Tonality and Temporality in the *Todesverkündigung*

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1 Introduction

D ESPITE THE OVERWHELMING primary and secondary literatures on Wagnerian studies, discussions of Wagner's temporal organization are decidedly rare. In this paper, I reveal a recursive temporal structure in the *Todesverkündigung* from Act II, Scene 4 of *Die Walküre*. The presentation is in six parts. I begin with a brief discussion of the ANNUNCIATION OF DEATH *Leitmotiv* and a large-scale motivic parallelism therein.¹ I will then present a network model of what I call the conceptual time spans of the excerpt. I briefly engage with other

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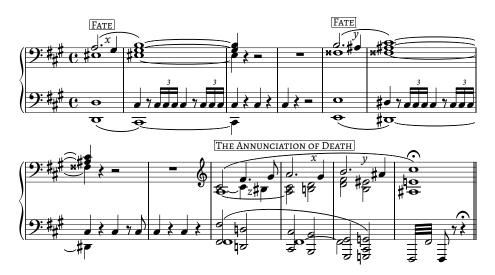
[†]The paper, handout, and slideshow are all available at http://www.sambivens.com/ research. Please include a direct link when citing this paper; a sample is given in the bibliography.

^{1.} The capitalized nomenclature comes from Warren Darcy's motivic guide to the *Ring* as found in an appendix to Bribitzer-Stull (2001, 331-408). The present author's current draft of this guide, with musical examples, is available at http://sambivens.com/research/darcy_ring_guide_draft.pdf.

research on the *Todesverkündigung*, and then I model the observable time spans from several leading recordings. I then provide a discussion of the end of Act II, showing how the music resolves the drama and analysis left hanging from Scene 4, before concluding.

2 A Brief Survey of the Tonal Structure

▶ We will focus on the opening 156 measures of Scene 4, a common division dating back at least to Lorenz.² ▶ Example 1 shows the twelve-bar sentence that opens the scene. Note that FATE functions as the basic idea, while ANNUNCIA-TION OF DEATH functions as the continuation and cadence; note as well the halfstep motives labeled *x*, *y*, and *z*. Please listen as Daniel Barenboim leads the 1993 Bayreuth Orchestra in performing Example 1.



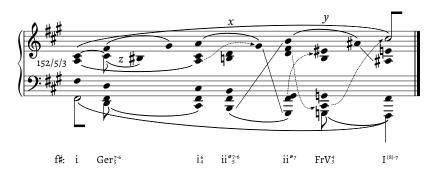
EXAMPLE 1: Opening of Act II, Scene 4, 152/4/1–152/5/6.

► The ANNUNCIATION OF DEATH *Leitmotiv*, the initial appearance of which is shown in reduction in ► Example 2,³ appears no fewer than nine times through-

^{2.} Note that these 156 measures correspond precisely to Lorenz's Period 10; see Lorenz ([1924] 1966), McClatchie (1998), and my later note 8.

^{3.} Measure numbers are in reference to the widely available Schirmer vocal score, arranged by Karl Klindworth, in the format page/system/measure. Thus 152/5/3–6 indicates measures 3–6

out the excerpt. Most important for our purposes are the three descending semitones labeled *x*, *y*, and *z*.



EXAMPLE 2: Voice-leading reduction of the initial ANNUNCIATION OF DEATH *Leit-motiv*, 152/5/3–6.

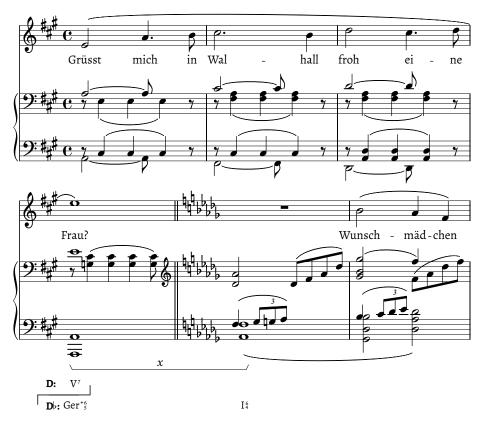
Note that motives x and y not only occur in the melody of ANNUNCIATION OF DEATH, but they also create the FATE *Leitmotive* shown in Example 1. Motive z, originally hidden in an inner voice of ANNUNCIATION OF DEATH, will return in the subsequent measures when Wagner transposes this entire sentential phrase up a major second. In short, Wagner transposes motives x and y to become motives y and z.

► Zooming out now to the excerpt at large, enharmonic resolutions of the V^7 chord into a Ger⁶₅ occur three times throughout the excerpt. ► In the first instance, shown in Example 3, an A⁷ chord in 156/4/6 resolves not to its expected D triad but rather to a tonic ⁶₄ harmony in Db major.⁴ Note the enharmonically spelled motive *x* in the bass at the double bar; the original A–G[#] is now spelled A–A^b in order to create this harmonic sleight of hand. Consult Example 3 as Clemens Krauss conducts the Bayreuth Orchestra in 1953; Ramón Vinay is Siegmund and Astrid Varnay is Brünnhilde.

► Similarly, the second instance, shown in Example 4, resolves a B^7 harmony in 158/1/6 to a cadential $\frac{6}{4}$ in d‡; motive y in the bass brings about this resolution.

on the fifth system of page 152.

^{4.} Due to this $\frac{6}{4}$ chord's resolution, I hesitate to label it a cadential V_4^6 .



EXAMPLE 3: First enharmonic reinterpretation of V^7 , 156/4/2–157/1/2.

The Vienna Philharmonic, conducted by Sir George Solti, performs Example 4; James King is Siegmund and Régine Crespin is Sieglinde.



EXAMPLE 4: Second enharmonic reinterpretation of V^7 , 158/1/3–158/3/1.

► The third and final instance is shown in Example 5; motive z occurs as the $C^{\ddagger7}_{4}$ in 158/4/6 resolves to an $e^{\ddagger6}_{4}$. Interestingly, though this final instance appears to resolve to a tonic or a cadential $^{6}_{4}$ as in the previous instances, closer examination reveals this as merely the first step in the unfolding of the dominant seventh chord in C \ddagger major. The 1967 Bayreuth Orchestra, led by Karl Böhm, performs Example 5; James King is once again Siegmund.

► Wagner accelerates his presentation of this device within the scene; ► over one hundred bars separate the beginning of Scene 4 from the first enharmonic reinterpretation, though hardly twelve bars separate the final two instances. ► In addition, note that the basslines of these three enharmonic reinterpretations



EXAMPLE 5: Third enharmonic reinterpretation of V⁷, 158/4/2–158/5/2.

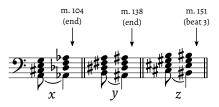


FIGURE 1: Bassline motivic parallelism with enharmonic dominant seventh resolutions.

present the very same half-step motives—x, y, and z—found in the original AN-NUNCIATION OF DEATH *Leitmotiv*, thereby creating a large-scale motivic parallelism between the initial ANNUNCIATION OF DEATH and the excerpt at large. To my knowledge, this parallelism has not been recognized until now.

I am convinced by this parallelism for a few reasons. First, it occurs in the precise order in which it is found in the initial FATE/ANNUNCIATION OF DEATH appearances at the beginning of the scene. Moreover, these pitches are the only melodic descents found in these *Leitmotive*. Combined with their traditional sigh gestures, this imbues a markedness for these pitch pairings which suggests a potential for future meaning. Since the latter appearances of these motives all occur in the context of the exact same harmonic event—a dominant seventh enharmonically reinterpreted as a German augmented sixth—and since this event occurs *only* these three times throughout the excerpt, always in the company of motive *x*, *y*, or *z*, the parallelism is confirmed.

► There are of course clear dramatic implications for these resolutions, but in order to fully understand them we first must change gears ever so slightly.

3 Modeling Conceptual Time

► Let us identify the end of 157/1/1—the appearance of motive *x* and thus the completion of the first enharmonic reinterpretation—as point *x*; points *y* and *z* similarly identify the conclusion of the remaining reinterpretations. ► Figure 1 shows these moments in reduction.

Let us also identify the opening of the excerpt as point p and the conclusion

Point	Schirmer Measure	Calibrated Measure	Libretto Text	Time Point
р	Beginning of 152/4/1	Beginning of m. 1	n/a	0
x	End of 157/1/1	End of m. 104	Wunsch mädchen	104
у	End of 158/2/5	End of m. 138	Siegmund dort nicht.	138
z	Beat 3 of 158/5/1	Beat 3 of m. 151	Wälse und al le	150.5
9	End of 159/1/1	End of m. 156	zu ih nen	156

TABLE 1: Outer boundaries (p and q) and completed motivic parallelism appearances (x, y, and z) matched with measure numbers and the libretto.

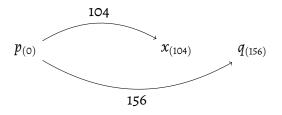


FIGURE 2: Durational network relating time-points *p*, *x*, and *q*.

of the excerpt as point *q*. ► Table 1 collates these locations with their time points and two systems of measure numbers: that based on the page/system/measure Schirmer format and that with m. 1 set at the beginning of Scene 4.

A network approach can show several relationships between these time points. To begin, we can observe the duration from time-point p to time-point x as it relates to the duration between time-points p and q. Figure 2 shows a durational network displaying this information. Recall that points p and q are the boundary points of our 156-measure excerpt, while point x is the location of the first enharmonic reinterpretation—and thus the appearance of motive x. This figure quantifies, then, the location of this bassline parallelism within the entire excerpt.

For our present purposes, we can now momentarily disregard the music up to the first enharmonic resolution, focusing instead on the excerpt from point x to the conclusion. Though we have a new starting time point, the procedure remains the same: measure the distance from the (new) beginning to the next enharmonic reinterpretation and compare that to the duration between the ex-

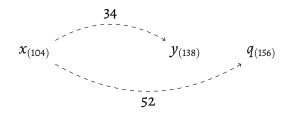


FIGURE 3: Durational network relating time-points x, y, and q.

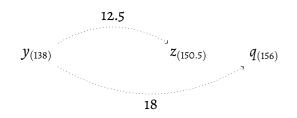


FIGURE 4: Durational network relating time-points y, z, and q.

cerpt's boundary points. ► Figure 3 shows a basic durational network displaying the location of motive *y* within the time span from *x* to *q*.

Our concluding exercise relates the durations within the time span between points y and q; \blacktriangleright Figure 4 displays this relationship. As a reminder, these three figures quantify the location of the aforementioned enharmonic reinterpretations within the time span of the previous landmark and the end of the entire excerpt. Note once again that the time spans shown in Figures 2–4 progressively diminish in size.

3.1 Lewin's FATE GIS

▶ When Lewin (1987) analyzed the opening of this excerpt, he emphasized the pitch structure of the opening FATE *Leitmotiv*. ANNUNCIATION OF DEATH is of course merely an expanded form of FATE; any discussion of one motive necessarily involves a discussion of the other. ▶ In discussing FATE, Lewin constructs a network for the opening three melodic pitches; Figure 5 reproduces his network.

The single -1-arrow from A to G \sharp is interesting, since it is the only descending interval in the FATE network. It is also the interval that, due to its metric place-

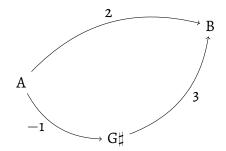


FIGURE 5: Figure 8.7.b from Lewin (1987), p. 185.

ment, negates the potential parallel perfect fifths with D and C \ddagger in the bass. And it is also, of course, this half-step, combined with its later transpositions, that creates motives *x*, *y*, and *z*.

3.2 Combining the Approaches

▶ In order for Lewin's network to interact more directly with mine, Figure 6 presents a revised network of Figure 5 with the pitches in descending order; the network structure remains the same after the successive major second transpositions of FATE. One may wonder how this new ordering of B–A–G# makes any musical sense considering the surface of the music clearly has an ordering of A–G#–B. From a strict Schenkerian standpoint, the analyst must prepare the chordal seventh B of the C#⁷ harmony at the start of Scene 4. The preparation comes in the transition immediately preceding our excerpt; here the B is properly prepared.⁵ As such, the B *does* occur first chronologically, followed by the A and G# of FATE. Indeed, conceptualizing a sustained B during the "D minor" harmony at the start of Scene 4 creates a b^{#6}. This harmony plays an important role throughout Act I of *Die Walküre:* it is outlined both in SIEGMUND and THE VOLSUNGS' BOND OF SYMPATHY, and it is exactly the sonority that Darcy labels the MISFORTUNE chord. The dramatic aptness for this reading is, I hope, clear.

▶ We are left now with a collection of durational networks in Figures 2–4 and

^{5.} Lewin (1987, 209) addresses another role in which these preceding measures set the stage for the scene.

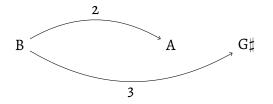


FIGURE 6: Revised network of Figure 5.

a consistent network from the FATE transpositions as shown in Figure 6. ► Figure 7 shows these networks to be isographic—more or less. Figure 2, in fact, can be reduced to produce just the network given in Figure 6. Figure 3 reduces to almost the same network, as does Figure 4.

The isomorphisms get fuzzier as time proceeds. While Figure 2 reduces to a clear 2- and 3-labelled arrow precisely like the network in Figure 6, Figure 3 reduces to a 3-labelled arrow combined with a 1.96-labelled arrow, a difference of 0.04. This term is largely nonsense, of course, but it nevertheless shows the degree of similarity rather clearly. Similarly, Figure 4 reduces to a 3-arrow with a 2.08-labelled arrow, a difference of 0.08 (twice that of the difference in the revised Figure 3). At first glance this might seem to weaken the argument of isomorphism. Instead, clear connections to the narrative actually strengthen the argument. The excerpt deals with Siegmund's impending death and entrance into Walhalla via Brünnhilde, an idea characterized musically as FATE, from which we created Figure 6. The revised network of Figure 2 details the initial harmonic sleight of hand, the point at which Brünnhilde moves into Db (the associative key of Walhalla)⁶ in order to explain the splendor of what Siegmund will find there. The isomorphism nicely portrays the fact that there is no hint yet of Brünnhilde failing her task. The revised network of Figure 3 details the second enharmonic reinterpretation, which accompanies Brünnhilde explaining to Siegmund that Sieglinde must remain on earth. For the first time in the duet, we see that Siegmund might fight his fate if doing so will allow him to stay with Sieglinde. Now,

^{6.} For more on associative relationships, see Bailey (1977) and McCreless (1989, 88–95); see as well my later note 19.

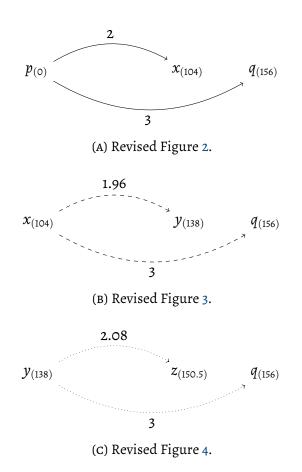


FIGURE 7: Revised networks of Figures 2–4.

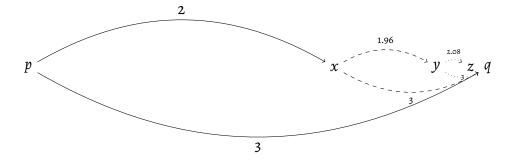


FIGURE 8: Nested proportions in mm. 1462–1617 (some labels omitted for clarity).

of course, the isomorphism is less precise. The final enharmonic reinterpretation, shown in the revised network of Figure 4, accompanies the moment when Siegmund officially announces his refusal to follow Brünnhilde to Walhalla. At this moment in the narrative Brünnhilde's task seems most likely to fail, and the isomorphism is appropriately the fuzziest of all.

► We are left, then, with a series of nested 3- and (near) 2-arrows throughout the entirety of the excerpt ► as shown in Figure 8. The gradual breaking-down of the isomorphisms nicely mirrors the dramatic action of each time point.

4 Relationships to Prior Research

► These thoughts are especially intriguing in light of BaileyShea (2007), who discusses how characters within the *Ring* can "control" the orchestra as a means of enhancing the drama. ► Connecting this to Robert Bailey's notion of associative tonality, please return to Example 3. ► We can imagine Brünnhilde wrenching the orchestra away from their expected D major down to Db in hopes of persuading Siegmund to come with her to Walhalla—Db, as a reminder, is the associative key for Walhalla.⁷ ► Similarly, in Example 4, as she informs Siegmund that Sieglinde must remain on earth, she cleverly coerces the orchestra into D[#] minor, the enharmonic equivalent of Eb, what Darcy (1993) labels as the key of the natural

^{7.} One may wonder how Brünnhilde can control the orchestra at the precise moment in Example 3 where she quits singing. BaileyShea (2007, 10n26) references this exact issue in a charming footnote connecting the concept to "the Force" in *Star Wars*.

world. Most poignant, however, is the ironic usage of associative tonality in the final resolution; \blacktriangleright refer again to Example 5. As Siegmund ultimately refuses to go to Walhalla, the C \sharp ⁷ suggests a resolution to F \sharp minor—the key associated with death, and the key of which Walhalla is the dominant. This C \sharp ⁷ instead moves to e \sharp_4^6 . At this point, the classically trained listener might expect a resolution to an e \sharp tonic, but instead we hear an unfolding of a G \sharp ⁷ chord, and Wagner forces us—and Siegmund—directly back to C \sharp major. The music thus first suggests that Siegmund will evade F \sharp minor, \blacktriangleright and that he will therefore evade death. Unbeknownst to him, however, some invisible hand—perhaps Wotan hiding in the shadows?—steers the orchestra immediately back to C \sharp —thus \blacktriangleright D \flat , thus \blacktriangleright Walhalla, and thus \blacktriangleright death after all. It seems, then, that Siegmund's fate is determined long before the dramatic conclusion to Act II. With these thoughts in mind, please listen once again as James King performs Example 5; note the sad irony within the text and music relationship.

► Moreover, in his groundbreaking (though problematic) study on form in Wagner, Lorenz ([1924] 1966) calls the *Todesverkündigung* the "apotheosis of the potentiated barform."⁸ Barform is itself a type of sentence structure comprising of two *Stollen* and an *Abgesang*. It is easy, then, to imagine the inherent 2and 3-arrows of a network detailing this construction, especially since Wagner's *Abgesänge* rarely balance out the combined length of the prior *Stollen* as we often see in sentence forms. Furthermore, the notion of potentiation is one of compound form; thus the nested hierarchies in my networks mimic the nested forms within Lorenz's view of this scene. I admit that Lorenz suggests a four-fold nesting of this scene, while mine is only three-fold, and that Lorenz's main articulation points do differ from mine (and sometimes considerably so), but the connection is nevertheless a worthwhile thought experiment.

^{8.} See Lorenz ([1924] 1966, 179–184) and McClatchie (1998, 139–141).

5 Modeling Observable Time

▶ My prior models handled what I have called "conceptual" time; distances were measured with bars and half-bars, thus they assumed a consistent pulse throughout the excerpt. We can similarly model what I have termed "observable" time time as measured in seconds based upon leading performances.⁹

▶ I have chosen to model eight recordings of the excerpt: ▶ a 1940 Met production conducted by Erich Leinsdorf; ▶ four from various Bayreuth Festivals: ▶ Clemens Krauss in 1953, ▶ Joseph Keilberth in 1955, ▶ Karl Böhm in 1967, ▶ and Daniel Barenboim in 1993; ▶ Solti's famous Vienna cycle from 1965; ▶ Levine's first Met cycle from 1987; ▶ and Janowski's cycle with the Rundfunk-Sinfonieorchester Berlin from 2012. Figure 9 in your handout shows the simplified networks for these eight recordings.¹⁰

What these simplified networks show us, of course, is how well the observable time of each recording matches the conceptual networks shown earlier. In no way is this a value judgment; that is, a closer relationship to the conceptual networks does not necessarily suggest that it is a better performance. Rather, it is merely one possible answer to the research question of how we can best understand the relationship between observable and conceptual time, especially using an excerpt so cleverly structured as this one. \blacktriangleright I urge you all, for instance, to consult the moments around time point *x* in the \blacktriangleright Janowski 2012 recording and how vastly different this performance is from the same spot in Solti 1965; you can consult the networks to get some idea, but only the recordings will tell the full story. \blacktriangleright A comparison of time point *y* in the Solti 1965 and Krauss 1953 recordings presents a similar scenario.¹¹

^{9.} Epstein (1979) uses the terms *chronometric* and *integral* time; that is, clock time and experiential time. Epstein (1995, 485n3), however, finds the terms "somewhat stuffy." Since my terms here offer a slightly different dichotomy than Epstein's, and due to his self-professed displeasure with them, I feel comfortable offering two new terms.

^{10.} Note that the Keilberth and Solti excerpts cross disc boundaries; as such, I accounted for an unintended pause in each (approximately 3 and 3.5 seconds, respectively).

^{11.} One may well wonder if these durational proportions are indeed perceptible. Though the psychological research is still lacking in many respects, Kramer (1978, 182 ff.) discusses the suc-

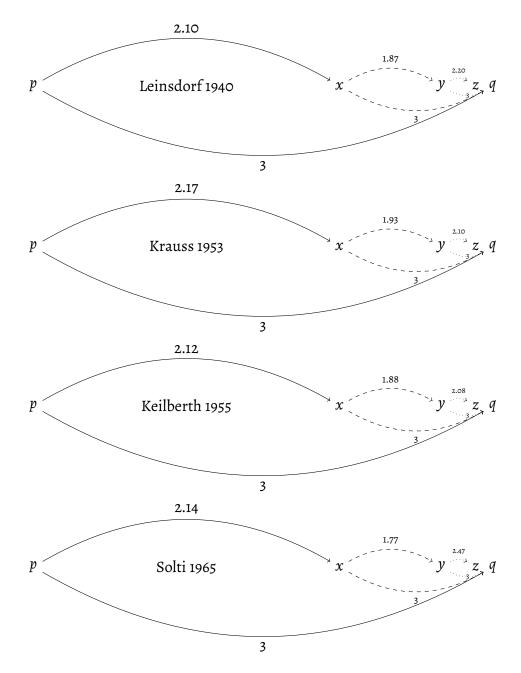


FIGURE 9: Simplified observable networks (some labels omitted for clarity).

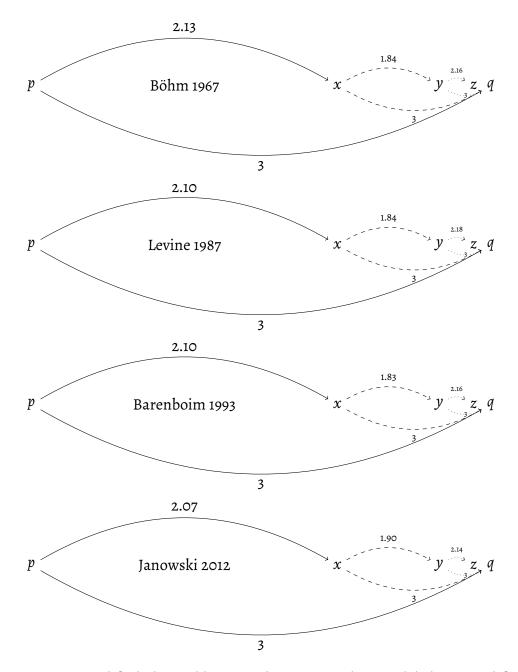


FIGURE 9: Simplified observable networks, continued (some labels omitted for clarity).

6 Siegmund's Death

▶ I think this analysis is compelling enough on its own, but an obvious question remains: does the analysis relate at all to the actual moment of Siegmund's death? ▶ If the narrative of the prior analysis was one of increasing doubt as to Siegmund's fate,¹² we are only left to wonder what a similar analysis might tell when his fate is actually decided. For this I will consult the entirety of Act II, Scene 5.¹³

Whereas the prior analysis uses half-bars as time points, this excerpt occasionally switches between quadruple $\binom{4}{4}$ and $\binom{12}{8}$ and triple $\binom{3}{4}$ and $\binom{3}{8}$ meter. As such, an analysis of conceptual time should account for beats instead of bars or halfbars. Taking this into account, the scene is comprised of 831 beats.

Furthermore, whereas the prior analysis focused on a bassline motivic parallelism, there is no similar parallelism here. Instead, I will focus on the main dramatic events of the conclusion to this act. As we consider the scene, a few moments stand out within the drama: \blacktriangleright Sieglinde's dream, \blacktriangleright the "Wehwalt" call (the moment Siegmund first hears Hunding's voice), \blacktriangleright and of course Siegmund's tragic defeat. \blacktriangleright Table 2 collates these locations with their time points in the manner of Table 1.¹⁴

All time points are pivotal to the narrative, but the one dramatic event not immediately apparent is ► SIEGLINDE'S DREAM. Here we have to turn to the libretto as Siegmund speaks to his sister:¹⁵ ►

14. Many may wonder why the initial appearance of Hunding's *Stierhorn* is missing from this list. In my reading, this is not a moment that suggests a change in the subsequent drama. The audience learned earlier in the drama to expect a fight, and at this moment the audience has no reason to believe Siegmund will not emerge victoriously. I return to this issue in note 20.

15. The translation is from Porter (1976). Though his is a singing translation and not a literal one, the excerpt here has no textual problems in that regard. Whenever this is the case, by rule I

cessful perception of the very ratio discussed here.

^{12.} That is, FATE.

^{13.} Lorenz ([1924] 1966) labels this as Period 13, though he includes the four bars leading into Scene 5, as well. I disagree; the material leading into Scene 5—which Lorenz includes in the period—is very similar to the music immediately preceding Scene 4, which Lorenz labels as a part of the transitional *Übergang*. I read both segments as transitional material outside of either formal unit.

Point	Schirmer Measure	Calibrated Measure	Libretto Text	Time Point
а	Beginning of 172/5/1	Beginning of m. 1	n/a	0
b	Beginning of 175/4/1	Beginning of m. 66	n/a	247
С	Beginning of 177/1/3	Beginning of m. 94	Wehwalt!	359
d	Beginning of 180/3/4	Beginning of m. 144	n/a	554
е	Beat 2 of 183/5/4	Beat 2 of m. 213	n/a	831

TABLE 2: Outer boundaries (*a* and *e*) and select dramatic events (*b*, *c*, and *d*) of Act II, Scene 5.

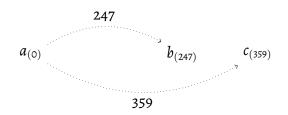
Charms of sleep / are sent to soothe / my sister's grief and pain. / Did the Valkyrie cast this spell / and lull my beloved to sleep, / so that no sound of our fight / should frighten this suffering maid? / Lifeless seems she, / though still alive; / her sorrow is eased; / she smiles in her sleep. / So peacefully sleep / till the fight is fought; / then wake when I have won!

The fact that Sieglinde begins to move about restlessly at this point is the initial cue to the listener of what may soon unfold. If Sieglinde is to "peacefully sleep / till the fight is fought; / then wake when [Siegmund has] won," her restless movement is our sign that the drama may not play out as Siegmund described. As such, this is the first indication in this scene of what is about to take place.

▶ Recalling the procedure from the prior analysis, ▶ Figure 10 shows the relationships between these time points and their related landmark boundaries.¹⁶ Figure 11 ▶ shows these networks in their reduced forms, and Figure 12 ▶ shows these simplified proportions nested into a single graph. Whereas the prior analysis handled increasing fuzziness as Siegmund's fate came more and more into question, these networks show a *decreasing* fuzziness. Astoundingly, the double bar at 180/3/4 (time-point *d*) is the precise point that creates the exact isomorphism emphasized in the *Todesverkündigung* analysis. At first glance this time point may seem to be "too late" in the music. The isomorphism relates to the FATE

provide the singing translation; I find it a much more musical experience than the alternative.

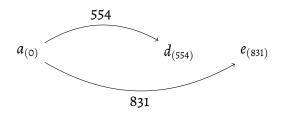
^{16.} As a friendly, coincidental mnemonic, the reader may wish to conceptualize these boundary points as *Anfang* and *Ende*.



(A) Durational network relating time-points *a*, *b*, and *c*.

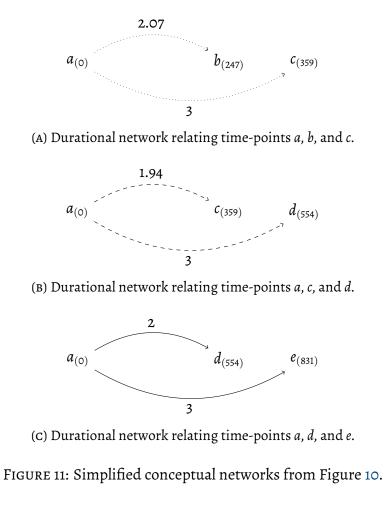


(B) Durational network relating time-points *a*, *c*, and *d*.



(C) Durational network relating time-points *a*, *d*, and *e*.

FIGURE 10: Basic conceptual networks for Act II, Scene 5.



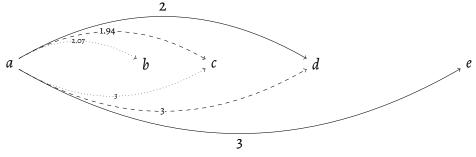


FIGURE 12: Nested proportions in Act II, Scene 5 (some labels omitted for clarity).

Leitmotiv, yet this time point is after the pronouncement of Siegmund's death in the stage cues written in both the piano-vocal and orchestral scores. The question then becomes whether we can pinpoint the moment of Siegmund's passing.

► The obvious answer seems to be the stage cue clearly stating "Siegmund falls dead to the ground," but a few measures later Wagner writes "*Mit Siegmunds Fall* the two lights disappear" (emphasis added). How, then, can two simultaneous events occur at separate points in the music?¹⁷ According to a witness at the stage rehearsals for the first Bayreuth Festival in 1876: ►

In the catastrophe that now inexorably unfolds, *Wagner insisted that the rapid sequence of events and corresponding themes should strictly coin-cide*. Every thematic entry must be given its full significance, even at those moments when the sheer volume of sound has the force of a hurricane; only this will prevent the outlines of the truly gigantic structure from being blurred.¹⁸

► Referring to Example 6, measure 180/1/3 consists of both THE SPEAR and THE SWORD *Leitmotive*. THE SWORD as stated here is actually an evolution between itself and THE SWORD GUARDIAN, and the latter is intriguingly chopped in half (!) right as THE SPEAR motive enters between beats three and four; the motivic narrative here is clear. The fortissimo chords that begin in 180/2/3 are reminiscent of the LIGHTNING chords from the opening of the opera; perhaps this is Siegmund again trying to evade the attacks of his foe. The D minor that appears at the double bar announces both THE VOLSUNG RACE and the associative key of Wotan's spear.¹⁹ If I understand Wagner correctly, I posit that the actual moment of death comes at the double bar with the appearance of THE VOLSUNG RACE. As such, our proportional networks return to the precise FATE isomorphism at the

^{17.} For a different viewpoint on temporality in an operatic context—one where an aria by Donna Anna occurs simultaneously with Giovanni's *earlier* farewell speech in Mozart's *Don Giovanni*—see Schachter ([1991] 1999, 222).

^{18.} Porges (1983, 64).

^{19.} Darcy (1993, 218) provides a terrific chart of associative relationships in Das Rheingold.

Producer	Conductor	Orchestra	Year	Moment of Death
Patrice Chéreau	Pierre Boulez	Bayreuth	1980	ca. 181/5/1
Nikolaus Lehnhoff	Wolfgang Sawallisch	Bavarian State Opera	1989	ca. 181/3/2
Otto Schenk	James Levine	Metropolitan Opera	1989	ca. 180/3/1
Harry Kupfer	Daniel Barenboim	Bayreuth	1992	180/3/4
Robert Lepage	James Levine	Metropolitan Opera	2011	181/5/1

TABLE 3: Interpretations of Siegmund's death in five productions.

moment Siegmund passes. Please listen as James Levine, James Morris, and the Metropolitan Opera Orchestra perform Example 6.

► I am not the first to be so liberal with the placement of Siegmund's death, and indeed my reading is quite tame compared to the liberties taken by others. ► Table 3 shows the score locations of Siegmund's death in five recorded video productions. Although the sample size is far too small to draw any firm conclusions, the span of over thirty measures within which Siegmund's death takes place is enough to show the liberties by which producers interpret this moment in the drama. Indeed, only in the Met's 1989 production does Siegmund's death seem to occur according to Wagner's stage instructions—though even here the precise moment is obfuscated by changing camera angles. Meanwhile, Kupfer's 1992 production matches my interpretation of the timing of Siegmund's death, including a poetic moment where Wotan kisses the Wälsung's life away, of course in clear reference to the climactic moment awaiting us in Act III.

7 Summary

▶ Both prior analyses ▶ have Siegmund's fate as their focal point. In the initial *Todesverkündigung* analysis, a repeated bassline motivic parallelism based off of the ANNUNCIATION OF DEATH *Leitmotiv* created a series of durational networks of conceptual time. These networks were joined into a single recursive structure creating isomorphisms with the pitch construction of the FATE *Leitmotiv*. In this analysis we saw increasing fuzziness with these isomorphisms that aligned precisely with the fulfillment of Siegmund's fate (that is, his death); ▶ Table 4 shows



EXAMPLE 6: Siegmund's death, 180/1/1–180/4/1.

Point	Ratio (to 3)	Difference (from 3)	Fuzziness
Act II, Scene 4			
р	n/a	n/a	
x	2	0	increasing
у	1.96	0.04	'eas
Z	2.08	0.08	in.
9	n/a	n/a	100
Act II, Scene 5			
а	n/a	n/a	. <i>ح</i>
Ь	2.07	0.07	lec1
С	1.94	0.06	lea
d	2	0	decreasing
е	n/a	n/a	, ad

TABLE 4: Changes in conceptual analysis fuzziness in Scenes 4 and 5.

these changes. The initial time point created an exact isomorphism because there was not yet any indication that Siegmund would escape his fate. Only as Siegmund begins to win Brünnhilde over do the isomorphisms correspondingly become fuzzier.

In Scene 5, however, we see the opposite case: the initial time point here creates the fuzziest isomorphism of the scene because the audience is still unsure if Siegmund will actually perish. As evidence of his impending doom mounts, the isomorphisms now decrease in fuzziness until the moment of Siegmund's death, when we return once again to the exact isomorphism of FATE. In short, these temporal isomorphisms narrate the end of Act II exactly: at the start of Scene 4, Siegmund is given a death sentence, and the isomorphism exactly matches that of FATE. These isomorphisms become less and less clear until Scene 5, when the isomorphisms suddenly begin to return to that of FATE, matching it precisely when Siegmund passes.²⁰ ►

^{20.} As mentioned in note 14, one may also wish to include the initial entrance of the *Stierhorn* in the set of main dramatic events. If one wishes to do so, the temporal analysis creates a ratio of 1.70 to 3. As such, the narrative of increasing and decreasing fuzziness still holds. The *Stierhorn*, which enters between points *a* and *b*, would create an isomorphic difference of 0.30. I think this isomorphism is much too fuzzy to be included here, but if one wishes, the narrative remains; one

8 Conclusion

I admit some apprehension that I may be lumped into the spurious tradition of Golden ratio hunters. I hope I have shown that my time points are of musical and dramatic significance; and that instead of *a priori* privileging some ratio, I am instead focusing on an isomorphism drawn from one of the most densely used and iconic *Leitmotive* in the Act—indeed, in the entire cycle. With the powerful narrative role that the FATE isomorphism has in Act II, one is left to wonder if similar structures exist elsewhere in the cycle where FATE permeates the musical surface: obvious examples for future study include the *Feuerzauber* from the present drama and Siegfried's death in *Götterdämmerung*.

may thus have their analytic cake and eat it, too.

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