

Mihai Popean - Forensis Analysis 1

Case Study: Krzysztof Penderecki, *Strophen* (1959) for soprano, speaker and ten instruments.

This analysis is best followed-through while studying in parallel the original score, for accurate observations and eventual annotations.

In identifying this particular work, a first quick visual analysis of the score already revealed notable particularities. The lay-out is organized in a cut-off style, specific to works of the twentieth century involving an element of innovation.

The instrumentation (Flauto, Xylorimba, Piatto piccolo, Piatto, Gong, Tam-tam, Pianoforte, Soprano, Voce recitante, Violino, Viola, Contrabasso) suggests an unusual mix of voices and instruments for a chamber ensemble setting as the second voice is a speaker, pointing again to the practice of the twentieth century music in which the emphasis on new sounds or the treatment of instruments in non-idiomatic ways would require new ways to approach instrumentation. Besides, the speaker itself is a product of the twentieth-century technological development.

The names of the instruments are presented in their Italian version (Pianoforte, Piato, Contrabasso) specific to the practice of European composers. The use of Xylorimba (a five octave extended-range xylophone) further narrows down the list of the possible composers as it is not a widely used instrument and, in the twentieth century, there seem to be just a handful of significant composers writing for this instrument.

The list includes Alban Berg (*Drei Stücke*), Pierre Boulez (*Le marteau sans maître; Pli selon pli*), Olivier Messiaen (*Couleurs de la Cité Céleste; La Transfiguration de Notre Seigneur Jésus-Christ; Des canyons aux étoiles; Saint François d'Assise; Éclairs sur l'Au-delà*), Stravinsky (*The Flood*) and Karlheinz Stockhausen (*Gruppen*) as discussed in the *Xylorimba* article from the *Oxford Music On-line*.

The text for both the soprano and the speaker is in Polish, which also suggests a European composer or at least of European origin, especially due to the fact that the other language present in the score (German) appears only as an alternate translation (always after the Polish version) and never for the text used by the soprano or speaker.

The rhythm exhibits a slight degree of complexity but remains highly approachable suggesting that the emphasis might be in other compositional layers such as pitch or texture.

The cut-out score written probably by a Polish composer, exhibiting rhythmic complexity while lacking time signature but skillfully plotted on a time graph of three different metronome marks pointed to Penderecki due to the fact that similar traits are present in *Threnody for the Victims of Hiroshima*:

1. No meter
2. At the bottom of each page there is a wide line which designates in seconds for how long each section should be performed)

A library search for a listing of Penderecki's works led to one of the three pieces simultaneously winning the first prizes of the 1959 competition organized by the Polish Composer's Union: *Strophen* (1959) with this exact instrumentation written on original texts of Menander, Sophokles, Jesaja, Jeremia and Omar El-Khayám and premiered 17 September 1959 in Warsaw, Poland.

The work was premiered by the Silesian Philharmonic Chamber Orchestra during the *Warsaw Autumn International Festival of Contemporary Music* where he was exposed to the music of Stravinski, Honegger and Schoenberg at its first edition in 1956 and consequently Webern, Boulez, Berio, Nono and Stockhausen at its second edition in 1958.

The other two winning works were *Emanations* for two string groups and *Psalms of David* for a cappella choir. The library at Bowling Green State University where I did my research did not own a

recording of this piece, at least at the time, although a recording was found on *Youtube*; however, the available score while listening to the example on youtube was indeed a perfect match.

Considered as being the leader of the Polish *Sonoristic* school characterized by the use of instruments and voices for effects and extended techniques in order to obtain non-specific sounds, Penderecki was largely influenced in his early works by Webern and Boulez.

Strophen is among the first sonoristic works along with *Dimensions of Time and Silence* (1959-61) that resemble such influences. He developed his unique style quickly and by the time he wrote his hallmark sonoristic piece *Threnody to the Victims of Hiroshima* (Tren Ofiarom Hiroszimy, 1960, for 52 string instruments) he already achieved a personal musical blueprint that led to *Fluorescences* (1962), the piece considered as a turning point in his compositional style, employing devices and objects as part of the sonic material.

Strophen appears as a carefully crafted work in which the serial distribution of pitches is not an end goal in itself but rather a by-product of his choice to render material based on intervallic preferences and dense pitch class sets.

This is in contrast with the notation and layout style which showcases a cut-out score filled with empty spaces, devoid of time signature and with a sinuous move through three different approximate metronomes marked “ca. 48, 54, and 66”.

The dotted vertical lines are points of synchronicity between the melodic and the harmonic gestures. They do not serve the function of bar lines nor that of strict temporal markers as many times the variations in tempo do not match these points of synchronicity.

A formal analysis would surely consider the text as intrinsically connected with the overall form. The use of a speaker seems an appropriate means to mark formal points throughout the score, especially due to the fact that the *Sprechstimme* part is the one to

initiate the dialogue each time, either alone (beginning) or immediately followed by the soprano (i.e. page 12 and page 16).

There is no translation of the text provided in any of the Latin, Italian, Spanish, French or English languages which makes it difficult to analyze the use of the text in relation to the formal, melodic, harmonic and material distribution (introduction of certain pitches) or architecture.

The original texts (Greek, Hebrew and Arabic) are presented at the beginning of the score as well as their Polish and German translations. Knowledge of Polish could be useful for deriving sense from the use of agogic accents as being possibly connected with minute details of the pitch material distribution as the choice of texts from important authors suggests that Penderecki probably uses different viewpoints of an idea common to all of them.

At the very least, the connection between the texts becomes obvious when available in an accessible format and, even if not organically connected with the work, at last it serves to draw aesthetic conclusions.

For the purpose of this analysis, I chose the first section rendered throughout the first ten pages of the score (pages 7-16). The *sprechstimme* starts on the second half of page 8 marking the beginning of the first text occurrence [*charíjen est' ánthropos, án ánthropos e*]. It can be observed that the first appearance of the word *ánthropos* after *charíjen est'* is rendered on a flat contour with all syllables on the same 'pitch'. When repeated (án ánthropos e) the pitches differ creating an arching contour that ends in the vowel 'e'. This might not seem relevant at first but the same trend is observed in the soprano entrance, which follows on page 9 [*hóste thnetón ont', ekéjnen ten ekéjnen ten teleutájan idéjn heméran e*].

The first occurrence of *ekéjnen ten* after *hóste thnetón ont'* appears on an arching contour. When repeated, (ekéjnen ten) not only it is rendered on a flat contour (same note) but it even loses the pitch quality as the note heads are given an (x) shape indicating therefore a lack of pitch.

This in itself is a soprano contour retroversion of the *sprechstimme* line expanded further with material rich in (012)/(013) and ending in the vowel 'e' (teleutájan idéjn heméran e) just like the *sprechstimme* line. Also, notable is the fact that 'e' is represented by Pitch Class 0 (C) which is the pitch class with which the score starts on page 7, the Flute line (notice that the first note on cymbal is not an actual pitch). The vowel 'e' in the soprano line appears as a capital letter (E__) and suggests a different function than the vowel the *sprechstimme* ends with. Its importance becomes obvious on pages 16-17 where the soprano renders all the vowels one after another in capital letters [U-O-E-I-A] thus marking the possible beginning of a new section.

This idea is also supported by the first occurrence of "tacet" in all other parts except for the two voices. However, while the Soprano is this time charged with bringing new text material into the piece, the *sprechstimme* echoes the previous text idea (prin an térma) which ended soprano's first text, acting like a bridge linking the previous idea to the next material, probably drawn from a different source.

The intervals expanding the (012)/(013) material characteristic for the whole texture of the piece in the soprano answer to the *sprechstimme* are at first in the same spectrum of 2m, 7m and 4+. This dialogue continues with a new set of *sprechstimme*/soprano dialogue starting on page 12 when the *sprechstimme* echoes the first soprano answer [hóste thnetón ont', ekéjnen ten ekéjnen ten teleutájan idéjn heméran episkopunta] acting again as a contour inversion (same text from upper voice to lower voice on the score) and continuing the idea (episkopunta) left open on the 'e' vowel that ended the first score occurrence while the soprano answers and continues with new text material (episkopúnta medén olbidzejn prin an térma).

A particular attention seems to be given to the treatment of resonance in this score, usually presented in a (013) configuration as it can be seen throughout the work:

- Page 7, Viola/Contrabasso [764]→(013) sul ponticello and flautando held notes;
- Pages 8, 10, 12, 14 Piano [134], [689]. [346], [245], [013], [AB1], [78A],etc. →(013)
- Pages 14-15, Violin/Viola/Contrabasso [764]→(013)

This adds the feel of stacked thirds to the sound and emphasizes the triton sonority $3m+3m = 4+$ which blatantly ends the (012)/(013) complex as explained below in the *specific gestures* section (i.e. page 8, Flute; page 10, 11 Soprano). As (013) is made by a $2m+2M$, the $2M$ itself is an even more compact set class expressed as (012) and punctuating the (013) resonance throughout the score, sometimes adding to it for a 'closer' feel.

These features of texture, resonance and punctuation are present from the very beginning in the *intro* section that precedes the entrance of *sprechstimme* at the end of page 8. Resonance is mainly treated on Piano and Strings with the addition of flute long tones or percussion (i.e. pages 10, 11, 12, Tam-tam). However, a notable moment is realized on page 14 where the percussion has a prominent role alongside the piano resonant build-up, marking the end of the soprano second occurrence.

Based on the above observations, the formal structure of the chosen excerpt is a complex block comprised of an introductory section A featuring a (013)/(012) texture, resonance and punctuation, a section B starting at the entrance of *Sprechstimme* continued by the soprano response and a "development" section C which combines elements from the first two sections (i.e. from A: percussion intro and texture and from B: *sprechstimme* and soprano, but this time presented in parallel).

A - material	B - voices	C - development
(013)/(012)(06)	(013)/(012)(06)	(013)/(012)(06)
percussion attack	<i>sprechstimme</i> ,	percussion attack
texture, resonance,	soprano dialogue	<i>sprechstimme</i> ,
punctuation	texture, resonance,	soprano parallel
		texture, resonance,
		percussion
		resonance, buildup,
		followed by the first
		instrumental <i>tacet</i>

Based on the metronome values provided and the variations in tempo change, the above section of the piece would last between 2:00-2:30 depending on how the tempo variations are handled. As such, different time results for the entire piece are expected according to the particularities of each performance as adherence to tempos such as $Qt.=48, 54$ and 66 can be inexact for multiple reasons.

To that end, there are also several parts with *tempo ad libitum* which factor-in time variables, suggesting that it was Penderecki's intention to set the time in such a way that it will allow variation while still controlling the surface aspects by using specific note values inside the gestures as well as synchronicity points.

The melodic material showcases a preference for second intervals with all its variations (2, 7, 9 major and minor) and triton. The serial distribution of pitches is evident but not consistent as it can be seen by the great variation in number of elements throughout the score:

- page 8, Flute {0A43579821}→ 10 elements, Strings {2768B4}→6 elements;
- page 9, Strings {27689BA53}→ 9 elements, *sprechstimme* {024567}→ six elements (It is arguable if the *sprechstimme* notes should be considered as actual corresponding pitches; however, since they are notated as such, it is possible to initially look for completion of other rows into this particular

one as a possible solution for a complete twelve-tone row. The reason an argument can be made for considering the notes here as actual pitches is the soprano part in which when pitches are irrelevant they are presented with (x) note heads and on the same line, as it can be seen on page 10 → soprano line).

- page 10, Soprano {A3421B06} → 8 elements (continued from pg.9)
- page 11, Strings (Vln, Vla, Cb.) {B1824}{84573}{6A2} → 5,5,3 elements, etc.

While the serial distribution of pitches is inconsistent in length (number of elements), the pitch material is consistently rendered in an overwhelming richness of dense, chromatic collections of (012) and (013) and symmetrical displacement of half steps (i.e. page 8 (0134), page 9 (01234), page 10 (0134), page 11 (0145), etc.).

The pitch organization is also done employing a number of specific figures/gestures carried from one voice/group to another such as:

- Clusters of (012)/(013) as it can be seen in page 8, Flute and Piano; page 9, Strings and Soprano + Piano and Xylorimba; page 10, Flute and Xylorimba, Piano, Soprano (continued from page 9); page 11, Soprano, Strings; Page 12, Pianoforte; Page 13, Strings; Page 14, Flute, Xylorimba and Pianoforte; page 15, Flute, Xylorimba and Pianoforte as well as Strings and page 16, Strings.
- A group of (012)/(013) followed by a triton (4+) as it can be seen in page 8, Flute; page 9, Strings; page 10, Soprano.

As a personal observation to this score, it is notable what solution Penderecki chose for the never-ending problem of harmonic notation for string instruments. The actual pitch notated in parenthesis next to the harmonic makes very clear both the fingering and the target pitch. The only possible question remaining is the

harmonic symbol on top of the flute (E) on page 9 which has no apparent explanation in the performance notes. Of course it can be interpreted as an octave harmonic since it is in such a low dynamic, however, without a clear explanation from the composer and lacking the experiential knowledge of a flutist, it is best to approach it with caution in a work in which almost every pitch is sought for its resonant qualities and for how those qualities are embedded in the overall soundscape.

Furthermore, Penderecki's solution for dealing with very flexible tempo parameters delineates clear tempos but in the same time allows and makes use of temporal deviation suggested by the tempo graphic at the bottom of the page, which works very well in this idiom or other applications that are compatible with such an approach.