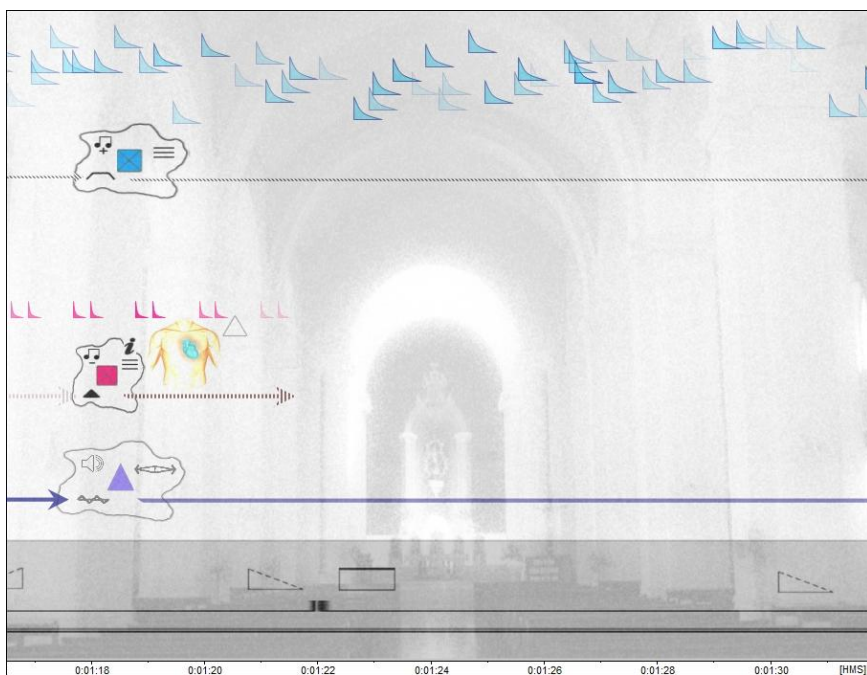
Acousmograph – 4/10



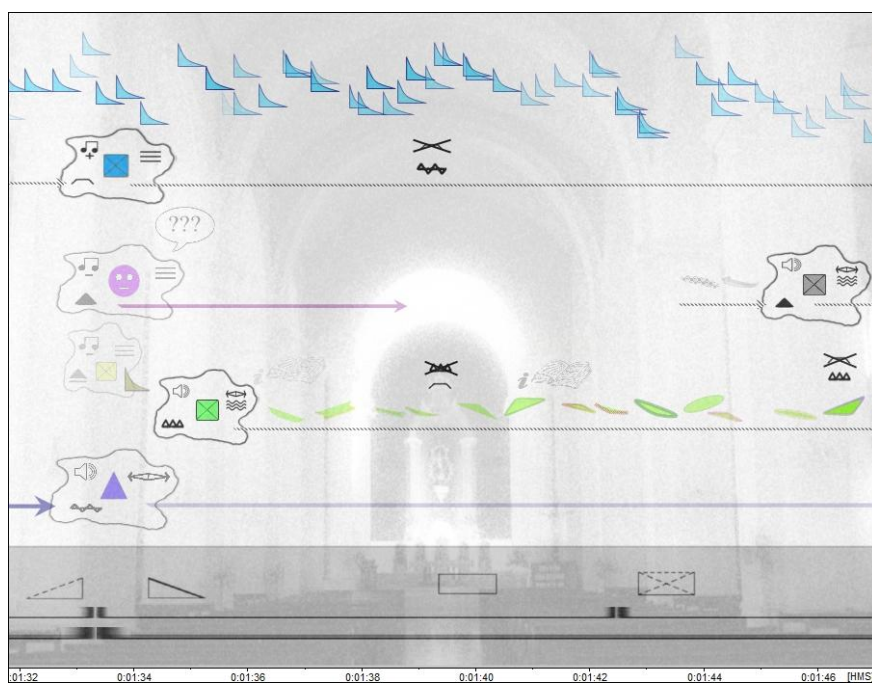
Acousmograph – 5/10

The ‘newborn’ changes at this point, becoming clearly artificial – due to the repetition of a short descending gesture on two pitches. As the ‘little bells’ become denser in spectral space over time, we hear the ‘gong’ again and the babble of the ‘newborn’ becomes less and less recognizable as such, finally turning into spatial punctuations. This makes for an absence of temporal

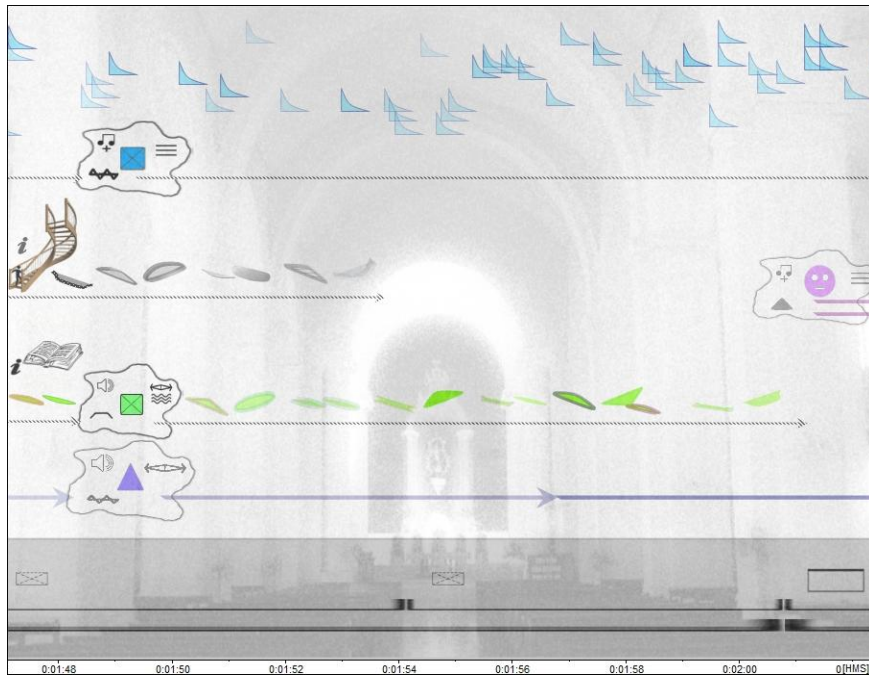
directedness (at 0'58'') before the emphasis on the present returns when the 'newborn' disappears (at 1'10'').



Acousmograph – 6/10



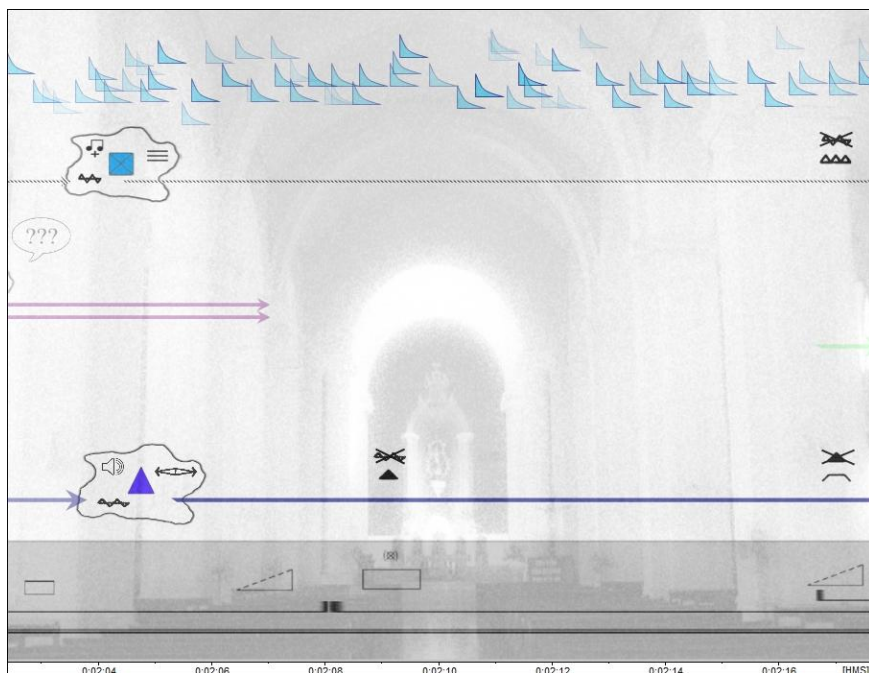
Acousmograph – 7/10



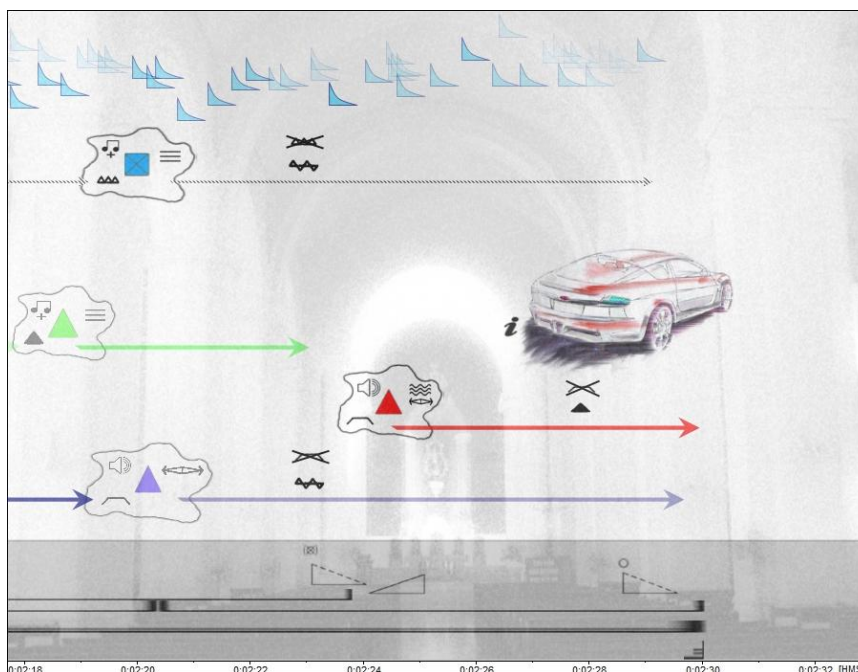
Acousmograph – 8/10

The ‘heartbeat’ fades in and out leaving us with a strong emphasis on the present, the numerous ‘little bells’ and the ‘drone’ continuously moving in space.

The incomprehensible ‘chant’ returns at 1’34”, where it is, again, accented by the ‘gong’. The ‘book’ starts to become manipulated and the ‘footsteps’ appear and disappear quickly. The ‘chant’ returns again at 2’01”, harmonized, and disappears just as quickly. This is the densest passage of the extract.



Acousmograph – 9/10



Acousmograph – 10/10

Finally, just as the emphasis returns to the present once more with the ‘little bells’ (which are now quite numerous) and the foregrounding of the ‘drone’, a ‘brass chord’ fades in and out (2’17” – 2’23”), followed by another fade in – that of a car passing by (recognizable with the Doppler effect) which ends the extract.

[\[journey_acous.swf\]](#)

4. Discussion and aesthetics

This extract is quite relevant to the whole piece, due to:

- its static character;
- the use of metallic, extremely reverberated sounds;
- the presence of human utterance in several forms and functions.

The static character prompts me to label **A**, as well as most of the piece, a state rather than a part. In fact, instead of articulated content (which has a role in the ‘arrival’ part), most of *Journey into Space* seems to alternate between mundane, trivial reports of events and contemplative, figures-on-ground states.

It could thus be qualified as a ‘space-form’ as defined by Smalley: time is in the service of space in its largest sense – spectral as well as panoramic and source-bonded spaces

(Smalley 2007). One could not listen to this piece hoping to find teleological, articulated and structured content without being extremely disappointed. *Journey into Space* does not lend itself to such listening. However, if we are to appreciate the work fully, we might want to listen to the interplay between two poles: the trivial, day-to-day, uneventful events in life, with their bland spectrum and the still uneventful, but dreamy, more profound, timeless philosophy of life, with its scintillations and continuous textures.

It is – beyond the simple use of contemplative, static time – this interplay, this alternation between coexistence and the contrast between two poles in the piece which makes for an interesting listening experience. Moreover, it must be noted that teleology exists at the microscopic level in the piece, with the use of ‘musical’ material (in the most traditional sense) on the static ground. For example, in our extract, the ‘newborn’ imitates the ‘little bells’, ‘chants’ are introduced by the ‘gong’ and fade out progressively, and the ‘newborn’ is cut and repeated, which leads to its disappearance, etc. However, none of these elements seem to participate in a larger temporal orientation.

I mentioned a listening experiment earlier. In this experiment (Marty 2014), I asked 28 persons to listen with headphones, twice, to the extract I analyzed here, before asking them some questions in order to evaluate hypotheses about listening strategies that are not the topic of this paper. Many listeners felt the absence of temporal directedness. The ‘newborn’, the ‘little bells’ and the ‘drone’ were the most cited sounds after the first listening – which shows that it is not necessarily the most (objectively) salient sounds that are best remembered.

The encoding of the form in memory seemed to be realized mainly through these three units, not as a temporal form but rather as a spatial form. In fact, when asked about which moment stood out for them in the sample, all listeners referred to a sound unit, rather than a timed section. This confirms the analysis of our extract as having an emphasis on the present rather than on directional gestures.

Regarding ‘anecdotal’ content, some listeners identified sounds and made few or no sense out of them (“it’s a potpourri of sounds”) – this is to say that anecdotal content might be a disservice to the work in some instances when listeners *try to understand it*. However, most listeners interweaved sounds through various processes (“the baby plays with the little bells”.....“there is fire and someone is in a castle reading a book and

practising sorcery”.....“the wind is making chimes move and strike each other”.....etc.) and were pleased with their listening experience.

To conclude, let us say that *Journey into Space* does not lend itself to many forms of listening because of the specificity of its structure and its strongly anecdotal content. Nevertheless, considering the very satisfying listening experience I can have after having heard the work numerous times, I consider *Journey into Space* to be quite an achievement in its genre.

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