

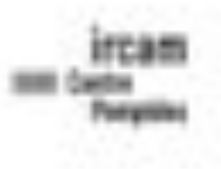
THE OM COMPOSER'S BOOK

Volume 3

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Preface by
Roger Dannenberg

Collection *Musique/Sciences*



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Rima Flow: Oral tradition and composition

Alessandro Ratoci

Two genres of improvised musical expression, very distant in time and space as the traditional *ottava rima* chant of rural Italian of the 19th century and the contemporary “beatboxing” practice in urban hip-hop music have been the inspiration for my piece *Rima Flow* for tuba and electronics written during IRCAM Cursus in 2015.

Computer-assisted composition techniques have been intensively employed to derive all the symbolic material (notation) and the electronic concrete sounds directly from some recorded sources of those oral-tradition repertoires. This has been the opportunity to experience formalization as a kind of cultural perspective to discover new possibilities over a traditional material.

Relics of a popular literacy: *ottava rima* poems

Ottava rima is a stanza form of Italian origin, composed by eight verses of 11-syllables lines (hereby the name *ottava*) originated in late 13th and early 14th century. One of the earliest adopters was Giovanni Boccaccio, who established *ottava rima* as the standard form for epic and narrative poetry. A distinctive characteristic of the form is the peculiar rhyme scheme, consisting in three open rhymes and a closing couplet: AB-AB-AB-CC. Below are two examples of *ottava rima* stanzas:

Dirò d'Orlando in un medesimo tratto
cosa non detta in prosa mai, né in rima:
che per amor venne in furore e matto
d'uom che sì saggio era stimato prima;
se da colei che tal quasi m'ha fatto,
che 'l poco ingegno ad or ad or mi lima,
me ne sarà però tanto concesso,
che mi basti a finir quanto ho promesso.

Ariosto, *Orlando Furioso* – Stanza 2 (1532)

*Ambition was my idol, which was broken
Before the shrines of Sorrow and of Pleasure;
And the two last have left me many a token
O'er which reflection may be made at leisure:
Now, like Friar Bacon's brazen head, I've spoken,
'Time is, Time was, Time's past', a chymic treasure
Is glittering youth, which I have spent betimes
My heart in passion, and my head on rhymes.*

Byron, *Don Juan* – Stanza 217 (1819)

Beside the literary use of this form for heroic literature, a parallel use of *ottava rima* is consistently found in traditional popular chants of rural areas in the center of Italy that were passed from generation to generation by word of mouth.

These relations between “high” (literary) and “popular” (oral) culture have been part of social identity of Italy for from Middle Age to the advent of marketed mass-media culture. As of the beginning of the 20th century, oral poetry had still an important role on education to moral and religious values for the lower classes (which were still largely analphabet) and the divulgation of spiritual poems, ranging from Tasso's *Gerusalemme Liberata* to the entire Dante's *Divina Commedia*, was carried over by popular storytellers with the encouragement of religious authorities. It was still common in the late 1980s and 90s to find old rural poets which, despite their semi-analphabet condition were able to perfectly sing entire poems dating from the Renaissance or even entire chants of Dante's *Divina Commedia*. As an aid to memory and to catch up listener's attention the poems where often sung over stereotyped melodies of a simple syllabic character. These melodies were the base for improvised embellishments and ornamentations which were often exaggerated to demonstrate the storyteller's virtuosistic abilities. These melisma, extracted from some original recordings by different performers are the most characteristic source materials used for the composition of *Rima Flow*.

From beatboxing to instrumental techniques

Beatboxing is one of the distinctive elements of the hip-hop culture that formed during the late 1960s among African American youth of the American suburbs, rapidly becoming a widespread identity in the metropolitan areas of USA and Europe.

Beatboxing is a tradition of vocal percussion which originates in 1980s hip-hop, and is closely connected with hip-hop culture. It involves the vocal imitation of drum machines as well as drums and other percussion, and typically also the simultaneous imitation of basslines, melodies, and vocals, to create an illusion of polyphonic music.

D. Stowell and M. Plumbley [3]

Important pioneers of the genre have been, among many others Kyle Jones (Aka Scratch), Marcel Theo Hal (Aka Biz Markle), Darren Robinson (Aka Buffy) and Kenny Muhammad.

There have been already interesting examples of contamination between beatboxing style and extended techniques of contemporary instrumental music. One of the first instruments to be involved in this practice has been the flute, surely for the peculiar embouchure which leaves the mouth and the lips a complete freedom of movement and probably because the richly percussive repertoire of effects that were already present in the jazz and rock flute tradition.

It is unknown when beatboxing was first transferred to the flute, though it seems to have occurred sometime in the early 2000s. Many of the articulatory and extended techniques involved in beatbox flute performance have been used by composers for decades. Examples include the “ch” articulations, key-slaps, flutter tonguing, spit tonguing, and audible breathing in the performances of Jethro Tull’s front man, Ian Anderson.

C. Kuhns [2]

The most relevant exponents of this experience are, among others, Tim Barsky, Nathan “Flutebox” Lee and Greg Pattillo. The large widespread favour that this genre of performance has encountered over the public of internet communities has encouraged many young instrumentalists to confront themselves to this kind of sound palette: on the internet is possible to find experiences of Beatboxing over the most disparate wind instruments: saxophones, clarinets or oboe, even if the presence of the reed inside the oral cavity of the performer limits the possible percussive techniques.

The large mouthpiece of the Tuba is also comfortable for this kind of sound effects and many of them are already present in the contemporary repertoire of extended techniques. The idea to include beatboxing elements in *Rima Flow* came also from the collaboration with the instrumentalist chosen for the Cursus partnership with the CNSM in Paris, Jean-Baptiste Renaux who is both a brilliant classical tuba player and a virtuoso *beatboxer*. The collaboration was very inspiring to me and the final results represented a perfect depiction of his personality and musical identity.

This range of heterogeneous sounds was employed to establish a *continuum* between two dialectic oppositions of sonic identities: ordinary sound of Tuba and the singing voice in one sense and the harmonic sound and the breath noise in the other (see Figure 1).

Tuba ordinary playing techniques have an evident vocal quality and the very low register exhibits the homologies between glottal pulses of the phonation and the mechanisms of sound production of brass instruments. On the other side, the large palette of beatbox vocal percussions, especially if performed inside the mouthpiece of the instrument, can be employed as an intermediary sound morphology between unpitched percussive extended techniques and the unvoiced phonemes of human voice.

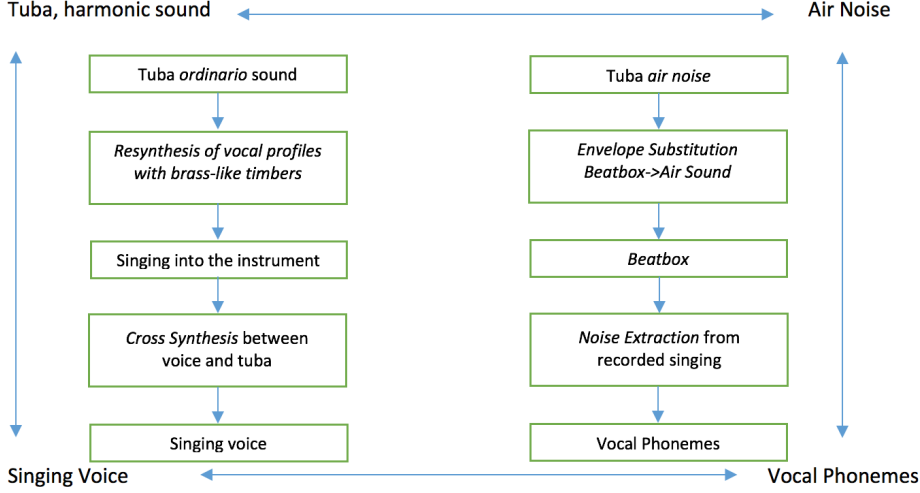


Figure 1. Sound categories of *Rima Flow*.

A new form of oral tradition

The decision of using multiple sources of inspiration (the *ottava rima* and the hip-hop beatboxing) instead of dealing with a single coherent corpus of traditional material was suggested by different reasons, some of a more conceptual nature, some more linked to sound morphology. I have always been fascinated by contrast, hybridization and hidden homologies between concepts that are considered very distant or even opposed by the common sense. In this case there are interesting parallelisms between the two cultures that I have taken into consideration:

- The singing of popular *ottava rima* poems, commonly known in Tuscany as *cantar di poesia* was often improvised as part of public contests, exactly as it happens in the modern *Slam*.
- These improvisation “battles” or *contrast*i were an important moment of social exchange, as it is today in the context of “urban” culture, where the established performers and aspiring ones fight with each other using metrics and rhyme.
- The subjects which were usually unacceptable in social contexts (sexuality, rebellion to authority, political satire) were permitted during the improvisation ceremonies of *ottava rima*, bearing an interesting relation between language virtuosity and freedom of speech which is also part of the rap/hip-hop culture.

I absolutely wanted to avoid any nostalgic, conservative approach towards an historical experience which is part of my personal identity (the *ottava rima* repertoire was commonly practiced in my family and represents my very first

contact with the musical practice) and favor a creative “fresh-look” instead. The sound analysis and the consequent formalization of the results was important to me as to establish a kind of rational “filter” of this emotionally charged material and to find a cultural distance that left me enough freedom to create new music instead of preserving a tradition.

The role of computer-assisted composition

OPENMUSIC has been employed at different stages of the elaboration of the piece to solve the following specific problems:

- Definition of the general form and the sections of the piece, modeled after the stanza structure of the *ottava rima* poems.
- Extraction of melodic profiles from audio recordings as source for melodic material of both instrumental and electronic parts.
- Transformation of the extracted profiles into graphic symbols for semi-aleatoric notation of instrumental gestures.
- Elaboration of concrete recorded material (micro-editing, dynamic envelope transformation, etc.)

The first step: analysis of the repertoire

Out of the large corpus of oral-tradition poems in *ottava rima* from anonymous authors, I have chosen one particular poem of which I possessed multiple recordings by different storytellers: *Poesia del sogno di un incontro fra un nipote e il nonno morto*. I found this poem particularly interesting for my work because the abundance of recorded sources allowed me to confront the different examples of melodic improvisation, and because of the theme of the narration: during a dream the poet meets the ghost of his defunct grandfather willing to have news from the human world and offering, in exchange, a vivid description of the afterlife. This simple vulgate of Dante’s *La Divina Commedia* was a pretext to satirize the post-unity Italian society of that time but also the celebration of the power of poetry in its ability to connect different generations. The poem is composed by 15 stanzas in the *ottava rima* form with a particularly virtuosistic rhyme scheme in which the last couplet of a stanza is taken as the starting rhyme for the successive (the full text is reported as appendix at the end of this chapter).

The first step was to mark the subdivision of the sound files according to the three levels of structuration of the poetic text: stanzas, verses and syllables. Transient detection was made using the OM-SUPERVP library in order to help with the syllables subdivision. The ability of easily transforming transients in rhythmic pulses has been very useful to correct the syllable segmentation by ear as even the more accurate choice of parameters will require, on non-percussive sound materials like the singing voice, some manual adjustment of the markers (see Figure 2).

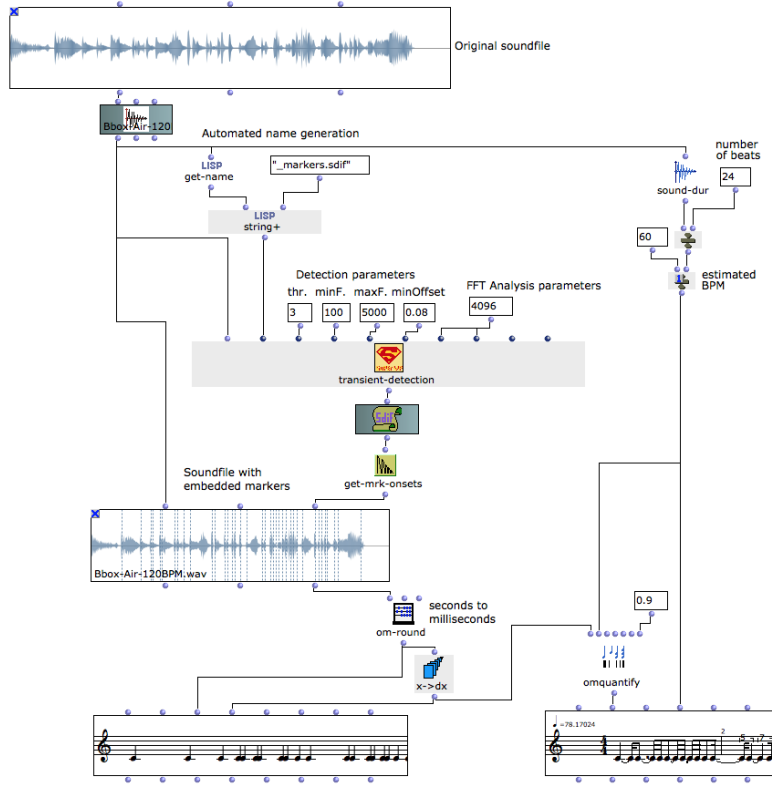


Figure 2. Transient detection for syllables subdivision.

The duration in seconds of the successive verses of each stanza, displayed using a break-point functions library (*BPF-Lib*), showed salient similarities in proportions (see Figure 3). The distribution of these durations is consistent over the stanzas and reflects the importance given to the different verses in a fixed narrative scheme: an invocative opening section, a more discursive central part and a rhetorical ending.

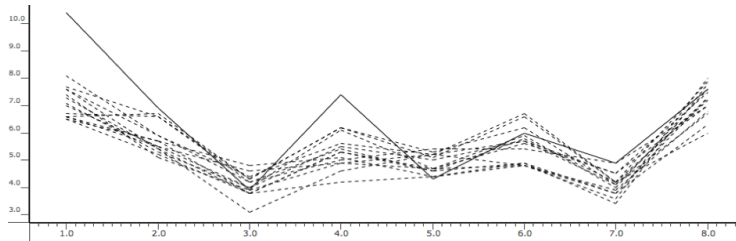


Figure 3. Proportions of verses duration in the stanzas (x -axis = verse number, y -axis = duration in seconds).

The pattern unfolds as six interlocking lines followed by a climatic couplet. The three insistent alternating rhymes propel the narrative forward while also encouraging meditation and commentary. The couplet, on the other hand, is a stopping point, a turn or summation...

E. Hirsch [1]

The density of ornamentation also follows this general distribution, with a more melismatic conduct at the beginning and at the end, and a syllabic proceeding towards the center of the stanzas. An approximation of the verses duration to natural numbers was used to structure the internal proportions of the different sections of the piece, according to the following numerical series:

(10 7 4 7 4 6 5 8) (7 7 4 5 5 5 5 7) (8 6 4 6 5 7 4 7) (7 7 4 6 5 6 4 7) (8 6 4 5 5 6 4 8) (7 6 5 5 4 5 3 8) (7 5 3 5 5 5 4 6) (7 6 4 4 4 5 4 8) (7 6 5 5 5 6 5 8) (8 7 4 6 5 7 4 6) (7 5 4 5 5 6 5 7) (7 5 4 6 5 6 4 7) (7 6 4 6 5 5 4 7) (7 5 4 5 5 6 4 8) (8 5 4 5 5 5 4 7)

The proportions between the respective sections of the piece are also given by the average duration of each of the eight verses of the stanzas (7 6 4 5 5 6 4 and 7), as if the whole piece itself was a section of an *ottava rima* poem.

Melodic profile extraction

The OM-SUPERVP and OM-PM2 libraries have been used to track the pitch profile of the singing voice by the analysis of fundamental frequency (Figure 4).

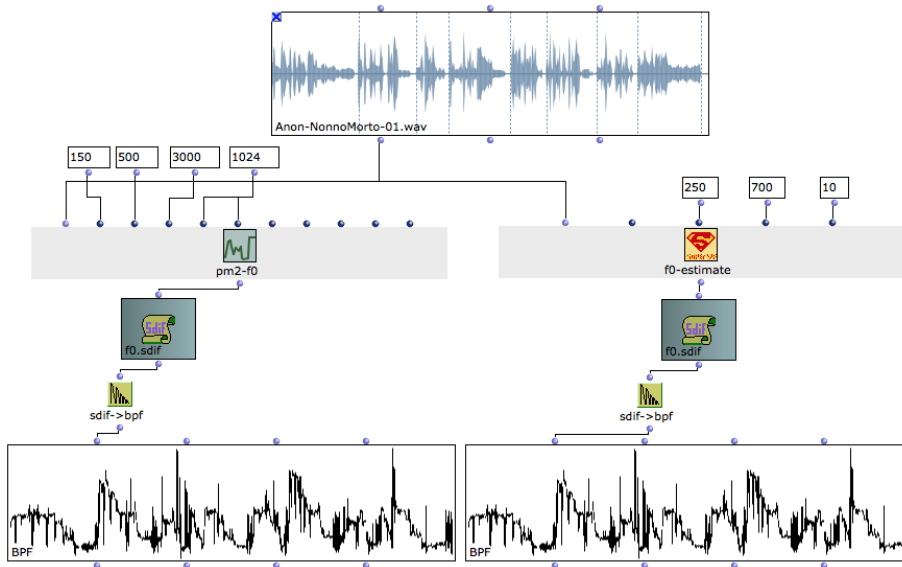


Figure 4. Fundamental frequency estimation using OM-PM2 and OM-SUPERVP.

The fundamental frequency tracings were stored in BPFs and also exported as SDIF files to the AUDIOSCULPT software, where they have been segmented using the syllable onset markers previously extracted. A series of MIDI *annotations* were then elaborated, which are basically transcriptions of the fundamental frequency rounded to the nearest tempered note value. Two degrees of precision were employed during this transcription process: 1) the most detailed possible, where any crossing of the tempered pitch value was reported as a new event, and 2) using syllables markers as averaging boundaries, where only one note was assigned per syllable (see Figures 5 and 6).



Figure 5. Fundamental frequency curve annotation with maximum precision.

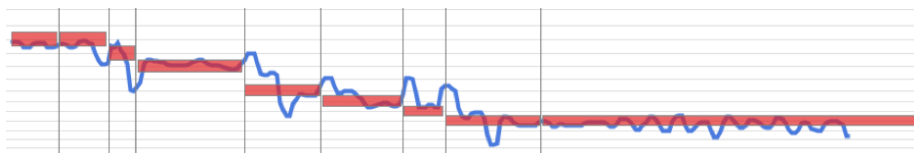


Figure 6. Fundamental frequency curve annotation using syllables.

Rhythm and quantification

The primary source of information with regards to rhythmic structures was the transient detection of *ottava rima* singing and of various fragment of beat-box improvisation, which were quantized using the *omquantify* function (see Figure 7).¹

Instead of searching for the perfect transcription (in the sense of a resemblance to the original) I started to use the transcribing utilities as a first stage of symbolic transformation of the materials. Figure 8 for instance shows different transcriptions of the same musical passage.

¹The *reactive* feature of OPENMUSIC 6.9 (dark-framed boxes in Figure 7) was very useful to have an instantaneous visual feedback over the quantization parameters and their impact on musical notation.

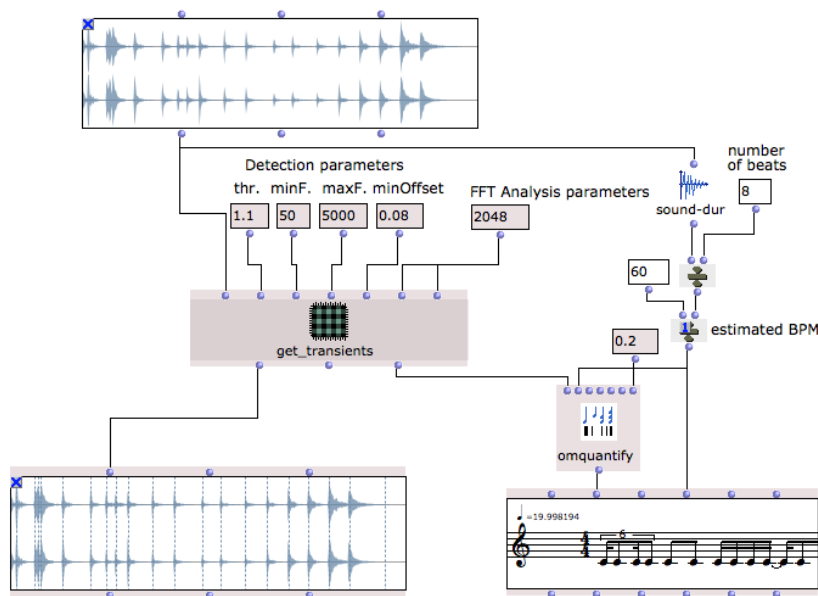


Figure 7. Rhythm transcription of a beatbox fragment.

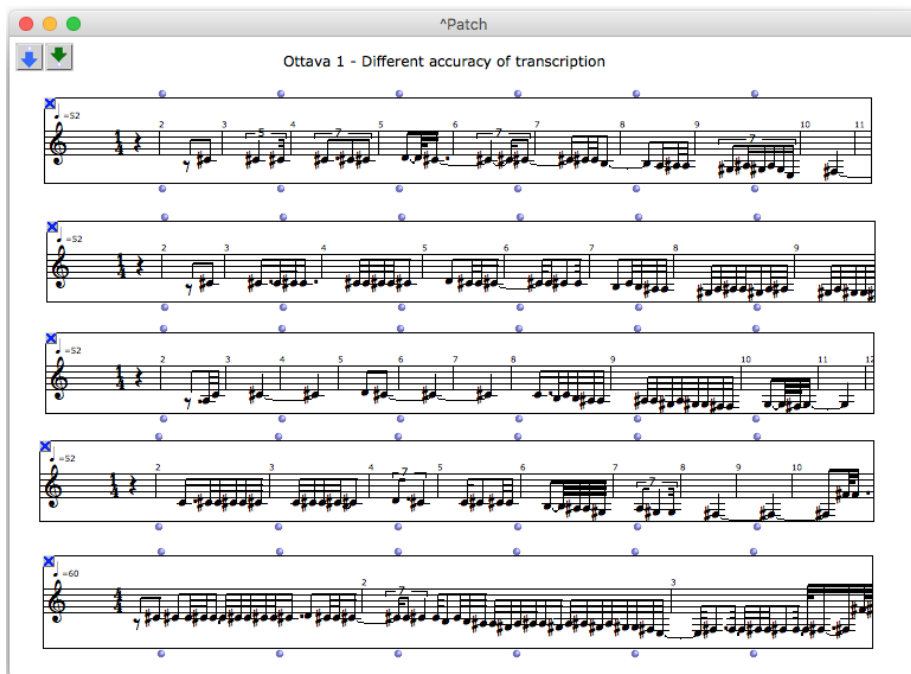


Figure 8. Different degrees of accuracy of transcription of *ottava rima* singing.

The aesthetic (and poetic) role of automatic transcription

The use of different analysis algorithms and different degrees of precision in the previous compositional processes was not only motivated by a technical exploration of the various possibilities of the software at hand, but also by a precise idea about the conceptual role and aesthetical implication of *computer-assisted* processes of sound analysis.

The automated processes should not, in my opinion, substitute the individual aural capacity but possibly represent, with its unrivalled level of accuracy, an ideal achievement for development of our perceptions and a fertile source of inspiration.

At a certain moment I started to feel unsatisfied by my instrumental writing style and felt the urge for a new vocabulary of rhythmic gestures and melodic motives. I have never had much interest on abstract numerical rules or in over-complex notation and thus I was searching for a vocabulary which would bear some relationship to both natural, physical phenomena and represent a development rather than a radical substitution of traditional human musical gestures. For instance, certain acoustical phenomena like the irregular vibrato of non-cultivated popular singing could generate interesting rhythm if analyzed with enough temporal accuracy or some delicate vocal inflexion would transform in ample non-tempered melodic arches if stretched over the frequency axis.

The classic problems of transcriptions as found in ethno-musicological research were of a fundamental importance for my work: the question of whether (and how!) to transcribe the fluidity of oral-tradition music was resolved towards a radical choice for accurate representation. The generation of new compositions being the purpose of my operations (and not the trans-cultural preservation of a musical text) I decided to retain any possible details and filter it thru the looking-glasses of an accurate musical representation. All the fluid inflexions of the improvised chant, the breathing pauses, the metric variety of the ornamentation of the *ottava rima* singing and the *groove feel* of the beatbox improvisation were all considered as intentional music features and notated as accurately as possible.

Last but not least, the use of different analysis parameters and also the inevitable errors introduced by different algorithms were used as additional means of transformation of the original material.

The profile server

One of the most important practical benefits from the integration of OPENMUSIC in my compositional workflow was the possibility of a rational organization of heterogeneous materials: numeric data, audio files, fragments of music notation and also electroacoustic processing can be organized in an integrated workspace, a kind of music *spreadsheet* in which the starting material can proliferate in multiple dimensions.

I organized most of my workflow around a central patch, that I call the “profile server”, which purpose was:

- Store all the original sound files, their segmentation, the melodic profile curves and the transcribed notations.
- Access the materials according to the verse segmentation of the poetic text, listening and confronting the original sound file with *virtual instrument* rendering of the transcribed fragments.
- Perform different kinds of filtering and the basic operations of *inversion* and *retrograde* on the melodic profile curves.
- Perform different kinds of symbolic transformations on symbolic materials (transcriptions).
- Re-synthesize the transformed profiles into new sound files.
- Generate vector graphics from the melodic profile curves that can be imported in music notation software (FINALE, SIBELIUS, etc.)

The filtering operations visible in Figure 9 are necessary to control the complexity of note transcriptions and to produce a smoother or more instable quality in resynthesized audio. The filtering algorithms I used are taken from the OM-FIL library by Mikhail Malt. They correspond to the *mean-filter* function with different values of *<window-size>* and *<recursion-level>* (respectively the amount of data that is taken into account for averaging purpose and the number of time the process is repeated).

The symbolic operations on transcribed notation are also very simple as I wanted to keep a certain degree to resemblance to the original *melos*, and because the most radical transformations of the material are done during the transcription process. These operations can be resumed in the following categories:

- Interval multiplication (expansion, compression and inversions) operated cyclically on *sub-groups* of notes;
- Retrogradation operated also operated on sub-groups;
- Rhythm retrogradation;
- Rhythm rotation.

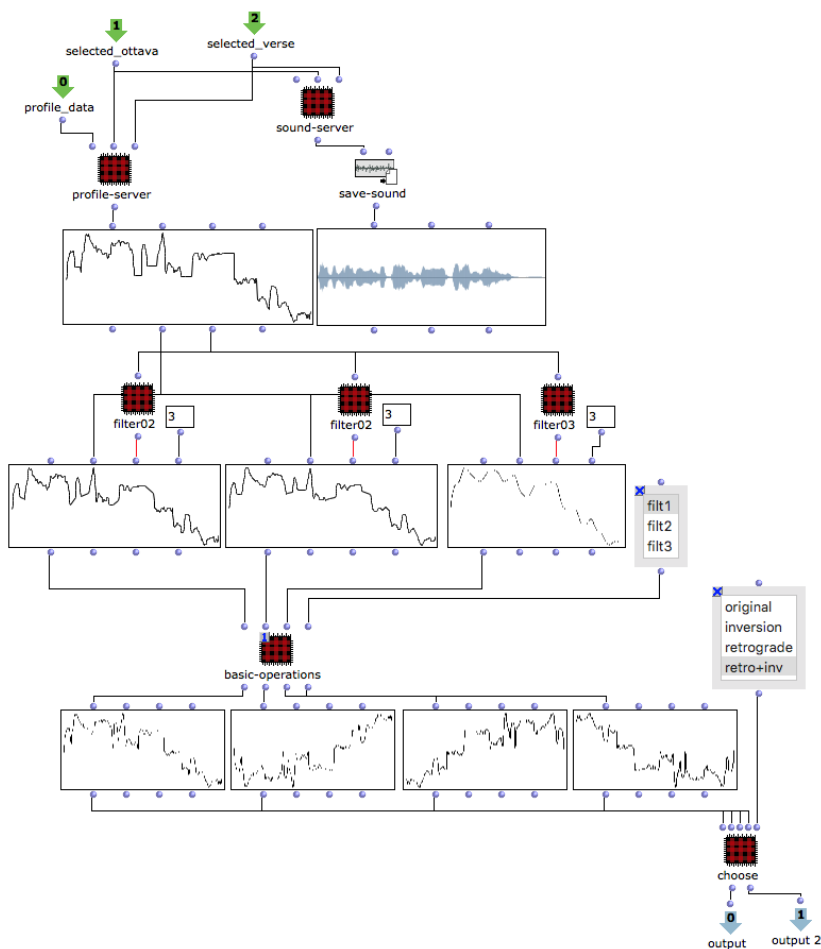


Figure 9. Profile server: filtering and operations on fragments of melodic profiles.

Operating the common operations of inversion and retrograde over small groups of notes (sub-groups) is a simple and effective way to generate new melodies which degree of resemblance to the original material can be precisely controlled. The *interval-mult-groups* or *retrograde-groups* patches in Figure 10 both take a list of chords in their first input, and a list of numbers, which corresponds to the segmentation of original melody, in the second.

Figure 11 shows the detail of the *interval-mult-group* sub-patch. In this example multiplication ratio of -1 produces a simple interval inversion using the first element of each group as the pivot pitch (see Figure 12). In this an internal hierarchy over the melodic material can be established, in which some important notes of the profile are recognizable as they don't vary over successive presentation of the transformed material.

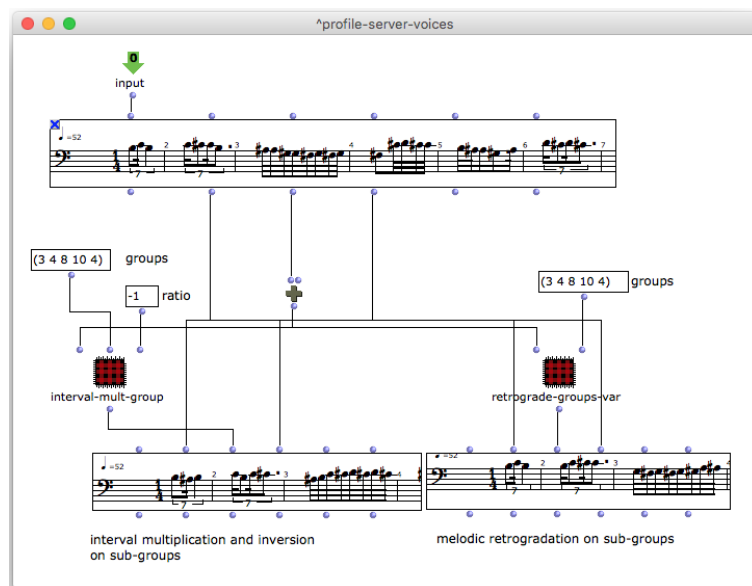


Figure 10. Interval multiplication and retrogradation on groups of notes.

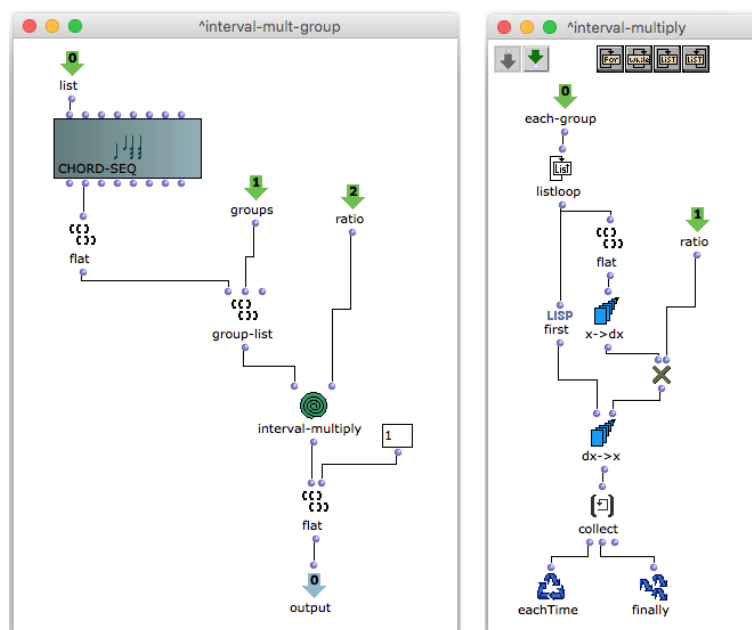


Figure 11. Interval multiplication on groups of notes. Sub-patch *interval-mult-group* from Figure 10.



Figure 12. Inversions calculated on sub-groups of notes.

Resynthesis of profile curves is used in the composition of the fixed-media electronic part of the piece and is obtained through CSOUND and the OM-CHROMA library (see Figure 13). Among the many possible, three generators (or “synthesis classes”) have been chosen:

- *add-1*: sinusoidal generator employed for simple additive synthesis.
- *fof-1*: formantic waveform generator, particular case of granular synthesis.
- *buzz-1*: dynamic spectrum oscillator capable of producing various noisy spectra, very similar to brass sounds.

The melodic profiles control the pitch parameter of the synthesis classes and are altered by other parameters which are used to obtain transformed versions of the original “melisma”. These parameters are:

- *<grain-dur>*: the length of granular fragments that are originated by sampling the melodic curve at regular intervals. Longer grains produce naturally a more “fat” but also “blurred” sound while shorter grains produce a clearer pitch profile but with a somewhat “thinner” timbre.
- *<stretch>*: the melodic profile can be stretched (> 1) or compressed (< 1) in time before re-synthesis.
- *<transp>*: the melodic fragments can be freely transposed in pitch at given midicents (mc).

Finally, another possible output related to the analysis and elaborations of melodic contours is the creation of *vector graphic* objects (SVG files) to be imported in notation software for semi-aleatoric notation of instrumental gestures (see Figure 14).

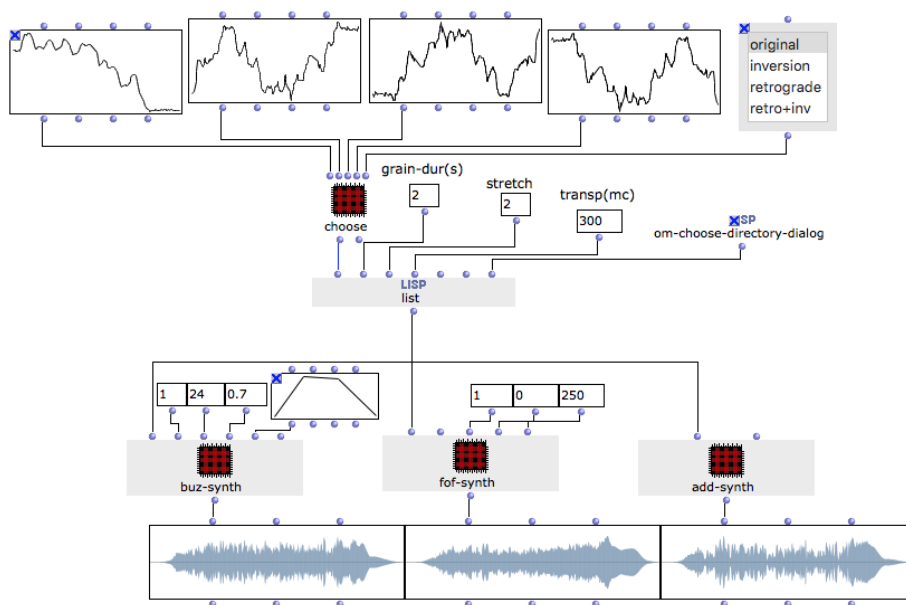


Figure 13. Re-synthesis of melodic profiles.

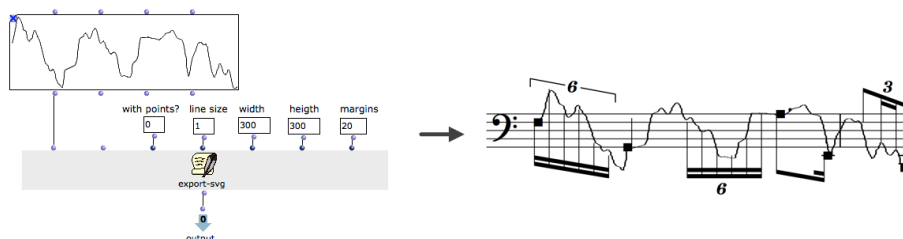


Figure 14. Export of melodic profiles as vector graphic.

Sound processing in OpenMusic: The OM-ReCycle

Rima Flow largely employs fixed-media electronic sounds. Beside the synthesized sounds produced with the OMCHROMA library, the rest of the audio material are re-elaborations of concrete recordings.

Fragment of popular storytellers singing in *ottava rima* are included as a sort of hidden “relics” of this unique material, elaborating it in a way to leave the impression of an ancient voice from the afterlife but making it impossible to distinguish for somebody not accustomed to this peculiar style of singing. The idea of the electroacoustic transformation to mask the stylistic connotations of a material is an important concept in *Rima Flow*. It is applied to both *ottava*

rima and beatbox material to create a sort of “neutral” material which is part of the dialectic of the piece.

An interesting approach to the deconstruction and successive reconstruction of recorded audio is the so called “slice/remix”. The process of segmenting the audio material in segments (slices) generally corresponding to rhythmical units and then recomposing it was initially introduced as a method to adapt percussive loop to different tempo (e.g. in the RECYCLE software by Propellerheads) or to perform variations on rhythmic material. The flexibility of the Lisp-based symbolic elaboration of OPENMUSIC and the integrated audio functions inspired me into expanding this approach to conceive a more general set of utilities based on algorithmic re-composition of the sound which purpose is:

- Produce variations of the percussive beatbox material of different degree of fluidity and irregularity.
- Alter the order of syllables of the *ottava rima* chant to generate melodic variations and to mask the intelligibility of the text.
- Mix slices of different sources to produce hybrid sequences.
- Impose a rhythmical quality to non-rhythmic material by discontinuity (slicing a continuous sound at discrete intervals).

The first stage is the subdivision of the sound file in a list of segments based on the embedded markers, as shown in Figure 15. The time-values of the markers are streamed two by two and used as the parameters for the *sound-cut* function.

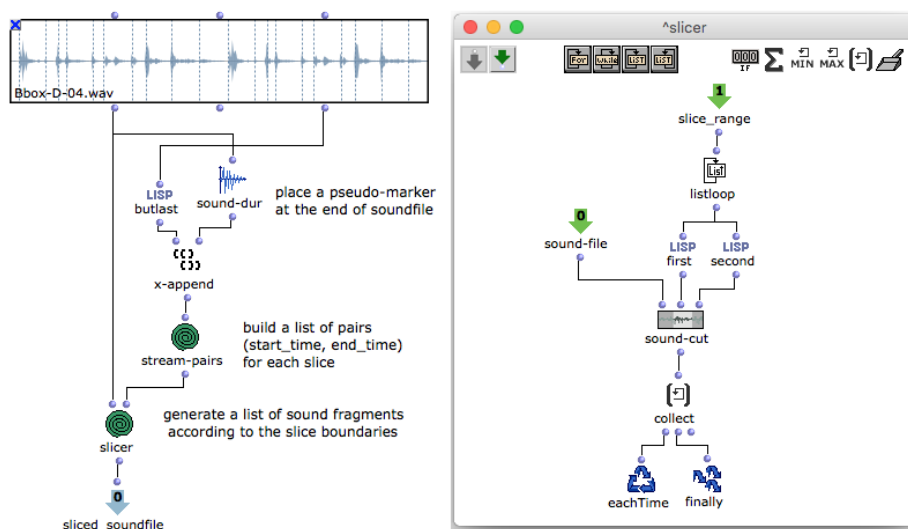


Figure 15. Slicing a soundfile. Right: Inside the *slicer* loop.

The re-composition of the new sound file is then done by successive applications of *sound-seq* using the *reduce*² function (see Figure 16).

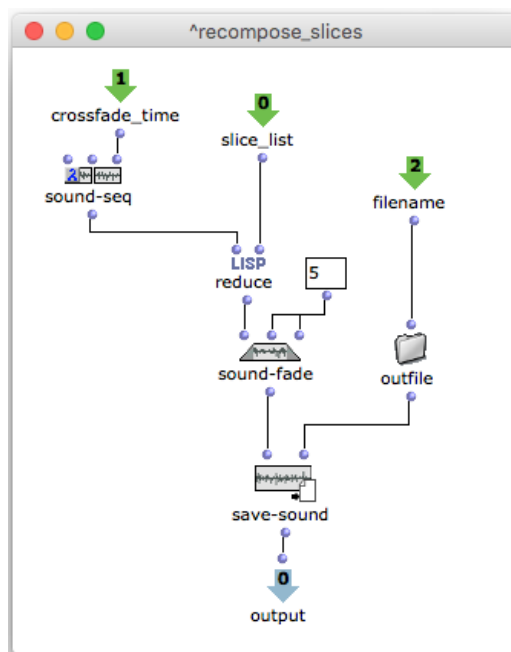


Figure 16. Recomposing slices in a new sound file.

Symbolic operations carried over the slice-list generate different re-orders of the sound file. This programmable approach enlarges enormously the possibilities that are offered by regular sampler processors, which usually propose a limited set of operations such as shuffling or reversing the order of the slices. Any kind of operation can be executed over the slice order, from simple rotation to complex conditionals based on the length or on the spectral content of the slices, or any other process limited only by the composer's imagination. Operations based on feature extractions of the slices (length, amplitude or spectral descriptions) can be used to impose a clear perceptive ordering while modulo operations, algorithmic or weighted-random permutations can give the most unpredictable (and often interesting!) results (see Figure 17).

²The *reduce* function takes a list of elements and combines them using an arbitrary binary operation (in this case the joining of two *sound* objects using *sound-seq*).

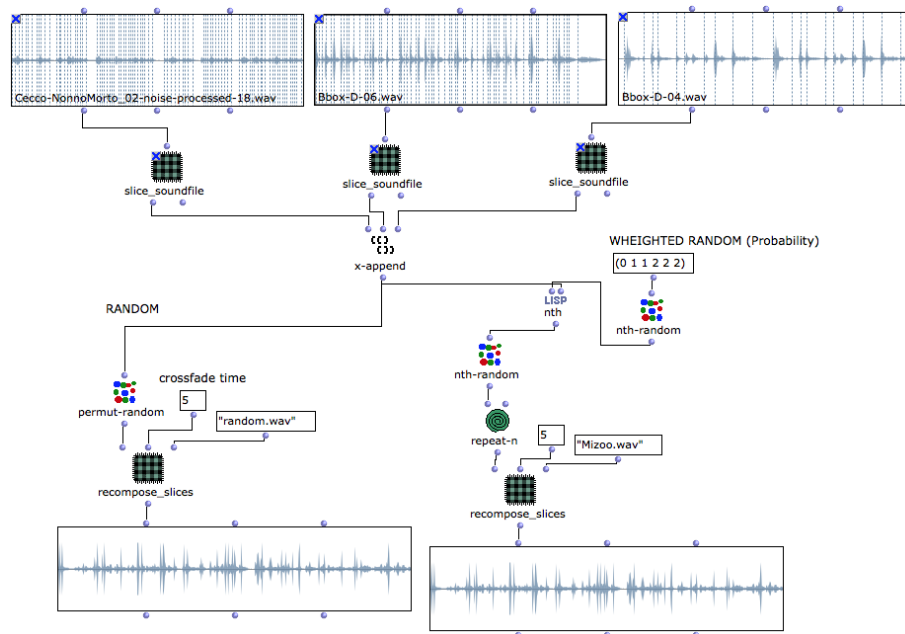


Figure 17. Construction of hybrid sound material (beatboxing sounds and extracted phonemes from *ottava rima* chant) by probabilistic juxtaposition.

Conclusions

Beside being a powerful instrument to speed up long and repetitive tasks while dealing with musical composition and audio processing, OPENMUSIC also opened new interesting perspectives of a conceptual nature. Being able to unify in the same workspace aspects of the compositions which are generally considered separate like the generation of score, the synthesis of sounds and the electroacoustic transformations, has been inspiring in the sense of a higher conception of the work as a whole.

Appendix

[Next page:] Transcript of the *ottava rima* poem *Poesia del sogno di un nipote e del nonno morto*. As recorded by Francesco Ugolini, Firenze 2006.

Natura dammi soccorso ai miei bisogni,
che alla fonte della Musa io mi bagni
Quindici ottave vi farò sui sogni
e un numero all'ambo s'accompagni.
Di rose, gelsomini e catalogni,
di zanzare scorpion piattole e ragni
Da un sonno tardo su il letto rivolto
Ecco un Nipote che sogna il Nonno morto.

E disse: « Come mai? chi vi ci ha porto?
Mentre un dì voi passaste all'altra vita?
Or siete diritto e voi moriste torto;
Ditemi, come la sta questa partita?... »
Disse: « Nipote mio, stai bene accorto:
Sono un'ombra terrena in via smarrita;
Il pensier mi guidò, se ti contenti,
Di saper le notizie dei viventi. »

« Le mura non son più sui fondamenti,
Com'eran prima, che voi bensapete:
Quelli zecchini d'oro e quelli argenti
Ora son fogli, e c'è poche monete!
Son diradati i frati nei conventi,
E pochissima stima gode il Prete;
Non è la Religione come una volta...
« Seguita, gli dicea, che il Nonno ascolta »

« La campagna ci dà buona raccolta:
Per grazia del Ciel, sono più belle:
S'empiono i tini, le bigonvice e sporta.
Ma son tanto più care le gabelle!
Un miglio intero, sai, fuor d'ogni porta,
Se tu vedessi, l'hanno fatte belle:
Si pesano i barrocci alla stadera,
E il nome è intitolato la barriera.

Rispose il Nonno: «Ma Nipote, è vera
Quel che mi dici tu ne' tuoi pensieri? »
Disse il Nipote: «Un altro n'è in carriera:
Gli hanno disfatto, sai, tanti poderi.
E vi è un vapore da mattina a sera,
'gli è quello che trasporta i passeggeri...
Tranta vagoni s'accatena attorno,
Da Firenze in due ore va a Livorno.

Poi c'è le guardie con trombetta e corno,
Acciò non attraversi il viandante,
E un fil di ferro lungo all'intorno,
Che si chiama il telegrafo volante.
In un quarto d'ora, sia di notte o giorno,
Si dà notizie per le città tante,
Nella chiamata, come al referire... »
Risponde il Nonno: « Tu mi fai stordire! »

« Un'altra, Nonno, ve ne voglio dire,
Di quando voi facevi il contadino,
E che il grano valeva dodici lire,
Il più bello e il più caro uno zecchino:

Ora vi è un dazio che non si può soffrire...
Il prezo è il macinato di mulino;
Per riportare a casa il sacco pieno
Ci vuol tre franchi e ottanta, non di neno.

Rincarato è le biade, paglia e fieno;
Rincarato è il dormire e la porzione;
Rincarato è le case ed il terreno,
Per tre volte è più cara la pigione
Nonno, ci fu la guerra sopra il Reno,
La Prussia si batté con Napoleone...
E Pio Nono ha perduto il temporale.

Nonno, Roma è venuta capitale,
Per quanto sia nelle dimostrazioni...
Nonno, ti ho raccontato il bene e il male,
Qua de' viventi tutti i paragoni.
Nonno, 'gli è un mondo, sai: chi scende e sale,
L'uomo giusto convien così ragioni,
Tutto t'ho detto in questa parte esterna
Dimmi come sis ta la in vita eternal...

Tristo è colui che l'umano scherna
Principiò a dir così, parlò al nipote,
l'inferno l'è un orribile caverna,
ombre notturne per le vie remote.
Tristo è colui che l'immortale scherna
L'ingresso è tetro che il terror percuote
Gole profonde e tempestosi venti
Ripiene d'urli, strepiti e lamenti.

Più giù c'è l'orlo e il cerchio dei serpenti,
Di mostri di demoni scatenati;
Che riguardano tutti i malviventi
Ch'ebbero al mondo i poveri strapazzati.
Ci sono degli avari qui presenti,
Ci sono fattori milordi preti e frati;
Di spie di ladri di ruffiani d'ogni veleno
La terza parte dell' inferno è pieno

La discendenza tua là troverai,
Genitori, fratelli e le sorelle,
Nonni, bisnonni e figli se ce n'hai
Son costì fra gli Arcangeli e le ancelle.
Il Padreterno tu saluterai,
Quel divino che fece opere belle;
Cerca di star con lui di notte e giorno,
Ti lascio in terra e in paradiso torno.

Si risveglia il nipote tutto adorno,
Di fede di speranza e religione;
Ogni vizio mondano gli fa scorno,
Solo confida alla sua vocazione.
I dritti del cantore interpretarono,
I segni dati all'immaginazione;
L'indice mi svegliò qui all'improvviso,
Per risvegliar pensieri in paradiso.

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