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<div align="center">Analysis of Webern's *Pieces for Cello and Piano* Op. 11, No. 1</div>

Like much of Anton Webern's music, the short duration of *Pieces for Cello and Piano* Op. 11, No. 1 belies its intricacy and purposefulness. In this paper I will argue that you can hear transformations of set classes (014) and (015) on both the surface and the underlying structure of the piece. I will begin by showing foreground segmentations of those set classes, followed by middleground transformations into voice-leading and supersets, concluding with a background demonstration of set class (014).

The surface of Op. 11, No. 1 is saturated with set class (014). Some of the most salient uses of (014) occur in the final two measures:

Example 1: Segmentation of mm. 8-9 of Webern's Op. 11, No. 1 showing sc(014).

The segmentation illustrated in Example 1 shows three different pitch-class sets that all belong to set class (014). The rhythmic overlapping is similar to the technique of stretto, providing a mounting sense of energy that makes for a fitting conclusion. The final sonority can be segmented in a different way that indicates a larger-scale structure at work. I will return to it at the conclusion of this paper.
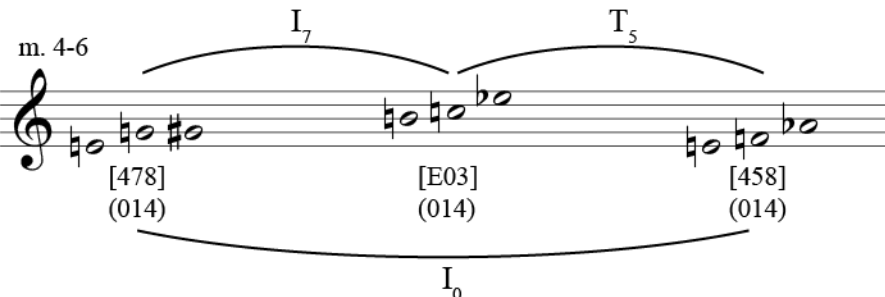
Another clear presentation of set class (014) occurs in the cello line during measures 4 through 6. This sequence can be heard as three groupings of three notes as follows:
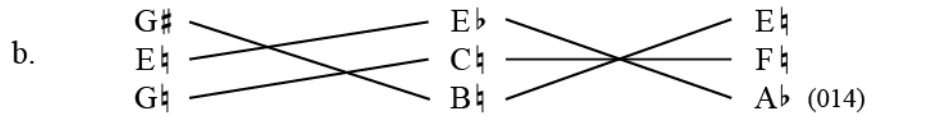

Example 2: Segmentation of the cello part, mm. 4-6 of Webern's Op. 11, No. 1 showing sc(014).

One reason to hear this sequence segmented as such is the dynamic markings. The listener should be able to perceive an intensifying in measure 4, an eruption in measures 4 through 5, and a retreat in measure 6. These three segmentations are also clear, surface level pitch-class sets which belong to set class (014).

Such a clear succession of pitch-class sets all belonging to the same set class warrants further investigation. It is in the cello part during measures 4 through 6 that we find our first example of a middleground usage of set class (014). The three pitch-class sets [478], [E03], and [458] have been mapped below to demonstrate Webern's atonal voice-leading:

Example 3: Atonal voice-leading of the cello part, mm. 4-6 of Webern's Op. 11, No. 1.

The first two pitch-class sets map onto each other through inversion at transposition level 7, while sets two and three are separated by transposition level 5. The first pitch-class set maps onto the last through inversion without transposition, nicely demarcating the end of the line. Example 3b suggests a voice-leading hierarchically listed by order of entry. Of note is the path of the middle voice in the first set. This voice begins as the middle member of the three-note grouping, and subsequently occupies the upper and then lower positions in the remaining two sets. This is the only voice to do so. The notes in this voice-leading create a middleground pitch-class set that belongs to set-class (014), showing structural unity with surface elements. In addition, the first pitch-classes in the three three-note groupings above show an almost tonal relationship of tonic-dominant-tonic (Example 3c).

Set class (014) is not the only element at work in Webern's Op. 11, No. 1. Set class (015) appears to play a secondary, and perhaps expansionary role in the piece. Having an offset of one

semitone from set class (014), set class (015) is presented clearly by itself and in combination with set class (014). One very clear example of set class (015) is from the cello line in the first three measures of the piece:

Example 4: Segmentation of the cello part, mm. 1-3 of Webern's Op. 11, No. 1 showing sc(015).

Besides this prominent statement, there are few isolated pitch-class sets that are solely set class (015). I hear set class (015) at work in a middleground layer of the piece, taking into account the lowest pitches in the piano during measures 2 through 4, creating pitch-class set [045]. A similar collection of low pitches in the piano during measures 5 through 7 creates pitch-class set [378], also a member of set class (015):

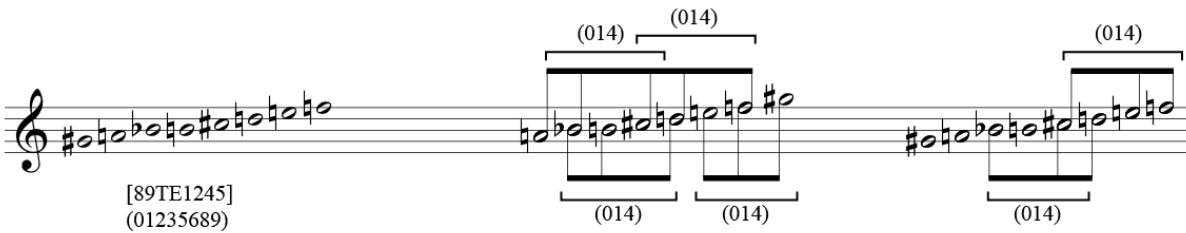Example 5: Segmentation of the piano part, mm. 2-7 of Webern's Op. 11, No. 1 showing sc(015).

While there are only a few examples of set class (015) on the surface of the piece, it is often used in conjunction with set class (014) to create several supersets. These supersets generate the majority of the pitch material in the piece and act as conduits of transformation of the basic trichord set classes. One way that this plays out in the piece is the large hexachord in the piano at measure 4:
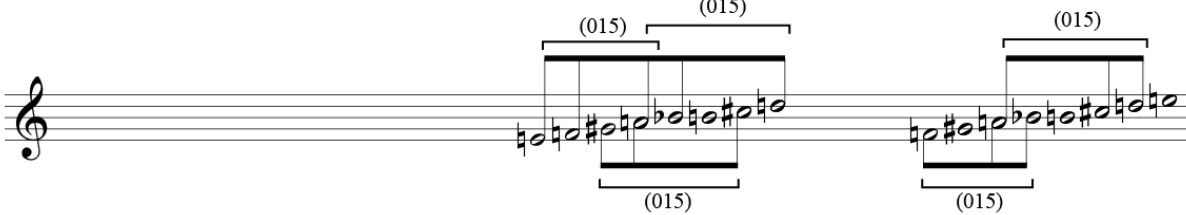

Example 6: Hexachord at m. 4 as a superset of sc(014) and sc(015).

This large collection of pitch-classes is a superset containing several interlocking subsets of both set classes (014) and (015). The density of these set classes in a single chord also happens to coincide with the loudest dynamic marking in the piece. This colorful sonority exerts a prominence that can be interpreted as a musical climax saturated with the core components of the piece.

The combinations of set classes (014) and (015) provide a vehicle for transformation of structural elements into surface features. Several supersets can be constructed using set classes

(014) and (015). Example 7 shows several combinations and transformations of the two trichords

into various supersets used throughout the piece:

Example 7: Several transformations of supersets constructed from sc(014) and sc(015).

The set class (0145) is, in one sense, the "mother" superset containing a symmetrical, interlocking

configuration of set classes (014) and (015):

Example 8: Superset sc(0145) containing subsets sc(014) and sc(015) and its working out at

structural points in Webern's Op. 11, No. 1.

Set class (0145) is difficult to locate in the surface of the piece. However, as indicated in Example 7, one can construct a version of it in measure 1 with pitch-class set [4589]. This might ultimately be more theoretical. A way it is recognizably used in the piece is as a deeper structural element. By again using a selection from the lowest pitches in the piece, one can construct pitch-class set [67TE]. I hear those lowest pitches as aural points of reference. When examined as a set, shown in Example 8b, these pitches form set class (0145).

Other important supersets are indicated in Example 7. A trend among these is an expansion of the outer pitch-class member from pc5 in sc(0145) to pc8 in sc(0148). Through an inversion of sc(0146) and an expansion similar to the above, one can derive two set classes, sc(0347) and sc(0236), which when rearranged from normal order yield the hypothetical set classes ("0149") and ("014T"). The purpose of renaming them this way is that is shows a continued expansion of the outer pitch-class member from pc5 in sc(0145) to pcT in sc("014T"). This expansion demonstrates a transformation of the basic set class (014).

The superset with the most surface level occurrences is set class (0146). Like many of the other supersets, this contains set class (014). Three particularly important instances of this set class happen at the end of measures 3, 6, and 9:

Example 9: Segmentation of mm. 3, 6, and 9 of Webern's Op. 11, No. 1 showing sc(0146).

These sonorities act as structural demarcations, indicating a three-part form with parts consisting of measures 1-3, 4-6, and 7-9:

Example 10: Set class (0146) as a structural determinant in Webern's Op. 11, No. 1.

Comparing the pitch-class sets in measures 3, 6, and 9 reveal transposition levels 1, 3, and 4, the same pitch-class intervals found in set class (014). The first pitch-classes in each set make up the pitch-class set [014], members of set class (014). Having the transposition levels of each of these three instances of sc(0146) match the pitch-class intervals of sc(014), therefore, indicates a high degree of structural importance placed on this trichord set class.

The conclusion of this paper centers on the importance of set class (014) in foreground, middleground, and background of Webern's Op. 11, No. 1. As demonstrated above, set class (015) plays a crucial but subsidiary role, acting primarily as a superset generator in conjunction with sc(014). A point of further investigation might include exploring the interplay between set classes

(014) and (015) throughout the remaining movements of Op. 11 and comparing the results to the present piece.