AN ANATOMY OF THE WORLD
FOR VOICE AND SIX INSTRUMENTALISTS
ON TEXTS BY JOHN DONNE

by

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AN ANATOMY OF THE WORLD FOR VOICE AND SIX INSTRUMENTALISTS ON TEXTS BY JOHN DONNE

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The musical piece *An Anatomy of the World*, on texts extracted from John Donne's *First Anniversary* (1611), is discussed in this accompanying essay, with an emphasis on technical-analytical terms, but also with a history of its composition. The choice of the text and a variety of compositional issues and concerns, link the analysis of *An Anatomy* to the previous musical output of the author, such as the expansion of a primordial melody into a complete piece, and the handling of duration-proportions between sections following concepts like the Golden Section.

The analysis follows chronologically the unfolding of the piece, and is divided into two main sections, according to two enunciations of the text by the singer. Important melodies, contrapuntal sections, and other sources of musical material and discourse, are quoted as figures to point out relevant details, while always keeping a constant and consistent reference to the actual score of the piece. General threads developing throughout the piece are identified and characterized, and the relationship between the text and the music, not always obvious, is addressed from several standpoints.

1 INTRODUCTION

'*An Anatomy of the World*' is the composition I have been working on during the first semester of 2003, and which I decided to submit, alongside this accompanying essay, as my M.A. thesis. In this text I will approach the piece from a variety of standpoints, that can be grouped into three categories according to the activity they stress most prominently: composition, analysis, and—since the piece is set to texts adapted from John Donne's *First Anniversary*—reading. Elsewhere I have identified these three standpoints as three 'levels' of the symbolic form: the *poietic* and the *neutral* levels in Jacques Nattiez's sense, the former for he who composes the symbol, the latter for the symbol itself; and, on the other hand, the *para-aesthesic* level, a hybrid concept stemming from Nattiez's *aesthesic* level (addressing the one who contemplates the symbol), but modified to apply not to the listener of the piece, but to the composer himself as the contemplator of a previously composed symbol—Donne's poem.[1]

The discourse will thus feature narrative, analysis, and 'philosophical' (for lack of a better adjective) reflection. In other words, this is a brief account not only of what I have composed, but also *how* and, more interestingly for me, *why*. Needless to say, there are no clear-cut separations between the three questions, and in any case I would be the least able to draw them, intermingled as the three aspects of my task were during the composition. I have therefore made no attempt to 'systematize' or even 'rationalize' the treatment of the three issues.

Since its earliest conception, the piece was explicitly intended for the *Furious Band*, who had been invited by the University to perform a concert and to record graduate students' pieces. Thanks to this, I can present a recording of *An Anatomy*, and appeal here and there to the sounding result of the score I wrote, for I have been able to listen to the piece.

The text is equipped with interactive links. In particular, links are provided (in this color) to the page of the score when a measure or section is mentioned. However, the screen-quality of the PDF file that contains the score is not the best, and the most advisable procedure is to print it out.

[1] See Jean-Jacques Nattiez (tr. Carolyn Abbate), *Music and discourse: Toward a semiology of music* [Musicologie général et sémiologie] (Princeton: Princeton University Press, 1990 [1987]), Introduction. By 'elsewhere' I refer to my paper "A semiotic-analytic approach to my *An Anatomy of the World*," presented to Dr. Mathew Rosenblum for his Composition Seminar ("Music and Semiotics") on February 2, 2003.

2 THE TEXT AND ITS MELODY

2.1 THE CHOICE OF THE TEXT

The choice of the text for what I knew was to be a piece for soprano, percussion and 'Pierrot ensemble' had in itself many characteristics of the compositional process—doubts, failed attempts, second thoughts, and sudden, joyful revelations. Even the matter of the language of the text was problematic; deep concerns of mine around the issues of nationality and nationalism conspired since the beginning against my choosing a Spanish text (even though, as it happens, my brother has written wonderful poems which I have the idea some day to musicalize), and ultimately directed me to English sources. On the other hand, my ever-present interest in science, in addition to the fact that virtually all my contact with English poetry has been the quotations in books about the history of science, made me look for suitable texts somehow related to science. Lewis Carroll's contribution to a philosophical symposium, namely the poem

Yet what mean all such gaieties to me
Whose life is full of indices and surds
$x^2 + 7x + 53$
$= 11/3$

was initially planned as a *ritornello* separating science-related poetic texts by John Donne and James Clarke Maxwell (who, in addition to his four equations, wrote many poems as well). Pope's epitaph for Newton's graveyard (*Nature and Nature's laws lay hid in night:/God said let Newton be, and all was light...*), and the wonderful reply (*It did not last: the Devil howling 'Ho!/Let Einstein be!' restored the* status quo) were also to be included. Eventually, however, I realized that Maxwell's texts did not posses a particularly striking literary quality, and that Donne's texts had an enormously larger potential than the quotations known to me let me imagine. Moreover, this potential pointed to a rather 'serious' text, not the playful one I had first intended with Carroll's joke. My attention turned then to Donne's poems exclusively.

John Donne (1572–1631) first published his 'First Anniversaries' in 1611. The poem originated with the death of Elizabeth Drury (at age 15), when her father commissioned Donne to write an elegy to her memory. The poet, who had never met the girl, did not quite know what to write about her, and his solution was to identify her (the mysterious "Shee" of his poem) with—among other things—the beauty of the universe.

His poem, prepared (obviously) for the first anniversary of Elizabeth's death, received the title "*An Anatomie of the World. Wherein, by occasion of the vntimely death of Mistris Elizabeth Drvry, the frailtie and decay of this whole world is represented.*" (See the cover of the 1625 edition in Figure 1). The 'decay of this whole world' he has in mind is not the common-place and ever-timely lament that things are going badly; it is instead a very definite reference to the turbulence created by what we today remember as the 'Scientific Revolution:' the death of the old, sense-making cosmology of an Earth-centered universe and concentric spheres representing degrees of perfection—from the ephemeral, changing Earth, through the periodically moving planets, up to the fixed, timeless and eternal stars, where nothing changes because everything has already achieved perfection.

The ideas of Copernicus, particularly in England, "were creeping into every man's mind" (as Donne himself put it). Galileo was seeing imperfections in the surface of the Moon, while Kepler observed them in that of the Sun itself and Tycho had proven that comets were supra-lunar events—after all, there *was* change beyond the accepted limits of imperfection. A millenarian tradition of knowledge collapsing, the scenario must have been desolating indeed. We today remember the Scientific Revolution with pride, and are prone to overlook the terrifying sense of disorientation it must have produced on the men who experienced it—who suffered it. The fact that Donne was by no means a retrograde unable to cope with novelty (in 1619 he went to the remote Linz pursuing an interview with his admired Kepler, and his poem contains ingenious and subtle references to virtually all the philosophical/scientific/theological concerns of the time) shows how painful and difficult the change was. Quite literally, 'this whole world was frailing and decaying,' and, as Frank Manley has put it, "Donne transforms the death of Elizabeth Drury into an image of his own heart's loss of wisdom."[2]

"As Marjorie Nicholson has pointed out, he never spoke of her as anything other than a mysterious 'Shee.' It is up to us in other words to allow the poem make sense."[3] For the composition of *An Anatomy* I took this dictum at face value. My heavy edition and adaptation of the text makes it preferable to think of the piece as a kind of '*Improvisations sur Donne*,' rather than as a plain setting of the poem. To begin with, the poem is several hundred lines long, and I have only taken ten of them. I omitted, since the beginning, the too-specific references to 'Shee' (which would make

[2] John Donne, *The Anniversaries: Edited with introduction and commentary by Frank Manley* (Baltimore: Johns Hopkins Press, 1963), p. 9.

[3] *Idem*, p. 13.

it necessary to tell the whole story of Ms. Drury). Many of the lines of the poem make hardly any sense to a modern reader unless detailed explanation is provided,[4] and this forced me to abandon either them or the clarity of the particular reference they are intended to do. In the end, I decided to use lines 205–8 and 213–8 (see Figure 2 for the page of the 1625 edition in which those lines appear):

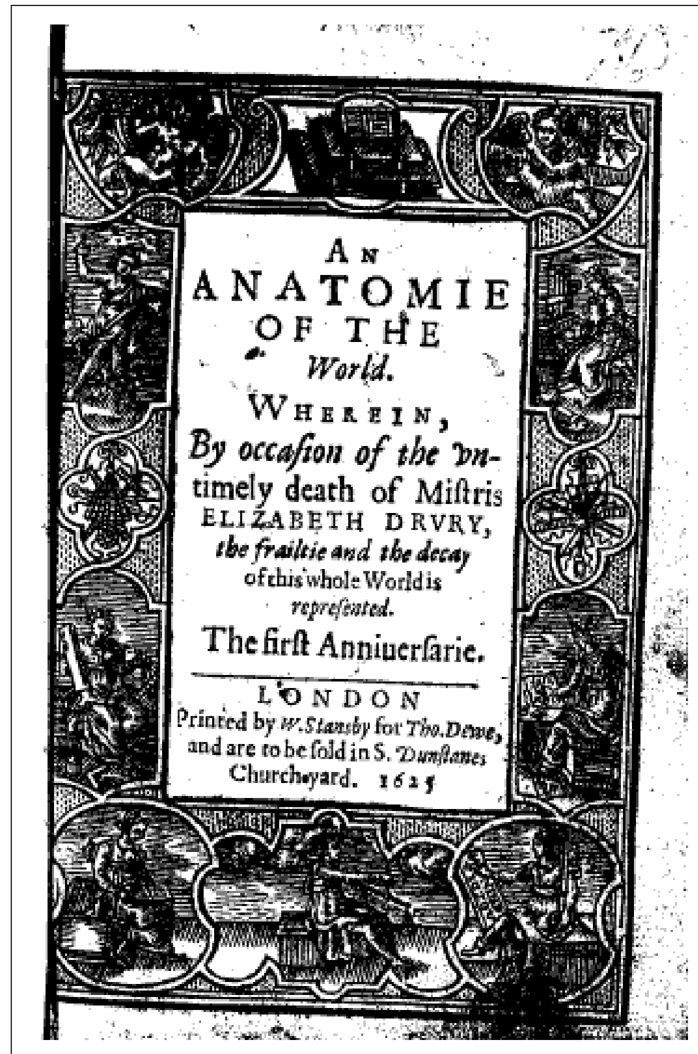
And new philosophy calls all in doubt,
The element of fire is quite put out;
The Sun is lost, and th'Earth, and no man's wit
Can well direct him where to look for it

'Tis all in pieces, all coherence gone;
All just supply, and all relation:
Prince, Subject, Father, Son, are things forgot,
For every man alone thinks he has got
to be a Phoenix, and that there can be
none of that kind, but he.

As it stands, this text does little to reveal my original search for scientific ideas—in fact, it has almost 'degenerated' into the common-place lament I mentioned before. But with a new nuance, also very related to another 'philosophical' concern of mine: individualism. Every man *alone* thinks none *but he* is to be a Phoenix. If by 'new philosophy' Donne referred to the new 'natural' philosophy, I take it to refer to the whole trend of thought we call 'modernity,' also starting with the Renaissance. The rationalist atomism of Descartes, the same-response-to-same-stimulus of Kant, the lonely universalism of the Stock Exchange. . . [5]

[4] As I have mentioned, all the technical problems of philosophy are somehow touched upon in the poem (the roundness of Earth and the consequent problems of over-crowding in Hell; the question whether fire produces matter or not; the observed approach of the Sun towards the Earth; etc.). Frank Manley's edition, which I have been quoting, offers excellent contextualizations.

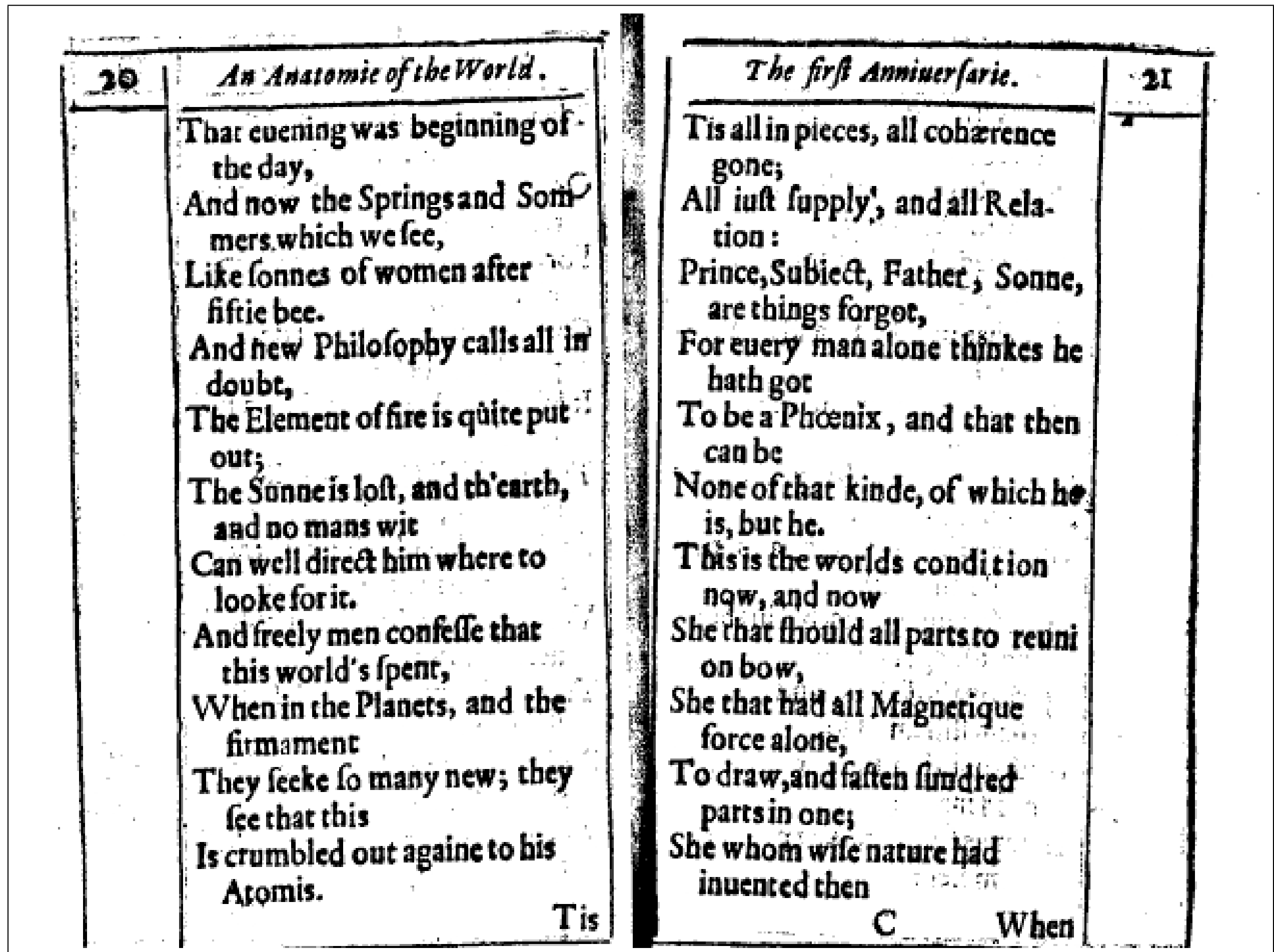
[5] The paradox is that I also have a profound distrust for the 'alternative' to that individualism, namely conservative, essentialist particularism and culturalism. The thinker in whose works I have found the best account of this kind of concerns is Ernest Gellner, particularly in his , a recent reading of mine. In any case, the paradox I face is of exactly the same kind as Donne's, who weeps over the remains of the old world, but also knows that its death is inevitable and necessary.



AN
ANATOMIE
OF THE
World.
WHEREIN,
By occaſion of the vn-
timely death of Miſtris
ELIZABETH DRVRY,
the frailtie and the decay
of this whole World is
repreſented.
The firſt Anniuerſarie.

LONDON
Printed by *W. Stansby* for *Tho. Dewe*,
and are to be ſold in S. *Dunſtanes*
Church-yard. 1625

Figure 1: Cover of the 1625 edition of Donne's First Anniversary ⇠ *back*


20 *An Anatomie of the World.*

That euening was beginning of
the day,
And now the Springs and Som-
mers which we ſee,
Like ſonnes of women after
fiftie bee.
And new Philoſophy calls all in
doubt,
The Element of fire is quite put
out;
The Sunne is loſt, and th'earth,
and no mans wit
Can well direct him where to
looke for it.
And freely men confeſſe that
this world's ſpent,
When in the Planets, and the
firmament
They ſeeke ſo many new; they
ſee that this
Is crumbled out againe to his
Atomis.
Tis

The firſt Anniuerſarie. 21

Tis all in pieces, all cohærence
gone;
All iuſt ſupply, and all Rela-
tion:
Prince, Subiect, Father, Sonne,
are things forgot,
For euery man alone thinkes he
hath got
To be a Phœnix, and that then
can be
None of that kinde, of which he
is, but he.
This is the worlds condition
now, and now
She that ſhould all parts to reuni
on bow,
She that had all Magnetique
force alone,
To draw, and faſten ſundred
parts in one;
She whom wiſe nature had
inuented then
C When

Figure 2: Page of the 1625 edition from which the text was extracted ⇐ *back*

2.2 THE TEXT MELODY

Now the reader of poetry yields to the composer of music. From a piece of text already defined, a piece of music was to be created. Just as the reader had concerns that very profoundly shaped his reading, the composer could not (and did not try to) escape concerns that shaped his writing—fortunately of a more 'concrete' nature. From the beginning, the idea of a solo voice accompanied by an ensemble fitted to my mind a compositional idea I had recently been playing with: that of developing a whole piece from a single melodic line. My previous *Canon for Violin and Piano* (2002) had already been an attempt in that direction, and in this case there was an additional pull towards this method: a (verbal) text that could be used to 'generate' the melody.

In fact, the first step in an unusually discrete compositional process (meaning that the steps were clearly differentiated from each other) was to compose the melody from the text. 'From' here has no particular relation to the *meaning* of the text, but rather to its sensible form: the melody was the spontaneous result of a sung, out-loud reading of the text. It was not exactly 'improvisation,' for its final form was not the first that occurred to me; rather, many out-loud readings were necessary to achieve a satisfactory complete melody—readings to which careful control, allowing for and demanding second thoughts, was consciously applied.

The melody that resulted from this step is reproduced, in its original form, in Figure 3. Although the rhythmic values transcribed there, as in my first sketches, were approximations waiting for definition (the fermatas, for example, represented places for instrumental interludes of some sort), the melody already resembles its final form, as starts in measure **31** of the score. The melody is divisible into two parts of four phrases each, and in the pitch dimension it has a strongly 'syntactical' construction, i.e. building blocks (*paradigms*) and rules for their combination (*syntax*) can be identified.[6]

There was little attempt to 'depict the words' in the usual way. On the one hand, the text is too 'abstract,' and it does not tell a story, but at most describes a situation. On the other, the melody already composed (departing more from its sensible form than from the meaning) was enough for determining what the music would be like, not precisely but sufficiently indeed—above all when I was departing from the premise of 'expanding a melody'—so that there was little room and little need to extract concrete musical ideas directly from the meaning of the text.

And yet there are some interesting effects of the meaning of certain words upon the general conception of the piece. One of them was the first word: 'And.' The idea of 'expanding a melody into a complete piece' originally suggested that the melody itself appeared right from the begin-

[6] These aspect of the melodies were studied in some detail in my mentioned paper for Dr. Rosenblum's seminar "Music and Semiotics" (see footnote 1). The syntax, in any case, was not created consciously.

ning. But this ‘And’ implied otherwise: there had to be *something* before, to which the ‘And’ could apply its conjunctive function. This made me go back to Donne’s poem, where I found a suitable line to be the ‘something:’ *Beauty, that’s color, and proportion* (line 250). This line is quoted as subtitle in the score.

Figure 3: The pre-composed ‘text melody.’ ⇦ *back*

3 THE INSTRUMENTAL INTRODUCTION

3.1 THE OPENING OF THE PIECE

Thus, the instrumental introduction should represent ‘beauty’ (the singer never mentions it). The way I chose to convey this representation was the most interesting ‘derivation’ of the music from the text, and the one which most closely follows the latter. Again, the relationship between text and music is not at all defined by the meaning, but purely from formalistic considerations. After having composed the first four phrases of the melody (1–4 in Figure 3), I realized that, leaving aside rhythm and repeated notes, its retrograde fell into groups of three notes within which there was always a minor-second progression:

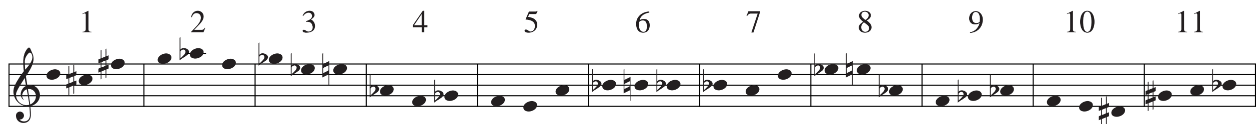


Figure 4: Three-note groups in the retrograde of phrases 1–4 of the melody. ⇦ back

These three-note motives were thus classifiable according to the other interval involved (e.g. nos. 1, 3, 5 and 7 are classified under the ‘perfect-fourth’ group). And within each group eight variants were possible, stemming from two oppositions:

1. *Rectus* vs. *inversus*: if the minor second goes downwards, the variant is ‘*rectus*.’ Within the ‘perfect-fourth’ group, for example, no. 1 is *rectus*, no. 3 is *inversus*.

2. Ordered vs. unordered: if the minor second appears as the first interval, the variant is ‘ordered.’ No. 1 is ordered, no. 3 is unordered.

3. Compensating vs. non-compensating: if the additional interval goes in the direction contrary to the minor second, the variant is ‘compensating.’ All the motives of the perfect-fourth group are compensating.

If we call ‘b’ the original variant of the perfect-fourth group (*rectus*, ordered, compensating), and apply purely visual transformations, ‘p’ (vertically flipped) nicely represents the *inversus* variant; ‘d’ (horizontally flipped) would be the unordered variant; these oppositions can be combined, so that ‘q’ (flipped both vertically and horizontally) represents the *inversus*, unordered variant. For the ‘non-compensating’ variant, a prime (′) can be used (so that b′ would be the non-compensating variant).

This is the core of the idea. The visual relationships between b, p, d, and q can be found also between other groups of letters: g can be seen as the ‘unordered variant’ of e (g∼ɘ), and a as its ‘unordered, *inversus* variant:’ a∼ə. Moreover, with a careful displacement of the ′, e itself can be seen as the non-compensating variant of c, for e∼e∼c′. With this and similar tricks, the whole alphabet can be interpreted in terms of the oppositions listed above, with the only exceptions of ‘o’ and ‘x’ (see Table 1).

With this alphabet there was a systematical way to represent any text. The portion at hand, “*Beauty, that’s color and proportion*,” was set with the following additional premises:

- Motives corresponding to letters within the same word would be elided.
- The letter ‘o’ would be set as pauses in the melody.

The ‘alphabetic melody’ that result can be seen in Figure 5, and the opening section of the piece (measures **1–19**) shows the actual realization of it as a first part of the instrumental introduction. The handling of timbres and doublings (“that’s color”) helped to infuse vitality to some potentially too repetitive moments of the alphabetic melody. The punctuations by the piano feature three-note chords that also correspond to the successive letters of the subtitle, but their rhythmic locations were freely decided. Most interesting perhaps is the ’cello solo starting at measure **13**, where some devices make the music more varied: the conflict-suggesting attacks in the marimba (which coincide with the instances of the letter ‘o’) and the trill F-G♭ in the clarinet, a variation of the letter ‘t.’

How ‘beautiful’ is this opening? Admittedly it is not the kind of beauty I first imagined when intending to represent it. But I soon realized that it *was* beautiful, and that, in any case, the nervous ’cello solo was a very good representation of the doubt that new philosophy will call for.

	letter		interval	*rectus*	ordered	comp.
	a	∼ə		✘	✘	✘
▹	c		minor 3rd.	✔	✔	✔
	e	∼ɇ∼c′		✔	✔	✘
	g	∼ɘ		✔	✘	✘
▹	b		perfect 4th.	✔	✔	✔
	d			✔	✘	✔
	p			✘	✔	✔
	q			✘	✘	✔
▹	f		minor 2nd.	✔	✔	✔
	t	∼ŧ		✘	✔	✔
	h	∼ɦ∼n′		✔	✔	✘
	m	(double n)		✔	✔	✔
▹	n		major 2nd.	✔	✔	✔
	u			✘	✘	✔
	v	∼ʋ		✘	✔	✔
	w	(double u)		✘	✘	✔
	y	∼ɥ		✘	✔	✘
	i	∼$\dot{\mathcal{J}}$∼$\mathcal{J}'$		✔	✘	✘
	j	∼$\mathcal{j}$∼$\mathcal{J}'$		✘	✘	✘
	k	∼ƚ∼ℓ'		✔	✔	✘
▹	l	ℓ	minor 6th.	✔	✔	✔
	r	∼ʆ		✘	✔	✔
▹	s		tritone	✔	✔	✔
	z	∼ƨ		✔	✘	✔

Table 1: The alphabet of motives and variants. ⇦ *back*

Figure 5: “Beauty, that’s color, and proportion” (alphabetic melody). ⇦ *back*

3.2 THE TRANSITION TO THE TEXT

The next task of the introduction, from a technical point of view, was to prepare the stage, both rhythmically and harmonically, for the entrance of the text. The two melodies already composed (the 'text melody' in Figure 3 and the 'alphabetical melody' in Figure 5) had their own 'ideal' tempo, which happened to be in a ratio of 3 : 2. Since, on the other hand, the text melody is of a ternary rhythmic nature (although considerably syncopated), a tempo modulation of quarter note becoming dotted-quarter note was both necessary and sufficient. (This realization shaped in part the triplet 'intromissions' of the marimba within the 'cello solo.) This modulation occurs right after the 'cello solo, and the piano establishes the ternary rhythm with a motive that will become important (measures **20–25**).

On the other hand, the text melody features a recurring and very characteristic construction, the ascending progression minor third-minor sixth. The motive is initially presented twice from F (F–A♭–E, phrases [2] and [4], measures **36** and **41**), and it finally leads to the climax from F♯ in phrase [8] (measures **59–60**). The idea was to accompany the entrance of the voice with a chord featuring the three notes of this progression, F–A♭–E (this is the '*Anatomy* chord'), plus the first note of the melody, A♮ (cf. measure **32**).

Rehearsal number **[B]** of the piece, following the establishment of ternary rhythm, is devoted mainly to the building of that chord. Thus the violin takes the F played by the clarinet in measure **28** (F was already a prominent pitch, since the piano has been holding it as a low pedal point since measure **17**); likewise, the 'cello takes the E in measure **29**, in a multiple-register figuration resembling the one on A a few measures before. The latter pitch, A, has 'been there' since the ending of the previous section, in the flute, and the A♭ is reached by the clarinet.

3.3 HIDDEN THREADS

This transition features the same pattern as the opening of the piece: a section that can be related to 'beauty,' followed by one that can be related to 'doubt.' In a higher sense, the deep constructive difference between the opening and the transition, namely systematic vs. relatively free, is another metaphor for the same ideas: a highly sophisticated system, comparable to the Ptolemaic system that Donne has in mind when weeping over the old, beautiful world, and the opening up of hitherto inconceivable possibilities, an image of the new universe that Copernicus, Kepler and Galileo were creating in Donne's time.

The whole instrumental introduction contains, hidden below the surface, the seeds of developments that are to grow up into some of the main discursive forces for the unfolding of the piece. The solitary trill in the clarinet, the so-far-mild rhythmic conflict between 2 and 3, and, above all, the opposition of major and minor seconds, both harmonically (cf. the first chords in the marimba in measures **15–19**, replicated by clarinet and flute in rehearsal number **B**) and melodically (cf. the top-part of the piano motive after the tempo modulation, measures **20ff**). I would like to compare these seeds to the little anomalies successively encountered by the Aristotelian-Ptolemaic view of the world, first only uncomfortable minor oddities, then the destructive power that was eventually to drive and shape one of the most important changes in the history of Western civilization.

4 THE FIRST ENUNCIATION

After the instrumental introduction, the voice enunciates the text in its complete form. Its entrance, intended as an interruption of the ensemble's disquisitions, is both expected and surprising. 'Expected,' because the piece has already advanced more than enough for the voice to make its entrance; and 'surprising' because previous points in which an entrance would have been very natural (measures **20** and **26**) have deceivingly led to more purely instrumental music.

The enunciation of the text is almost completely faithful to the melody composed and shown in Figure 3. Rhythmic values have changed (particularly, quadruplets have been included), but this possibility had been always contemplated, and, in fact, the new rhythm is closer to the composed melody than the previous written-down version. The most important change is the substantial elongation of the *caesura* that originally separated phrases [6] and [7] into a pause four eighth-notes long (measure **51**). The reasons for this change will be made clear in page 18.

Just as the text is divided into two parts (4 and 6 lines respectively) and the melody responds to this division (compare phrases [1]–[4] and [5]–[8]), the accompaniment by the ensemble changes its structure from measure **45** on.

4.1 THE FIRST FOUR PHRASES

4.11 Tenor-like counterpoint

The first element of the accompanying texture in the first four phrases is a line that, together with the voice melody, makes a contrapuntal whole resembling the ancient *organum*: long notes in one voice (*tenor*), more lively ornamentation in another. (Of course, the *compositional* process is here the reverse of that of the *organum*, where the *tenor* is the given. Here, the *discantus* is.) Figure 6 shows the complex formed by the two elements (abstracting register and timbre).

The *tenor*-like line (marked '*senza espressione*' in the score) is not as important perceptually as it is structurally. The harmonic intervals it forms with the melody governed the behavior of

the marimba in the opening (section 3.1) and of the clarinet in the transition (section 3.2). Its sequential character and its centering around F give cohesion and closure to the whole first part of the enunciation (it comes to rest on F in elision with the next part). On the other hand, its interplay of minor and major seconds make it central to the discourse of the whole piece.

This line is distributed by 'cello and clarinet, and registrally it progresses downwards, from high harmonics and *chalimeau*, to the c-string.

4.12 Piano interludes

For the first three phrases of the text, when the voice is singing the piano plays nothing (except for chords at the beginning of each line of text). But it intervenes between the phrases, with a motive derived from, and clearly resembling, the one with which it established the ternary rhythm at the beginning of the transition (section 3.2). This 'interlude motif' is shown in Figure 7.

The motive, which delineates the *Anatomy* chord (see section 3.2) is played in different rhythmic locations within the measure, and makes a fourth-cycle, first being stated in F (measures **33–34**), then in B♭ (**38**). The next interlude, based on the same motif and this time in E♭, appears in the 'cello and the clarinet. And after this, having the piano lost its attachment to the interlude function, the piano restates it in F, and *alongside* the fourth phrase of the melody (measures **43–44**). This time, moreover, the arrival at the high E serves as the starting point for a restating of the original motif from the transition. In the second beat of measure **44**, the interlude-motif starts again, from E♭, to arrive at the D that closes the first enunciation.

4.13 Other elements

The flute and the violin make freer counterpoint. The sixteenth-notes in the violin (measures **38–45**) feature transcriptions of the words '*color*' and '*proportion*' according to the 'alphabet of motives' (Table 1), this time without elision between letters. The flute has a role in the completion of the third 'interlude motiv,' started by the 'cello and the clarinet. The percussion reinforces downbeats with the bass drum and strong consonants in the voice with snare drum (with no snares).

But the most important 'other element' is the group of long *crescendo* notes, an idea brought directly from the transition, and which here and there distracts the clarinet or the violin from what they are doing. The idea is certainly at home in the clarinet, but it is still not fixed there (it will be), and it is not always finished with the grace notes that will become attached to it.

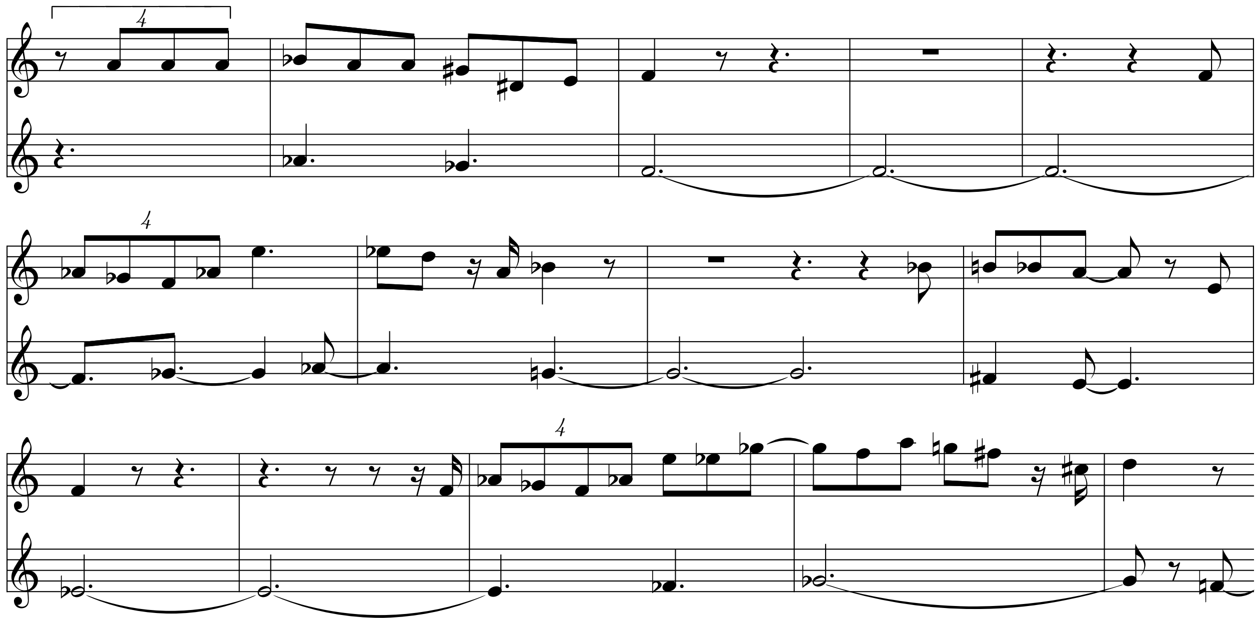


Figure 6: Organum-like counterpoint. ⇜ *back*

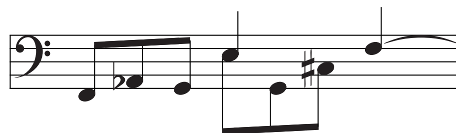


Figure 7: Piano-interludes motive ⇜ *back*

After the relatively unified complex of the four first phrases of the melody and the diverse elements of its accompaniment, the piece enters a phase of looking both behind and ahead. The trill idea, taken from the brief chromatic trill of the clarinet in measure **17**, is expanded into nervous, trembling long microtonal trills, scored for a good part of the ensemble. This in itself is a big leap forward, but it is structurally strongly related to what came before, concretely to the opening of the piece. Incidentally, this is the fist moment since the establishment of the ternary rhythm in measure **20** that the first section of the piece is directly alluded to. The first trill happens on a re-orchestration of the second chord that the piano played in the introduction, and from then on the relation is consistently held: the second trill (measure **49**) is on the following chord (which the piano actually attacks, in the same disposition), and finally flows into a literal reprise: compare measures **50ff.** with measures **8ff.**

The fourth piano chord in the introduction led to the held double G ringing by itself, and here the same happens again. This point (second beat of measure **51**) is what corresponds to the *caesura* in the original text melody (Figure 3), and the ringing G is the next note in the melody. The *caesura* has been converted into the four eighth-notes long pause to reinforce all these relationships.

The restatement of the introduction goes on, with minor but significant changes. In the next gesture, the *pianissimo tenuto* eighth-notes, the clarinet has dropped its repeated G to substitute a *crescendo* long note that ends with the grace notes; the piano displaces its chord to attack it after the singer has pronounced, *a solo*, the words "are things forgot."

The last of those words, in addition to 'Phoenix' in the second line, suggested a dying and a re-wakening, an idea which the next thing to be restated from the introduction—the melody of flute and clarinet starting in measure **11**, resembling of the outset of the piece—fitted perfectly. This time, it comes in flute and violin, in a texture that, as an summary, points to the whole opening section.

Of course, this close restatement of material of the introduction is hardly perceived (and not intended) as a 'recapitulation.' In addition to the already mentioned changes, stemming from what has happened between the original version and the present one (for 'new philosophy has called all in doubt'), the difference in *tempo* is enough to make it a further step in an on-going process, rather than the culmination of a cycle.

The speeding process does in fact continue. The immediately following *precipitando* is a dramatic confirmation. The 'cello, as before, takes over the instrumental parts, and accompanies the singer towards its climatic tone in the first enunciation, on the word *Phoenix*. (Not by accident, this tone is a F, and leads to a E.) The 'cello itself arrives at a B♭, and the ensemble completes a chord formed by two perfect fifths and a minor second: E♭–B♭–F–G♭, which is a transposition of the first

chord in the piano, the one that had not been restated. This chord resolves—almost in a Phrygian half-cadence—into the one that the transition had built: A plus the '*Anatomy*' chord.

All this makes it consistent to finish the text with a resemblance of its first part: the introduction has been, so to speak, re-staged. The last five measures of the first enunciation (**62–66**) are a condensed summary of what has not yet been remembered (including the *pianissimo* tam-tam stroke, and the text starting with 'And').

And yet there is no clear sense of closure for the piece. In part, at least, this might be due to the emphasis on a tone that so far has not been central to the piece, but which takes precedence precisely in the last five measures: E♭.

5 THE SECOND ENUNCIATION: REFLECTION AND SYNTHESIS

After having enunciated the text in its entirety, the singer leads the way to the second part of the piece. The text of this second part is an abbreviated and modified version of the text already heard; although the general idea in terms of meaning is the same, the change of order of certain expressions produce changes in 'detailed' meaning:

> *And new philosophy*
> *calls all philosophy, Sun, and Earth,*
> *in doubt!*
>
> *All in doubt, the element of fire is out,*
> *and no man's wit can well direct him*
> *where to look for it.*
>
> *'Tis all in pieces, all supply.*
> *Is relation gone, forgot, quite put out?*

Note that every single expression comes from the original text (see page 4). This is true also of every single word, with one exception: '*Is*' (instead of '*and*') before 'relation gone.' In fact, I originally had imagined the last line of this enunciation as 'and relation gone, forgot, quite put out.' The change to '*Is*,' which responded to musical reasons to be explained, implies also the shift from an affirmative to an *interrogative* sense that I found perfect to round up the reflection. After all, it is a reflection on a paradox, on a dilemma: the lack of an answer is precisely the point.

It is important to note that this second part of the piece was composed with a rather different process. Neither the text or the sung melody were constructed and given *a priori*; the singer's part was conceived of as one more, if only somewhat more important, element of the ensemble texture. The text was accommodated *afterwards*—the change from '*And*' to '*Is*,' for example, was one of the last compositional decisions I took.

The first part of this second version of the text is set to a melody (measures **67–73**) that combines elements from both the instrumental introduction and the original text melody: in Figure 8

below, which contains this melody, α stands for a condensation of the first three measures—the word '*beauty*'—of the 'alphabetic melody' that opened the piece (Figure 5), while ω is the most important paradigmatic motif of the text melody, ending all its phrases but 6 and 8 (Figure 3).

Figure 8: Melody that opens the second enunciation. ⇦ *back*

The ensemble has remained expectantly waiting during this introduction to the second part. The harsh reinforcement of '*calls*' (after the previous complete pause that would seem a hesitation around the question of what is what 'new philosophy' does—it *calls* all in doubt) is then reduplicated in measure **74** with the harsh E♭ that sheds doubt on the singer's climatic D ('*doubt*'). The ensemble goes back (for it is immersed 'in doubt') to a softer D, and then the singer takes over the emphatic E♭ to inaugurate a more direct and contrapuntal section. This section is structurally, if not perceptually, based on the counterpoint between the voice and flute lines, shown in Figure 9.

Figure 9: Structural counterpoint in the second part. ⇦ *back*

Initially, the relationship between the two voices is what could be called 'selective doubling:' at some points, the two voices, formerly independent from each other, come together. The technique

has been applied throughout the piece, and not only in relation to the voice part,[7] and can even be seen as a variation of the kind of texture that opens the piece.

At this time, however, the 'selective doubling' is applied more systematically and is linked to other thread that has been developing in the piece: the opposition between minor and major seconds, and the rhythmic conflict of 2 and 3. Melodically, the voice part shows this opposition in the pickup and the first measure of the present section.[8] When the voice turns to a more chromatic discourse, a regular selective doubling in quarter-notes (a 2-based unit, as opposed to the ternary nature of the voice part) creates whole-tone progressions. The same idea—selective doubling of minor seconds creating major seconds—had been hinted at by the piano in measure **47**.

The culminating point of the minor-major second conflict comes at the end of this counterpoint, with the motive F–G♭–E in the last measure (voice), which imitates the immediately previous D–E♭–D♭ from the flute. This motive had already been prominent when the piano established the ternary rhythm in measures **20–25**, and here it appears in a climatic position.

The rest of the instruments respond to the rhythmic interplay of the voice-flute counterpoint of Figure 9, all of them supporting the flute syncopations, and some supporting the four-note motives that the voice inserts between quarter-notes. As it comes to pitch, the 'cello and the left hand of the piano play, in different rhythm, the 'alphabetic melody' that opened the piece—the 'cello reaching up to the word 'that's' (see Figure 5). Right hand, clarinet, marimba and violin fill in the chords.

In rehearsal number **E**, the whole ensemble joins the restatement of the introduction started by the 'cello (which, again, it is hardly possible to call 'recapitulation'). The *flautando* three-note motives in 'cello and violin, and later on that of flute and clarinet, are a direct transposition a half-tone upwards of the motives that started in measure **7** and that correspond to the word 'color'. Finally, for the first time, the voice comes in to directly reproduce the material of the introduction: the musical material of 'and proportion' (that the cello and the clarinet had shared and dismembered in measures **13–19**) meets the text '*'Tis all in pieces, all supply. Is relation gone, forgot, quite put out?*' The interpretation is left to the reader… For the first time also, emphasis is given to the acute vowel /i/ (''Tis,' 'pieces'). The change to 'is' and to the interrogative mode was made to keep consistency, and its effect on the meaning was most welcome.

This voice-restatement is initially transposed a minor third up from the original. This is because flute and clarinet were holding the pitches E and A♭. When the voice enters in F (supported by the piano), the '*Anatomy* chord' is formed. The same chord is heard later on, in measure **91**, transposed to C (i.e. C-E♭-B), where the piano plays once more the 'interlude' motive of Figure 7. The perfect-

[7] See, for example, flute-piano in m. **25**, flute-voice in the last two notes of m. **32** and in m. **37**, piano-voice in m. **48**.

[8] A conflict of the same kind had already been made explicit in the previous melody, the introduction to the second part of the piece (Figure 8), particularly in the change from B to B♭ in the repetition of the neighboring figure C–D♭–C.

fourth cycle is then suggested when the chord sounds once more in F. This time no interlude motive is played, but the piano plays it next in the next perfect-fourth step: B♭.

The last section of the piece, a nervous increase in tension, features also a restatement of previous material. The 'cello and the left hand resume the reprise of the introduction where each had left it before **E**. Flute and violin play a version of the *tenor*-like accompaniment to the first enunciation (Figure 6). The rhythmic conflict between $\frac{6}{8}$ and $\frac{3}{4}$—2 against 3—is reinforced by a veiled but constant allusion to $\frac{7}{8}$. The piece is (and feels) now finished. Its point, it seems, was to create conflict and bring it to a head.

6 "AND PROPORTION"...

The two parts of the piece are related also in another way. Each consist of five parts, whose durations, in terms of beats, are given in Table 2. A double line separates sections v and vi, and corresponds, in the piece, to the moment in which violin and flute point to the introduction in a clear fashion from the listener's perception.

The fact is that the sections of the first group (i-v) are related to those of the second group (vi-x) through the golden section:

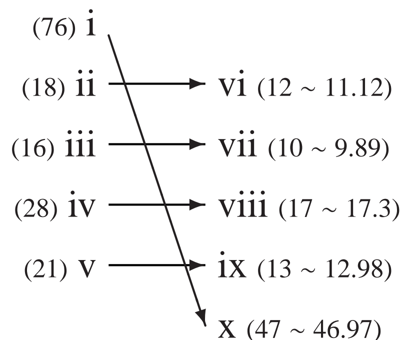


Figure 10: Golden section proportions between sections. ⇐ *back*

It was relatively late in the process of composing the piece, when I had already started to write the 'final sections,' that I began considering proportions in these terms. As had happened before to me, I realized that some relationships of this sort were already present in the music, and then worked to confirm and potentiate them. For example, section v had, when I started to analyze proportions, 17 beats, rather than the 21 that are 'needed' for the relationship to hold. In that case it was possible to expand this section; but that I did not want to *impose* relationships to the music is proven by the fact that, in all truth, section vi 'ought' to have 11, rather than 12, beats—there was simply no sensible way to remove the 'extra' beat while keeping the music alive.

The interesting thing, in any case, is how I was so 'consumed,' so to speak, by different concerns about the piece, that only the last day of actual composition it occurred to me that proportion-oriented thought—a tool that has virtually always been essential for my composing—could offer

me a hand. (The 'hand' it offers to me is a fairly authoritative answer to the ever-present question 'what to do next.') Since this is also the first time I composed seriously with text, I am tempted to conclude that my relationship with the text was powerful enough to guide me through the creation of the music. After all, and in some elusive sense at least, it seems that I *did* depict the words. . .

	Part	Measures	Duration (beats)
i	Introduction	1–19	76
ii	Ternary-rhythm established	20–25	18
iii	Building up the chord	B 26–31	16
iv	Text, lines 1–4 ('And new. . . ')	31–45	28
v	Text, lines 5&6 (''Tis all. . . ')	45–55	21
vi	Text, line 7 ('For every. . . ')	D 56–61	12
vii	Text, line 8 ('And that. . . ')	62–66	10
viii	Second enunciation, lines 1–3 ('And new. . . ')	67–75	17
ix	Flute-voice counterpoint ('All in doubt. . . ')	75–81	13
x	Final sections	E 82–105	47

Table 2: Sections and durations of An Anatomy of the World ⇦ *back*

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