

5 Technê of Radiance

Kaija Saariaho's *Lonh* (1996)

A work for soprano, electronics, and electronic sounds, *Lonh* is a brilliant instance of recently composed music that uses timbral phenomena as structural determinants (Saariaho 1996). My analysis of *Lonh* shows how these timbral phenomena work in conjunction with text, recurrent sonorities, motivic transformations, and electronically enabled vocal effects to project a sense of musical “radiance.” As I use the term here, radiance is a comprehensive formal property arising from specific musical procedures over the duration of *Lonh*.

The analysis focuses on the technê of radiance in *Lonh*, that is, on how the formal design of radiance emerges from the processes of musical sounding. In recent years the term and concept of technê has been recycled from Ancient Greek thought within the philosophy of technology, and I engage it here as part of my claim that analytical investigation of the sounding presence of musical phenomena is a necessary part of a critical understanding of music generally and of *Lonh* in particular. In the earliest Greek contexts, technê was linked to the concept of epistêmê. Typically, technê has been translated as either craft or art, and epistêmê as knowledge, invoking the modern opposition between practice and theory. But in the earliest Greek usage, technê and epistêmê are often used interchangeably, implying that practice enacts knowing of the world. This earliest notion of technê has proven fruitful for recent philosophers of technology. As the etymological forerunner of the modern notion of technology, technê offers a conceptual model for the integration of practice and theory, for the integration of technique and knowing.

The philosopher Martin Heidegger, in his 1955 essay “The Question Concerning Technology,” engaged the ancient Greek concept of technê as part of his argument that technology is a “revealing” or a “bringing-forth” (Heidegger 1977). For Heidegger, a technology reveals or brings forth the reality of the world; this reality is not an absolute existent but rather a contingent presence arising from the relation between humans and the materialities of being. The concept of technê for Heidegger embeds this idea of a reality emerging from practice: our specific ways of encountering the world are a bringing-forth of its reality. Since technologies take the form of tools broadly conceived and hence are used for “doing something,” they are

aligned with practice. The development and use of technologies is then a bringing-forth of the reality of the world.¹

I invoke the concept of *technê* here as a motivation for analysis, an analysis that seeks in music's sounding presence the particular ways that it enacts a bringing-forth of the reality of the world.² In other words, an analytical engagement with the practical or material details of music leads us to the reality of the sounding world. I construe the materiality of music in broad terms, including but not limited to sound and video recordings, the score, composer commentary, critical reaction, and digital sound analysis (spectra and amplitude). Consideration of how music's materiality is a bringing-forth of the reality of a world entails a more speculative interpretive analytical stance, but a stance that flows from material details. My analysis demonstrates how Saariaho's *Lonh* entails a bringing forth of the sensation of radiance, and the validity of such an assertion will lie in the particular ways that the material details of the work support such an interpretation.

The analytical articulation of *Lonh*'s design offered here reflects a wide variety of factors: the trace of compositional intent as inscribed in the score, critical commentary, other analyses of Saariaho's music, the composer's comments about *Lonh* and other works, engagement with recorded audio and video performances,³ digital sound analysis of the available professionally recorded performance, knowledge of relevant music technologies used in composition, including familiarity with IRCAM procedures,⁴ knowledge of medieval musical practices, and my own analytical background, preferences, and goals. And while several of these factors may not be explicit in the analysis, all of them figure in the analytical process itself. The analysis of Saariaho's *Lonh* here focuses on the most crucial factors contributing to the formal design of radiance.

Lonh consists of two strands of musical events as summarized in Table 5.1. These strands include the live soprano, with electronic enhancements, and an electronics part in a fixed medium that is projected through speakers. Table 5.1 also indicates that the text of *Lonh* is based on a twelfth century troubadour song by Jaufré Rudel and that the electronic strand includes sampled and electronically generated sounds, all produced and manipulated at IRCAM.⁵

Table 5.1 *Lonh*, Two Musical Strands.

<i>Musical Strands of Lonh</i>	
Live Soprano	miked voice; occasional electronic enhancement, including sustain and reverberation; Text based on 13th century troubador song by Jaufré Rudel
Electronic Part	fixed-media, sounds projected through four speakers; synthesized and sampled sounds, the latter including various percussion instruments, nature, and voices

Saariaho chose to set Jaufré’s song “Lanquand li jorn son lonc en mai” while doing some initial exploratory work for what would be her first opera, *L’amour de loin* which is based on Jaufré’s vida and its theme of “love from afar.” She reviewed manuscripts pertaining to Jaufré in the Bibliothèque nationale in Paris,⁶ after first encountering a 1994 book by Jacques Roubaud titled *La Fleur Inverse: L’art des Troubadours* (Roubaud 1994). For *Lonh*, Saariaho chose the original language of the text, Occitan (Old Provençal), although the first stanza is to be recited in either modern French or English during the prologue. The form of the piece follows the large stanzaic structure of the poem: it includes a prologue and eight sections corresponding to the poem’s seven stanzas and tornada.⁷ Saariaho utilizes some aspects of modal design from Jaufré’s song for the vocal melody of *Lonh*, and she retains the overall poetic focus on the troubadour’s longing for an idealized and unobtainable love, reputed to be a countess in Tripoli.⁸

Significantly, Saariaho chose to set the text of the male troubadour with a soprano voice, inverting the gender expectations that might arise in connection with the quest for a distant love.

Table 5.2 shows the Occitan text and its English translation. In the table different fonts or shadings for the Occitan text indicate the type of text delivery: Times New Roman with light grey shading indicates that the text is not heard at all; Times New Roman-bold that the live soprano sings the text; Times New Roman-italics that the recorded voices present the text; and Verdana that both live and recorded voices present the text but not simultaneously. As Table 5.2 indicates, over the course of *Lonh* the text as a semantic unit recedes from presence. The texts of the first and second stanzas are stated in their entirety, but from the fifth stanza on only minimal parts of the text are presented.

While the form of *Lonh* is governed by the poetry, its sections are not all of the same duration. Figure 5.1 indicates the sections and the times at which they begin in the published performance with soprano Dawn Upshaw (Upshaw 1997). Durations of each section are shown above the central timeline.⁹ The fixed medium of the electronics part allows for some small amount of variability in performance: each section has a different track that is cued at the appropriate moment by either the performer or a sound engineer. But because this variability is small, I will be relying on the timings of the recorded performance with Upshaw in my analysis in addition to measure numbers.

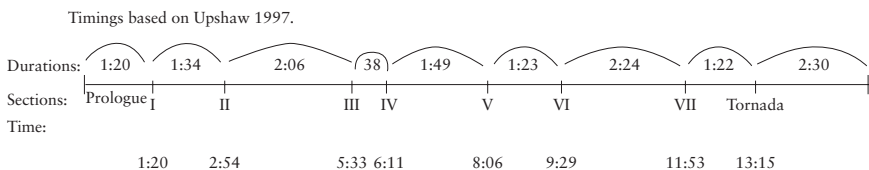


Figure 5.1 Overall Form: Sections, Durations, and Timings.

Table 5.2 Lonh, Source poetry: Jaufré Rudel, “Lanquand li jorn son lonc en mai.” Text and Translation from Treitler 1992; differs slightly from Saariaho’s score.

<p>I Lanquand li jorn son loc en mai M’es bels douz chans d’auzels de loing, E qand mes sui partitz de lai Remembra-m d’un’ amor de loing; Vauc de talan ebroncs eclis Si que chans ni flors d’albes pis No-m platz plus que l’invern gelatz.</p>	<p>When the days are long in May I like the sweet song of birds from afar; And when I have departed from there, I remember a love from afar; I go sad and bowed with desire So that neither song nor Hawthorn flower Please me more than icy winter.</p>
<p>II <i>Jamais d’amor no-m gauzirai</i> Si no-m gau d’est amor de loing, <i>Que gensor ni meillor non sai</i> <i>Vas nuilla part ni pres ni loing.</i> Tant es sos pretz verais e fis <i>Que lai el renc dels Sarrazis</i> Fos eu per lieis chaitius clamatz.</p>	<p>Never in love shall rejoice Unless I enjoy this love from afar, For nobler or better I do not know In any direction, near or far, Her worth is so true and perfect That there in the kingdom of the Saracens I would, for her, be proclaimed captive.</p>
<p>III Iratz gauzens m’en partrai Qan veirai cest’amor de loing, Mas non sai coras la-m veirai, Car trop son nostras terras loing: <i>Assatz i a portz e camis.</i> E per aisso no-n sui devis, Mas tot sia cum a Dieu platz!</p>	<p>Sad and rejoicing I shall depart When I shall see this love from afar, But I do not know when I shall see her For our lands are too far. Many are the ports and roads, And so I cannot prophesy, But may all be as it pleases God!</p>
<p>IV Be-m parra jois qan li qerrai Per amor Dieu l’amor de loing. <i>E s’a lieis, plai, albergarai</i> Pres de lieis, si be-m sui de loing. <i>Adones parra-l parlamens fis</i> Qand drutz loindas er tant vezis <i>C’ab bels digz jauzirai solatz.</i></p>	<p>Joy will surely appear to me when I seek from her For the love of God, this love from afar. And if it pleases her, I shall lodge Near her, although I am from afar. Then will appear fine discourse, When, distant lover, I shall be so close That with charming words I shall take delight in conversation.</p>
<p>V Ben tenc lo seignor per verai Per q’ieu veirai l’amor de loing, Mas per un ben qu m’en eschai N’ai dos mals, car tant m’es de loing Ai! car me fos lai peleris Si que mos fustz e mos tapis Fos pelz sieus bels huoills remiratz!</p>	<p>I consider that Lord as the true one Through whom I shall see this love from afar But for one good that befalls me from it, I have two ills, because she is so far. Ah! Would that I might be a pilgrim there So that my staff and my cloak Might be seen by her beautiful eyes.</p>
<p>VI Dieus qe fetz tot qant ve ni vai E fermet cest’ amor de loing Me don poder, qe-l cor eu n’ai, Q’en breu veia l’amor de loing Veraiamen en locs aizis, Si qe la cambra e-l jardis Me resemble totz temps palatz.</p>	<p>God who made all that comes and goes And established this love from afar Give me the power, for the desire I have, Quickly to see this love from afar, Truly, in agreeable places, So that chamber and garden Might always seemsto me a palace!</p>

VII

Ver ditz qui m'apella lechai
 Ni desiran d'amor de loing,
Car nuills autre jois tant no-m plai
 Cum jauzimens d'amor de loing;
 Mas so q'eu vuoill m'es tant ahis
 Q'enaissi-m fadet mos pairis
 Q'ieu ames e non fox amatz.

He speaks the truth who calls me greedy
 And desirous of love from afar,
 For no other joy pleases me as much
 As enjoyment of love from afar;
 But what I want is so difficult
 For thus did my godfather decree my fate,
 That I should love and not be loved.

Tornada

Mas so q'ieu vuoill m'es tant ahis
 Toz sia mauditz lo pairis
 Qe-m fadet q'ieu **non fos amatz!**

But what I want is so difficult
 May the godfather be cursed
 Who decreed my fate that I should not be
 loved

Key
 Soprano—sung by live soprano
 Recorded Voice—recited in fixed-media
 Soprano and recorded Voice—occurring live and in fixed-media
 Not audibly present—text does not occur

The electronic part of *Lonh* is indicated in the score by a separate staff underneath the vocal part. Example 5.1 cites measures 36–47 of the score, indicating both the vocal and electronics part for the end of the Prologue and the

I *sempre calmo, intimo*
 ♩ = 72
 S.V. *p* >

Soprano
 36 *l'hiver gelé*
 frozen green
 m

Electronics
 Pitched Perc.
 and Voices
 recorded singing voices

Perc.
 M..... ②

Sopr.
 42 *Lan - qand li*
 jor_n_ son lonc
 mp

Electr.
 Pitched Perc.
 and Voices

Perc.

Example 5.1 *Lonh*, mm. 36–47, end of Prologue to beginning of Section I.

beginning of Section I. Descriptive terms such as “wind and whispering voices” and “non-pitched percussions” and notated rhythms in the electronic staff serve as cues to the soprano and indicate the timbral variety of the electronics part. Since the electronics part is not fully notated, I have mapped out its events. Table 5.3 lists the several timbral types occurring in *Lohn*. I have grouped these types into four categories: Vocal, Electronic, Nature, and Percussion. Within those large categories, the table shows the specific types, and abbreviations for specific types are given in an adjacent column. The categories of Vocal, Nature, and Percussion all entail sampled sounds; sometimes those samples have been manipulated and sometimes they have a strong resemblance to their sound source. The sounds of the Electronic category are recognizably synthetic. The percussion category has five subcategories—glockenspiel, vibraphone/chimes, cymbal, gong, and drum—and timbral types within those subcategories. Since these are sampled and transformed percussion sounds, the timbral types sometimes merge into one another, as in the vibraphone/chimes. The

Table 5.3 Electronics Part: Categories and Codes for Timbral Types.

<i>Categories of Timbral Types</i>		<i>Code</i>
Vocal		VOCL
Choral—high		C-H
Choral—mid-range		C-M
Murmuring Voices: male+female		Mur
Spoken Voice		Spkn
Electronic		ELCT
High—electric sound		E-H
Nasal—electronic sound, mid-range		E-Na
Low—electronic sound		E-L
Nature		NATR
Birds—high		Brd
Wind/rain		W/R
Percussion		PERC
Glockenspiel	High Glock	GI-H
	Low Glock	GI-L
Vib/Chimes	Windchime	WCh
	Vib/Chime—softer mallet	VCS
	Vib/Chime—harder mallet	VCH
	Bell—sustained	BLL
Cymbal	Cymbal—hit with metal	CyM
	Cymbal—hit with wood	CyW
	Cymbal—bowed	CyB
Gong	Gong—hit with wood	GgW
	Gong—hit with soft mallet	GgS
Drum	Bass Drum	BsD

descriptive names of the timbral types mostly refer to recognizable timbres of the sampled acoustic sounds. Sounds in the Electronic category are referenced by relative pitch and a sound feature, such as “nasal.”

Figure 5.2 maps the occurrence of timbral types within the sections of *Lonh*, using the categories, layout and abbreviations of Table 5.3. Transcribing only relative features of timing, each cell of the timbral map indicates whether a particular timbral type is present and the relative time of its occurrence. For instance, the Bird type occurs throughout all but the very end of Section I, and in Section II the white vertical lines indicate that the Bird sounds are intermittent. For all of the timbral types except two I have indicated their occurrence with rectangles at the relative moments within each section. The two exceptions are the High and Low Glockenspiel timbral types. Here, because of the nature of the attacks of these types and their layering during sections V and VII, I have depicted their occurrences with small circles. The timbral mapping of Figure 5.2 provides the basis for my analysis of the musical strategies of the electronics part and for the soprano and electronics parts together.

As a comprehensive formal property of *Lonh*, radiance emerges from the interaction of several coincident musical planes. These planes comprise three types of musical phenomena: 1) moments of sonic luminance, a quality arising from pitch range, spectral attributes, and culturally derived timbral associations, 2) moments of formal “flickering,” an emergent quality arising from musical processes of association and uniqueness, and 3) moments of intensity arising from the culmination of transformational process. My analysis takes the following path through these musical planes. I consider how the planes of luminance and flickering operate first in the electronics part and then the vocal part; next I consider how intensity arises through the interaction of both parts; and finally I consider how the overall property of radiance emerges from the interaction of these three planes.

Figure 5.3 maps the events involved in luminance and flickering in the electronics part. The bracketed rows for luminance indicate the time of seven events and the words associated with five of them. These events of luminance have some unique and momentary qualities giving them salience; these include brighter sounds with prominent upper partials, higher pitch, and a louder dynamic. Of the seven such moments all but two are associated with significant words that are shown in the Text row of the figure. For instance, “remembra-m” in Section I occurs as part of the phrase “I remember a love from afar” and the articulation of the word achieves luminance with increased activity of the Bird type at a high pitch. The other moments of luminance associated with text include the words joy (jois), God (Dieus), might (Fos), and love (amor)—all significant words for the theme of love from afar.¹⁰ The moments of luminance not associated with particular words occur at Time 3:12 at the beginning of Section II and at Time 13:11 bridging over section VII to the Tornada. This latter instance is unusual in that it involves both higher and lower pitches as well as a dynamic swell, creating a shwooshing gesture into the concluding section.

	Prologue	I	II	III	IV	V	VI	VII	Tornada
Vocal									
C-H		■	■						■
C-M	■	■	■	■	■	■	■		■
Mur	■			■			■		■
Spkn			■	■					■
ELCT									
E-H									■
E-Na				■	■				
E-L								■	■
NTR									
Brd	■	■	■	■					■
W/R	■			■				■	
PERC									
Gl-H				■	■	■	■	■	■
Gl-L						■	■	■	■
WCh							■		
VGS				■	■				
V-H			■	■	■	■	■	■	■
BLL							■	■	■
CyM						■	■		
CyW				■					
CyB									
CgW			■	■	■	■	■	■	■
CgS		■	■	■	■	■	■	■	■
BsD	■								

Figure 5.2 Timbral Mapping: Timbral Types by Section.

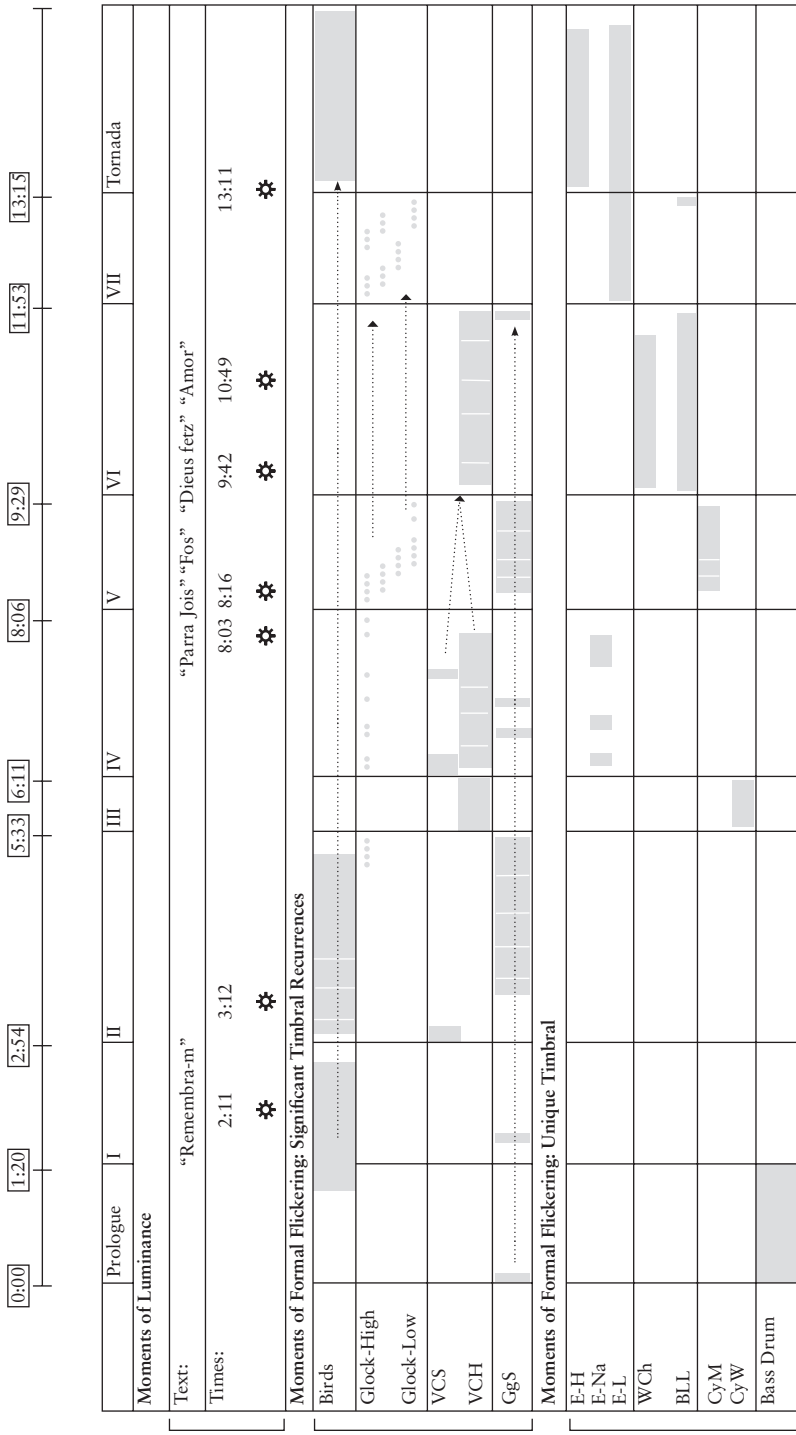


Figure 5.3 Radiance: Moments of Luminance and Moments of Formal Flickering in the Electronics Part.

Moments of formal flickering arise from processes involving cross-sectional associations generated by timbral recurrence and from salience generated by timbral uniqueness. Because the timbral associations arising from recurrence and moments of timbral salience are intermittent during *Lonh*, I refer to the emergent formal quality as flickering. The recognition of timbral recurrence across sections creates associations that generate such intermittent moments of formal “brightness.” The emergence of such formal flickering is a relational phenomenon in contrast to the quality of luminance. In Figure 5.3 the middle, bracketed rows show significant timbral recurrences in the electronics part: Birds, Glockenspiel—High and Low, Vib/Chime with softer and harder mallet, and Gong with soft mallet. The Bird type occurs at the beginning of *Lonh* (end of Prologue and Sections I and II) and recurs in the Tornada, creating associational relations across those sections. The significant occurrences of both the High and Low Glockenspiel type happen in sections IV–V and VII; and the significant occurrences of the Soft and Hard Vib/Chime type associate sections III, IV, and VI. And finally the Soft Mallet Gong type occurs in all but three of the sections and noticeably not in the last two sections. The directional arrows between these timbral types indicate the associational relations between these recurrences, and it is these associational relations between timbral recurrences that generate the sense of formal flickering.

Unique timbral events generate another dimension of formal flickering. The lower bracketed rows of Figure 5.3 show the timbral types that occur either once or a few times in close succession. For instance, the Bass Drum type occurs only in the Prologue and the Cymbal with wood only in Section III.¹¹ The Nasal Electronic type occurs three times in Section IV and the Sustained Bell in Section VI and toward the end of Section VII. Because they appear as unique (or nearly unique), these timbral events assume a salience that contributes to formal flickering. The sense of uniqueness is, however, a comparative feature of timbral quality and hence it depends not on a particular quality as does luminance nor on the associational relations arising from timbral recurrence. Rather timbral uniqueness generates salience as a quality in relation to other timbral types. Overall, the mapping of Figure 5.3 coordinates the moments of luminance with the two modes of formal flickering for the electronics part, showing how timbral phenomena play a structuring role in *Lonh*.

Next I turn to the vocal melody and its participation in formal flickering through associational relations. As mentioned earlier, Saariaho uses not only the text of Jaufré’s song but also the melody as a modal jumping-off place. Example 5.2 juxtaposes the melodic pitches of Saariaho’s Section I, which sets the first stanza of the poetry, with one of the extant versions of Jaufré’s melody—one that is at the *Bibliothèque nationale* in Paris. Comparison of Jaufré’s melody to Saariaho’s shows that she composes a melody that enacts a modal character, especially in lines one through five, by maintaining in general ways the range and intervallic contours of Jaufré’s melody. While

Saariaho, *Lonh*
Section I, Stanza I

Jaufré Rudel
Edition X, Bibliothèque nationale
From Treitler 1992

Line 1)

Example 5.2 Comparison of Melodic Contours: Saariaho and Jaufré.

Example 5.3 Melodic Structuring of Soprano Part by Section: Range, First and Last notes, Modal Collections.

the first section of *Lonh* stays relatively close to the character of Jaufré’s song, the following sections do not. Example 5.3 abstracts general aspects of melodic structuring for each section of *Lonh*, indicating range, first and last note, and the modal collection.

Some of the significant structuring features of Saariaho’s melody for each section are tabulated in Table 5.4, extrapolating from information given in Example 5.3. The table shows the first and last note of the melody in each section, indicates the modal orientation and its stability, and the range of the melody for each section. The table also indicates associational relations in the pitch organization of the soprano melody. Sections I, IV, VI, and the

Table 5.4 Soprano Melody: Beginning and Ending Pitches, Modal Stability, Range, and Highest Notes.

	I	II	III	IV	V	VI	VII	Tornada
First Note	D4	(E4)	(A4)	D5	(E5)	D4	(A4)	D4
Last Note		F4	E4 → E5	G4	C#5	B4	B5	A5
Modal Collect	D	D	A	A	C#? (Only 4 pitches)	No Center	No Center	A or D
Stability	Stable	Stable	Stable	Changing	Constrained	Changing	Stable	Stable
Range: pitches	D4-D5	E4-F5	G#4-F5	G#4-Ab5	E4-E5	E4-A5	A4-B5	D4-A5
By semitones	12	13	9	12	12	17	14	19

Smallest Largest

Highest Soprano Pitch

Tornada all start on a D, sections II and V begin on E, and II and VII start on A. The associational arcs (with differing line characteristics for each of the three pitches) show these relations between sections. The recurrence of D as a section-beginning pitch suggest an overall D modal orientation for *Lonh*, an orientation supported by the dominant A, and its dominant E, as section-beginning pitches. In distinction to the more stable character of the section-beginning pitches, the section-ending pitches are more varied and serve to create a fluid pitch organization overall. As indicated in Table 5.4, Sections II and III both end on an E and Sections VI And VII on a B. Sections I, IV, and V end on F, G, and C♯, and the piece ends with an A in the vocal melody.

This tension between more stable and fluctuating pitch organization characterizes the modal orientations of *Lonh*'s sections. Table 5.4 also shows that sections I through III have relatively stable modal collections, sections IV–VI relatively unstable, and Sections VII and Tornada return to stability although the modal center is unclear in the Tornada. The table also indicates that the smallest range occurs in Section III, the largest range in the Tornada, and the highest note, B5, in Section VII. Overall, the directed associational arcs on Table 5.4 suggest how the complex of relations for pitch organization contributes to the property of formal flickering in the vocal part. These moments of association create glimmers of connectivity and differing that play a role in this sense of flickering during *Lonh*.

Next I turn to the third type of musical phenomena contributing to radiancê—transformational processes culminating in moments of intensity. In this instance, I'll focus on motivic transformations in the soprano melody. Two distinct but related motives play a role in this transformational process. Example 5.4 shows the “de loing” (afar) motive which concludes the phrase setting the text “A love from afar” (mm. 56–60). The example cites the significant occurrences of this motive and its transformations in sections I and II. Each occurrence of the motive is shown with its characteristic rhythm and the successive intervals are listed directly under the staff. As Example 5.4 indicates, three different transformations operate. The first transformation

Contextualizing Phrase: “D’un amor de loing” -- “A Love from Afar”

Section I
59
Expand then repeat first interval
m. 70-71
+3 -1
de loing (from afar)

Section II
m. 117
m. 140
+5 -1 -4 +5
d'un amor de loing (a love from afar)

-1 +3
d'a mor (a love)

-2 +4
de loing (from afar)

Interval Retrograde
Interval expansion

Example 5.4 “de loing” Motive: Statement and Transformations.

a) Section III "Dieu Platz"--"Pleases God"

m. 195

-1 +8
Dieu Platz
(pleases God)

b) Section IV "Parra jois"--"Joy will surely appear to me"

m. 200 m. 206 m. 208

-1 +3 Par-ra jois Par-ra Be -1 -10 +1 Par-ra jois -9 +4 li jois

Compress range, contract/last interval Interval R1 + R Permute last two pcs or expand/invert Contract + expand

m. 223 m. 249 m. 266

+1 -9 Par - ra jois -1 -9 Par - ra -10 +1 Par-ra jois -10 +1 Par-ra jois

Interval R: contract first Invert first R: expand + invert Repeat

m. 272 m. 275

-5 -1 Par - ra jois -9 -1 Par - ra jois

Contract + permute Expand first

Example 5.5 "Dieu Plat/Parra Jois" motive and transformations.

(a) Section III, "Dieu Platz" ("Pleases God")

(b) Section IV, "Parra Jois" ("Joy will surely appear to me")

(mm. 59–60 to 70–71) is expand-then-repeat-first-interval: that is, interval +3 becomes +5, and that +5 is repeated at the end. The next transformation is an interval retrograde: +3-1 becomes -1+3, and the last transformation is an interval expansion: -1+3 becomes -2+4.

The second significant motive, "Dieu platz" ("pleases God"), is shown in Example 5.5a. The motive first occurs at the end of Section III (in m. 195) and then recurs in several transformations in Section IV, setting the text "parra jois" within the larger phrase "Joy will surely appear to me." Example 5.5b cites the several transformations occurring in Section IV and annotates the transformations from Sections III to IV and within Section IV. Each subsequent motive transforms the one immediately preceding it rather than transforming the initial "Dieu Platz" motive, creating a chain of transformations. And as

such, in Section IV the motive more properly becomes the “parra jois” motive. Throughout Section IV, the types of transformations vary from one to the next, creating a supple flow of relations. The process of transformation from the first “Dieu platz” motive culminates with four nearly identical concluding statements of the “parra jois” motive. Of the four, the first two starting in mm. 250 and 266 are identical, and those starting in mm. 272 and 275 are nearly identical, these last two differing from the first two only by a permutation of the last two notes. Overall then, the process of transformations of the “Dieu platz/parra jois” motive culminates in repetitions that create a moment of intensity at the end of Section IV, a culminating intensity that contributes to the long-range formal design of radiance.

Finally, the last stage of my analysis demonstrates how the interacting planes of luminance, flickering, and intensity produce the overall property of radiance. Figure 5.4 represents the momentary, associational, and processive relations that occur during the planes of luminance, flickering, and intensity. For this figure, I use different shapes to indicate associations or significant moments and to suggest some coincident moments of particular prominence during *Lonh*'s structuring of musical time. In the luminance plane, the ovals indicate the proximity of luminant moments for those occurring in Sections I and II and those spanning Sections IV through VI, and the oval around the event going into the Tornada singles out its unique role in this plane. For the flickering plane rectangles indicate the associational relations or the unique relational events that contribute to formal flickering. For the intensity plane, directed arrows and hexagons indicate the transformation process for the “de loing” and “Dieu platz/Parra jois” motives, a process whose culmination generates a moment of intensity for the ending of Section IV. As Figure 5.4 suggests, *Lonh*'s formal design arises from a complex network of events occurring during the three interacting planes of luminance, flickering, and intensity, and it is the interactions of these planes that project an overall sense of radiance.

There are, however, some musical moments having more salience due to the confluence of events in interacting planes. These moments are indicated by diamond shapes at the bottom of Figure 5.4. The first confluence occurs at the end of section IV, its salience generated by i) the culminating intensity of the motivic transformation; ii) a moment of luminance; and iii) the unique nasal timbre. The second confluence occurs at the beginning of Section VI, its salience generated by i) the proximity of four moments of luminance; ii) the uniqueness of the Windchime and Bell timbral types; and iii) the recurrence of the the Vib/Chime—harder mallet timbral type. The third confluence occurs during the passage from Section VII to the Tornada, and it emerges from i) the moment of luminance during this passage; ii) the recurrence of the Bird timbral type; and iii) the highest note in the vocal part followed by the largest vocal range. These moments of formal salience during *Lonh* emerge from the multiple processes and relations of the coinciding planes. It is from the

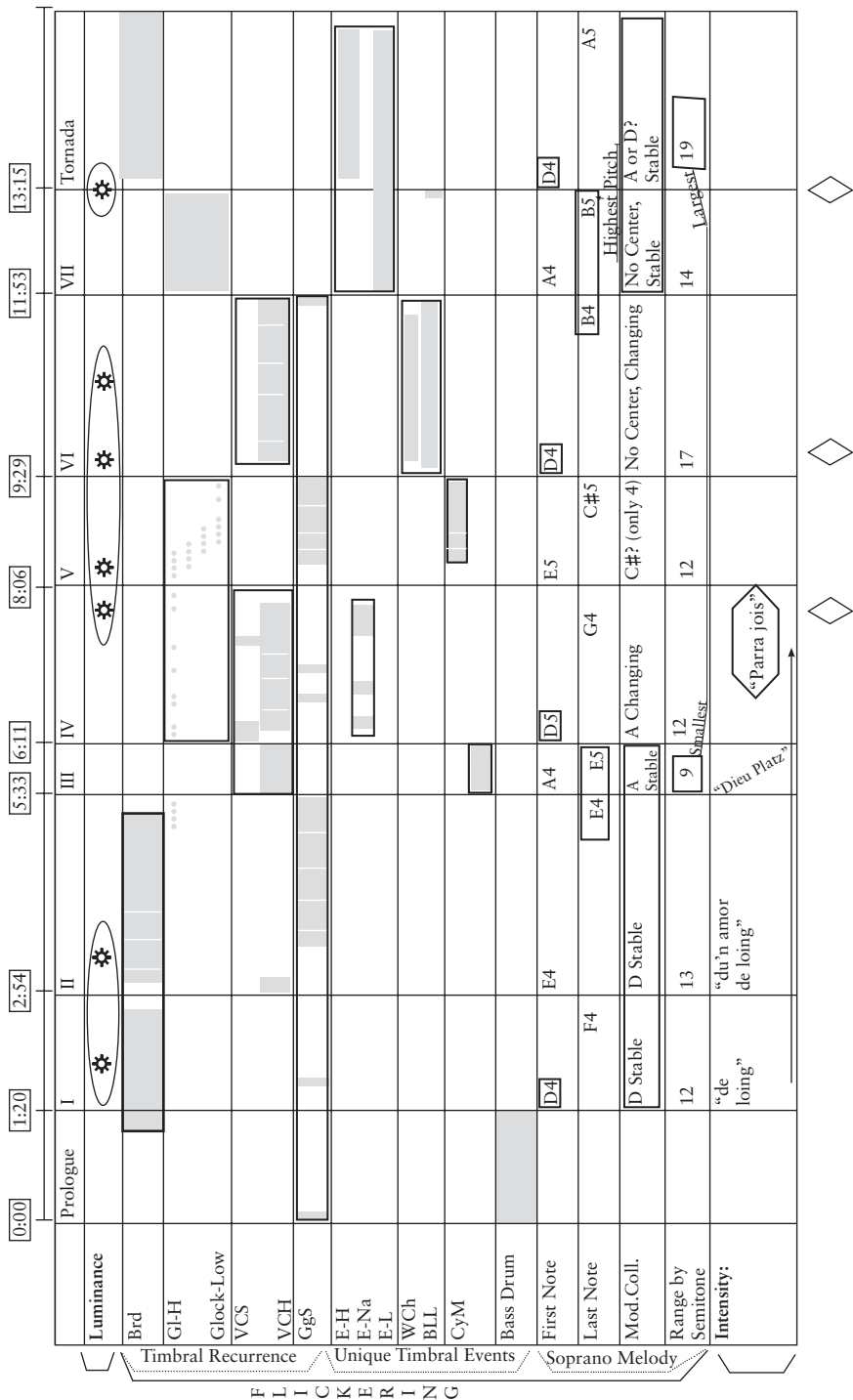


Figure 5.4 Interacting Planes—Luminance, Formal Flickering—and Moments of Salience.

interactions of the three planes that these moments of salience assume their significance—a salience given only in relation to the features of luminance, flickering, and intensity. That is to say, these moments of formal salience are not the goal of the processes of interaction but rather they materialize as enhanced moments of radiance.

From the very details of its sonic design, *Lonh* reveals the quality of radiance—its sense of sonic light and brightness emerging through its material details. The technê of *Lonh* then is a revealing of this lived experience of radiance. Let me conclude with one final observation: the radiance that *Lonh* sonically brings forth is itself an emergent feature of late twentieth century sound technologies—that is, the music-formal features of radiance are steeped in the digital sound technologies that both enhance and transform live and recorded sound. But despite her compositional dependence on these technologies, Saariaho has chosen to mask this mediation. Using digital technologies as a tool to enact a sonic design of radiance, Saariaho projects a premodern sense of longing as might have befit Jaufré in the twelfth century but a Jaufré embodied in the present through the female voice. Saariaho's subtle maskings of the high degree of technological manipulation and of the gender inversion of the singing voice give the sheer beauty of *Lonh* a critical edge.

NOTES

1. Heidegger's concept of technology has proven fruitful for more recent philosophers of technology. They rely on the concept of technê in particular as part of a larger two-part argument. On one hand, they deny the idea of technology as a neutral tool that is put to use by humans, a concept made explicit by the NRA phrase "Guns don't kill people; people kill people." And on the other hand, they deny what Latour calls "the Autonomous Destiny that no human can master" attitude toward technology. The concept of technê models a more complex human-technology relation (famously articulated as the cyborg by Donna Haraway). See Haraway 1991; Ihde 2002, 1990, 1993; Latour 1993; and Verbeek 2005 in particular.
2. The phrase "sounding presence" does not refer to some transcendental notion of sound as an absolute existent but rather invokes what Ihde has described as both the "micro- and macroperceptions" of experience—bodily dimension of sensory perception and the cultural dimensions of perception.
3. My analytical inquiry focused on the audio recording with soprano Dawn Upshaw (Upshaw 1997) and also on some YouTube videos (see the references in the Works Cited list at the end of this chapter). I was unable to hear a live performance.
4. IRCAM, *Institut de Recherche et Coordination Acoustique/Musique*, is a French institute for research into music, especially electro-acoustic music. It was started by Pierre Boulez with support of the French government.
5. The score provides technical details pertaining to the fixed-media CD and how to set up the microphones of the voice for purposes of balance and reverberation.
6. In his analysis of Jaufré's song, Leo Treitler indicates that there are three sources for the song in the Bibliothèque nationale: "MS 22543, known as R; MS 844 known as W; and MS 20050, known as X" (Treitler 1992, 10, fn.14).

7. The tornada is a short closing stanza in lyric poetry of Provence. For further information on lyrical form see Aubrey 1996.
8. It is believed that Jaufré heard about the beautiful Countess of Tripoli and that he died on his way to see her. Interested readers may view the illustrated manuscript of Jaufré and the Countess online: see Anonymous 2014. The theme of “love from afar” was an important Romantic trope of nineteenth century literature, and is manifest in Beethoven’s song cycle “An die ferne Geliebte.”
9. Moisala cites Saariaho’s sketches for *Lonh* in Moisala 2009. And the sketches show somewhat different durations for the sections. Given the strong creative relation between Upshaw and Saariaho, it seems clear that the timing differences between the sketches and that of the recorded performance have compositional intention. Dawn Upshaw premiered *Lonh* in 1996, and Saariaho had her in mind for other works from this period, including the opera *L’Amour de Loin* (2000) and *Chateau de l’Âme* for soprano and orchestra (1996).
10. The term “might” here is part of a conditional construction expressing the wish of the lover to be near the beloved.
11. The Bass Drum type also underscores the textual theme of a “love from afar,” suggesting the processional aspects of the lover’s quest.

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