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Background, sources, compositive process, aims

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Incontri di fasce sonore by Franco Evangelisti.
From the rebuilding to the analysis via
synthesis process

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What we have done

- Reconstruction of the piece “as a technician” (process based work)
- Created a brand new listening score
- New analysis
- Improved study about Evangelisti

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What we have **NOT** done

- Restoration
- Sound study
- Problems like reverb

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History

- History
 - 1956-57
 - WDR Cologne

The dream (1)

- Evangelisti's dream

- “The problem of the creation of the score, with explanations and symbols, is fundamental from an historical point of view as proof of our work, due to the fact that tapes are going to deteriorate [. . .] and only a precise documentation will allow people to obtain something from us and, eventually to reconstruct our work.”

From AAVV. *Interventi. La Biennale, (44-45): p.32, 1961.*

- “Electricity and automation are two closely connected concepts.”

From FRANCO EVANGELISTI. *Verso una composizione elettronica. Rapporto tra mezzi ed individuo nel suo tempo. In “Ordini. Studi sulla nuova musica”, (1): p. 51, 1959.*

The dream (2)

- Evangelisti's dream
 - “To obtain certain sound-transformations we should need various very expensive pieces of apparatus wich would make it possible to do it without the human hand.”
From FRANCO EVANGELISTI. *Incontri di fasce sonore. Universal, 1958 (introduction)*
 - “Much depends on the manual dexterity of the technician, a fact that shows us still to be far away from genuine electronic sound-production, electronic in the absolute sense of the word.”
From FRANCO EVANGELISTI. *Incontri di fasce sonore. Universal, 1958 (introduction)*

Texts

- Franco Evangelisti, *Incontri di fasce sonore*, Universal, 1958
- Franco Evangelisti, *Verso una composizione elettronica. Rapporto tra mezzi ed individuo nel suo tempo*, in “Ordini. Studi sulla nuova musica”, (1): p. 51, 1959.
- Franco Evangelisti, *Dal silenzio a un nuovo mondo sonoro*, Roma, Sema, 1991.
- Franco Evangelisti, *Intervention*, in *Interventi*, La Biennale, (44-45): p. 32, 1961.
- several articles and analysis on *Incontri di fasce sonore*

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The original score

The image displays a handwritten musical score on a grid of staves. The score is organized into several systems. The top system includes a treble clef, a key signature of one flat, and a time signature of 3/4. The notation consists of various rhythmic values and melodic lines. The middle system features a large block of notes with a dashed line underneath, possibly indicating a specific performance instruction or a section of the score. The bottom system shows a complex rhythmic pattern with various note values and rests. The score is annotated with various markings, including dynamic markings like 'mf' and 'f', and performance instructions like '110Gf'. The overall layout is dense and detailed, characteristic of a composer's working draft.

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Score description

- The score
 - realization score
 - “*Leporello*”
 - 2 staves, 21 lines for the amplitudes, single staff for amplitudes, labels

Compositive process (1)

- Process
 - sinus tones
 - freq scale
 - mixtures, used:
 - “as they are”
 - reverb
 - to ring modulate
 - transposed
 - double reverb

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Compositive process (2)

- Structure
 - Linear counterpoint (focal point, see below)
 - Reversed beginning in the end
- Technical Means
 - oscillators
 - ring modulation
 - reverb

Why “Incontri di fasce sonore”

- Why
 - Score
 - Precise indication
 - Only electronic sounds
 - Born for automation
- Other pieces have problems
 - Stockhausen’s *Studie 1*
 - A few pieces from Warsaw studio (Dobrowolsky, . . .)

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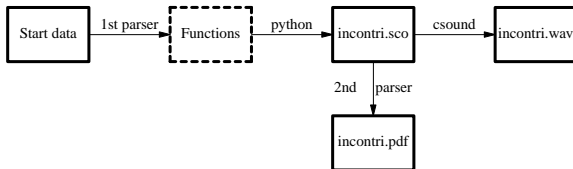
Bye

Methodology 1

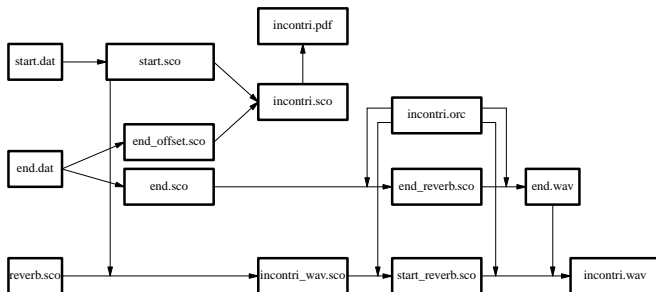
Methodology 2

Methodology 3

The generative process (1)

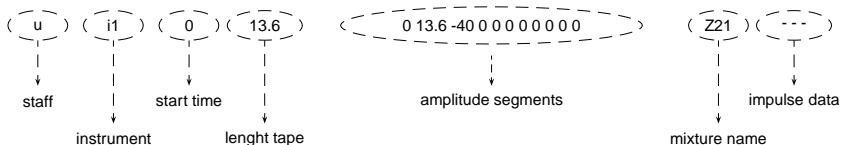


The generative process (2)



The generative process (3)

- The starting data file
 - events
 - as a technician
- Example:



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The generative process (4)

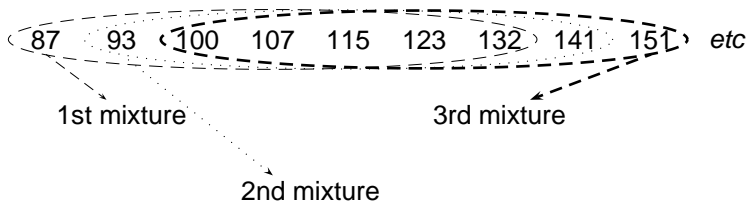
- Csound score and audio files
 - .dat, .orc, .sco
 - reverb

Generating mixtures (1)

- Rules, mixtures structure
 - Several groups
 - Several rules
 - Not explained into the text: it is necessary to discover them
 - Internal structure: dictionary (keys == mixture name, values == groups of 7 mixtures)

Generating mixtures (2)

- Examples:



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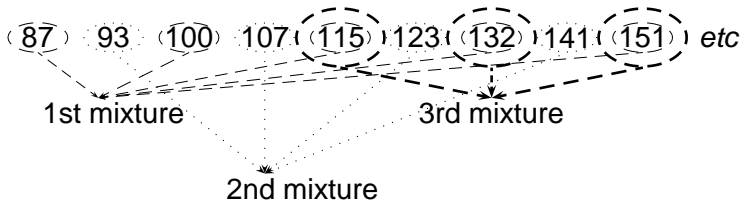
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Methodology 2

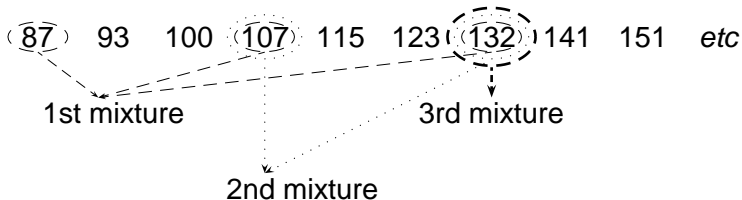
Methodology 3

Generating mixtures (3)



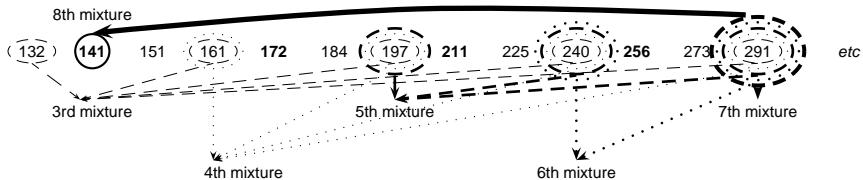
Generating mixtures (4)

- Complex Example (a):



Generating mixtures (5)

- Complex Example (b):



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The new score (1)

- Why another score?
 - need for listening score
 - less data, more readable
 - automatically build
 - make Evangelisti's dream come true
 - control system for mistakes (see below)

The new score (2)

- Software
 - python (because it is extremely good)
 - csound (because it is the best)
 - bash scripting (because we love the cmd line)
 - pic (because we are crazy)
- General features
 - one BIG box
 - label == mixture name
 - slope == envelope
 - different lines for different instruments
 - possible to scale the score from 0.1 seconds to ∞

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The new score (3)

The image shows a page of handwritten musical notation. At the top, there are three staves with musical notes and clefs. Below these, there are several horizontal lines representing a score, with various annotations and markings. A prominent feature is a series of numbers along the bottom: 55.4, 54.3, 52.8, 47.4, 46.4, 42.4, 37.4, 37, 33.4, 32.4. The notation includes various symbols, including what appears to be a large 'X' or 'P' in the middle, and some vertical lines connecting different parts of the score. The overall style is that of a composer's working draft or a score for a specific performance.

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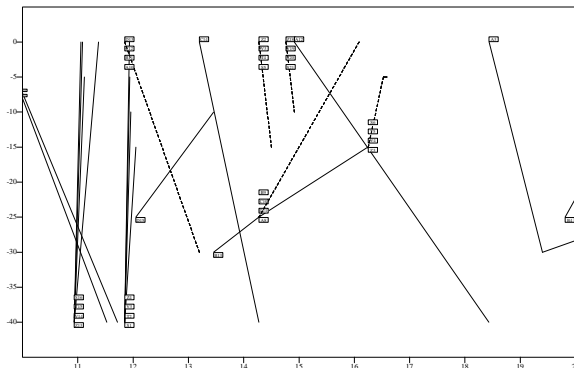
Bye

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The new score (4)



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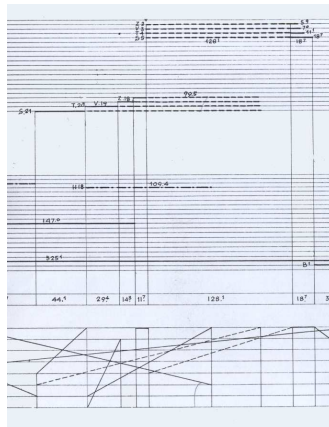
Bye

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The new score (5)



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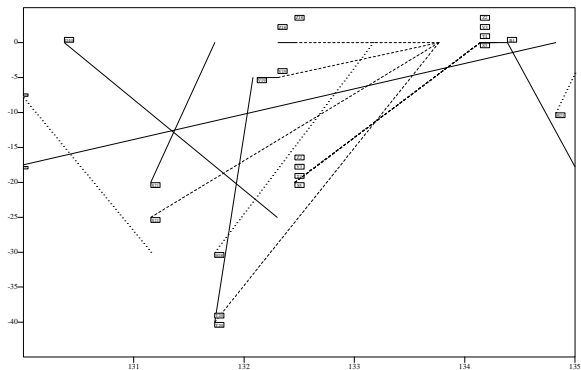
Bye

Methodology 1

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The new score (6)



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Case study (1)

Case study (2)

Analysis (1)

Analysis (2)

Analysis (3)

Analysis (4)

Analysis (5)

Instruments

- Like Evangelisti, we created the following (with Csound):
 - simple oscillator
 - reverberated oscillator
 - impulses. They are obtained by a simple ring-modulation instrument
 - reverberated impulses
 - transposed mixtures
 - transposed impulses
 - transposed and reverberated impulses
 - double reverberation (for the ending part of the piece)

Comparing the audio

- Problems
 - Reverb
 - Some impulses
- Examples:
 - 04-08 sec. ca.
 - 08-12 sec. ca.
 - 46-52 sec.
 - 1:35-1:41
 - 2:00-2:04
 - 3:04-3:22

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Analysis

- Detailed analysis
 - not possible to be covered now (long)
 - how:
 - macro-segmentation (episodes)
 - micro-segmentation (events)
 - interpretation of recurring figures and listing
 - consideration about “linear counterpoint”

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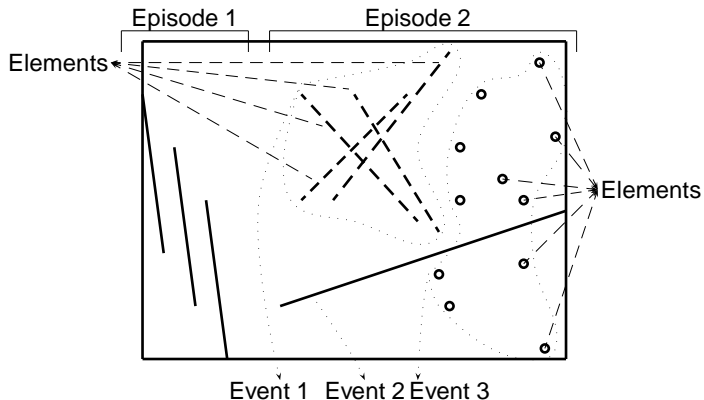
Analysis (2)

Analysis (3)

Analysis (4)

Analysis (5)

Explanation



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Analysis (4)

Analysis (5)

Recurring figures, structure and counterpoint

- Recurring figures
 - Leading voice
 - Rapid agglomerate
 - Juxtaposition and decay
 - Rising superposition
 - In-out-reverb
- Structure
 - 21 episodes
 - more than 67 events
- Counterpoint
 - contrast
 - similar and oblique motion
 - standard imitation
 - mirror
 - “amplitude progression”, etc.

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Analysis (1)

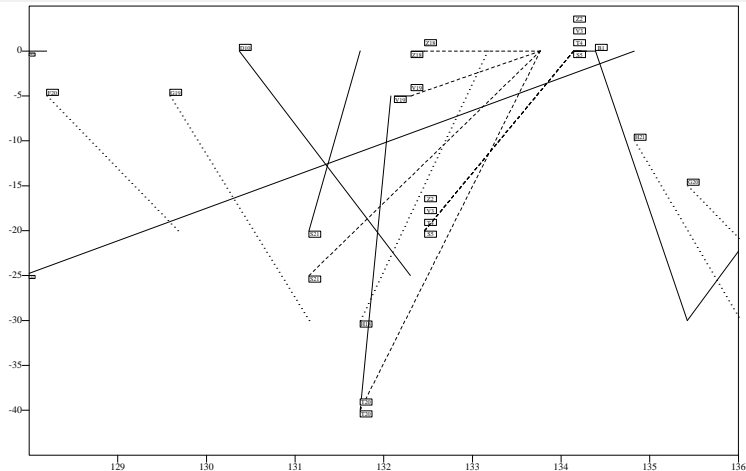
Analysis (2)

Analysis (3)

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Example B - Complex episode



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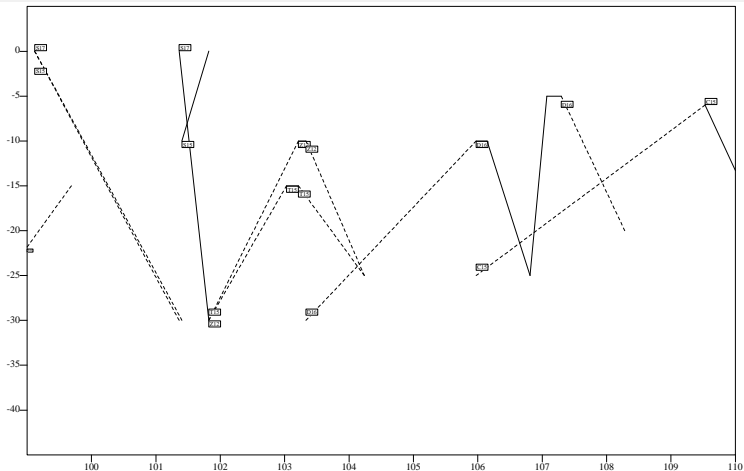
Analysis (2)

Analysis (3)

Analysis (4)

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Example C - Mirror



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Analysis (2)

Analysis (3)

Analysis (4)

Analysis (5)

What is “linear counterpoint” ?

- counterpoint of amplitudes
- different rules for frequencies
- substitution of typical *counterpoint* processes with . . .
. . . an elaboration of *linear* (line == the amplitude of freq. mixture in time) events

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Analysis (3)

Analysis (4)

Analysis (5)

“Mistakes” list

- aesthetical issue: what does it mean to *correct* an electroacoustic piece?
- mistakes / differences
- kind of mistakes:
 - simple graphical mistake
 - bad graphical mistake (ambiguity)
 - missing data
- 70 mistakes found

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Conclusion (1)

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Summary

- Useful for didactic purpose
- Critical edition-revision of the piece
- Reusable methodology
- Enrich the study of Evangelisti

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Conclusion (1)

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TODO, if we find the money. . .

- Broaden the field of study (repertoires, authors, etc.)
- Create a gui for the software
- Generalize the software (rewritten objects-oriented)
- Release it under GPL license
- Try to link it to Audio Retrieval research (well. . . too early now)

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Grazie
Thank you
Merci
Danke