Analysis of *Quartetto No 4* by Giacinto Scelsi

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In Giacinto Scelsi's fourth *String Quartet* (1964) Scelsi consolidates many of the techniques pioneered in his works of the late 1950s and early 1960s; including the use of sustained focal pitches, the use of timbre as equally important compositional parameter and the use of microtonality – all features one can find in works from his groundbreaking *Quatre Pezzi (sul una nota sola)* onwards.

In *Quartetto No. 4* focal pitches, timbre and microtonality all feature, but one of the most interesting aspects of the work is the way in which Scelsi combines these aspects to create form, phrasing and harmony.

Focal Pitches

From the 1950s onwards Scelsi's work used drone-like focal pitches instead of conventional harmony. These focal pitches provided both form and phrase structure. Phrases were created through the establishing of focal pitch, followed by either:

- a semitonal or microtonal movement away from that focal pitch or
- micoronal clustering around the focal pitch

These were always followed by a return to the original focal pitch or a different one.

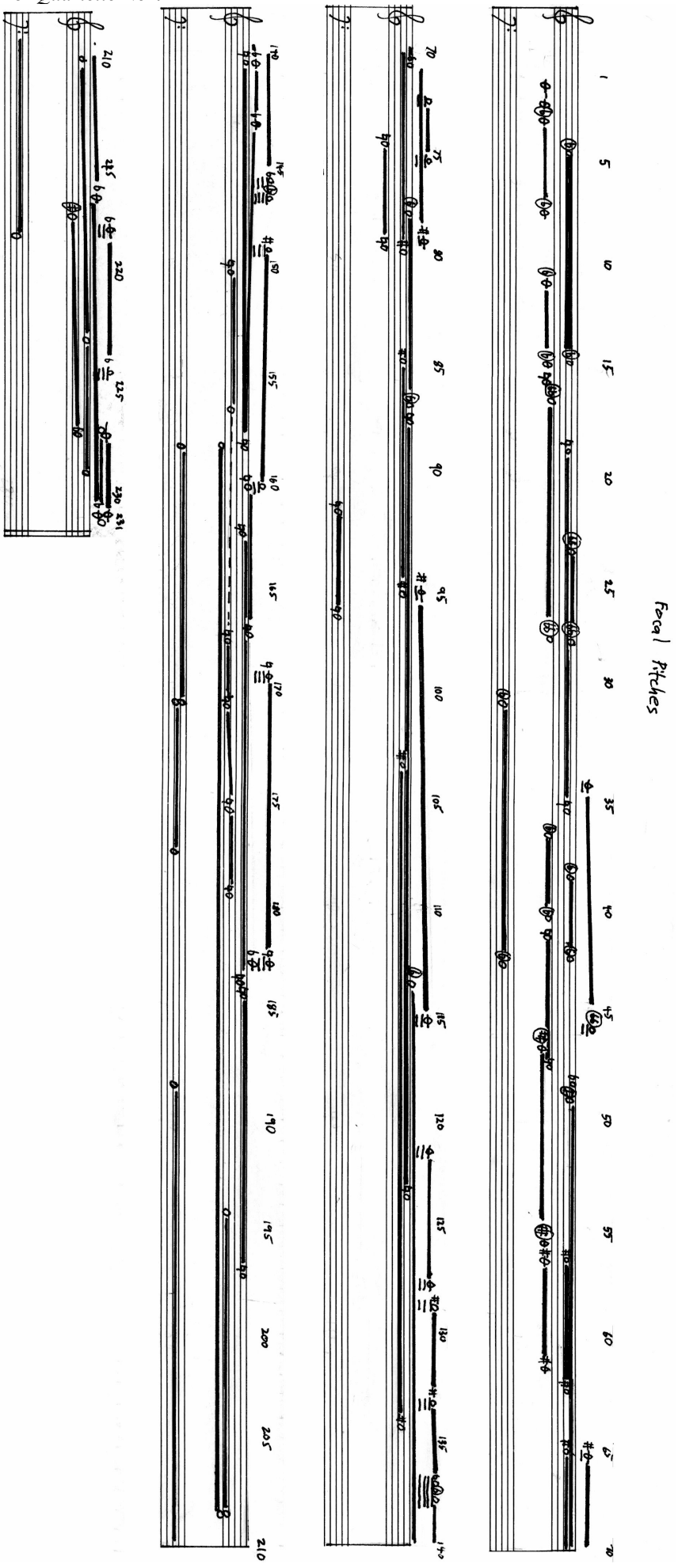
This technique can also be seen in *Quartetto No 4*, where this microtonal or semitonal movement around a focal pitch is key to creating phrase structure. The movement:

focal pitch – non focal pitch – focal pitch
mirrors the classical:
consonance – dissonance – consonance or,
tension – release phrasing archetypes.

Form

Form in *Quartetto No 4* is defined by focal pitches, pitch ranges and harmony.
In the diagram below, the focal pitches of the piece are plotted out. From the diagram over the page it is possible to see how the focal pitches in the piece create an arc-like form for the piece.

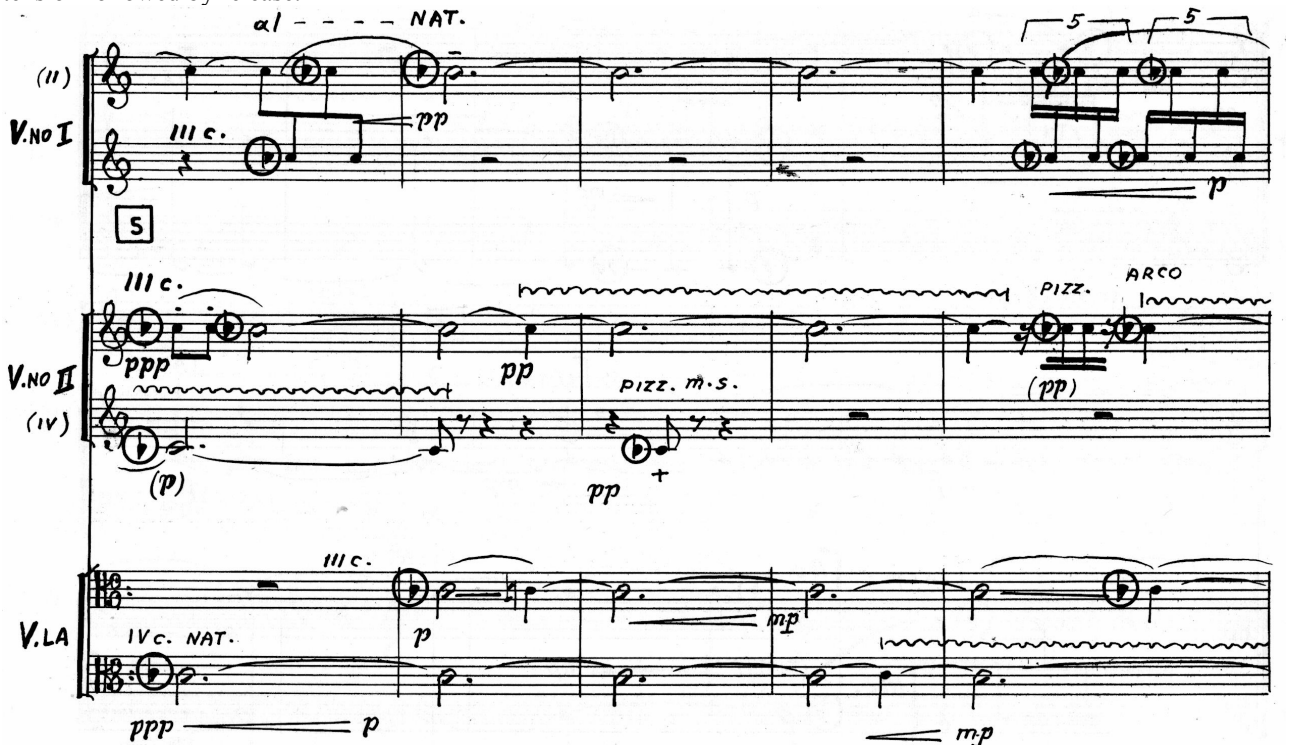
Fig 1. Focal Pitches for *Quartetto No 4*



This arc form is also a feature of the pitch-ranges used throughout the piece, as the notes in the piece are normally clustered around the main focal pitches.

Another important aspect about the way the focal pitches function is related to the way in which they interact. The piece consists of two or three layers of focal pitches at any one time. At the start of the piece, there are two layers which reinforce each other, starting on c quarter flat.in two octaves (bars 2-15).

Fig 2. Two layers of focal pitches at the start of the piece (bars 5-9). The C quarter flat appears in two otaves, these are the starting points from which the piece branches out into three layers. In this example there is also an example of how Scelsi uses microtonality to create phrasing: The viola moves from C quarter flat to C natural and back again, creating tension followed by release.

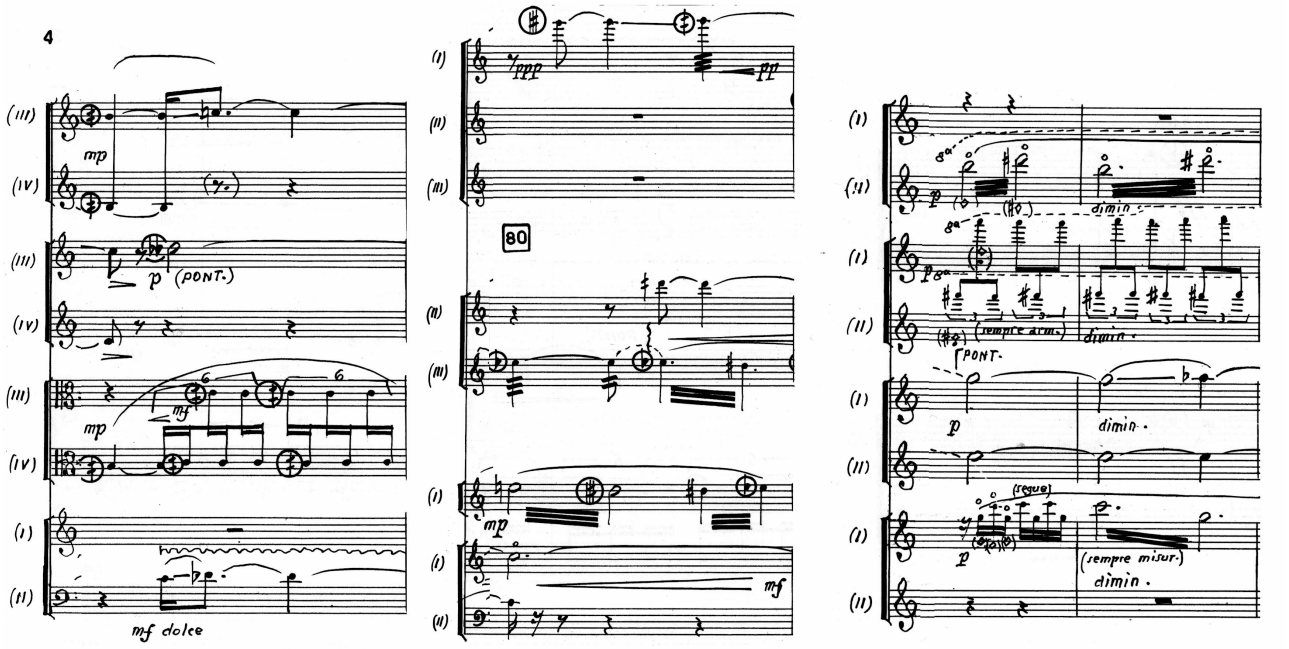


From this point onwards, the three layers gain growing independence, often moving in ascending lines of microtonal clusters (see bars 95-185). The increasing autonomy of the layers creates conflicts between focal pitches of different pitch classes, a tension which Scelsi exploits to dramatic ends. In the middle of the piece (bars 87-185), Scelsi uses the tension between the two focal pitches of C# and E and later uses D and F (bars 194-208) which creates an odd implication of a D minor tonality near the end of the piece.

As the piece progresses Scelsi increases the intervals between notes in each of the layers so that, whilst the beginning of the piece up to bar 28 only uses intervals of a semitone or less, by bar 80-84 the centre layer uses intervals of a major third and, at the very end (bars 227-229) the cello can be seen playing tremolos of a perfect fourth.

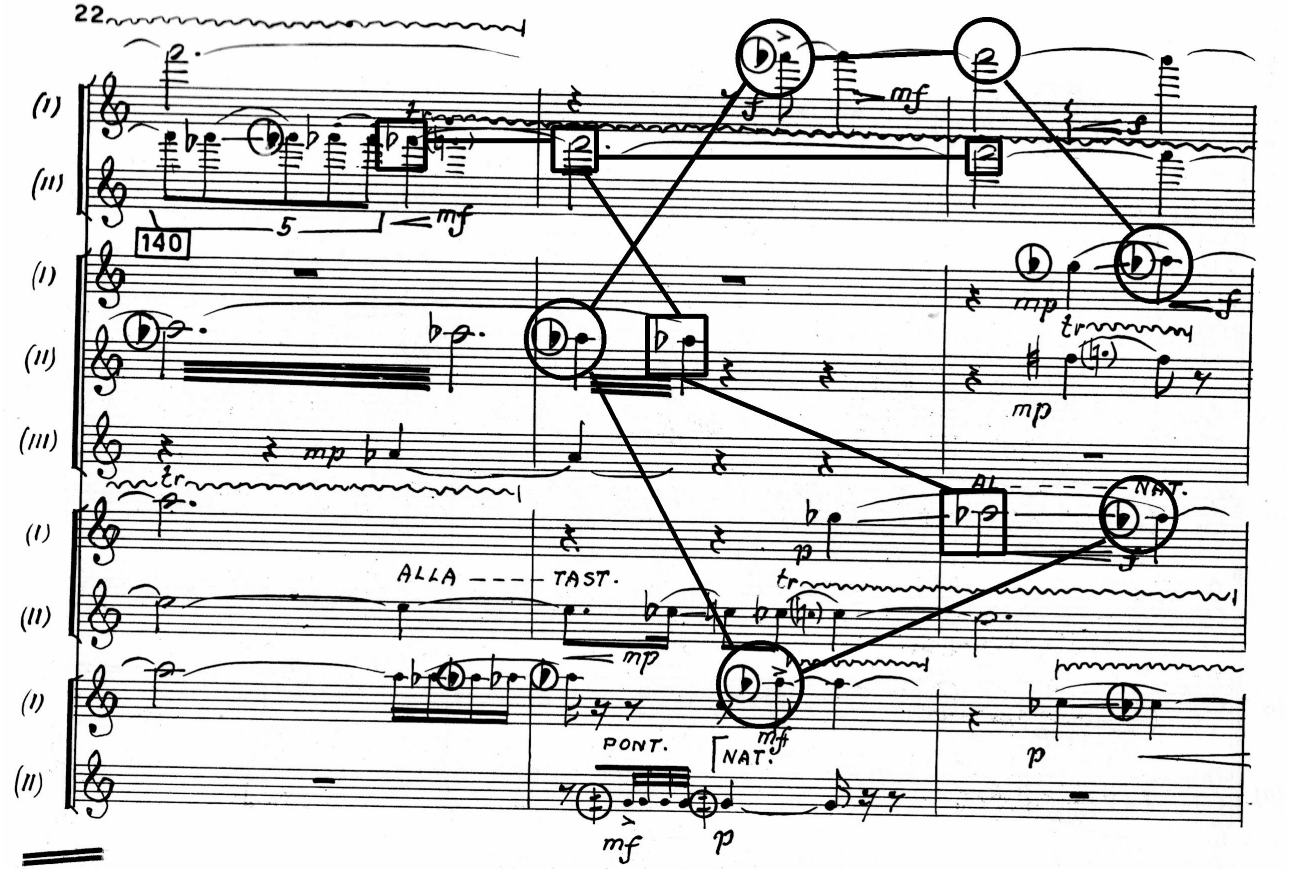
Fig 3. Comparison of bars 22, 80 and 227.2-228 and the intervals used.

a) Notice the quarter of a semitone interval in the second beat in the second and bottom systems.
b) Notice the major third interval between the 6th and 7th systems.
c) Notice the perfect fourt tremolo in the 7th system.



It has been written that, like Anahit, this piece uses the Golden Section as a formal tool. However, on closer inspection, the Golden Section should occur at bar 142, an indistinguishable bar in the middle of a phrase.

Fig 4. Mathematical Golden Section (bar 142) – notice how the A flat (square) and A quarter flat (circle) focal pitches continue from bar 141, meaning that very little changes in terms of harmony:



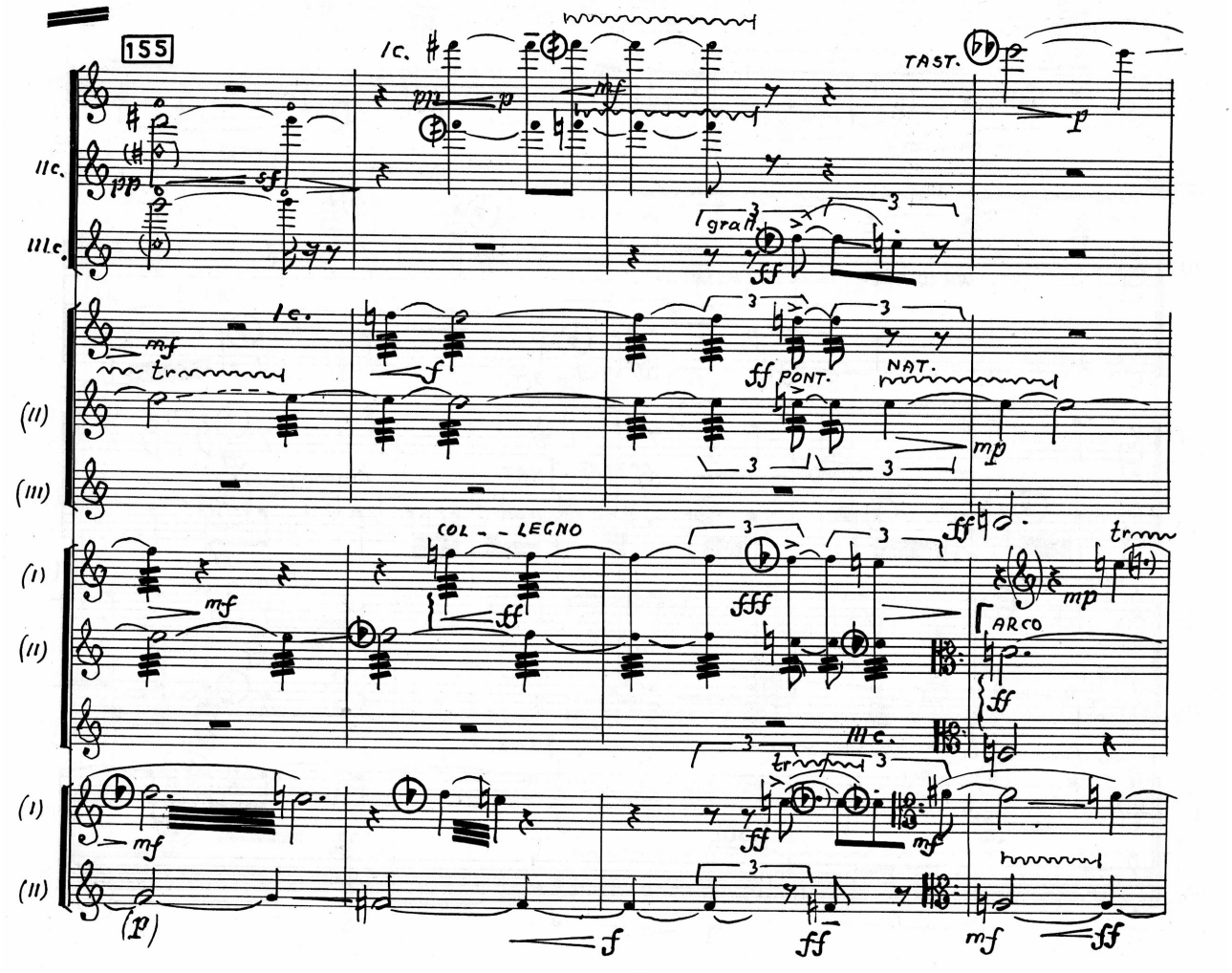
Calculations

The whole piece is in the time signature ¾ apart from five bars:
134 in 4/4,
135 in 2/4
170 in 2/4
214 in 4/4
215 in 2/4

Taking these bars into acount the Golden Section would be:
Bars 1-231 (in ¾) including all bars in other time signatures = (226 x 3) + 4 + 2 + 2 + 4 + 2 = 692
692/0.618033989 (Golden Section) = 142.5

However, at bar 158 there is a clear audible change that seems like a formal marker. Although this is not the mathematical golden section , it is close (0.680636 not 0.6180…). Could it be that Scelsi took artistic license in the location of his golden section? Perhaps, but what is interesting is that, although bar 158 seems to indicate an important formal change while bar 142 does not, the map of Focal Pitches on page 2 indicates that the peak of the arc-like formal structure of the piece is around bar 142.

Fig 5. At bar 158 a clear change occurs. Notice how the chord of E three quarters flat, E natural, D, F natural and F sharp is a clear change from the previous bar in which only F sharp, E natural, E quarter flat, F quarter flat and F natural. This change is further highlighted by the simultaneous playing of the chord by all the instruments and the sudden jump in register in the Cello and viola.

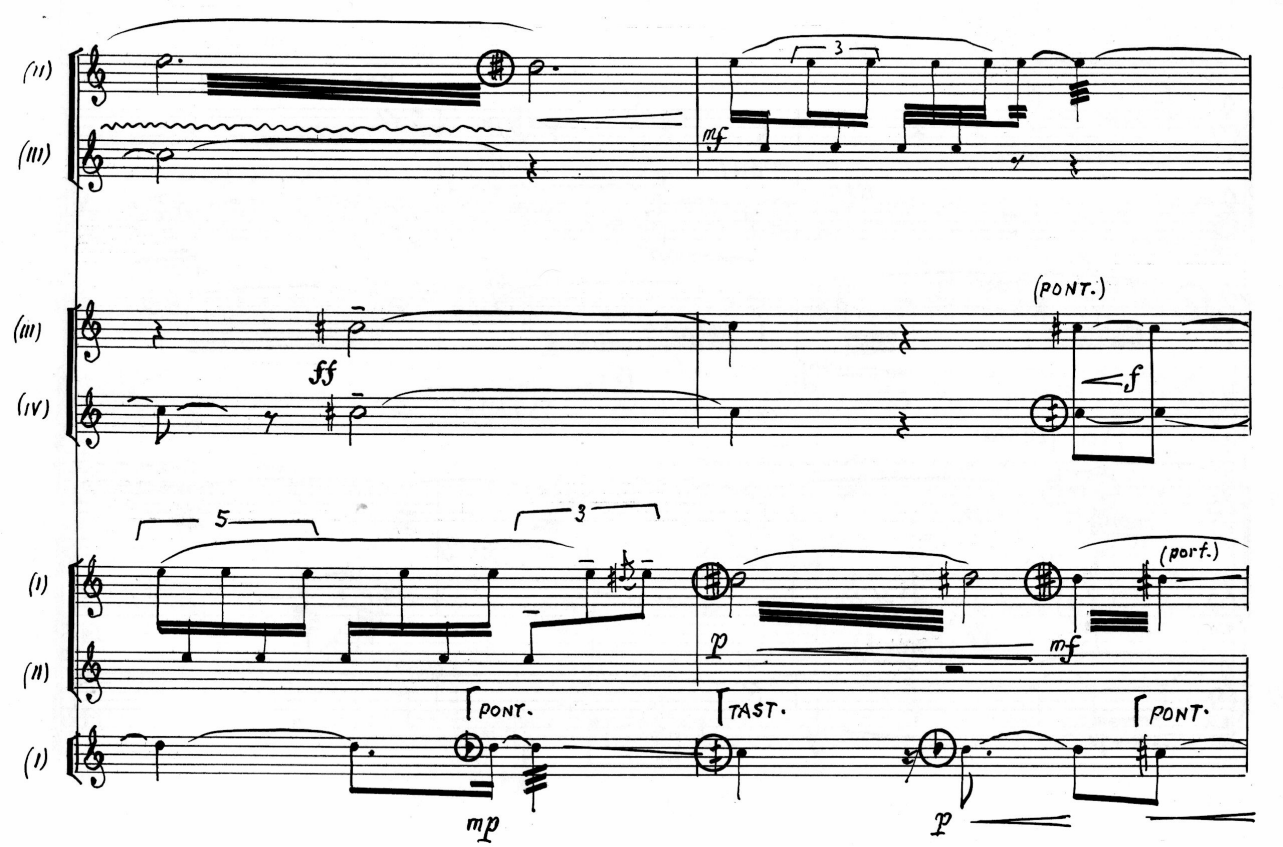


The reason for the five bars with different time signatures is unclear as the piece is without a clear pulse and, although this could be due to gestural reasons, in other places in the work important moments are not always set on the first beat of the bar.

Microtonality

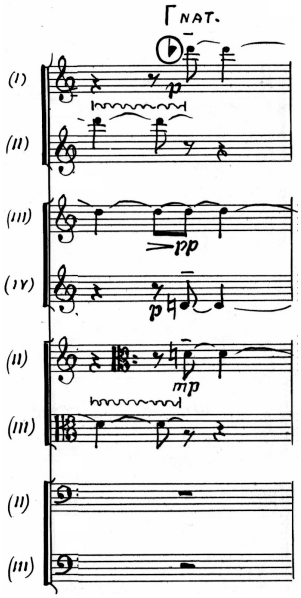
Microtonality is used in Scelsi's works in several ways:

- To provide tension by creating microtonal clusters around a focal pitch.
  Fig 6. Bar 87, microtonal clustering around E and C#.



- To destabilise focal pitches by either
  - adding a pitch a quarter of a semitone away from the focal pitch (see fig 2) or
  - adding a pitch a quarter of a semitone above or below the octave above or below the focal pitch. (see below)

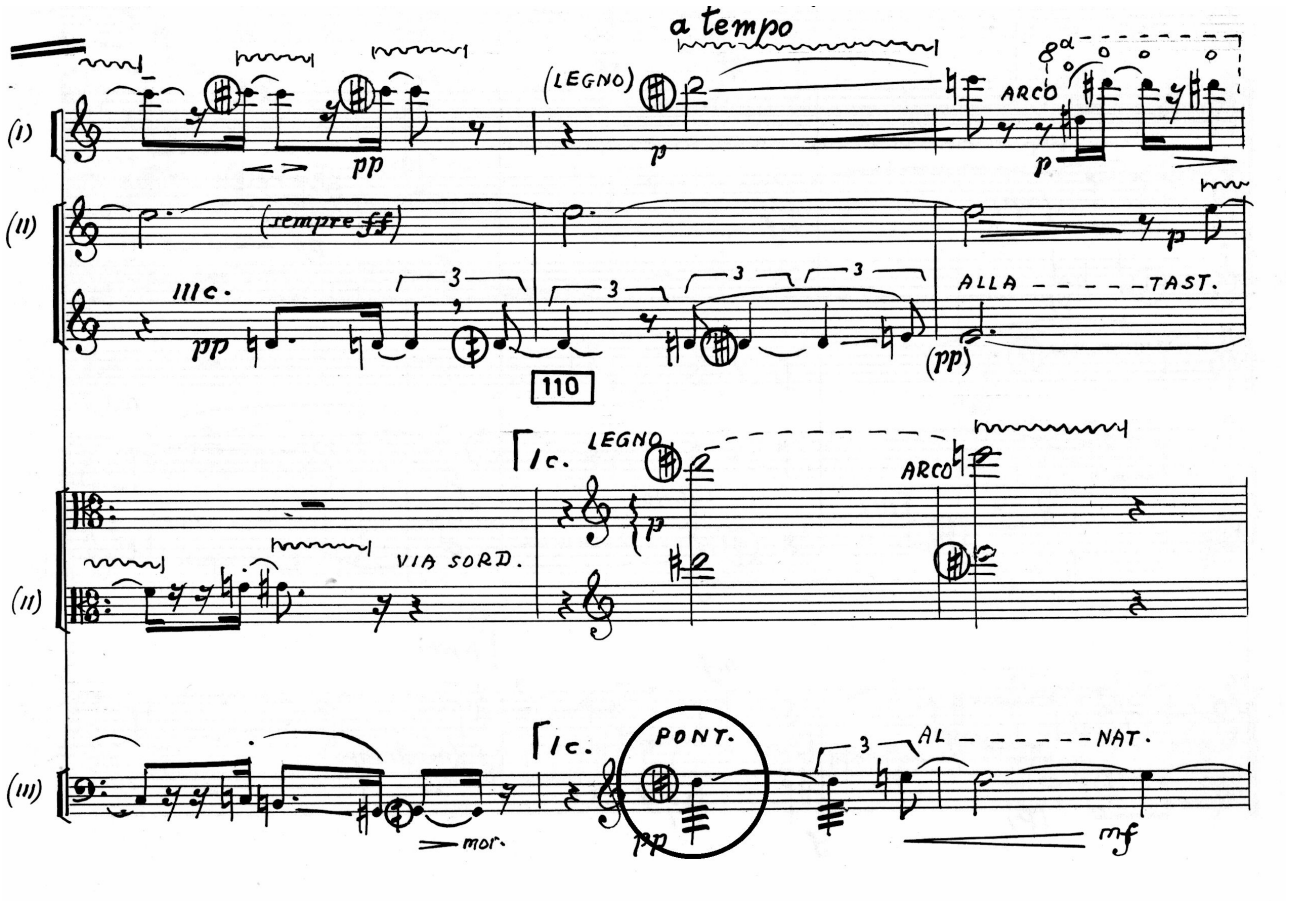
Fig 7. (bar 38) adding a pitch (D quarter flat, top system) a quarter of a semitone below the octave above the focal pitch (D natural).



Harmony
One of the characteristic elements of this piece as compared to Scelsi's earlier works is the way in which the tension between different focal pitches creates harmony which contrasts to the normally used microtonal variations on the focal pitch and its equivalents at different octaves.

Timbre
Harmonically, the most important timbral characteristics that occur in the piece are through the contrasting between *sul ponticello* and *sul tasto* playing. The movement to *sul ponticello* contains more overtones, which Scelsi uses both to strengthen existing focal pitches classes by using the lower overtones to double notes of the same pitch class in the octave above.

Fig 7. Use of Sul Ponticello to reinforce existing focal pitches (bars 109 -111)



Phrase Structure
Phrase structure in the piece is created through the establishment of a set of situations that mirror the tension-release archetype used in classical music.

Release	**Tension**
A harmony in which a single focal pitch is the only (or predominant) note (in one or more octaves).	The clustering of notes around a focal pitch,
A harmony in which the number of pitch classes is reduced to pitch classes which are at least a minor third apart.	Several previously established focal pitches playing simultaneously.
Return to previously established focal pitch.	Movement away from focal pitch.

Conclusion

Scelsi's piece works by using focal pitches as places of rest and by creating tension through:

- microtonally surrounding focal pitches,
- disrupting focal pitches by adding microtones around the octaves above or below the pitch,
- pitching two or more tonal centres against each other or
- microtonally variating from the focal pitch.

There are three separate lines of focal pitches which gain growing autonomy as the piece progresses. The string quartet acts as one instrument, frequently swapping between these lines. This autonomy allows more conventional harmonic intervals to emerge, such as the major third which becomes so dominant in the last half of the piece.

On a large scale, form is created through:

- the arcing movement of both focal pitches and pitch ranges.
- the gradual increase of the intervals used within each layer.
- The growing autonomy of the layers.

On a smaller scale, feelings of tension and release caused by the reinforcing or destabilising of a focal pitch or pitch class provide the phrasing of the piece.