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A NEW LOOK AT THE PLOYER/ATTWOOD NOTEBOOKS, OR, MOZART: A TEACHER OF CHROMATIC COMPLETION

The 1784 notebooks of Barbara Ployer and those from 1785 to 1787 of Thomas Attwood reveal a surprising fact: that Mozart taught them the technique of chromatic completion – the gradual unfolding of the 12 members of the chromatic aggregate in such a way that the last tone arrives at a moment of definite musical importance.¹

A representative instance of how Mozart employed the technique in his own music can be found in K. 453, a piano concerto which he wrote for Ployer in 1784. As we look at its orchestral exposition, we can verify that it is designed to have four moments of chromatic completion, all clearly arriving at points of structural significance.

The first occurs in m. 35, precisely as the “secondary theme” arrives. The 12th note to appear is *D#*. The next happens on the downbeat of m. 49, just as the music plunges unexpectedly into the key of *Eb*. Here the final element is a *Bb*. The third point of completion is in m. 56, on the dominant 7th chord which re-establishes *G major*. *F#*, the leading tone, ends this unfolding. The final cycle of chromatic unfolding fulfills itself in m. 69, with the arrival of *D#*, as the orchestral exposition concludes. The solo piano then sets off the next round of chromatic unfolding.

The question this essay deals with, making use of the Ployer and Attwood Notebooks, is whether Mozart taught this technique to his students. Let’s begin with Ployer. In the opening pages of her notebook, Mozart sketched out a short minuet for string quartet, giving only the first violin and cello lines, and asking his student to fill in the interior parts – in keeping with a figured bass he also provided.

Example 1 indicates that the opening eight measures of the minuet require the diatonic set plus *C#* and *Bb*. What remains? *Eb*, *Ab* and *F#*, and these tones dutifully appear in the second grouping of eight measures. The full aggregate having been unfolded, the final two measures, by contrast, are entirely diatonic.

Example 1

Two entries later – (example 2) – we find Mozart leading Ployer into an awareness of the varying degrees of chromatic density which a given instance of music might sustain. Notice: this entry has three versions. The first uses 9 pitch-classes; the second, 10. By the third, Mozart has arranged matters so that these eight bars express the complete chromatic universe: all 12 tones.

The evidence of conscious pedagogy is hard to resist. Were there space in this journal, we could traverse her entire notebook and see just how richly the evidence accumulates. It is, one might say in slang, “chock full” of similar things. Meanwhile, it is useful to go on to Attwood – for unlike Ployer, who was in essence a pianist, Attwood went on to become one of the important English composers of his generation; and chromatic completion is, fundamentally, a compositional technique.

Attwood’s notebooks begin with a short section devoted to harmony, followed by a longer one on counterpoint. The section on harmony is full of examples of chromatic completion; the one on counterpoint, by contrast, is severely diatonic.

Example 2

It seems that having introduced Attwood to the richness of chromaticism, Mozart now wanted his student to develop an equal respect for its tonal opposite: something lean, strict.

A third section – on free composition – now follows, and here again chromaticism reigns. On its first page, Mozart presents a model illustrating the difference between the fundamental bass and the actual bass of a four-voice texture. What is fascinating is that this entry (example 3) likewise illustrates how chromatic completion can help define musical form. Eight measures long, it begins in *G* and concludes in *E_b*. Where is the point of chromatic completion? On the downbeat of m.6, with the arrival of a *B_b*: the dominant of the new key. From this point on, the music is strictly diatonic. The form-defining contrast is thus double: a contrast of key center, and a contrast of chromaticism versus diatonicism.

Example 3

As this example illustrates, chromatic completion is a technique that in no way supersedes other, and far better known, form-building procedures of 18th-century music. In fact, one of the reasons the technique of chromatic completion has “hidden in plain sight” all these years, and is yet to be included in any “standard” teaching texts – either of music history or of music theory – is precisely because it is most often used in close coordination with traditional concepts of modulation and formal cadence. Among the few musicologists who have spent time with the issue, other than myself, are James H. Baker, and Henry Burnett.²

At this point, we can summarize our findings by noting that there appear to be, for Mozart, three characteristic paths to chromatic completion. Either the 12th tone arrives at the very end of a musical unit, or (option 2) it comes in the midst, with everything afterwards staying purely diatonic; a third path, however, is how Mozart most typically employs the technique in his own work – namely, ending a musical unit with a sense of incompleteness, with only 11 tones expressed. This makes the arrival of the missing tone at the beginning of the next musical unit a way of “linking” them.

This third method is the most dramatic. It makes a listener – if only subconsciously – yearn for the moment of fulfillment: the moment when all the possible tones have been expressed. And as we know, Mozart was a dramatist even in his non-theatre works.

As we consider the technique of linkage, let me suggest a rough parallel from the world of traditional theory. We all know the impact of a half-cadence; especially when such a cadence separates – and yet joins – otherwise independent movements. We feel, at such a moment, a sense both of discontinuity and continuity; of incompleteness and fulfillment. Opposites come together musically: a very significant fact, about which I’ll have more to say later in this essay.

Returning to the Notebooks and the section on the art of “free composition” – we find there several short works by Attwood, nearly all of which illustrate chromatic completion. Consider example 4, a 28 measure Allegro; we see in it a single unfolding of the aggregate. The twelfth tone, *F* natural, arrives in m. 25, and its enharmonic equivalent, *E_#*, is heard in the next measure. Everything that follows is diatonic.

Attwood returned to England in 1787, and became a leading figure in its musical theater, eventually creating thirty-four dramatic scores for the London stage. He also distinguished himself both as a church musician – he was organist at St. Paul’s and at the Chapel Royal; and as an educator – he was named professor at the Royal Academy in 1823. Meanwhile, in keeping with the focus of this essay, the point to note is this: throughout his career as a composer, we see the continuing presence of chromatic completion.

Example 4

The technique is present as early as his Piano Trios, Op. 1, published soon after his return to England. Let's begin, however, with his first full-length stage composition: *The Prisoner*, a romance premiered at the Haymarket Theatre on October 18, 1792. Early on in it, we meet the Trio, "And will you soothe my anguish?" It is 32 measures long. The vocal parts conclude in m. 28; the aggregate is completed soon afterwards: the final tone, *D#*, arrives in m. 30 during the orchestral coda.

It is worth noting that there is one extra chromatic tone in this coda: a *C#*. Just as composers throughout history often waver a bit in their employment of otherwise strict techniques – canons, for example, may have an occasional altered interval in order to preserve musicality – so composers who employ chromatic completion sometimes use the technique with a degree of flexibility. This is hardly surprising; what is surprising is how often the technique is used with almost adamant strictness.

Returning to Attwood's music: the aria which follows the Trio is titled "Come from Horror's Dreary

Cell," and is surely modeled on the Queen of the Night's aria, though it is cast in *D major*, rather than the Queen's *D minor*. As with its Mozartian predecessor, the words call for revenge, and its highly melismatic melody has quite a high tessitura. But there is another, deeper parallel: both arias display chromatic completion as a simultaneously structural and expressive principle.

This essay is not the place to take up Mozart's masterpiece, though I did so in my NYU doctoral thesis, which studied – in an over-arching way – the place of chromatic completion in the late vocal music of Haydn and Mozart, with some subsidiary study of how it was employed by Bach and Gluck.³ Nor, unfortunately, is there room to survey a larger swath of Attwood's theater music, or even to go deeply into the rest of the music for *The Prisoner*. But here are three observations about the opening two pages of the aria just mentioned.

1. The orchestral introduction employs all twelve tones.
2. The first vocal climax is the high *C* of m. 41, during the phrase "revenge, her fang in mortal poison steeps." This is likewise the first point of chromatic completion in the aria proper, and the second such point since the music began over-all.
3. The sudden presence of a German 6th chord in the dominant key at m. 57 marks – with the arrival of the note *D#* – the third point of completion. This chord and its resolution comprise the remainder of the "A" section, leading, at m. 61, to a stunning fermata on the word "hell."

This last point is significant, and has to do with the creative flexibility mentioned before. Gluck, Haydn, Mozart – and Attwood, too – often linger on the crucial 12th note. As a result, it is highlighted; it is marked for our awareness. I've noticed that this kind of "extra emphasis" almost always comes at a moment crucial to the cadential design of a work. How right! – and how 18th-century!

These measures at the end of the aria's "A" section are very obviously expressive and emotional. They also function structurally as a pivotal half cadence, setting up the "B" section of the aria which immediately follows. Emphasizing the *D#* – and the German VI chord – makes sense therefore both on traditional grounds (harmonic and dramatic), as well as in terms of the logic of chromatic completion.

Just to forestall a possible misunderstanding: saying that Mozart and Attwood were deeply committed to the technique of chromatic completion is not the same as asserting that they used it in all – let alone a majority – of their compositions. Beethoven and Bach were enamored of fugue, but each wrote many works that were not fugues!

As we turning from Attwood's dramatic music to his choral work, we can see his sustained interest in the technique. Consider, first, his anthem, "Come, Holy Ghost." It is in three stanzas, and each unfolds just eleven members of the aggregate. What is lacking? An *Ab*; and where do we hear it? At the start of the instrumental

(Mozart→Attwood→Mendelssohn→(?)→Sullivan), this much can objectively be established: there are many instances of chromatic completion the work of Sir Arthur. Among them is this charming example from the operetta *Patience*: a chorus of “twenty love-sick maidens,” whose opening melody, as you can see, is shaped as a single unfolding of the chromatic aggregate. *Patience* premiered in 1881; roughly a century after the concerto by Mozart with which I began this essay.

In this essay so far, I’ve emphasized the “technical” aspect of chromatic completion; but the aesthetic and philosophic meaning of this musical phenomenon is likewise important. I explored it at length in my doctoral dissertation as well as in various publications since, including “Haydn’s Secret Dodecaphonic Art” – an essay which is easy to access on-line in the *Journal of Music and Meaning*.⁴ I write there of how chromatic completion evidences the truth of Aesthetic Realism, which I see as the one authentic universal theory of aesthetics. The central principle of this great philosophy is a statement by its founder, Eli Siegel – with whom I had the honor to study: “*All beauty is a making one of opposites, and the making one of opposites is what we are going after in ourselves.*”⁵

Chromatic completion instances the universal human need to make sense of life as a drama of completeness and incompleteness; a drama, likewise, of what is discontinuous and what is continuous. It meets this need through the symbolic drama of sounds organized in time: that is, through music. And insofar as it allows a composer to coordinate the structural and the expressive aspects of his or her work, chromatic completion also arises from our undying need to make a one of the desire

to be precise and logical, clear and strict—and our equally inevitable desire to be expressive, passionate, and deeply and adventurously full of emotion.

When opposites are experienced as one, Eli Siegel explained, we have what makes for happiness and sanity. We also have, when opposites are felt as one, a true picture of the world: the world where it begins, the world in its enduring ontology, its permanent philosophic structure.

In this writing, I’ve dealt largely with the opposites of continuity and discontinuity, the complete and the incomplete. They are central to the experience of music – any music, from any time and from any culture. Meanwhile, chromaticism and diatonicism, while not opposites in the metaphysical sense, were often taken by theorists and composers of the late 18th and early 19th centuries as capable of standing for contrary things. There was a feeling that these two ways of understanding the tonal universe represented a certain relation of simplicity and complexity; harmony and conflict; even the ‘natural’ world and the ‘artificial’ efforts of man. As the Attwood Sanctus indicates – and there are other pieces that do so with even greater aesthetic impact: pieces by Mozart, Haydn, and Gluck, for instance – many composers of the time used the contrast between diatonicism and chromaticism as a means of dramatizing opposites present in the text they were setting.

So I conclude this essay with another of Eli Siegel’s classic philosophic statements: “*In reality opposites are one; art shows this*”⁶ – and I hope that I’ve raised your interest in the phenomenon of chromatic completion: both as a little-known datum of historical musicology, and, more importantly, as a technical illustration of the great philosophic ideas just spoken about.

NOTES

¹ The examples taken from these notebooks (Examples 1–4 in this essay) can all be found in the Neue Ausgabe of Mozart’s works. The first two examples are in Vol. 2. of Werkgruppe 30, and are, respectively, on pages 18 and 22. Examples 3 and 4 are found in Vol. 1 of Werkgruppe 30, on pages 166 and 198.

² Among Baker’s works are «Chromaticism in Mozart’s “Jupiter” Symphony» in *Mozart-Jahrbuch*, 1991, Vol. II (Kassel: Bärenreiter, 1992) and “Chromaticism in Classical Music” in *Music Theory and the Exploration of the Past*, ed. Christopher Hatch and David M. Bernstein (Chicago and London: The University of Chicago Press, 1993). Burnett, in collaboration with Shaugn O’Donnell, published “Linear Ordering of the Chromatic Aggregate in Classical Symphonic Music” in *Music Theory Spectrum*, Vol. 18, #1, (Spring, 1996), and with Roy Nitzberg wrote *Composition, Chromaticism, and the Developmental Process* (Farnum: Ashgate, 2008). Among Burnett’s independent

writings on the topic is “Levels of Chromatic Ordering in the First Movements of Haydn’s London Symphonies: A New Hypothesis,” which appeared in *International Journal of Musicology*, Vol. 7 (1998).

³ *Chromatic Completion in the Late Vocal Music of Haydn and Mozart: A Technical, Philosophic, and Historical Study*.

⁴ Issue 8. (Winter, 2009–2010). Another recent article by me on the subject appeared in the premiere issue of the on-line journal *Haydn*: “Chromatic Completion in the Late Masses of Haydn.”

⁵ Cited in *The Modern Quarterly Beginnings of Aesthetic Realism: 1922–1923*, ed. Ellen Reiss (New York: Definition Press, 1997), p. 13. For a fuller sense of the range of this philosophy, the best source is the web-site of the Aesthetic Realism Foundation: www.AestheticRealism.org.

⁶ Siegel, *Aesthetic Realism: Three Instances* (New York: Definition Press, 1961), p. 1.

