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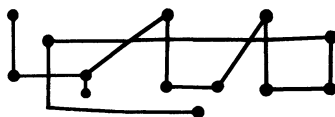
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PRESERVING THE FRAGMENT: FRANCO DONATONI'S LATE CHAMBER MUSIC



BRADLEY D. DECKER

INTRODUCTION

I N A 1981 ARTICLE TITLED “PRESENZA DI BARTÓK” in *Il sigaro di Armando*, Franco Donatoni enumerates what he regards as the four essential aspects of the music of Béla Bartók:¹ “(1) cellular exposition and organism growth; (2) growth without development, conservation of the fragment; (3) juxtaposition of organisms; mutation, not evolution; and (4) stasis of pulsation, continuity of tone.”² Such traits can be also found in Donatoni’s compositional output from 1977 to 2000, which he calls his “joyous” period.³

Following a phase of artistic transfiguration in the mid-1970s,

Donatoni's music is marked by the preservation of gestural identity, or in the words of musicologist Gianmorio Borio, "a conservation of energy."⁴ Works from Donatoni's earlier, so-called "negative" period⁵ are less economical, in which new gestures are produced at every turn, creating an overabundance of material. In his joyous period, internal characteristics of a gesture may change over time, but the gesture's identity remains consistent. Michael Gorodecki, in a 1993 article in *The Musical Times*, credits Donatoni's success to a greater emphasis on 'line' in his compositions.⁶ Donatoni himself explains that he was creating "a music more determined by the linearization than the superimposition of the codes, rich in diverse and variegated articulations."⁷ These "codes," which he also called "automatic procedures," were at work in early compositions such as *Puppenspiel 2* from 1966⁸ and *Etwas Ruhiger im Ausdruck* from 1967.⁹ But it is Donatoni's more efficient application of these codes that define his joyous period. In a 1990 pamphlet he summarized his compositional goals: "Complexity of code, simplicity of result . . . [and] difficulty [for others] to know the nature of the code."¹⁰

As I will show, Donatoni's codes transform musical fragments to generate a unified interplay of gestures. The result is a compositional approach that efficiently realizes an intricate design, on both a micro- and macro-level. I will focus on his chamber works to show how Donatoni's codes are applied to musical fragments. The four Bartókian points outlined above are a point of departure for this study, as they enumerate Donatoni's compositional goals in his joyous period. I will use *Refrain* (1986) for 8 instruments to illustrate the codes and how Donatoni uses them.

CODE PANELS: "JUXTAPOSITION OF ORGANISMS"

Donatoni's codes are used to create both musical stability and motion. The dichotomy between stability and motion—a key component to his compositional thinking—is manifest in a variety of codes that can be categorized as either panels or filters.¹¹ These codes are used to transform various musical attributes, such as orchestration, form, gesture and pitch, to promote a musical gesture in a coherent way. I will show how Donatoni implements a variety of codes to attain musical stability in *Refrain*, which I categorize as *panels*.

Panels are the result of transformations that preserve some musical attribute (such as a pitch-class, rhythmic value, or timbre—either in part or as a whole) over a period of time, resulting in a feeling of relative

musical stability. Donatoni's panel technique begins with large linear passages, or strands, of music that can stand alone. Recognizable parts of these strands are taken to form the panels, and are assembled with panels from other strands according to a formal plan. Therefore a panel presents a passage from one or more complete strands. The different strands interact through changing juxtapositions, thus creating new musical contexts as they combine in the panels. Through this technique, the goal of Donatoni's third point regarding Bartók is achieved: "Juxtaposition of organisms; mutation, not evolution."¹²

Bartók's Fourth String Quartet, which had an immense impact on Donatoni at the start of his own career,¹³ provides an excellent example of the use of panels. In mm. 136–145, near the end of the first movement, two panels of material alternate (See example 1). Panels that feature the important thematic thread are in boxes, and are separated by panels of secondary material.. Both panels change in size through addition and subtraction. Abrupt changes in dynamic level and tessitura provide enough contrast to set them apart.

Musical material gains new life through new associations with other materials. Donatoni uses panels on many formal levels, from the largest macro level, to smaller strands of material within formal sections to the smallest micro level. The sectional makeup and orientation of *Refrain* (1986) is an example of this concept. Example 2 shows the macro-level

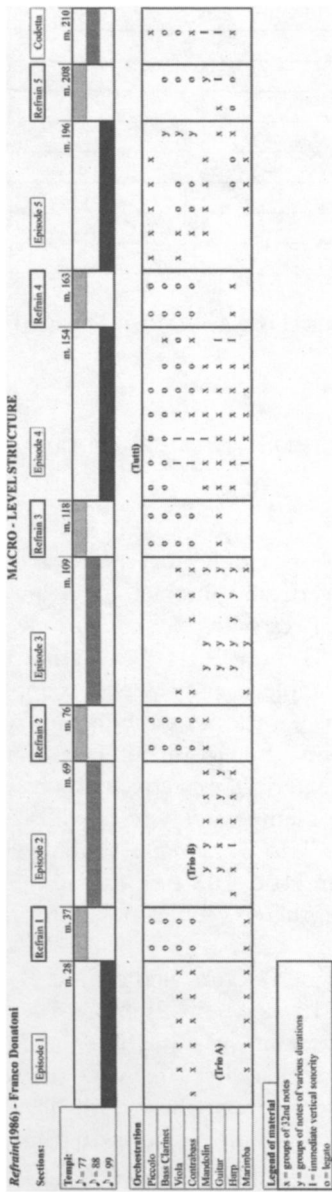
EXAMPLE 1: BÉLA BARTÓK, *FOURTH STRING QUARTET*, MM. 135–45

form of *Refrain*, which uses three different tempi (♩ = 77, 88, 99) to provide obvious formal cues and help to divide the work into ten sections. The slowest tempo, ♩ = 77, shaded in light grey, is reserved specifically for the five “refrain” sections of the work, which, like the *ritornello* in a concerto grosso, use the same motivic material, even if they differ slightly in orchestration. The others, ♩ = 88 (dark grey) and ♩ = 99 (black), are episodes of varying yet related material. The letters X, Y, L and O are used in example 2 to generally associate musical material with similar characteristics. There is a two-measure “codetta” at the end, which I do not consider a full section.

In the five episodes, panels are marked by abrupt changes in orchestration and motivic content. Dramatic contrasts make it possible to identify their lineage in the piece. The third episode from mm. 76–109 consists of three panels: mm. 76–84, mm. 85–95, and mm. 95–109. Examples 3 and 4 below show these abrupt changes in orchestration at m. 85. X material in example 3, mm. 76–84, is a texture of small groups of thirty-second notes played by a trio of pizzicato viola, contrabass, and marimba (hereafter referred to as “Trio A”), which creates a tense, unpredictable and undulating texture, with erratic stops and starts. Y material immediately follows with notes of varying durations and articulations, and is played by the mandolin, guitar, and harp (“Trio B”). Example 4 shows the juxtaposition of these two panels in the score. These panels can also be seen in the macro-structure in example 2.

The X panel is thematically important, and permeates most of the work. It is first heard at the outset of *Refrain* played by Trio A, from mm. 1–19 (See example 2). It is homogenous in both rhythm and motivic content, as it uses short groups of thirty-second notes and features mostly minor seconds and thirds. Panel X stops at m. 19. (Note the similarity between example 5, and the first three measures of example 4.) In m. 76 this panel reemerges after a fifty-eight-measure interruption of other panels, sixteen measures of which are dedicated to refrain sections.

The Y panel provides an important motivic and textural contrast to the X panel. In episode 3, mm. 85–95, the Y panel features more continuous phrases and rhythms than its counterpart. (See example 6 for a score excerpt, mm. 91–93, of this material.) It begins with a sudden drop in dynamic level and intensity, builds to a quartet by adding marimba at m. 89, and concludes in ascending thirty-second note phrases by m. 91. The source of the Y panel in episode 3 can be found in mm. 52–68, the second half of the episode 2, as it employs Trio B for Y material—ascending thirty-second note phrases. (Note the similarity between example 6 and example 7.)



EXAMPLE 2 :MACRO-LEVEL STRUCTURE OF REFRAIN (1986)

Episode 3 - Panels

	mm. 76-84	mm. 85-95	mm. 95-109
Piccolo			
Bass Clarinet			
Viola	x x x x		x x x x
Contrabass	x x x x		x x x
Mandolin		y y y y	y y
Guitar		y y y y	y y y
Harp		y y y y	y y y y
Marimba	x x x x	(y y)	x
	X Panel (Trio A)	Y Panel (Trio B)	XY Panel (Trio A + B)

EXAMPLE 3: PANEL STRUCTURE IN THE THIRD EPISODE OF *REFRAIN*, MM. 76–109

These two panels are not only linearly juxtaposed. Donatoni obliges these two panels to vertically interact to create a composite texture. Trios A and B and their respective X and Y motives are combined in the third panel of episode 3, mm. 95–109, creating what I will call an XY panel. (See chart in example 3, and refer to example 8 for a score sample of this material.) At m. 95, the XY panel begins with one representative from each timbral group (the viola from Trio A and the harp from Trio B) presenting X or Y material, respectively. By m. 101 (see example 8) a quartet is formed: two members of Trio A (viola and contrabass) with X material, and two from Trio B (harp and guitar) with Y material. The XY panel concludes in mm. 106–108 (see example 9) with Trios A and B playing simultaneously, thereby achieving a “juxtaposition of organisms; mutation, not evolution.”

A juxtaposition of panels occurs at the climax of the work, from mm. 131–144, in episode 4, shown in example 10. The piccolo and bass clarinet present an important quasi-melodic thread (to be discussed later in the section on *filters*) that alternates with the rest of the ensemble in unison. The opposition between the piccolo/bass clarinet pair and the ensemble creates a microcosmic situation that mirrors the macrocosmic form—that is, the alternation of episode and refrain sections.

Size ratios between the two panels in the climax section reflect the ratios in the macro structure of the piece. Example 11 shows the micro-level structure of episode 4. White horizontal boxes represent material

The image displays a musical score for a piece, specifically focusing on the refrain measures 82-87. The score is organized into two systems of staves. The first system (measures 82-87) shows a dense, complex texture with many notes and rests across all instruments. The second system (measures 88-93) shows a significant change in orchestration, with many instruments (Ott., Cl. B., Vla., Ch., Mand., Chit., Arpa, Mar.) having rests, and the remaining instruments (Mand., Chit., Arpa) playing a more sparse, rhythmic pattern. The Arpa part in the second system includes dynamic markings like 'f', 'p', 'pp', 'sol', 'sib', 'dof', 're', 'dof'.

**EXAMPLE 4: ABRUPT CHANGE IN CONTENT AND ORCHESTRATION
IN REFRAIN, MM. 82-87**

EXAMPLE 5: TRIO A AT THE CONCLUSION OF THE FIRST PANEL IN THE FIRST EPISODE OF REFRAIN, MM. 16–18

EXAMPLE 6: TRIO B WITH MARIMBA IN THE THIRD EPISODE OF REFRAIN, MM. 91–93



EXAMPLE 7: TRIO B IN THE SECOND EPISODE OF *REFRAIN*, MM. 55–57

108

Ott.

Cl. B.

Vla.

Cb.

Mand.

Chit.

Arpa

Mar.

siti, solfi

EXAMPLE 8: TWO MEMBERS OF EACH TRIO WITH X AND Y MATERIAL
IN *REFRAIN*, MM. 100–102

A musical score for measures 106-108 of a piece. The score is for a large ensemble, including Oboe (Ott.), Clarinet in B-flat (Cl. B.), Viola (Vla.), Cello (Cb.), Mandolin (Mand.), Chitarra (Chit.), Arpa (Arpa), and Maracas (Mar.). The notation is complex, with many notes and rests. The Maracas part has a dynamic marking of *f* and a tempo marking of *E. dure*. The Arpa part has a dynamic marking of *f*. The Chitarra part has a dynamic marking of *f*. The Mandolin part has a dynamic marking of *f*. The Cello part has a dynamic marking of *f*. The Viola part has a dynamic marking of *f*. The Clarinet in B-flat part has a dynamic marking of *f*. The Oboe part has a dynamic marking of *f*.

EXAMPLE 9: TRIOS A AND B COMBINE IN EPISODE 3 OF *REFRAIN*, MM. 106–108

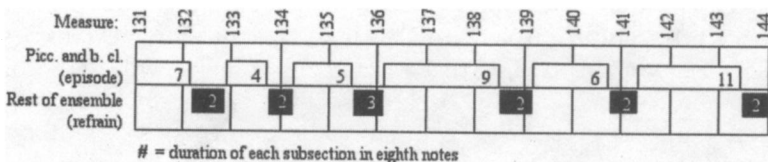
A musical score for measures 138-140 of a piece. The score is for a large ensemble, including Oboe (Ott.), Clarinet in B-flat (Cl. B.), Viola (Vla.), Cello (Cb.), Mandolin (Mand.), Chitarra (Chit.), Arpa (Arpa), and Maracas (Mar.). The notation is complex, with many notes and rests. The Maracas part has a dynamic marking of *f* and a tempo marking of *E. morb.*. The Arpa part has a dynamic marking of *f*. The Chitarra part has a dynamic marking of *f*. The Mandolin part has a dynamic marking of *f*. The Cello part has a dynamic marking of *f*. The Viola part has a dynamic marking of *f*. The Clarinet in B-flat part has a dynamic marking of *f*. The Oboe part has a dynamic marking of *f*. There are also markings for *flaut.* and *pizz.* in the upper staves.

EXAMPLE 10: ALTERNATING THREADS IN THE FOURTH EPISODE OF *REFRAIN*
MIRROR THE MACRO-LEVEL FORMAL STRUCTURE

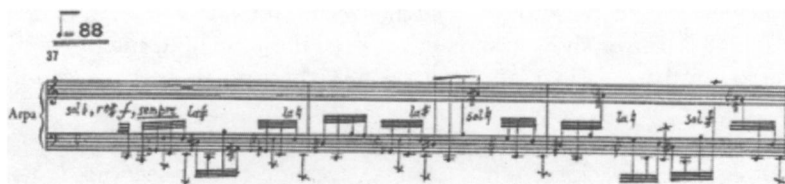
presented by the piccolo/bass clarinet pair, measured in eighth note beats. Black boxes show where the rest of the ensemble interrupts the piccolo and bass clarinet. A comparison of the formal charts in example 11 and in example 2 shows striking similarities. The micro-level structure in example 11 has six white sections (episodes), each of which are followed by six black sections (refrains), totaling twelve sections. This is comparable to the macro-level structure of the entire work shown in example 2, which has an equal number of episodes, but only five refrain sections. The important relationship between Donatoni's micro- and macro-level structures is therefore revealed at the climax of the work. In sum, panels can be found on both the macro level and the micro level. Dramatic juxtapositions of opposing panels create obvious formal divisions, while their recurrence enables a sense of unity and recollection.

Pitch panels are passages of frozen-register pitch collections that provide brief points of harmonic stability.¹⁴ The harp solo in mm. 37–40, example 12, uses this technique. The pitch collection in m. 37 {A A \sharp B C D \sharp E F G \flat G \sharp } is used throughout the solo. Each pitch-class is frozen in m. 37 and the first half of m. 38, creating the pitch set A¹, A \sharp ², B³, C², D \sharp ³, E², F³, G \flat ², G \sharp ⁴. In the second half of this three-measure example, however, Donatoni changes register placement, presumably for the sake of direction and growth. The fourth thirty-second note of beat three of m. 38 is an A \sharp ⁴, two octaves above its original register in m. 37. Each A \sharp thereafter remains in this new register. By beat three of m. 39, the A¹ is now an A⁵. In m. 40, A² moves by four octaves to A⁶. Although these pitches transpose to higher registers, and the tessitura of the passage widens to cover the entire range of the instrument, the harmonic character remains relatively static implementing “continuity of tone,”¹⁵ the fourth Bartókian point outlined above.

Donatoni contrasts these periods of harmonic stability with periods of harmonic instability. The viola and contrabass in example 8 share four



EXAMPLE 11: ARRANGEMENT OF QUASI-MELODIC AND REFRAIN-LIKE THREADS
IN THE FOURTH EPISODE OF *REFRAIN*, MM. 131–144



EXAMPLE 12: FROZEN PITCH AND REGISTER IN THE HARP SOLO
IN *REFRAIN*, MM. 37–40

pitch classes at an octave (viola $G\sharp^3$, $A\sharp^3$, B^3 , and G^4 , and contrabass $G\sharp^2$, $A\sharp^2$, B^2 , and G^3). The harp B^1 , B^2 , C^4 , D^4 , $E\flat^4$, F^4 , $G\sharp^2$, $G\sharp^3$, A^3 , A^4 imitates the rhythm of the viola and contrabass in unison, and plays short notes with the contrabass and long notes with the viola to create a static composite texture. Guitar, mandolin, and marimba eventually enter, but do not conform to the fixed register of the viola, contrabass, and harp trio. (They also articulate an *interval panel* code, to be discussed below.) The harmonic content of the guitar-mandolin-marimba trio is relatively unfocused since it is not wholly restricted in pitch or register. Example 9 shows these two trios juxtaposed. Viola, contrabass, and harp use a pitch panel to provide harmonic stability, while the guitar, mandolin, and marimba do not.

An *interval panel* code builds gestures using unordered pitch intervals that, when summed, create a constant.¹⁶ The majority of the opening episode of *Refrain*, from mm. 1–28, is an example of an interval panel code, as an unordered pitch interval set (i.e. $1 + 3$ and $3 + 1$) consistently creates pcsets that are members of a common set-class. Throughout mm. 1–19 combinations of pitch intervals 1 and 3 (or 3 and 1) create pcsets in the $SC(3-3)[014]$. In example 12, m. 13, the contrabass $D\flat$ to C, 1 semitone, and C to A, 3 semitones, creates pcset $\{0,1,4\}$ from $D\flat$ to A. The next group combines F to D (3 semitones), and D to $C\sharp$ (1), to make pcset $\{1,2,5\}$, from F to $C\sharp$. (It is related to the previous pcset by T_1 .) The viola A to C, C to $D\flat$ example beginning with the second eighth note of m. 13 is $\{9, 0, 1\}$ (also in the same $SC(3-3)[014]$). Counterpoint between the two string instruments is coordinated through related pitch interval sets and similar rhythmic patterns.

Marimba dyads in m. 8 accentuate the points where the viola and bass overlap. As shown in example 13, the marimba is not a part of the set class code in the strings, and the combined sonority of all three instruments is rather dissonant and unpredictable. In the second sixteenth

A rather complex interval panel code is used in mm. 20–28, after the two strings and marimba switch roles. Here the unordered pitch interval 11 is found in three ways. First, the distance between a grace note and its target note in the marimba is consistently 11 semitones. See m. 20 of example 14. Second, the dyads in the viola and contrabass that accent certain beats, as in m. 20 beat 1 in example 14 are also consistently eleven semitones apart. Third, the intervals between four note groups in the marimba, ignoring grace notes, sum to create a constant interval of eleven half steps. Because its code aggregates three intervals between four notes, the marimba can use many combinations of intervals to produce the sum. Examples 14 and 15 show some of these combinations. In m. 20, E \flat , F \sharp , A, and D form intervals 3, 3, and 5 to equal 11 (the same interval combination is used in the next set of four pitches {G \sharp B D G}). Four different intervals form the next group, beginning in beat 4 of m. 20. {D F B C \sharp } create intervals 3, 6, and 2 to

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Example 14 shows a musical score for measures 19-21 of the Refrain. The score includes staves for Otr., Cl. B., Vla., Cb., Mand., Chit., Arpa, and Mar. The Marimba part is the focus, showing a sudden shift in interval panel from strings to marimba in measures 19-21. The Marimba part includes dynamic markings [p], mf, and mp, and is marked with various interval patterns like 3, 3, 3-1, 1-3, 3-1, 4, 4, 11, 3 3 5, 3 3 5, 3 6 2, 4 3 4, 3 1 7, and 4.

**EXAMPLE 14: SUDDEN SHIFT OF INTERVAL PANEL FROM STRINGS TO MARIMBA
IN MM. 19-21 OF REFRAIN**

Example 15 shows a musical score for measures 25-27 of the Refrain. The score includes staves for Otr., Cl. B., Vla., Cb., Mand., Chit., Arpa, and Mar. The Marimba part is the focus, showing the interval panel in the Marimba, measures 25-27 of the Refrain. The Marimba part includes dynamic markings * and is marked with various interval patterns like 1-3-7, 1-1-9, 2-8-1, 2-1-8, 3-1-7, 3-6-2, 5-5-1, and 3-3-(5).

EXAMPLE 15: INTERVAL PANEL IN THE MARIMBA, MM. 25-27 OF REFRAIN

equal 11. Other combinations are found in the measures that follow. However, set-class does not define this use of interval panel code. The first group in m. 20 is SC(4-18)[0147], and the third group in beat 4 of m. 20 is SC(4-12)[0236].

CODE FILTERS: “GROWTH WITHOUT DEVELOPMENT”

Donatoni identifies “Growth without development; conservation of the fragment” as an influential aspect of the music of Bartók. This statement is admittedly cryptic: how does one further a musical idea without development? Rather than a method of developing variation used by Brahms and Schoenberg, Donatoni “preserves the fragment,” or retains the integrity of the original motive, throughout an evolutionary process. While the issue of whether “growth” is synonymous with “development” can be disputed, the method by which the composer attempts this goal is intriguing. In any case, I believe that Donatoni strove for a more gradual approach to musical growth through the consistent presentation of small motives.

Filter codes achieve “growth without development” by gradually evolving a figure, gesture, melody, or harmonic texture, while preserving its identity, through a process of rebuilding, or reducing, of musical entities. An *interval filter* code systematically alters a pcset (and therefore its membership in a set-class) in this manner. In the first refrain, mm. 28–36, two different interval filter codes alternate two opposing strands of independently evolving material.¹⁷ The two strands are identified by their articulation: a sustained strand and a trilled strand. Since both the principle and alternating notes of all trills are included in set-classes, the trilled strand’s set can have up to eight members. Therefore, Strand 1, consisting of sustained tetrachords, alternates with Strand 2’s trilled four- to eight-note clusters. The reduction in example 17 provides a timeline of this alternation, and shows how these strands grow and contract over time.

Strand 1 begins in m. 28 (example 16), as piccolo, bass clarinet, viola and contrabass—a quartet that is consistently used in the refrain sections—play a homorhythmic tetrachord. The two woodwinds (piccolo E \flat and bass clarinet F) and the two strings (viola E and contrabass F \sharp) move in parallel motion, and create a four-note set of SC(4-1)[0123]. Certain aspects of Strand 1 remain invariant throughout this passage (see examples 17 and 18). At the outset, in m. 28, the chromatic set {E \flat E F F \sharp } is consistently divided between the two timbral groups; the woodwinds have the first and third notes of the set, and the strings the

EXAMPLE 16: WOODWIND AND STRING PAIRS COMBINE TO BEGIN THE INTERVAL FILTER PROCESS IN M. 28 OF *REFRAIN*

second and fourth. Example 17 shows how the four instruments interlock in m. 28, top staff.

Two semitone dyads are at first connected by a semitone, only to expand internally to a whole tone, a minor third, and back to a semitone. In m. 29, piccolo F \sharp , viola G, bass clarinet A, and contrabass B \flat creates a member of SC(4-3)[0134]. The semitone relationship between a woodwind and string instrument (i.e. piccolo and viola have F \sharp and G, respectively) is preserved. The tetrachord in m. 30 {G \sharp A C D \flat } is a member of SC(4-7)[0145]. By m. 32 it expands to its widest point [0156]. At m. 35 Strand 1 begins to return to its original set, first as [0145] and finally as [0123] in mm. 35–36. The final set [0123] between E \flat and F \sharp is a literal restatement of the original set in m. 28.

Strand 2 grows by adding pitches to a chromatic cluster, rather than by the expansion of an internal interval. In m. 30 its six-note cluster from G to C grows to seven notes in m. 32 (between F \sharp and C) through the addition of an F \sharp . By m. 33 Strand 2 becomes an eight-note cluster from F to C. The diagram in example 17 shows the initial reduction of Strand 2 to a 6-note cluster in the first half of m. 34, before expanding to a seven-note cluster between A and E \flat .

To sum up our observations, two independent codes provide continuity to unify musical attributes—pcsets based on semitones; and alternating arrangements of timbral organization based on semitones—to create a sense of direction, motion and balance, that is, “growth without development.”

The image displays two musical staves, 'Strand 1' and 'Strand 2', with various musical notations and annotations. Above the staves, arrows indicate 'Expand' (pointing right) and 'Contract' (pointing left). The score is divided into sections by brackets and labels.

Strand 1:

- mm. 28: Sustained Figures. Includes a note marked with an asterisk (*).
- mm. 29: Sustained Figures. Includes a note marked with an asterisk (*).
- mm. 30: Sustained Figures. Includes a note marked with an asterisk (*).
- mm. 31: Sustained Figures. Includes a note marked with an asterisk (*).
- mm. 32: Sustained Figures. Includes a note marked with an asterisk (*).
- mm. 33-36: Sustained Figures. Includes a note marked with an asterisk (*).

Strand 2:

- mm. 28: Sustained Figures. Includes a note marked with an asterisk (*).
- mm. 29: Sustained Figures. Includes a note marked with an asterisk (*).
- mm. 30: Sustained Figures. Includes a note marked with an asterisk (*).
- mm. 31: Sustained Figures. Includes a note marked with an asterisk (*).
- mm. 32: Sustained Figures. Includes a note marked with an asterisk (*).
- mm. 33-36: Sustained Figures. Includes a note marked with an asterisk (*).

Annotations:

- Expand:** Indicated by arrows pointing right.
- Contract:** Indicated by arrows pointing left.
- (Temporary Contraction):** Indicated by arrows pointing left.
- period of all sustained material:** Indicated by a bracket.
- period of all trilled material:** Indicated by a bracket.
- Trilled Figures**:** Indicated by a bracket.
- Sustained Figures*:** Indicated by a bracket.
- 6-note cluster:** Indicated by a bracket.
- 7-note cluster:** Indicated by a bracket.
- 8-note cluster:** Indicated by a bracket.
- 9-note cluster:** Indicated by a bracket.
- 10-note cluster:** Indicated by a bracket.
- 11-note cluster:** Indicated by a bracket.
- 12-note cluster:** Indicated by a bracket.
- 13-note cluster:** Indicated by a bracket.
- 14-note cluster:** Indicated by a bracket.
- 15-note cluster:** Indicated by a bracket.
- 16-note cluster:** Indicated by a bracket.
- 17-note cluster:** Indicated by a bracket.
- 18-note cluster:** Indicated by a bracket.
- 19-note cluster:** Indicated by a bracket.
- 20-note cluster:** Indicated by a bracket.
- 21-note cluster:** Indicated by a bracket.
- 22-note cluster:** Indicated by a bracket.
- 23-note cluster:** Indicated by a bracket.
- 24-note cluster:** Indicated by a bracket.
- 25-note cluster:** Indicated by a bracket.
- 26-note cluster:** Indicated by a bracket.
- 27-note cluster:** Indicated by a bracket.
- 28-note cluster:** Indicated by a bracket.
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- 30-note cluster:** Indicated by a bracket.
- 31-note cluster:** Indicated by a bracket.
- 32-note cluster:** Indicated by a bracket.
- 33-note cluster:** Indicated by a bracket.
- 34-note cluster:** Indicated by a bracket.
- 35-note cluster:** Indicated by a bracket.
- 36-note cluster:** Indicated by a bracket.

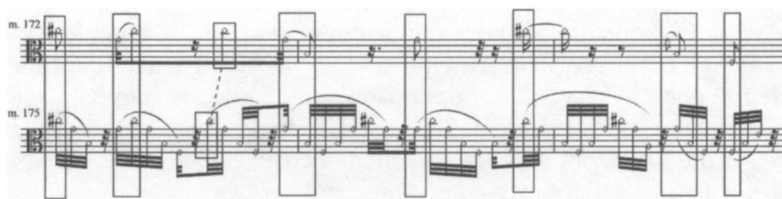
EXAMPLE 17: TWO DIFFERENT INTERVAL FILTER CODES ALTERNATE TWO OPPOSING STRANDS OF INDEPENDENTLY EVOLVING MATERIAL IN *REFRAIN*, MM. 28–36

The image displays a musical score for four instruments: Oboe (Ott.), Bassoon (B.), Viola (Vla.), and Chamberlain (Ch.). The score is organized into measures 31, 32, and 33. Each measure contains two strands of music, Strand 1 and Strand 2, which are grouped by brackets labeled "Strand 1" and "Strand 2" respectively. Above the Strand 1 brackets are the numbers [0123] and above the Strand 2 brackets are the numbers [01234567]. The notation includes various musical symbols such as notes, rests, and dynamic markings. In measure 32, there is a specific instruction for the Viola part: "should be E flat". The score is presented in a standard musical notation format with staves for each instrument.

EXAMPLE 18: BOTH STRANDS IN MM. 31–33 OF REFRAIN

Additive filters typically begin with an abridged version of a gesture or phrase and gradually add more musical entities until the complete gesture or phrase is revealed. This process allows the listener to connect with points in the piece that use the same source material and reduce the need for excessive development. (A related technique—a *subtractive filter*—from Donatoni’s earlier, so-called “negative” period, alters entire gestures or phrases by extracting notes and replacing them with rests. An analysis of the second half of *Etwas Ruhiger im Ausdruck* (1967), a chamber work from Donatoni’s earlier period, shows how this process breaks down borrowed musical fragments.¹⁸) In *Refrain*, additive filters are accomplished in two ways: a “literal” additive filtering method, where little change in temporal placement occurs during the filtering process, and a “skewed” additive filtering method, where much more rhythmic variance, or temporal displacement within the phrase, occurs during the filtering process. Both methods are shown in examples 19 and 20. In example 19, a literal additive filter is used in mm. 172–177 in the viola, which plays legato harmonics, where a three-measure phrase is repeated. A comparison of the two phrases in example 19 shows how the first phrase is a filtered version of the second. Notes from the second phrase have simply been subtracted to produce the first, as the remaining notes are fixed in time. The box in example 19 illustrates how the C# in the first phrase, m. 172, is temporally linked with the C# of the second phrase, m. 175. The next two notes of the first phrase, G and C#, correspond to the exact temporal placement of the same notes in the second phrase. This practice remains consistent, with few exceptions (these exceptions are minor, as the temporal differences are no more than a thirty-second note value. At a tempo of mm = 99, such deviations are hardly apparent).

The “skewed” additive filter achieves “growth without development” in a less obvious manner. In example 20, the piccolo repeats a three-measure phrase four times in mm. 166–176. Like the viola passage, the first phrase is the sparsest, and more material is added to successive phrases. Finally, by the fourth pass, the texture is fully realized. This filter is skewed because the temporal placement of notes changes with each generation of the phrase. Boxes of dotted lines in example 20 show how these musical figures move temporally within the phrase. While the first three phrases, beginning in m. 166, m. 169, and m. 172, remain somewhat closely related in temporal spacing, the fourth pass at m. 175 is less related to the previous three. In this last version, only the first gesture in m. 175 remains temporally fixed, while others seem to drift towards the center of the phrase. Two C⁶ thirty-second notes in the last two measures of the first three phrases are completely filtered out from the final phrase.



EXAMPLE 19: LITERAL ADDITIVE FILTER IN THE VIOLA, MM. 172–77 OF *REFRAIN*

This image shows a musical score for the Piccolo, measures 166 through 175. The notation is in treble clef with a key signature of one sharp (F#). The music features a series of vertical rectangular boxes, each containing a single note. These boxes are connected by horizontal lines, indicating a sequence of notes. The notes are primarily eighth and sixteenth notes, with some rests. The overall texture is sparse and rhythmic, characteristic of a skewed additive filter.

EXAMPLE 20: SKEWED ADDITIVE FILTER IN THE PICCOLO,
MM. 166–76 OF *REFRAIN*

Refrain's opening episode uses an additive filter code to gradually introduce important thematic material in Trio A. In example 21 the contrabass opens the work with a gesture of pizzicato thirty-second notes at an average of six per bar with large gaps of rest. This represents the most filtered state of a lively and active gesture (the X panel described above), which is eventually distributed among the three members of Trio A (viola, contrabass, and marimba). In m. 7 (example 22) this texture becomes more active, and by m. 8 the trio is complete. The strings are engaged in a musical conversation; the viola answers the contrabass's thirty-second note figures, which have grown into consider-

EXAMPLE 21: THE OPENING OF *REFRAIN* USES AN ADDITIVE FILTER CODE TO GRADUALLY INTRODUCE IMPORTANT THEMATIC MATERIAL IN MM. 1–3

ably longer phrases, while the marimba periodically interjects with dyads—all at *pianissimo*.

This discourse grows in density and intensity as Donatoni adds more notes and the dynamic level increases. In example 23, m. 16, the strings' *mezzo forte* thirty-second note phrases are shorter but more frequent as the viola answers the contrabass's every phrase. Each answer in the viola dovetails the end of the contrabass's phrase by one thirty-second note. The marimba accentuates these points, which become more frequent as the strings' phrases shorten. By m. 16 the marimba's accent points are at an average of six per bar, and its dynamic level increases from *pianissimo* to *piano*. Although this process is suspended at m. 19, its continuation reemerges at m. 76. A comparison of example 23, mm. 16–18, and example 24, mm. 76–78, shows that the latter is clearly an extension of the former, as it is a thicker and more fully realized version. In example 24, Trio A enters strongly at a *fortissimo* dynamic level, and this active texture continues unchanged through m. 84.

A similar use of *additive filter* code occurs at m. 131, the climax of

This musical score, labeled '18' at the top left, shows measures 7 through 9 of a refrain. The instruments listed on the left are Ott. (Oboe), Cl. B. (Clarinet B-flat), Vla. (Viola), Ch. (Cello), Mand. (Mandolin), Chit. (Chitarra), Arpa (Arpeggio), and Mar. (Maracas). The Viola and Cello parts are active, with the Cello marked 'mf' (mezzo-forte). The Maracas part is marked 'p' (piano) at the beginning of measure 7. The score is written in a complex, rhythmic style with many beamed notes.

EXAMPLE 22: A MORE ACTIVATED TEXTURE EMERGES IN TRIO A,
MM. 7–9 OF REFRAIN

This musical score, also labeled '18' at the top left, shows measure 16 of the refrain. The instrumentation is the same as in Example 22. The texture is significantly denser than in the previous measures, with many more notes and rests across all staves. The Maracas part is marked 'p' (piano) at the beginning of the measure. The overall intensity and complexity of the texture have increased.

EXAMPLE 23: FURTHER GROWTH OF THE TEXTURE IN DENSITY AND INTENSITY
AT M. 16 OF REFRAIN

the work, discussed previously with regard to panels. In example 25, a musical cell evolves through addition to finally reveal a primary quasi-melodic figure in the piccolo. This is important for three reasons. First, the timbre and tessitura of the piccolo project well over the entire ensemble, and along with the bass clarinet, is radically exposed. The rest of the ensemble responds to the woodwind duet in a call and response fashion, but nevertheless remains secondary and supportive to this linear figure. Second, the character of this figure is unique, as Donatoni applies a variety of articulations to bring it to the foreground. Flutter-tongue, mordents, slurs, and dynamic contouring clearly set this figure apart. Third, this is the first instance of the piccolo and bass clarinet appearing in an episodic section, as well as the entire ensemble being active at the same time within any section of the work. Orchestration is a large part of the formal design of this work, which is shown in the macro structure in example 2. Piccolo and bass clarinet otherwise only appear in the refrain sections. Furthermore, in a work that is built from combinations of duos and trios, a unison section at this point in the work is aurally striking.

The means by which this line's salience is revealed mirrors the way the piece began. Donatoni uses an additive filter to slowly expose the main theme until it reaches its fullest state in m. 131. The process begins in episode 4, m. 118. Small slurred phrases in the piccolo and bass clarinet alternate with passages of a plucked string trio—mandolin, guitar, and harp—to create a hocket. The woodwind duo's fragment in m. 118 eventually grows through addition to reveal a primary line in m. 131 (See examples 25 and 26).

"Growth without development"—that challenging phrase—suggests a contradiction. It would seem that if one "grows" a musical texture from a motive, then one is in fact "developing" that motive. But Donatoni's compositional practice utilizes a specific type of growth, whose result is closely related to its origins, clearly matching musical attributes. It is not "developed" to a point where its original identity is lost. Filters are a gradual process that conveys a linear progression of gesture, and eventually reveals a musical consequence. The original integrity of the gesture—the fragment—is preserved throughout the process.

CONCLUSION

Donatoni referred to his experiences with serialism, chance procedures, cellular composition, autonomous procedures, magic squares, and the degeneration of found objects as "codes."¹⁹ In his early work, prior to his joyous period, the definition of "codes" changed with each cluster of

EXAMPLE 25: A PRIMARY QUASI-MELODIC FIGURE IS PRESENTED IN THE PICCOLO, MM. 130–32 OF REFRAIN

EXAMPLE 26: GRADUAL UNFOLDING OF THE PRIMARY FIGURE IN MM. 121–123 OF REFRAIN, PRIOR TO ITS FULL STATEMENT

works. While his early codes in works like *Etwas ruhiger im Ausdruck* (1967) are rigid and meticulous operations upon found objects, his later codes are less rigorous and more context sensitive. A comparison of the compositional processes in *Etwas ruhiger im Ausdruck* and *Refrain* shows a transformation of style. *Etwas ruhiger im Ausdruck* is more concerned with the procedure of the code. That is to say, the goal of the work is the same as the goal of the code: to break down and restore a quoted passage of Schoenberg. *Refrain*, whereas his later works, seem more concerned with the way musical fragments interact and evolve through a more positive application of codes. An amalgam of the previously mentioned compositional techniques, Donatoni's later codes balance autonomy and subjectivity, and provide a reliable and playful compositional method for the composer. In this way, Donatoni abandoned a highly rigorous, structural ideal for one that was more relaxed and flexible, and the music from this period reflects this change.

Donatoni's music also raises issues about how much composers should rely on autonomous procedures. Perhaps, as he stated himself, his earlier period would have been slightly more successful if he used computers to carry out algorithms without human error.²⁰ But if his procedures were executed with greater precision, would the results be any more successful? After all, sheer computer computation cannot guarantee musical quality. Donatoni's later success depended upon the notion that musical quality relied not only on the code, but also how the codes were applied to certain musical attributes. While he strove for an "egoless music," maintained by the "separation between [him]self and the material,"²¹ he permitted himself to intuitively guide the use of his panel and filter codes.

Before closing, I'd like to offer a caveat to this highly analytic approach to Donatoni's music. It has not been my intention to expose Donatoni's compositional methods, or to define his codes in the way he may have thought of them, but rather to discover how his ideas about Bartók yielded new ways for him to compose. Donatoni never wished that the inner workings of his codes be revealed so they could be become an objective recipe for composition; this would betray the essence of his art.²²

I hope I have shown that the four attributes that Donatoni admired in the music of Bartók exemplify his ideals of good music composition, and provide a link between his negative and joyous periods. The first two Bartókian points—"cellular exposition and organism growth," and "growth without development, conservation of the fragment"—are manifest through interval and additive filters. The second two points—"juxtaposition of organisms; mutation, not evolution," and "stasis of

pulsations, continuity of tone”—are produced through the use of pitch and interval panels. While these attributes have been identified in *Refrain*, they can be found in other works from his joyous period, including chamber pieces such as *Spiri* (1977), *Tema* (1982), and *Cadeau* (1984). Donatoni’s solo works, an important and substantial part of his later output, and the larger works, such as *In Cauda* (1982) for chorus and orchestra, and *Prom* (1999) for orchestra, follow the same kinds of codes outlined above. Regardless of instrumentation, the music from his joyous period utilizes two opposing states—motion and stability—that remain in constant flux and facilitate changes in momentum. Donatoni’s creation and implementation of panels and filters produce organic, vibrant music.

NOTES

1. Santi 1982, 87.
2. Ibid.
3. In the accompanying booklet to Etcetera CD KTC 1053, Donatoni, upon the completion of *Spiri* in 1977, describes this new period as “joyous, almost euphoria.” These sentiments are additionally referenced in Gorodecki 1993, 246.
4. Borio 1990, 224.
5. In his interview with Enzo Restagno in Restagno 1990, Donatoni referred to this early style, and use of codes, as “negative.” In this period, “the will was denied by automatism, but this negativity was overcome.” By the time he composed *Duo pour Bruno* in 1975, he noticed how his music became trapped by these complexities, and solved the problem through personal intervention. He continues: “You will begin to notice (a change in use of code) with *Duo pour Bruno* because the first part is rigorously codified. I then had to quit because of depression and a clinical recovery, but when I started again I became aware, later of course, that the second part was strangely dramatic. With these codes, there was a lack of completely personal elements, synthetic and inventive elements that I did not understand while I wrote, but whose existence I later recognized.” (43)
6. Gorodecki 1993, 248.
7. Restagno 1990, 43.
8. Donatoni 1982, 81.
9. Restagno 1990, 43.
10. Donatoni 1990.
11. Donatoni himself used the terms “panel” and “filter.” The former can be found in Restagno 1990, 44, where Donatoni states: “In 1976 the condition was different... the piece was conceived like a series of panels which interrupt the continuous flow of the orchestra.” The latter is found in the same interview: “You apply . . . [a] filter or extrapolation to a sequence of pitches... This case involves an autonomous code” (31). While Donatoni here refers to his ear-

lier period, I am attempting to draw a connection between such older filters and newer ones in his joyous period.

12. Santi 1982, 87.
13. Ibid.
14. Gorodecki 1993 identifies this trait of Donatoni's late style in *Spiri* (1977). "The continued, rigorous use of the serial technique of 'polarization', the registral fixing of pitches, has...aided greater harmonic clarity, as well as being used to create structurally normative sonorities" (248).
15. Santi 1982, 87.
16. The interval panel concept is equivalent to transpositional combination. See Cohn 1987.
17. A similar process to what is discussed here is found in Cone 1968. According to Cone, Stravinsky alternates between different musical ideas through a process called "stratification," where two or more musical ideas alternate over a period of time, and are "usually incomplete and often vary fragmentary." He goes on: "Although heard in alternation, each line continues to exert its influence even when silent...the effect is analogous to that of polyphonic strands of a melody" (156–7).
18. For a detailed study of his earlier compositional methods from his so-called "negative" period, and an analysis of *Etwas ruhiger im Ausdruck*, please consult Decker 2005, or Piencikowski 1990.
19. Donatoni uses the term "code" to describe his compositional processes throughout his career, in both his early and late periods.
20. This refers to Donatoni's comments in his interview with Enzo Restagno (1982): "Codes . . . [are] nothing more than what people do with the computer today . . . To produce the code, however, sometimes required a week of work. It is a bit difficult" (31).
21. Ibid., 315.
22. In a 1975 interview with François-Bernard Mache in *La Revue Musicale*, Donatoni states that his codes are "an internal experience; it is not destined to hit the listener; this is a purely personal logic."

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