

*THE ECSTASY OF
ST. THERESA
(Homage to Bernini)*

Commissioned by Donaueschinger Musiktage

*For 9 mixed solo voices
and live electronics*

Gerard Pape (2001-02)

**The Ecstasy of St. Theresa
(Homage to Bernini)**

*I saw an angel,
Small, extremely beautiful,
Cherubim most high.
His face aflame,
Burning with love.*

**Holding a long golden dart
With iron tip, point of flame,
The angel plunged it
Through my heart
Right to my entrails,
Time and again.**

*Each time the fiery dart pulled out,
My entrails pulled with it, too.
The angel set my soul aflame,
Burning with love.*

**Pain so strong,
I couldn't help but moan.
Incomparable torment.
Pleasure so great,
I didn't want it to end.**

*So beside myself,
No wish to see or speak,
Savor torment.*

*Ravished soul
Plunged into ecstasy,
No time for pain,
No time to suffer.*







Immediate rapture.

---Gerard Pape (Paris, 27/12/00)
(adapted and translated from the original text of St. Theresa of Avila of 1562)

Performing Notes for "The Ecstasy of St. Theresa"


1) PITCH AND VIBRATI:


In addition to normal semitonal sharps, pitches are notated in smaller microtonal values:


1/8 tone sharp= 
1/4 tone sharp= 
3/8 tone sharp= 
5/8 tone sharp= 
3/4 tone sharp= 
7/8 tone sharp= 

All notes are to be sung non-vibrato unless an indication for vibrato is expressly given.

When notated, vibrati add three types of micro-pitch ornamentation to the "fixed" pitches:

 = 5-6 events per second, pitch oscillates irregularly up and down around the central pitch, maximally, a quarter tone, and, minimally, an eighth tone up or down.

 = 4-5 events per second, pitch oscillates irregularly up and down around the central pitch, maximally, a semitone, and, minimally, a quarter tone up or down.

 = 3-4 events per second, pitch oscillates irregularly up and down around the central pitch, maximally, a three quarter tone and minimally, a semi-tone up or down.

In addition to vibrati, there are also glissandi which are indicated by dashed lines between note heads (-----) to distinguish them from the solid lines that are the graphic representation of dynamics that one finds superimposed on staff lines (see below).

2) DYNAMICS AND ACCENTUATION:







The five staff lines also correspond to five dynamic levels:


line 5 = *ffff*
line 4 = *ff*

line 3 = *mf*
line 2 = *pp*
line 1 = *pppp*

Dynamics are notated graphically, not by traditional "hairpin" crescendo/decrescendo shapes which are reserved for indications of pressure (see below). The dynamic curves show a continuous, independent evolution of intensity that, nonetheless, corresponds exactly to the amount of time that is passing in the pitch-time conventional notation. The spaces between the lines are other dynamic values such as *fff*, *f*, *p*, etc.

There are six different attack values used:


 = very heavy attack
 = heavy attack
 = medium attack
 = light attack
 = very light attack
 = no attack at all

The perpendicular lines () attached to the dynamic curves represent additional accentuations, that is, supplementary accentuations that disrupt the sustained dynamic of the sound, adding another layer of rhythmic events whose strength of accentuation is proportional to the changing levels of the dynamic curve to which they are attached. For example, if a perpendicular accentuation line is attached to the fifth or highest line in the staff, which is associated with *ffff*, its value is to be equivalent to a very hard accentuation, whereas, if the perpendicular accentuation line is attached to the first or lowest line of the staff, which is associated with *pppp*, its accentuation is to be equivalent to a very soft accentuation. The number and relative graphic positioning of these accentuations is to be performed quite literally, even if these events are assigned only relative, not absolute rhythmic values, as their number and placement on the staff indicates density of accentuation and acceleration and deceleration of accentuation within the overall dynamic continuities.

3) TIMBRE:

A) TYPES OF VOCAL EMISSION

There are three basic types of vocal emission used in this work:

- a) sonic speech (*) - Notated with its own clef () , which indicates the relative range of the spoken pitch (High, Middle, Low) , this technique is not to be confused with Schoenberg's *sprechgesang*, that is, "speechsong". Sonic speech is a spoken type of vocal emission that varies continuously in all its sonic parameters (frequency, intensity and timbre) , thus, becoming a special musical variant of normal speech. This "sonic speech" is given a precise rhythmic notation, also distinguishing it from mere recitation.
- b) speechsong (x) - the classic Schoenbergian technique is adapted here by adding continuous transformation of timbre to it, in addition to the precise indications of pitch, intensity and rythm that Schoenberg already used.
- c) sung (●) - classical singing techniques are here extended by the addition of continuous micro-variations of timbre, pitch and intensity all sung non-vibrato, unless indicated otherwise.

If there is a glissando or a slur over two notes that have two or more differing vocal emission types, one should create a timbral glissando between them, that is, continuously transform from sonic speech to speechsung to sung, for example.

B) TIMBRAL TYPES

There are a number of different types of vocal timbres that sometimes remain static and sometimes continuously transform. The symbol " ---> " represents a continuous transformation: timbre A transforms gradually into timbre B, for example. In transforming A into B, the performer should try to make perceivable the intermediate timbres that are between the old and new timbres. The symbol "-----" represents sustaining a timbre's identity in time, while its micro-color is varying by changes in vocal pressure (see below).

Here are the different timbre types and brief descriptions of each one. It is to be understood that these descriptions are approximative and timbres will vary from performer to performer:

- 1) **Floating, airy** - timbre that has a minimum of harmonic content, similar to that of a boy soprano, with some tone, much breathiness to it.
- 2) **Breathy** - timbre with some tone, much breathy noise to it.
- 3) **Whisper** - timbre with some tone, much whispering noise to it.
- 4) **Gasping** - timbre obtained by literally gasping for breath while vocally emitting another sound
- 5) **Rich and saturated** - timbre with rich, multiple overtones that converges on but does not attain noise.
- 6) **Fiery, intense** - timbre with much intensity to it, enormous energy that is barely contained; the timbre is noise-rich, like the sound of fire.
- 7) **Ecstatic** - The most sublime of all the timbres, the very sound of Teresa's ecstasy itself; the sound contains within a combination of extreme corporeal pleasure but without the slightest hint of sexual enjoyment in the conventional sense -- it is not an "orgasmic" sound but the wordless sound emitted by a being who has attained her spiritual quest -- union with God.
- 8) **Gritty, granular** - This sound is very noisy and "dirty" in the sonic sense, that is, full of sonic parasites. It is at the opposite extreme of "floating and airy", for example. It is the timbre that represents Teresa's struggle with the reality of her painful body. This sound is similar to that made by walking over gravel or the sound of noisy radio static.
- 9) **Moaning** - Quite literally, the pain of Teresa's bodily existence, her unbearable torment.
- 10) **Cry of sharp pain** - Like the "gasping" timbre, this is one that is a superimposition of the sound of a sharp cry over that of another vocal emission.
- 11) **Cry of deep, profound pain** - This timbre should come from deep within the singer's body as though s/he had an unbearable pain that originated deep within the intestines that resulted in a constant dull ache with occasional bursts of sharp pain.
- 12) **Anxious** - The timbre of Teresa's anxiety itself, a sound that is troubled by uncomfortable feelings that something is wrong, but it is unclear what. It is a disruption of the smoothness of vocal emission as were the "gasping" and "cry of sharp pain" timbres, but anxiety is more subtly integrated into the vocal sound as a kind of vague unease in the timbre.
- 13) **Groaning with pain** - The next four timbres exploit the ambiguity in Teresa's relationship to her bodily pains and pleasures. The groan is ambiguous, sometimes painful, sometimes a sign of pleasure. "Groaning with pain" superimposes the groan of unbearable bodily pain over words that have largely lost their meaning, so unable are they to convey the depth of Teresa's experience. This is a timbre that is quite noisy.
- 14) **Groaning with pleasure** - "Groaning with pleasure" is on a continuum with "groaning with pain". Both are very noisy and intense; both ambiguous with regard to words and their relation to the body. In any case, Teresa insists that her pleasure is not sexual. Groaning is her body's pleasurable response to the fact that she has encountered God. This timbre is also rather noisy.


15) **Sighing with pain** -Teresa is human, even if a saint. Sometimes, she sighs because the pain is all too much. Tiring and unbearable. She sighs because she wants and doesn't want the pain to end. This timbre is full of painful noisy breath .

16) **Sighing with pleasure** - Teresa's struggle to not give into the devil, that is, bodily temptations of a sexual sort. This inner struggle sometimes results in her emitting strange hybrid sounds that indicate that she is still a woman and that, even if she desires no earthly man, she still enjoys her body only as a woman can, and that she has no words to talk about that. This timbre is full of a noisy, breathy sound saturated with sensual (not sexual !!!) pleasure.

C) MICRO-TIMBRAL VARIATION: PRESSURE VARIATION

At the same time as vocal emissions and timbres are changing , vocal pressure is changing continuously, creating a kind of timbral glissando of the purity/ roughness of the sound. This is not the same as amplitude, as one can have a rough and quiet sound or a pure and loud sound. These changes in vocal pressure are indicated by the type of notation usually used to indicate changes in dynamics, with increases and decreases in pressure notated as crescendo/ decrescendo hairpin shapes. Symbols range from *llll* which is lightest possible pressure, to *ml*, medium-light pressure, to *mh*, medium-heavy pressure, to *hhhhh* which is maximum pressure. These "pressure" changes create sub-continuums within a timbre by creating a micro-timbral range of that timbre that varies between a very pure "flautando" version (*llll*) and a very rough, noisy version (*hhhh*), with all the intermediate timbres in-between. (*lll*, *ll*, *l*, *ml*, *mh*, *h*, *hh*, *hhh*).

4) TEMPO

The work is basically in a constant tempo ( = 60) that is very slow and which allows the time needed for the many micro-variations of pitch, intensity and timbre. However, there are moments in the work where the singers do not enter or exit together and are not all singing in the same tempo. This is indicated by an "ad lib entrance and tempo" marking. This indication is cancelled out by an "end ad lib" marking. Note: some singers may remain in strict tempo and precise entrance-exit mode while others are in ad lib mode; not all "ad lib" entrances and exits are synchronous. Chaotic-like effects are obtained by mixtures of fixed and non-fixed tempi, fixed and non-fixed entrances and exits, creating rich mixtures of order and disorder, my definition of musical chaos.

5) SPATIALIZATION, LIVE ELECTRONICS AND AMPLIFICATION:

All voices are individually amplified and separated spatially into three groups of three singers that sing antiphonally against one another. The singers are placed in the concert hall at three points of a triangle that symbolically represent St. Theresa's relation to the number 3 (the Divine Trinity; Teresa, the angel, and Jesus, etc.). These three vocal groups surround the public.

The amplified sound of each of the 9 singers is sent to one of 9 loud speakers . On the other hand, there are various live electronics that take the singer's amplified sound and transform it as well as move it about in the space. (Please see the drawing that follows that describes the placement of the 3 vocal groups and the corresponding 9 loud speakers for each singer's amplified sound.)

« Live electronics » in this work are used in tandem with the vocal timbral types described above ; that is, they can be seen as an extension or enhancement of the vocal techniques of the singers. Thus, the patches that were developed at the Experimental Studio in Freiburg (with the expert assistance of Joachim Haas and Stefan Tiedje) bear the same names as their corresponding vocal timbral types. There are 14 « live electronic » patches total, most developed in the programming environment of MAX MSP.

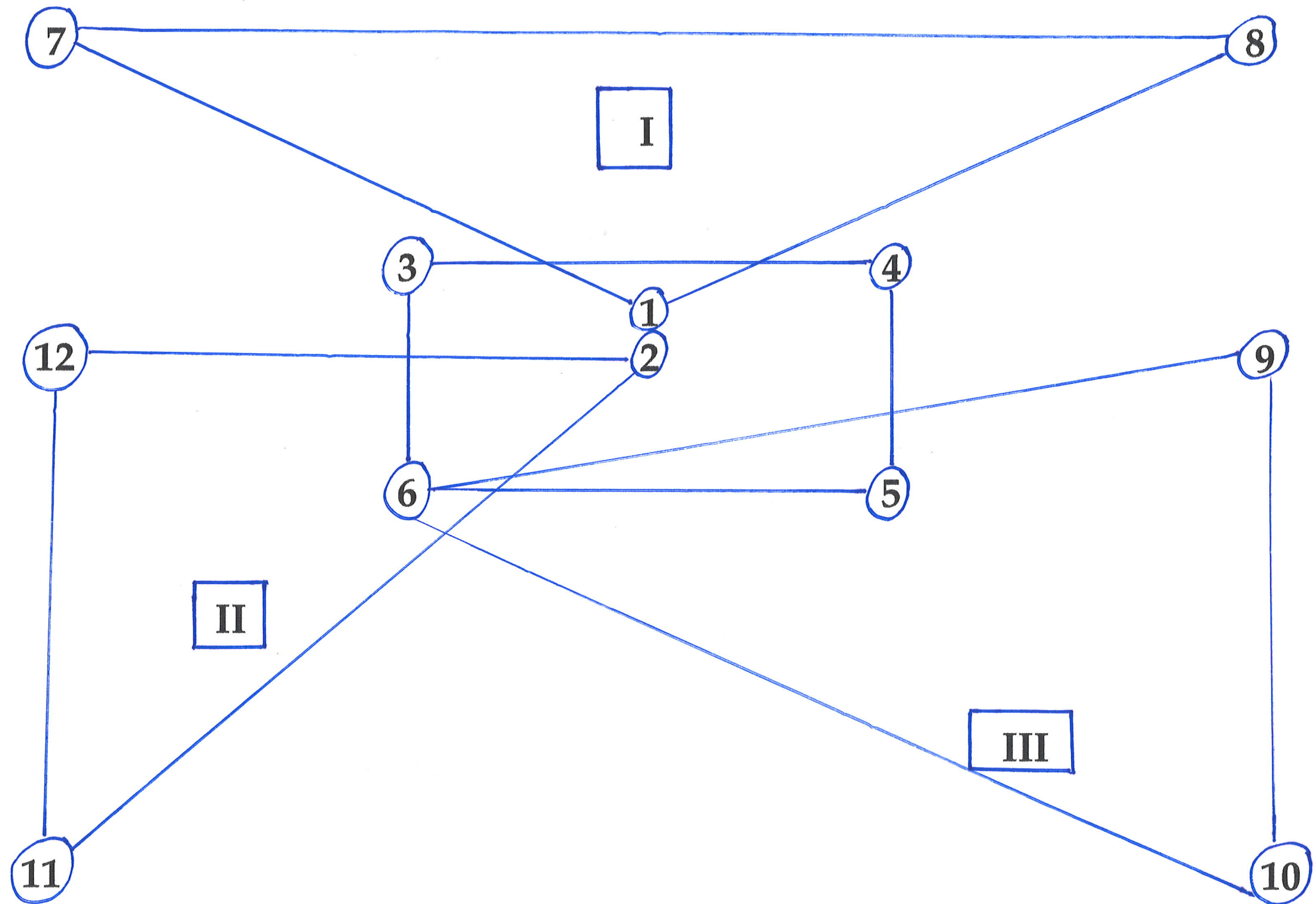
It should be mentioned that there are, thus, nine independent »voices » of « live electronics », each running concurrently and transforming the nine corresponding amplified voices of each of the singers. Thus, each singer has his own separate « live electronics » which are synchronized via MIDI with his various entrances and exits in that singer's part. Thus, when a given singer sings the « breathy » vocal timbre, for example, the breathy « live electronic » is triggered on and off at the same time that the singer starts and stops this « breathy » timbre vocally .

Here, I will list all patches and give a brief verbal description of them and what they do. I will leave their more technical description to those who are interested to consult the diagrams of the patches themselves in their original MAX MSP programming language :

- 1) **Breathy**-This patch consists of 5 multi-tap delays for each of the 9 voices (.5 seconds, .9 seconds, 1.2 seconds, 1.4 seconds, 1.5 seconds). The two shortest delays are then further associated with a short, less than 1 second, reverb, and they come out of only two loudspeakers. The 1.2 second delay is associated with a 1 second long reverb and it comes out of 4 loudspeakers. The two longest delays are associated with a 5 second long reverb and come out of all 9 loudspeakers.
- 2) **Whisper**- 9 delays are spread over 9 voices, that is, one delay per voice. These delays are 150, 180, 210, 270, 330, 390, 480, 570 and 660 ms long. The three shortest delays are associated with a 5 second reverb and come out of all 9 speakers. The three middle delays are associated with a 1 second reverb and come out of 4 speakers. The three longest delays are associated with a less than 1 second reverb and come out of only 2 speakers.
- 3) **Gasping** – This is a reverse gated reverb corresponding to effect 600 in the Eventide Harmonizer 3000s.
- 4) **Floating, airy**- 9 different rotation speeds are spread over the 9 voices. The 3 lowest voices (i.e. tenor2, baritone and bass) are assigned the 3 lowest speeds along with a 1 second reverb. The 3 middle voices (alto, counter-tenor, tenor 1) are assigned the 3 middle speed rotations with also a 1 second long reverb. The three highest voices (coloratura, lyric and mezzo) are assigned the 3 highest speed rotations also with the 1 second long reverb.

- 5) **Rich and saturated-** 3 detuning values (-31 cents, 44 cents, -56 cents) are assigned to coloratura, mezzo, counter-tenor, tenor2 and bass) while 3 other detuning values (38 cents, -52 cents, 62 cents) are assigned to lyric, alto, tenor 1 and baritone). The end result is that each singer sings their original pitch along with 3 other detuned values.
- 6) **Ecstatic-** this timbre is a mixture of the detuning as found in « rich and saturated » and the 9 rotation speeds as found in « floating, airy »
- 7) **Fiery, intense-** the singer's voice is convolved with an impulse response waveform which comes from a sample of « synthetic fire ». The impulse response varies over time as the « fire » sound's waveform is scanned through.
- 8) **Gritty, granular-** the singer's voice is granulated with the help of an algorithm called the « drunk captain » which continuously varies the « speed » of the granulation by the use of random walks that are averaged over time.
- 9) **Moaning-** in addition to the detuning values coming from the « rich and saturated » patch, each singer's voice is transformed by a different vibrato and tremolo whose depth and speed are varying according to random walks whose maximum step sizes are limited to small values. In addition, there is also random tempo variation within the vibrato and tremolo, that is, the time between each new value to be calculated is constantly speeding up or slowing down.
- 10) **Cry of sharp pain-** in addition to the reverse gated reverb effect of « gasping », a waveshaping algorithm is added to create distortion of the vocal timbre and this « waveshaper » is subject to intermittently random tempo variation, that is, the time between each new event value remains constant a certain number of « beats » before changing to a new random value.
- 11) **Cry of deep, profound pain-** This patch combines dense harmonization with « tunnel » reverb. Each singer's voice is detuned by 4 negative detune values : -1144 cents, -1169 cents, -1244 cents, -1269 cents. The « tunnel reverb » patch comes from TC Electronics' M3000 unit and is called « dark tunnel ».
- 12) **Anxious-** in addition to using the reverse gated reverb effect of « gasping », there is one detune value per singer (taken from the detune values used in the « rich and saturated » patch) with the addition of a vibrato whose speed and depth are randomly varying.
- 13) **Sighing with pain/pleasure-** - in addition to the 3 detuning values coming from the « rich and saturated » patch, each singer's voice is transformed by a different vibrato whose depth and speed are varying randomly within boundaries that have been set as slow and wide on the average.
- 14) **Groaning with pain/pleasure-** each singer's voice is transformed by a different tremolo whose depth and speed are varying randomly within boundaries that have been set as slow and wide on the average.

OVERHEAD VIEW OF THE SPATIALIZATION PLAN



GROUP I:

COLORATURA=1

LYRIC=8

MEZZO =7

GROUP II:

ALTO=2

COUNTER-TENOR=12

TENOR I=11

GROUP III:

TENOR 2=6

BARITONE=9

BASS=10

(Homage to Bernini)

Dedicated to Neue Vocalsolisten Stuttgart

Music : Gerard Pape (2001)

The image shows a page of a musical score for a vocal ensemble. The score is written for eight parts: Coloratura, Lyric Soprano, Mezzo-Soprano, Alto, Counter-Tenor, Tenor 1, Tenor 2, Baritone, and Bass. Each part has a vocal line with lyrics and performance instructions. The lyrics are in Italian and include words like "I", "saw", "an", "gel", "ex", "h", "hhh", "l", "ll", "ml", "An", "An", "gel", "whisper", "breathy", "gasp", "floating, airy", "ad lib. entrance+tempo rich and saturated". The performance instructions are written above the vocal lines and include "breathy", "whisper", "gasp", "floating, airy", "ad lib. entrance+tempo rich and saturated". The score is written in 6/8 time and features a variety of musical notations, including notes, rests, and dynamic markings.

43

rich and saturated end ad lib. ecstatic

Color. 8 h hhh treme h hhh h hhh ly beau ti ful

rich and saturated end ad lib. ecstatic

Lyric 8 h hhh treme h hhh h hhh ly beau ti ful

rich and saturated end ad lib. ecstatic

Mezzo 8 h hhh treme h hhh h hhh ly beau ti ful

rich and saturated end ad lib. ecstatic

Alto 8 h hhh treme h hhh h hhh ly beau ti ful

ad lib. entrance+tempo rich and saturated end ad lib. ecstatic

Counter 8 ex h hhh treme h hhh h hhh ly beau ti ful

ad lib. entrance+tempo rich and saturated end ad lib. ecstatic

T 1 8 ex h hhh treme h hhh h hhh ly beau ti ful

ad lib. entrance+tempo rich and saturated end ad lib. ecstatic

T 2 8 ex h hhh treme h hhh h hhh ly beau ti ful

ad lib. entrance+tempo rich and saturated end ad lib. ecstatic

Bar. 8 ex h hhh treme h hhh h hhh ly beau ti ful

ad lib. entrance+tempo rich and saturated end ad lib. ecstatic

B 8 ex-treme h hhh h hhh ly beau ti ful

ad lib. entrance+tempo floating, airy 3:4 3:5 4:5 3:4

Cher u bim most high ml Cher u bim ml most high ml Cher u bim ml most high

ad lib. entrance+tempo floating, airy 3:4 3:5 4:5

Cher u bim ml most high Cher u bim ml most high Cher u bim ml

ad lib. entrance+tempo floating, airy 3:4 3:5

Cher u bim ml most high Cher u bim ml

fiery, intense 6:4

His face a flame h hhh h hhh h hhh h h

[illegible]

The musical score for "The Fire of Love" by John Adams is presented in a multi-staff format. The vocal parts include Color, Lyric, Mezzo, Alto, Counter, T 1, and T 2. The instrumental parts include Baritone (Bar.) and Bass (B). The score is written in 2/4 time and features a complex rhythmic structure with various time signatures (4:6, 5:6, 15:12) and dynamic markings (f, ff, h, hh, hhhh). The lyrics are "Time and again" and "my pain". The score includes performance instructions such as "fiery, intense", "ecstatic", "molto legato/without attacks", and "end ad lib.". The score is divided into measures by vertical bar lines, and the tempo is marked "Ad lib.". The score is written in a standard musical notation with a key signature of one sharp (F#).

[illegible]

74 **ecstatic** **fiery, intense**

Color. **set** **my soul a flame**

Lyric **set** **my soul a flame**

Mezzo **set** **my soul a flame** **rich and saturated** **Bur - rrr ning with love, Bur - rrr ning with love, Bur - rrr ning**

Alto **set** **my soul a flame**

Counter **set** **my soul a flame**

T 1 **set** **my soul a flame**

T 2 **set** **my soul a flame** **gritty, granular** **Bur - rrr ning with love, Bur - rrr ning with love, Bur - rrr ning**

Bar. **set** **my soul a flame** **moaning** **Bur - rrr ning with love, Bur - rrr ning with love, Bur - rrr ning**

B **set** **my soul a flame** **cry of deep, profound pain** **Bur - rrr ning with love, Bur - rrr ning**

ad lib. entrance + tempo

This musical score is for the vocal and percussion parts of "The Fire of Love" by John Adams. The score is written for a large ensemble, including Color, Lyric, Mezzo, Alto, Counter, T 1, T 2, Baritone (Bar.), and Bass (B.). The music is characterized by its complex, non-linear structure, with multiple time signatures (3:4, 3:2, 4:6, 2:3, 5:6) and a variety of rhythmic patterns. The lyrics are "I could not help but moan". The score includes a variety of musical notations, including notes, rests, and dynamic markings. The percussion parts are written for a variety of instruments, including Color, Lyric, Mezzo, Alto, Counter, T 1, T 2, Baritone, and Bass. The score is a complex and challenging work, requiring a high level of musical skill and collaboration.

The image shows a page of a musical score, likely for a vocal ensemble and piano. The score is divided into two systems. The first system includes staves for Color, Lyric, Mezzo, Alto, Counter, and T 1. The second system includes staves for T 2, Bar., and B. The lyrics are: "Plea ecstatic sure so great". The piano part includes various musical notations such as notes, rests, and dynamic markings like "fiery, intense", "gritty, granular", and "cry of deep, profound pain".

Color. 106 whisper moaning cry of sharp pain cry of sharp pain moaning whisper moaning cry of sharp pain cry of sharp pain

Lyric 106 whisper moaning moaning anxious anxious anxious anxious anxious anxious

Mezzo 106 whisper moaning moaning gasping gasping gasping gasping gasping gasping gasping gasping gasping

Alto 106 whisper whisper whisper groaning with pain 5:6

Counter 106 breathy gasping breathy groaning with pleasure 4:6 5:6

T 1 106 moaning cry of sharp pain gasping moaning cry of sharp pain moaning gasping cry of sharp pain moaning

T 2 106 cry of sharp pain anxious anxious anxious cry of sharp pain sighing with pain 4:6

Bar. 106 anxious gasping anxious cry of sharp pain moaning cry of sharp pain anxious gasping anxious

B 106 gasping anxious moaning anxious gasping

Lyrics: I didn't want it to end e be anxious gasping e see a t self No wish to see fles ym e dis eb os si side or siw Sa vor my my my spe s ment

[illegible]

Color. *ecstatic*
 Lyric *ecstatic*
 Mezzo *ecstatic*
 Alto *ecstatic*
 Counter *ecstatic*
 T 1 *ecstatic*
 T 2 *ecstatic*
 Bar. *ecstatic*
 B *ecstatic*

136 *ecstatic*
 136 *ecstatic*
 136 *ecstatic*
 136 *ecstatic*
 136 *ecstatic*
 136 *ecstatic*
 136 *ecstatic*
 136 *ecstatic*
 136 *ecstatic*

I - sta sy
 I - sta sy
 I - sta sy
 I - sta sy
 I - sta sy
 I - sta sy
 I - sta sy
 I - sta sy
 I - sta sy

ad lib. entrance+tempo
 floating, airy
 3:4 3:5 4:5
 ml im me di a te ml im me di a te ml im me di a te
 ad lib. entrance+tempo
 floating, airy
 3:4 3:5 4:5
 ml im me di a te ml im me di a te ml im me di a te
 ad lib. entrance+tempo
 floating, airy
 3:4 3:5 4:5
 ml im me di a te ml im me di a te ml im me di a te

fiery, intense
 hhhh ture h hhhh
 fiery, intense
 hhhh ture h hhhh
 fiery, intense
 hhhh ture h hhhh
 fiery, intense
 hhhh ture h hhhh

gritty, granular → ecstatic
 hhhh rap h hhhh
 gritty, granular → ecstatic
 hhhh rap h hhhh
 gritty, granular → ecstatic
 hhhh rap h hhhh
 gritty, granular → ecstatic
 hhhh rap h hhhh