

Atonal Music Analysis of Webern's op.18, no.2

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Abstract: As one of three famous composers of modern music in the 20th century, Webern has always been attached great importance to the research of music field. There has been a lot of researches on his music works. Many people think that Webern's prime and mature style of his works is very obvious, also have special composing techniques.

1. Significance of Research

Webern's works can be divided into initial, transitional and mature periods. Many researches about his prime work and mature period, but But few people have researched his works of transition period. Specially, Webern's transitional work op.18. no.2, which will be analyzed in this paper, has received but scant attention¹. In this, I will talk about Webern's composing technique presented in this piece, so illuminate its meaning and value. I hope to attract more scholars and music theorists to pay attention to op.18 and arouse interest in this subject [1-3].

2. Research status:

1.English articles: Anton Webern's Musical realization of Goethe's urpflanze concept in "Drei lieder", Op.18, author is Lorian Meyer-Wendt. The simple analysis of music pitch-class set and musical contour. Composition with a Single Row Form? Webern's "Schatzerl klein," Op. 18, No. 1, author is Mark Sallmen. It's main to analysis musical of pitch intervals.

2.Korean articles: Anton Von Webern 의 Dreil Lieder(op.18) 에 한 research.

author is Jin Bao Qing. This paper makes a simple analysis of music formal rhythm and so on.

3.Chinese articles: The application of music mapping in pitch-class music. For example of webern's op.18, no.1.This paper mainly discusses the mapping in Webster's works.

3. The background of Op.18:

Webern is one of the representative composers of the "Second Vienna Music faction". There are thirty-one opus numbered works, seventeen vocal works and ten artistic songs. Webern's first time use twelve-tone composition was for the poem "Mein Weg geht jetzt vorüber", and continued to use with serial writing in 1923-24. After he completing op.17, serial work "Drei Volkstexte", Webern composed "Drei Lieder," op.18 in 1925, which is his first multi-movement work written with twelve-tone skill. This work considered a transitional work before mature works, however, has been rarely examined. It sets up closed relationship between poetry and music than other works.

Since Webern unfinished lot of numbers twelve-tone works, op.18 is very important in his work. He completed "Schatzerl Klein" on 10 September 1925 and this was followed by the composed of "Erlösung" on 27 September. He completed the third song on October 28 as a work based on linear permutations of the row. Then the work was published by Universal Edition in 1927's. On composing op.18, Webern set music to three texts from different sources. Among three songs, the first is from a folkloristic bridal song, the second, "Erlösung," come from "Des Knaben Wunderhorn", and the third form a Latin Marian hymn. Among them, the poetic text for op.18, no.2, "Erlösung," (Redemption), comes from the third volume of Des Knaben Wunderhorn, eclectic three-volume

collection of Germanic folk poems compiled and edited by German writers Ludwig Achim von Arnim (1781-1831) and Clemens Brentano (1778-1842). The third is for Marian antiphon's music.

4. 1. Analysis of the lyrics:

The following is "Erlösung"'s German Original and English Translation:

"Erlösung" (German)

Marie:

Mein Kind, sieh an die Brüste mein, A
kein Sünder laß verloren sein. A

Christus:

Mutter, sieh an die Wunden, B
die ich für dein Sünd trag alle Stunden. B
Vater, laß dir die Wunden mein, A
ein Opfer für die Sünde sein. A

Vater:

Sohn, lieber Sohn mein, A
alles, was du begehrst, das soll sein. A

"Salvation"² (English)

Mary:

My child, look upon my breast,
Let no sinner be lost.

christ:

Mother, look upon the wounds
That I carry every hour for thy sins.
Father, let Thou my wounds
Be a sacrifice for sin.

Father;

Son, my beloved son,
All that you wish for, it shall come to pass.

In the original German lyrical of Mary, the end of the first verse sounds similar to the end of the second verse, it's end with "-in". And the Christ's third and fourth phrase also end with "-in". Then, including Father's part, they have the same rhyme. The lyrics are derived from poems, so they have a strong sense of rhythm. Christ's first and second lines of Jesus, which end in "en", they are different from the other phrase.

5. 2. Analysis of Webern's op.18, no.2

This piece of music is a modern piece of music by Webern, that is entirely employed by twelve-tone technique, first of all, in m. 0~1.

Figure 1. Sets in three instruments, guitar, clarinet and vocal part of m. 0~1.

In the beginning, we can find there are two pitch class sets in clarinet melodies. The first three notes, F#, A and F make up the pitch class-set 3-3(014). Among them, there are prominent intervals which are significant interval elements in this piece. That is, the interval between F# and F is major 7th (or minor second) and the interval between F# and A is minor third. These Major 7th (minor 2nd) and 3rd are prevalent in this piece. As seen in < Figure 1.>, the second circle in the beginning shows G#, E, G, Eb, forming the pc-set 4-7(0145). This set can be divided into two subsets (014), Eb-E-G and E-G-G#.

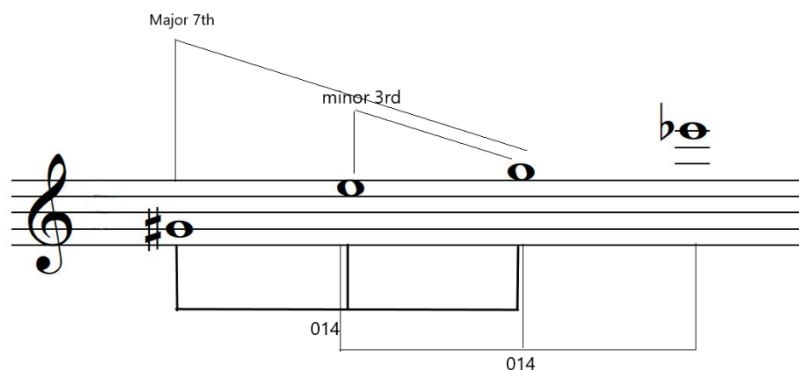


Figure 2. On the decompositional analysis of m.0

As show on < Figure 2>, the tetrachord, Eb, E, G, G#, consists of two sets of (014), G#, G, E, and Eb, E, G. Where G# and G is Major 7th (minor 2nd) and E and G is minor 3rd.

Figure 3. Sets in three instruments, guitar, clarinet and vocal of m.1-2.

At the m.1, the guitar has two sets. The first set is shown on the first circle of the m.1 of the guitar part, they are D-C#-B, forming the pc-set 3-2(013). The circle that follows is F#, F, C, the pc-set is 3-5(016). As shown on the m.1 of guitar and clarinet part, there is four tones making up with Bb-B-C#-D, the Pitch class interval is (0145). In many cases, the tetrachord often appeared at the end of a phrase. The m.1 of the clarinet has only two tones, so combine it with guitar and soprano. The first set is shown on the fist circle of m.1. In the guitar and clarinet part, there are Bb, B and D forming 3-3(014), following the second group marked in Clarinet and Soprano, which consists of A, G#, F, pc-set 3-3(014).

As the shown on m.2, many of the notes can be employed in the same set class 3-3 (014). The soprano melody has one conspicuous set, Bb, C# and A, and the guitar's part also shows the same set, 3-3(Eb, E, G). The guitar and clarinet part can also collected Eb, D, and B as the identical set 3-3(014). In the short measures 1-2, we can see many trichord of the same set-class 3-3(014). In m.2, there are two trichord set shown in Guitar, E-F-F#-G, pc-set 4-1(0123) and in the vertical line of the soprano, clarinet, and guitar part, sc 4-7(0145).

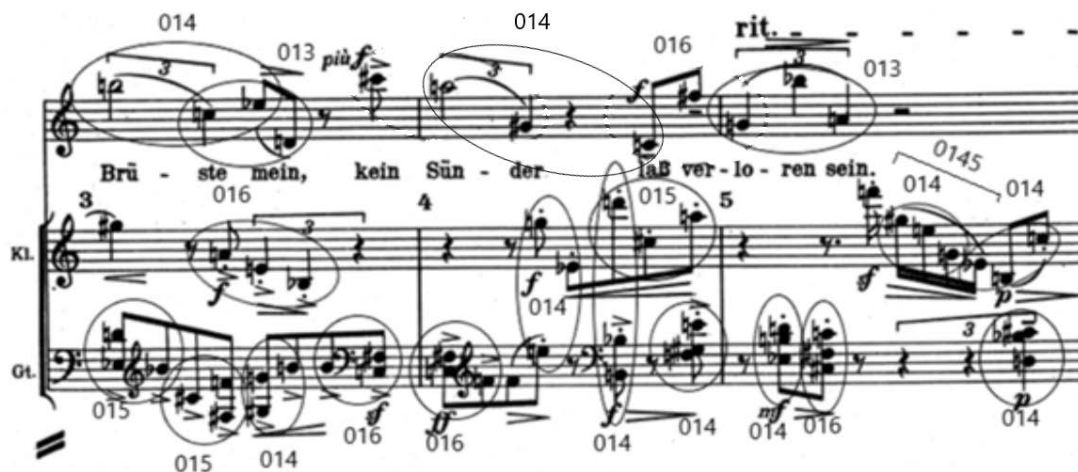


Figure 4. Three instruments, guitar, clarinet and vocal Set of m. 3-5

As shown in < Figure 4>, we can see four different sets in m.3. There are sc 3-2, 3-3, 3-4, and 3-5. Most of all, the first three notes in soprano part forms sc 3-3(014), which is mainly shown in m.1-2. In measure 3, the sc 3-3 does not dominate but rather, other scs 3-4 and 3-5 can easily be fined. For example, the clarinet part in m.3 clearly shows the trichord Bb, A, E, which all belongs to sc 3-5(016). The m.3~4 of soprano in the circle is C#, A, G#, pc-set 3-4(015). The following notes in m.4~5 of soprano can be figured out as two trichords, each belongs to pc-sets 3-5(016) and 3-2(013). Guitar's part, most of the notes forms the prevailing set-class, (014). For exception, the notes in m.4 shown in < Figure 4>, the circled F#, F, C, belong to 3-5(016).

The last three notes in m.4 of clarinet is D, C#, A, make up a sc 3-4(015). The vertical line, however, presents two sets. At first, vertical set of clarinet and guitar, Eb, E, G in m.4 presents pc-set 3-3(014) and the following vertical set also belongs to the identical sc, (Bb, B, D), which shows the relation at T7 between them. In m.5 of the clarinet's part, we can see three trichord scs, 3-3(014) as shown in Figure 4.

Overall, We can see some sets can be paired by symmetrical relations. Both in m.0 and m.5, there are three consecutive sets of 014 in the clarinet part. Notice that notes in m.0 and m.5 show the symmetrical relation, through < Figure 5>. Both m.1 and m.4 of guitar part that have the same notes (C, F, F#) of the identical set of 3-5(016). Also, In m.3 and m.6, they are the same pc set 3-2(013) in soprano part. That is, C-Eb-D and G-Bb-A are the same sets in T7 relation. Though observation, the m.3 in the guitar part has two sets of the same 3-5(015), Eb-D-Bb and C#-F-F#, which shows the T3 relation. The last set(B-F#-C) in m. 3 and the first set(C-F#-F) of guitar part in m.4 are the identical pc set 3-5(016), related by T5 relation. In addition, We can find other symmetrical relations of several sets. There are three sets (014) in m.0 and m.5 of clarinet part. It's obvious from the < Figure 6> that they're all symmetric. And the sets of (016) and (014) in m.1 and m.2 of the guitar part in the example are labeled as symmetric with the sets of (014) and (016) of m.4 and m.5 of the guitar part.



Figure 5. m.0 versus m.5.

Figure 6 shows a musical score for three parts: Gesang (Vocal), Es-Klarinette (E-flat Clarinet), and Gitarre (Guitar). The vocal part has lyrics: "Maria f Mein Kind, sieh an die". The Es-Klarinette part has dynamics like *fp* and *p*. The guitar part has dynamics like *fp* and *più f*. Circled notes in the guitar part are labeled with set numbers: 013, 014, 015, and 016. The vocal part also has a circled note labeled 014. The Es-Klarinette part has a circled note labeled 014. The guitar part has a circled note labeled 014. The vocal part has a circled note labeled 014. The Es-Klarinette part has a circled note labeled 014. The guitar part has a circled note labeled 014.

Figure 6. the relation of m.1-m.5

In the soprano part, it's easy to be find in < Figure 7.>, taking m.4 as the axis of symmetry, the sets of (013) in m.3 and m.5 show symmetry. And m.3 as the axis of symmetry, the set 014 of m.2(Bb-C#-A) and the set of m.4(A-G#-C) also present the symmetrical relation. At the begin of measure 3 the first set(D-Eb-Bb) of guitar and the second set (C#-F-F#) is 3-4(015), it's symmetry relation of them. And the same relation of m.3's end set(B-F#-C) and m.4's first set(C-F#-F) in guitar part.

Figure 7 shows a musical score for three parts: tempo Christus (Vocal), Kl. (Clarinet), and Gl. (Guitar). The vocal part has lyrics: "Mut - ter, sieh an die Wun - den,". The Kl. part has dynamics like *f* and *mf*. The Gl. part has dynamics like *f* and *mf*. Circled notes in the guitar part are labeled with set numbers: 012, 014, 015, 016, 0136, and 0126. The vocal part has a circled note labeled 014. The Kl. part has a circled note labeled 014. The guitar part has a circled note labeled 014.

Figure 7. Three instruments, guitar, clarinet and vocal Set of m. 6-7.

In the < Figure 7> above, except soprano three tones make up a set, Eb, E, F, the pc-set (012)3-1. and the guitar's second circle in m.6, (G#, G, Eb) filled with the obvious (015) and also m.7 C, G#, G, pc-set 3-4(015). In m.7 the first four notes of clarinet part, builds up the obvious pc-set, 4-5(0126), including the subset, Eb-E-F (012). There is a very distinct vertical set of clarinet and guitar part, (B, C, F#) the set 3-5(016) that appears at the end of a phrase. The rest of the sets are all pc-set 3-3(014).

In this m.8, we can see the pc-set 3-4(015) consisting of the first three notes, F#, F, C#. There is another sc 3-4 containing the notes, C#, C, A, after the set of clarinet part, F, C#, C. They are I6 relation each other. Also, the set after the bass clef of the guitar part F, A, E, is identical pc-set 3-4(015). In this measure, however, the four notes of guitar part, Ab, Eb, G, E make up the pc-set 4-7(0145).

Note that at the end of m.12, the last two notes of soprano part and the first beat in m.13, make up the set class (013), (F#-F-Eb). In measure 13 of clarinet part, there is a tetrachord, (G-D-C#-A), pc-set 4-16(0157). The second beat in m.13 contains G#-G-F#, pc-set 3-1(012). In the same measure, the last three notes are the set(G#-G-Eb), 3-4(015).

In addition, it's easy to find the tetrachord(F-E-B-C) set be marked in guitar part in m.13 <Example1.13>, forming the sc 4-8(0156). It can possibly be associated the previous set, (B-F#-C), with the next pc-set 3-4(015, F-A-E).

The image shows a musical score for three parts: soprano, clarinet, and guitar, spanning measures 12 to 15. The soprano part has lyrics: "Op - fer für die Sun - de sein." Various pitch-class sets are circled and labeled: 013 in m.12, 0157, 012, and 015 in m.13, and 014 in m.14. The clarinet part shows sets 016, 0156, 015, and 016. The guitar part shows sets 016, 0156, 015, and 016. Dynamics include mf, f, rit., p, and pp. A 3-measure rest is marked in the soprano part at the end of m.14.

Figure 11. different pitch-class set of m.13's soprano, clarinet and guitar part.

Following the lyrics, from m.6-m.13 can be regarded as a second part of this music. The narrator is now Christ, the song reach a climax, presenting the change the sets from (014) to (015/016). The middle part mainly employed the pc sets, (015/016) rather than (014), which shows wider interval, perfect 5th/augmented 4th. Webern continue to hold on his favorite interval, a semitone (01). Also, he employed a special tetrachord, (0156), containing (015) and (016) at the same time.

From m.14, as father's word part enters, the soprano shows (014) in m. 14-15. In the same measures, the clarinet and guitar present 3-5(016) and 3-6 as shown in <Figure 12>.

The image shows a musical score for three parts: soprano, clarinet, and guitar, spanning measures 14 to 15. The tempo is marked "tempo I (♩ = ca 100)". The soprano part has lyrics: "Vater zart ruhig Sohn, lie - ber Sohn mein,". Pitch-class sets are circled and labeled: 014 in m.14, and 014, 016, 014, 014, 0157, and 014 in m.15. Dynamics include p, zart, and pp. A 3-measure rest is marked in the soprano part at the end of m.14.

Figure 12. different pitch-class set of m.14-15's soprano, clarinet and guitar part.

In m. 16~18, we can see the sets(013)and(016)in the soprano, while the clarinet and guitar parts(D-G-G#), which is a member of set-class (016), looking for another identical set-class in m.17 of the guitar part, there is a trichord(C#-F#-C), sc (016). Also, the soprano part in m.17 shows the trichord(G-F#-C), that is the identical sc, 3-5(016). The trichord in the first beat of m.16, D#-B-E, belongs to set 3-4(015), and the set (Eb-B-E) in m.17 of guitar part shows the same set. In the three measure, Here are very obvious two tetrachord, in m.17 of clarinet tetrachord (F-A-Bb-D) presenting the pc-set 4-20 (0158) and in m.18 of guitar part showing the tetrachord(B-D-Bb-Eb),

Figure 15. Comparison chart of m.0, m.5 and m.18.

There are tetrachord appeared in this piece. The Table 1 and Figure 16 analyzed and summarized their set-classes set where they appeared.

Table 1. tetrachord of this music and the place in this music, subset and superset of the sets.

Form	A			B					A'		
Bars	M.0	M.2	M.5	M.6	M.7	M.10	M.11	M.13	M.15	M.17	M.18
Tetra-chord	0145	0145	0145	0136	0126	0123	0156	0156	0157	0158	0145
subset	014/ 015	014/ 015	014/ 015	013/ 016	012/ 016	012/ 013	015/ 016	015/ 016	015/ 016	015	014/ 015
Tetra chord		0123					0123				
subset		012/ 013					012/ 013				

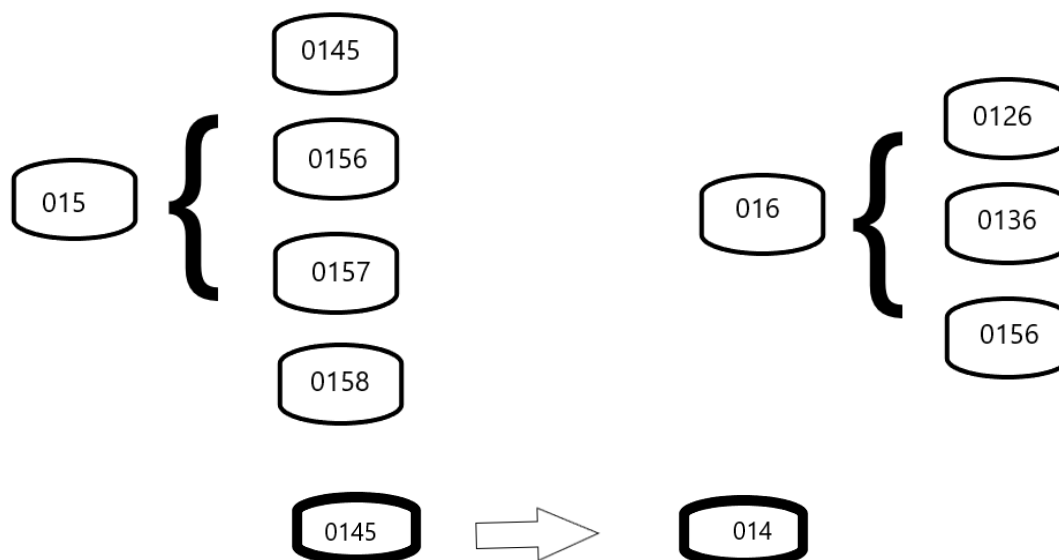


Figure 16. tetrachord of this music and the place in this music, subset and superset of the sets.

By arranging the tetrachord, we can find most of tetrachords include set-class (015) or (016). Thus, their subsets are mostly (015) / (016), that can be easily presented in the middle part. The beginning and ending of this piece, however, presents many tetrachord including the sc (014) as a subset. That is, the tetrachord (0145) composed of two (014) s is mainly found in the A part(m.1~5), while other tetrachords including sc (015)/ (016) are located in B part. In addition, we can find most

of principle subsets employed in this piece in A' part from m.14 to m. 18. In conclusion, Marie part can be represented by sc (014), while Christ part can be suggested by (015)/ (016). At last, the God part put together all possible subsets presented in this piece as if the God rules over the whole world.

6. Conclusion

The subject for this piece, op.18, no.2, is from the Bible. It is mainly divided into three parts: Mary, Christ and Father. Through analysis, the first part uses a large number of SC 3-3(014) and second part shows many pc-set 3-4(014) and 3-5(016). The progression of the third part looks similar with the first part. The characteristic notes of the Mary part and Father part involve three kinds of pc-sets of seven notes, that presents the same sets as well as a unique set in the last bar. Thus, we can figure out the symmetrical layout in this piece and also the final cadence in the final measure. Webern used his special twelve-tone techniques to make the work more three-dimensional and regular, which influenced the works in the late half of 20th century.

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