Surmising the Compulsions of Creativity

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Abstract:

Undergraduate theory texts and coursework have traditionally been focused on concepts that create form, harmonic and melodic language, unusual features and temporal organization in tonal, and more recently, atonal music. Understandably, and perhaps due to space restrictions, emphasis has been placed almost entirely on empirical topics of structural significance within those criteria. By way of an example taken from the third movement of Anton Webern's Op. 5 string quartet, the author illustrates the need and value of straying from the empirical and chancing conjecture while analyzing compositions influenced by composers' enigmatic game-like constructs.

Undergraduate theory texts and coursework have traditionally been focused on concepts that create form, harmonic and melodic language, unusual features and temporal organization. Although tonal music is the primary subject, atonal topics are more commonplace of late and have received treatments in a number of text——sJohn Rahn's *Basic Atonal Theory,* Joseph Straus's *Introduction to Post-Tonal Theory,* Ralph Turek's *The Elements of Music Volume II,* Stephen Kostka's *Materials and Techniques of Twentieth Century Music,* and Jane Clendinning and Elizabeth *Marvin's Theory and Analysis,* to name a few. However——perhaps because they are rather mysterious, unquantifiable and usually unverifiable——the creative games and goals that inspire recondite compositional choices are rarely explored. As instructors, we often point out the results of procedures, but rarely do we ask ourselves or our students why individual compositional choices may have been preferred over others.[1] Which choices might have been dismissed and why?

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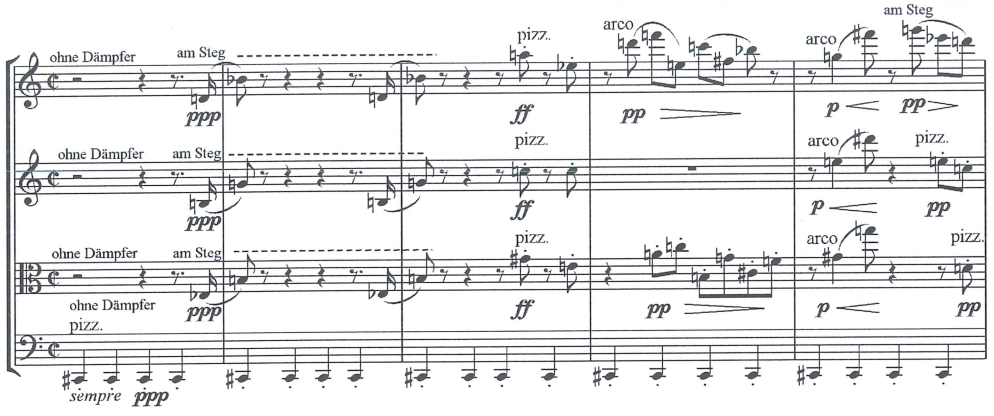
[1]Reginald Smith Brindle attempts to divine Webern's line of thought during his composition of *Six Bagatelles for String Quartet Op.* 9. *Serial Composition.* (Oxford: Oxford University Press, 1986), 182-185.

The point to be made here is that, perhaps, instructors should be brave and not focus entirely on what is heard or what appears structurally significant, but take time to ponder what the composer may have been thinking when choosing a musical element. Certainly, theory instructors are uncomfortable with conjecture and second-guessing the "masters," but perhaps they need not be. If it is made quite clear that the suppositions are only educated guesses, no harm will be done.

The author believes a great number of compositional choices are frequently not audible or structurally significant, at least in the greater sense. Many choices are made from a sort of compulsion. Just as master cabinet makers take great care and use fine wood on the backs of furniture——surfaces rarely if ever seen——composers frequently work with materials and relationships they alone know are present. However, these compulsive choices have an organic influence on the final product in ways that cannot be discerned through analytical procedures that focus entirely on empirical or audible evidence.

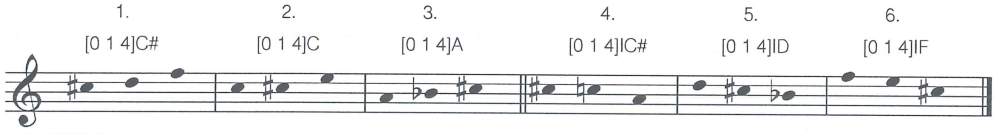


Example 1. Measures 1-5 of Anton Webern's Op. 5, no. 3.

But where can one start safely? Tightly structured atonal works often show the signs of creative play and lend themselves nicely to conjectural detective work. One such work, Webern's Op.5 string quartet, has become a popular choice for exploring set theory principles in several current textbooks. We shall explore the first four measures of the third movement in an effort to surmise the creative procedures that may have been at work during the construction of the movement. Although Webern was not thinking precisely in set theory terms, he was most definitely

thinking in terms of pitch and interval collections. In order to clarify the examples, set theory terminology will be used.

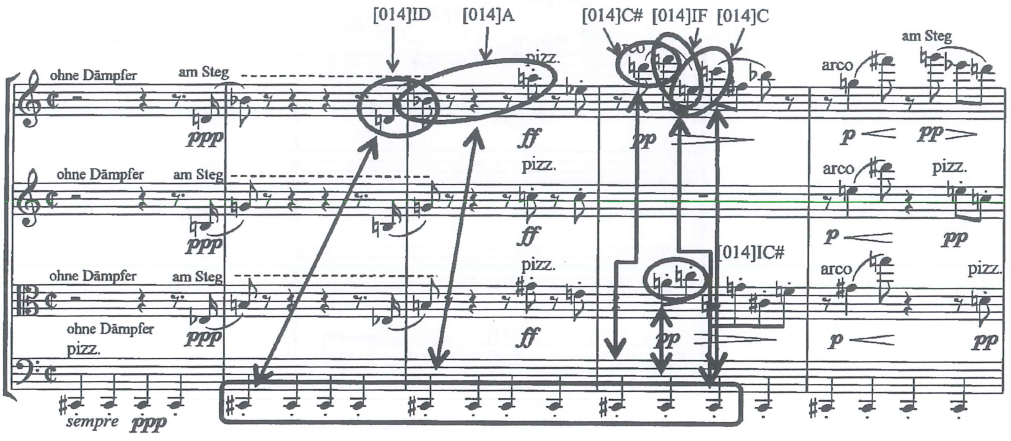
It is not possible to know where composers begin compositions; however it is a mistake to believe they always begin in bar 1 and progress linearly to the end. Creativity is generally not a linear process. Leaps abound and construction of music may often unfold in ways similar to a painter's work. Very few artists complete a corner of a canvas before moving on to another corner. Rather, creation is a back and forth affair with details and ideas emerging in unsteady and uneven streams from various points and at different times. Measure four may very well have been composed before measures one through three. However, we will restrict our observations primarily to the introduction.



Example 2. The six possible prime form and inverted configurations of [014] containing C#.

What could have been going through Webern's mind at the outset of the composition of this movement? Perhaps he wanted to explore the possibilities of a single pitch class in all six possible [014] configurations in which it can be found. Any note could serve as a pedal tone with the other pitch classes of [014] rotating about it. But which pitch would be a good choice? C# served well as it is the lowest pitch a string quartet can produce without resorting to an open string. Example 2 illustrates the six possible formations of [014] containing C#——three in prime form and three inversions.[2]

[2]Set identification in this article is a variation of inversion mapping outlined in Joseph Straus's *Introduction to Post-Tonal Theory*. (Upper Saddle River: Prentice Hall, 2000), 45-46. Transposed set classes will be identified with a pitch class from which the prime form intervals will ascend. Inverted set classes will be identified with an "I" preceding a pitch class from which the prime form intervals will descend. Therefore, [014]IF will signify the pc set F, E, C#. Mapping indications have been omitted.

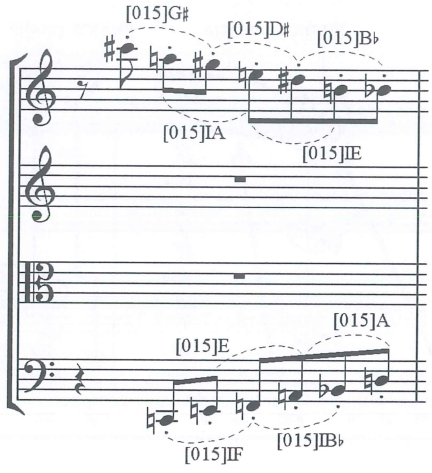


Example 3. Use of the six [014] cells from example 2.

We will begin with linear aspects of cell construction. Webern chose to rotate pitches around a C# pedal tone in [014] configurations. To accomplish this, the first violin plays a D to a Bb in measures one, two and three. The notes D, C# (the pedal tone), and Bb form a [014] cell inverted on D——the fifth of our six possible configurations of [014] with C# present (Example 3).

After several repeated beats in measures two and three, a leap of Bb to A combined with the C# pedal creates the third of the six possible [014] cell configurations. Normally, theorists would be rather reluctant to recognize the Bb, A, C# relationship as a [014] cell because it is in an aurally weak position with intervening rests. At this juncture, most instructors would invoke the poetic 'truism:' "The harder a relationship is to see, the less important it's likely to be."[3] However, the point to be made here is one should not be constrained to investigate only what is overtly structurally significant. Forces are at work that influence pieces organically. A compulsion, if you will, to investigate all six [014] possibilities with C# inspired Webern to choose an A over other possible notes. The choice is neither immediately apparent nor structurally significant, but further investigation, and admittedly conjecture, will make Webern's desire to explore all the possible [014] configurations a probable cause for choosing A over other pitch classes in measure three.

[3]Ralph Turek, *The Elements of Music, Volume II* (New York: McGraw Hill, 1996), 388.

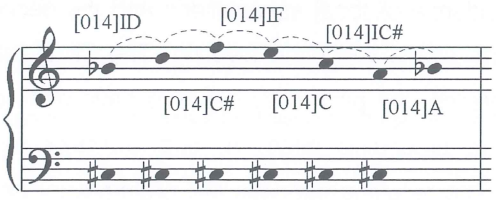


Example 4. Overlapping [015] cells in measure 7.

Observations of the first violin part in measure four will help support the conjecture that the weak relationship of the cell in measure three is not a whimsical choice. The first two possible [014] cells containing C# overlap or pivot on a pitch——Bb in this instance——and we can observe that this same technique is used frequently within the first five measures and at several points in the entire movement (Example 4). The first of our [014] cells in example 2 is completed by the D and F in the first violin in measure four. This cell in turn pivots on the F to form, with pitch class E, the sixth [014] cell in example 2. This cell in turn pivots to form the second [014] cell in example 2.

At this point, within the space of little more than two measures, the first violin part contains five of the possible six [014] configurations linked together over the C# pedal (Example 3). The sixth and final [014] cell (example 2-4) can be found as the viola makes its first solo entrance in a real imitation of the first violin. Beginning with the pickup to measure three, all six possible configurations of [014] on our list appear within less than four cut time beats——if this is a coincidence, then it is an extraordinary one.

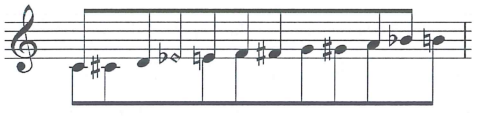
But we are left with questions requiring more detective work. If pivoting around C# in [014] configurations was indeed Webern's scheme, why was it abandoned at several points. Webern could have pivoted through the entire list of six possible [014] configurations in several unbroken ways, including the following manner: Bb D, D F, F E, E C, C A, A Bb (Example 5).



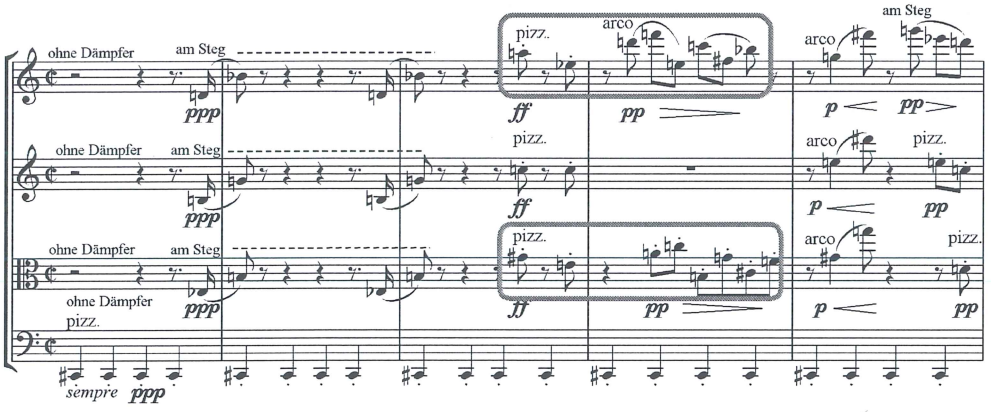
Example 5. Tonal implications of overlapping [014] cells containing a C# pedal.

An undesired weakness of this process may well have been the pervasive tonal character of the pitch classes available. No matter the order of the pivoting pitch class rotation and regardless of the non-tonal pedal, the linear or melodic result would sound uncomfortably reminiscent of D minor or F major. Tonal associations, of course, were an anathema to Webern's aesthetic principles. A more simple explanation may be that cells one and four of example 2 are the only cells containing minor thirds (interval three) apart from the pitch class C#. Since the important opening interval of the real imitation was the apparent goal at this juncture, example 2-4 was his best option for the viola entrance.

Notes of violin I in a twelve-note aggregate in mm. 3-4 (upper stems).



Notes of viola in a twelve-note aggregate in mm. 3-4 (lower stems).

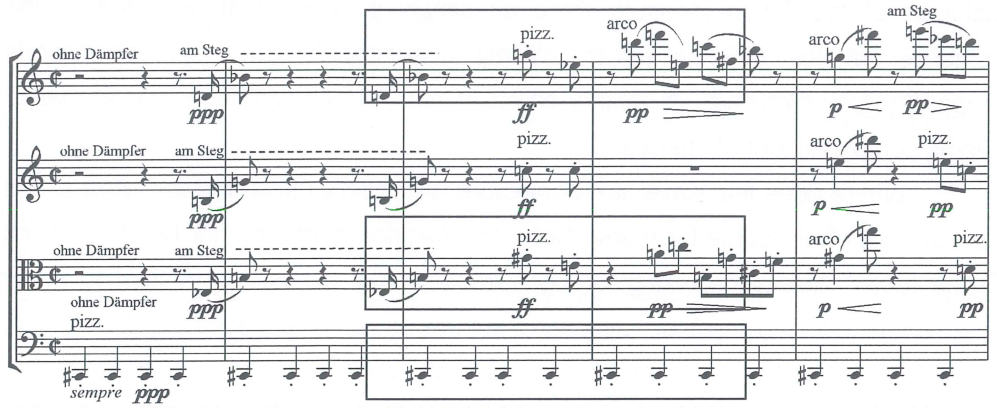


Example 6. Twelve-note aggregate created primarily through real imitation.

However, avoidance of tonal associations and the desire for real imitation is a rather poor explanation of the disjointed pivoting. The Eb in measure three becomes problematic. At first glance, the pitch may seem to have been chosen because it is a tritone away from the preceding pitch, A, and a major seventh away from the subsequent pitch, D. The resulting intervals are preferred in the style because of their non-tonal associations. Although all the pitches in the first violin part up through the first half of measure four are in Bb, the associations are disguised through octave displacement.

Could the Eb simply have been added to fill the register between Bb4 and A5? Possibly, but a more likely explanation lies in the construction of a twelve-note aggregate (Example 6). Measure four features a real imitation of the first violin at an eleventh below in the viola part. The violin line contains an F#, a Bb, and is preceded by our Eb in question. By using F# and Bb in the original statement, the corresponding imitation contains a C# and a G. Combining all the notes within the first violin part and the viola part leaves us with a troubling (to Webern?) eleven pitch classes. The only remaining unclaimed note is an Eb. Our master cabinet maker could not possibly let that go and it was included in measure three.

Our conjecture may not stop there. Perhaps by extraordinary coincidence or perhaps by design, another twelve-note aggregate arises between the first violin and the viola. If we take the notes of violin I and the viola in measures one through the third quarter of measure four, we will find eleven pitch classes. Adding the C# pedal completes the total chromatic. It is only then, on the very next quarter, that we experience another C# (Example 7). And it is only after using all six possible [014] configurations that Webern uses the only missing note of the total chromatic——the F# in the first violin part.



Example 7. Twelve-note aggregate created over pedal tone with supporting harmony in violin II.

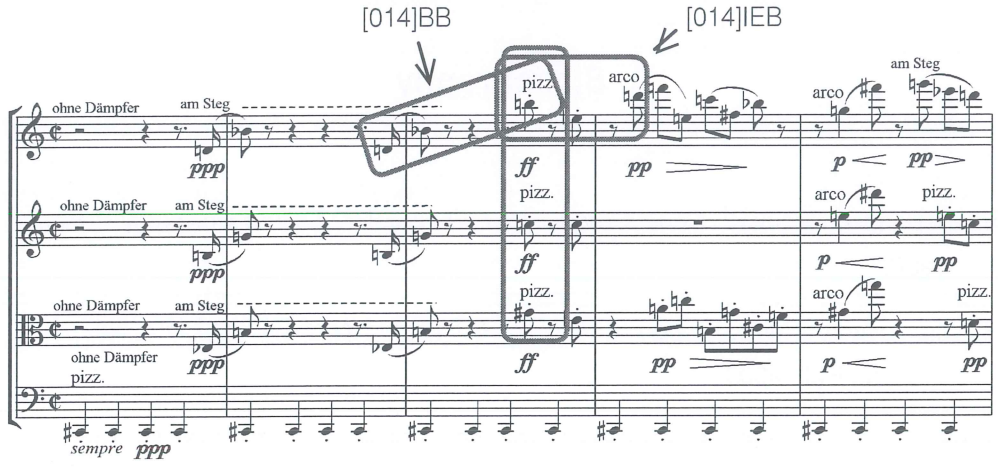
As for the overall process, our conjecture is certainly at its weakest. However, we may take a stab at it and venture measure four may very well have been composed first with a two part texture placed over the C# pedal in an effort to utilize all the possible [014] cells containing C#. The cells [014]ID and [014]A were added as an introduction to complete all six possibilities. Eb, the remaining unwritten pitch up to this point, could not possibly be left out by the master cabinet maker and was added to complete twelve-note aggregates. The supporting second violin part was added last to complete vertical [014] configurations and is the least structurally significant element. Of course, many other scenarios are possible, but the author feels the foregoing would in all likelihood have a strong resemblance to the actual methods undertaken by a composer such as Webern.

One of the more valuable procedures of conjecture is to determine which of our educated guesses are more likely correct——to place them in a conjectural hierarchy if you like. With regard to our Webern excerpt, certainly the pivoting pitch classes revolving around the pedal C# in various [014] configurations seems far too coincidental to be an accident. Possible, one supposes, but an unlikely occurrence. As for the total chromatic being achieved immediately after the completion of the entire list of [014] possibilities containing C#, the author would have to say that this may be a coincidence, but again, an unlikely one. The preference of including all twelve pitch classes as frequently as possible would make the occurrence of the total chromatic in measures three and four likely to be an intended event. Strangely, perhaps to many, the author believes the

inclusion of the Eb in measure three as simply a sound that appealed to the composer at the time, a rather unlikely occurrence——given the composer's propensity for orderliness. A solitary chord or note placed without a logical reason seems completely out of character.

Where does this leave us? Conjecture is certainly uncomfortable ground and best left out of discourse for many. One can imagine an interrogator berating, "stick to the facts!" However, picking through circumstantial evidence can lead to many interesting ideas. For instance, although they are usually overlooked, the Eb and the second 'weak' cell in measure three are actually quite important occurrences. The fact that they could easily be removed, expanded, or altered with no audible interruption is actually a telling detail. A compulsion led to their existence.

For instance, had the first violin's A in measure three been a B and the accompanying parts remained the same, the first violin part would have contained several melodic interlocking [014] cells and tonal references to Bb would have been completely obscured (Example 8). The vertical structure would have remained undisturbed as a [014]——a [014]IC in this instance. At first glance, this seems the logical choice. Certainly the melodic and harmonic flow is not disturbed in the least ——some may actually prefer the B. However, Webern was compelled. The overriding thought was not the audible linear interlocking of [014] cells but the completion of all six possible [014] cells containing C#——whether they could be heard or not. As for the Eb, its only 'function' was to complete the twelve-note aggregates mentioned earlier. In this instance, a compulsion to complete a predetermined scheme trumped localized aesthetic choices.



Example 8. Substitution B5 for A5 and accompanying parallel cells in measure 3.

What does this tell us about Webern, his mode of thought, and the form of his compositions? One gets the notion that Webern would have been unable to sleep at night if he had left the A or Eb out of the introduction——the cabinet back would not have been polished. The forms of his works feel as if they were dictated by the breadth of his compulsion to complete audible or inaudible schemes. When the schemes were complete, the work was complete. Indeed, after the composition of his *Bagatelles for String Quartet Op. 9,* Webern stated he had come to a feeling, "When all twelve notes have gone by, the piece is over." [4]

The drive to formulate concealed structures and game-like assemblies is a powerful influence in composition——possibly heard on a subliminal level. Recognizing their importance is valuable. One should not stop short and contemplate only the obvious or the empirical. But the application of enigmatic game-like structures within compositions has two sides. An urge to compose virtually undetectable patterns may be either inhibiting or a positive incentive to various individuals. On the positive side, game-like construction can inspire ideas when none are coming. Whether they are audible or not is beside the point. They can be instruments of creativity that fill the fabric of the material we hear like the unseen individual threads of a complex woven cloth. On the negative side, compositions created with multifaceted schemes may be perceived as overly rigid contrivances, and subject to the now oft heard pejorative moniker——"academic."

[4] Anton Webern, *The Path to the New Music,* trans. Leo Black (Bryn Mawr: Theodore Presser, 1963), 51.

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