

Patterned Repetition and Use of Schemata in Two Works by Franklin Cox and Brian Ferneyhough

Jon Fielder, Fall 2015

Written under the study of Dr. Edward Pearsall  
The University of Texas at Austin

## Patterned Repetition and Use of Schemata in Two Works by Franklin Cox and Brian Ferneyhough

In the opening fifteen measures of Franklin Cox's *Clairvoyance* for solo cello the composer introduces what he refers to as the five "basic gestures"<sup>1</sup> that make up the musical material for the rest of the piece. Throughout composition the gestures are developed in one of three ways as outlined by Cox in the prefatory notes of the score. The three developmental trajectories are development into transformation, reduction into disappearance, and stubborn resistance to change. The syntactical strategy employed by Cox relies heavily on the repetition of ideas musical ideas (the basic gestures) to create structural unity, motivic development and meaning in an otherwise dense and chaotic texture of material.

The use of repetition in Cox's music is of particular interest primarily due to his affiliation with the New Complexity<sup>2</sup> school of composers - a loosely defined collection of composers who are linked primarily by their complex methods of notation and multi-layered musical density driven by parametric development<sup>3</sup>. The term New Complexity is most closely associated with the British composer Brian Ferneyhough and is often regarded as an outgrowth of integral serialism practiced at Darmstadt in the mid 20<sup>th</sup> century. Franklin Cox, a student of Ferneyhough, employs the multi-layered systems of development and density of materials associated with New Complexity, but he does so through the large-scale process of patterning and varied repetition of defined gestures. This practice is similar to Robert Gjerdingen's theory of schemata used to analyze stylistic patterns common in 18<sup>th</sup> century Galant music. While the system of patterning schemata has different implication in the music of Cox and Ferneyhough compared

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1 Franklin Cox, *Clairvoyance* (Sharon, VT: Smith Publications, 1994). The cello version is a transcription of the original version for solo violin composed in 1989. Cox refers to the basic limbs in the score as guiding the piece, but does not specifically outline the materials in the prefatory notes.

2 Richard Toop, "Four Facets of the New Complexity," *Contact* no. 32:4-8. 1988. The term "New Complexity" was used early by Richard Toop to describe a collection of compositional methods. Although Ferneyhough and Cox are not mentioned in the original article they are both associated with this group of composers, Ferneyhough often noted as one of the original practitioners.

3 Parametric development in this instance refers to the development of numerous streams of musical ideas including, but not limited to, pitch, rhythm (sometimes multiple rhythmic ideas), articulation, dynamic, melodic contour, meter, phrase duration, and physical movement/gesture. Composers associated with the New Complexity are often dealing with these parameters as autonomous developmental trajectories that change over the course of a piece using varying degrees of formalized constraints.

to 18<sup>th</sup> century Classicism, it is my hypothesis that the practice of patterning schemata is of central importance in creating musical meaning in music of the New Complexity.

Gjerdingen's uses the term "stock musical phrases employed in conventional sequences" which assist in developing a coherent style and compositional practice.<sup>4</sup> An example is the prinner, a melodic figure typically consisting of descending scale degrees 6-5-4-3 found at the ends of phrases or acting as a common melodic contour accompanying 4-3-2-5-1 cadential bass motion. This particular pattern, in addition to numerous other schemata, can be found throughout the literature in galant music as patterns which create small-scale formal functions within a piece and stylistic prototypes which serve to establish musical meaning. For my purposes I will borrow Gjerdingen's terminology, but the implication of the term schema takes on a different meaning through the lens of Cox and Ferneyhough. The use of the term schema(ta) in 21<sup>st</sup> century New Complexity works does not imply a prototypical gesture or motive (or collection of gestures and motives), but instead a collection of gestures and ideas unique to a specific composition which undergo various types of musical development. This begs the question as to how Cox's, Ferneyhough's, et al. methods are different from Schoenberg's theory (and practice) of developing variation. Ostensibly there are elements of developing variation in the works of Franklin Cox and Brian Ferneyhough, but my hypothesis is that the distinction is with the importance that Cox and Ferneyhough seem to place on the recognition and development of gestural shape, often multiple shapes in the case of Franklin Cox's music.

To help support my theory I will look in more detail at Cox's *Clairvoyance* (and briefly at two other works) and at Brian Ferneyhough's *Superscriptio* for solo piccolo and describe the importance of establishing schemata for creating musical development. I will also discuss the role of cognition and its importance in recognizing the schemata and being able to hear their development over time.<sup>5</sup> The

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4 Robert O. Gjerdingen. *Music in the Galant Style*. (Oxford, Oxford University Press, 2007) 6.

5 This portion of my analysis will look at Larence Zbikowski's theory of categorization (drawing on the research of Gerald Edelman) which suggests that the human brain is capable of recognizing and categorizing complex musical patterns. The patterns in the case of my analysis are the schemata established by Cox and Ferneyhough, and the categorization of those schemata is the manner in which the schemata are developed, changed or eliminated from the texture during the unfolding of the composition.

recognition of motivic and gestural ideas is a key element in the theory of utilizing patterned schemata in New Complexity compositions. It is my hypothesis that this method of composition is essential for establishing musical meaning in a piece of music containing the level of complex systems found in New Complexity. Furthermore, the ability of humans to recognize these patterned schemata is of equal importance, and whether or not the use of clearly recognizable schemata is intentional or unintentional it is nonetheless central to establishing overarching musical coherence in the following compositions.

#### Franklin Cox - *Clairvoyance*

The five basic gestures (which will also be referred to as Cox's schemata) employed in *Clairvoyance* are presented within the first fifteen measures of the piece, and are then subjected to varying degrees of development over the course of five continuous sections. The basic gestures are 1) Sustained tone followed with a semi-tone inflection, 2) Melody consisting of an oscillating interval (with quarter-tone inflections) , 3.) A melodic figure consisting primarily of semitones and quartertones with a single large leap, 4) A melodic "arch" gesture (descending to ascending or ascending to descending) and 5) Rising and falling glissandi. In each section of *Clairvoyance* at any given time the musical material presented can be traced directly or indirectly to one of these five gestures. **Example 1** shows the opening fifteen measures with the initial presentation of each gesture in brackets. The five schemata make up the entire musical framework of *Clairvoyance*, which is presented as five continuous sections to form one extended single-movement composition. The formal outline of the five sections is outlined in **Example 2**.

In addition to establishing the five basic gestures, Cox also outlines three specific trajectories of gestural development, 1) development into transformation, 2) reduction into disappearance, and 3) stubborn resistance to change.<sup>6</sup> Cox does not outline the specific gestures in the program notes of his score, but he does mention that the basic gestures are the primary musical materials in the compositions, and his outlining of the possible developmental trajectories suggests that he is concerned with the listener's ability to recognize the behavior and developmental stages (Zbikowski's categories of the

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<sup>6</sup> Cox, *Clairvoyance*. Prefatory notes.

motives) of the materials over time.

The most ostensibly recognizable gesture is the melodic “arch” schemata, particularly due to its dynamic characteristics, both in volume and its gestural shape and energy. Each time this melodic fragment is presented it is accompanied by a rapid change in dynamic to *subito forte* (or *mezzo forte* in some instances) and an abrupt increase in energy propelling the music forward even if only to be followed by a point of resolve accompanying a change in melodic direction. **Example 3** shows the first five presentations of the “arch” schemata. While the pitch content of each presentation is different and the specific rhythmic values are different one can still see that the characteristic contour and dynamic of the gesture are maintained. The importance is not so much in the number of pitches nor the specific pitches contained in the schema, but the repetition of the contour with the accompanying dynamic character and energy. It is clear that Cox almost immediately begins to develop the gesture while simultaneously fusing it with gestures 2 and 3 for added development of all three gestures simultaneously, essentially creating the implication of new schema subject to varied repetition. Though it is not listed as one of Cox’s three developmental trajectories, one could argue that fusion of gestures also plays a part in the development of his schemata. This fusion of materials generates a new composite schema that may also be subjected to one of the three developmental trajectories.

The implication of fused gestures to create new schemata is realized in section C (m. 69) of *Clairvoyance*. At the onset of Section C each measure is a single autonomous compound gesture comprised of three stages, though not necessarily three distinct gestures within a compound gesture. The first twelve measures of this section are shown in **Example 4** with brackets showing the three-part division of the measures as well as the fragments of the basic gestures that are employed. While one is most likely to hear each measure as a single compound gesture, the characters of each of the basic gestures are still present in the musical fabric. The semitone inflection of gesture 1 becomes a trill. The rising and falling of the “arch” gesture becomes only ascending motion or descending motion. The leap in gesture 3 which one served to break up the meandering semitone and quarter-tone melody now becomes part of the arch or angular melodic gesture. The glissando remains unchanged, as it most clearly

represents the “stubborn resistance to change” trajectory. If one were to hear the characteristics of these individual gestures within the larger framework of the compound gesture of the measure it becomes clearer aurally that each measure (with the exception of m. 73) contains a three-part structure and has become a new schema for thematic and gestural development.

The final section of *Clairvoyance* demonstrates the fully realized implications of Cox’s developmental trajectories. Section E lasts from mm. 145-269, a total of 124 measures, just under half the length of the entire piece. At this point only fragments of the semitone/quarter-tone melody are present – reduction into disappearance, though the schema has not fully evaporated at this point in the composition. During the course of the piece a new schema is introduced, that being repeated double-stops (some of which are seen in Section C in Example 4). This is not an entirely new schema, but one that is born out of the fusion and development of schemata 1 and 2, and will therefore be referred to from this point as schema 1-2. The extended note characteristic of gesture 1 becomes a broken rhythmic idea, which is fused with the oscillating notes of gesture two. By combining the two Cox creates the new schema which contains the diad pitch content of gesture 2 with a development of gesture 1. Schema 1-2 eventually becomes fused with gesture 5, the glissandi, in which one pitch of the diad is sustained while the other glisses up or down, creating a third schema for development.

In Section E the “arch” gesture exists only in short fragments, but it maintains the *subito* dynamic attack and characteristic energy gain, but is not always presented with both ascending and descending trajectories in a single statement of the schema. However, the glissandi remains unchanged and takes over as the dominant schema. Over the course of Section E Cox liquidates all material in shorter and quieter bursts of energy, which are presented between long glissandi which gradually move higher in the tessitura of the cello. The glissandi simultaneously decrease in dynamic until only a mimed physical gesture of the glissando is presented to end the piece. **Example 5** shows some fragmented selections of the gestures as they are presented in Section E.

The key feature of the schemata in *Clairvoyance* is Cox’s reliance on the repetition of the ideas. This repetition can be seen and heard most clearly in Section C. Even under varying degrees of

development and simultaneous fusion of schemata they can still be identified on the surface of the composition because of the unique gestural characteristics of each schema and the frequency of repetition of each idea. Repetition in this regard, though, is not exact duplication of an idea. The durations, registers, pitch class content and rhythmic characteristics may be altered on each presentation of an idea, but the essential characteristic gestural shape remains mostly unchanged. Additionally, though some of the basic gestures have changed in Section C through diminution, variation, fragmentation and/or fusion (or some combination of the four), we are able to recognize the changes in character because of the frequency of repetition and gradual degree of variation of the schemata with each repetition. The schemata which remain unchanged (or changed very little) in turn become increasingly recognizable by the end of the composition, and as a result take on a very specific musical meaning; one that was only possible through repeatedly hearing the characteristic gestural content of the schema in the context increasing varied repetition of other musical ideas.

*Clairvoyance* is not an anomaly in Cox's output. The technique of introduction of material and variation of that material can be found in other works with the trajectory of development and syntax being unique to each composition. In his work *viz.* for large chamber ensemble there is an introductory section that is broken into five distinct subsections, each with its own characteristic melodic contour, mood, dynamic, texture and rhythmic qualities. In *viz.* Cox refers to these sections as the six "limbs" of the piece, all of which undergo various degrees of development, expansion and variation over time.<sup>7</sup> The "limbs" of *viz.* are analogous to the "basic gestures" of *Clairvoyance*, all of which could be viewed through the lens of schematic development. While the narrative arc of *viz.* is different from the narrative arc of *Clairvoyance* the syntactical unfolding of material is reliant on repetition of schema in both works. In *Clairvoyance* the schema are recognizable gestural patterns, whereas *viz.* develops melodic, rhythmic, textural and orchestrational schemata. Regardless, one cannot discount the importance of variation,

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<sup>7</sup> Franklin Cox *viz.* 1988-91. Background analysis of *viz.* was done in private study with the composer in the winter of 2012 through summer of 2012. The study done with Cox resulted in a paper on motivic and sectional development in *viz.* though it was not analyzed through the lens of patterning and schemata as is presented in this paper.

patterning and schema in both of these key works of Franklin Cox's output. Moreover, the reliance on repetition of the ideas implies the importance the composer places on the listener's ability to recognize and understand the musical and dramatic implications of the schemata in the musical narrative.

### Brian Ferneyhough - *Superscriptio*

Brian Ferneyhough's method of patterning and use of schemata differ from Cox's in that Ferneyhough's schemata are more hidden under the surface of his musical fabric. Cox brings his schemata to the surface through clear presentation of the schemata in the introduction of *Clairvoyance* followed by varied repetition of the schemata throughout the composition. Cox also provides a prefatory note giving clues about the development of his ideas, although this is only a useful tool when viewing the score and offers little to a listener without the visual aid. However, I contend that patterned variation can be found in Ferneyhough's music and, even though it may be less superficial than in Cox's music, it is no less important in establishing meaningful interaction and development of his materials.

*Superscriptio* is the first of seven pieces in Ferneyhough's *Carceri d'Invenzione* series inspired by a collection of prints of the same name by 18<sup>th</sup> century artist Giovanni Battista Pieranesi.<sup>8</sup> Concerning the piece, Ferneyhough explains that "*Superscriptio* is constructed upon a dense network of metric and proportional relationships wherein variations of texture and momentum are achieved by means of distortions in the pattern, created by the mobile juxtaposition of diverse bar lengths, as well as the gradual de-synchronization of gestural shaping, dynamic intensity and rhythmic density..."<sup>9</sup> The important element of Ferneyhough's own description of this piece is his use of the word "pattern," denoting that some kind of patterning, and therefore repetition of the pattern, must exist in order for it to be both recognized and subjected to various stages of development. Ferneyhough's quote refers to a single pattern that is developed over time, but closer analysis reveals that there are three distinct patterns of contour and

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8 Toop, Richard. Interview with Brian Ferneyhough "Carceri d'Invenzione: In Conversation with Richard Toop," *Brian Ferneyhough: Collected Writings* (London, Routledge, 1995) 251.

9 Hodges, Bruce. "Brian Ferneyhough." Seen and Heard International. Accessed November 11, 2015. <http://www.musicweb-international.com/SandH/2005/Jan-Jun05/ferneyhough.htm>. Concert review of Brian Ferneyhough's entire *Carceri d'Invenzione* series by Ensemble 21.



gestural shape that are established early in the piece which are used as the backbone of gestural and melodic material over the course of the composition. In this way, Cox employs a similar method as Cox, but instead of presenting all musical materials at the onset of the piece, the schemata are gradually created, varied and developed over the course of the composition according to his various systems of motivic development.

*Superscriptio* is made up of five clearly defined sections (A, B, C, D and E) punctuated by silence and/or an abrupt shift in texture, dynamic and/or melodic and gestural shape.<sup>10</sup> In *Superscriptio* Brian Ferneyhough utilizes - uncharacteristically - a twelve-tone row (**Example 6**) that is used to govern pitch organization in the piece, though not in the strict sense as is found in integral serialism.<sup>11</sup> Ferneyhough uses the series for sequencing pitch material locally in each section, but also uses the pitch class numbers to govern various temporal relationships in *Superscriptio*, such as meter changes, rhythmic proportions, etc. As with *Clairvoyance*, the precise pitch content, rhythmic values, etc. that are governed by the series are secondary to the importance of Ferneyhough's utilization of recognizable schemata that make up the surface material of the *Superscriptio* and the cognitive affect the schemata have on a listener. Ferneyhough, like Cox, fuses the schemata to create composite schemata but unlike Cox, Ferneyhough's schemata seem to grow out of one another more organically, but in a way that each schema remains recognizable on the surface. For the purposes of labeling and identification I will refer to three main schemata (1, 2 and 3) and two fused schemata (4 and 5). The characteristics of these schemata are, 1) rising/falling continuous melodic contour, 2) angular intervals presented in contrary motion, and 3) repeated notes on a single pitch with no directional change. The two fused schemata are 4) a series of pitches presented as repeated notes with large leaps in register (fusion of 2 and 3), and 5) a short melodic fragment combined with a brief burst of repeated pitches (combination of 1 and 3 or 2 and 3). In addition to these schemata there are also variations of the initial schemata that are presented in *Superscriptio*.

**Example 7** contains a table that outlines the sections in which the various schemata appear, and the

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10 Toop, Richard "On Superscriptio: An Interview with Brian Ferneyhough and an Analysis" *Contemporary Music Review* 13 no. 1 (1995)

11 Toop. "On Superscriptio" 1

schemata that are being fused when applicable.

In examining Ferneyhough's use of schemata I will analyze each section of *Superscriptio* individually to demonstrate how each schema is introduced, developed and/or fused with previous content or how a fused schema foreshadows material that will be introduced later. The opening section of *Superscriptio* (A) is a continuous flourish of notes in the highest register of the piccolo. Only the first two schemata are presented in this section, but because of the endless barrage of notes, the characteristic features (that being gestural contour) of the two schemata do not take shape until nearly the end of the section. **Example 8** shows two excerpts from Section 1, the opening measures of *Superscriptio* in which schemata 1 and 2 are heard, but have not fully taken shape and mm. 14-16 wherein a clearer distinction between the contour of schemata 1 and 2 can be derived. Section 1 is dominated by schema 1, though schema 2 is introduced early in the section, though is quickly abandoned in favor of development of the more continuous rising and falling melodic contour of schema 1. Ferneyhough also introduces a degree of developing variation on schema 1 consisting of a continuous melodic direction made up of wide interval and registral leaps. This variation on schema 1 becomes more prominent as the piece unfolds and takes on an identity of its own in later sections of *Superscriptio*.

Section B begins at m. 60 and introduces the first fused schema (schema 4). This gesture is comprised of large registral leaps with each new pitch presented as repeated notes on that pitch in a frozen register. The frozen register of schema 4 remains unaltered throughout Section B. This schema is presented between short fragments of schema 1, primarily as ascending gestures. All melodic, rhythmic and gestural material in Section B is derived from these two schemata and the development and fusion of the schemata foreshadows material that is presented in Sections D and E. The introduction of schema 4 is a key feature in this section of *Superscriptio* in that the characteristics of the schema include the angular contrary motion that was foreshadowed in Section A but not fully realized, as well as introducing a new gestural idea of the repeated pitches. Ferneyhough's method of developing this gesture is primarily through expansion of the motive and gradual fusion with schema 1. Schema 4 is first presented as a two-measure unit consisting of pitches E4-C#6-D5. The next presentation of the schema contains pitches C5-

Eb7-Bb4-Ab6 and the third contains pitches Bb4-Eb7-C5-B5-G4-D5. Each successive presentation of the schema increases the density of pitch and registral space but maintains the general rhythmic and gestural characteristics. The rising gesture of schema 1 undergoes more extreme degrees of variation than schema 4 with each presentation between schema 4, but the motive always maintains the general rising contour. After the third presentation of schema 4, Ferneyhough begins reducing the number of pitches in each presentation of the schema (six pitches in the fourth presentation, five in the fifth), and instead of restarting the expansion process to make the schema longer he begins fusing schema 1 with schema 4. This fused gesture maintains mostly characteristics of schema 4, but select pitches are played only once in a general ascending or descending trajectory. However, this fusion does not happen with enough regularity to take on an identity as a new schema in Section B, but it does create an unrealized implication of a new schema, or at the very least a blurring of schemata, which becomes realized in Section D.

**Example 9** shows excerpts of various stages of schematic development in Section B.

Section C, beginning at m. 119, is markedly different from the previous two sections in that Ferneyhough utilizes longer periods of silence to separate short musical phrases. The material in Section C is most clearly derived from schema 2, wherein landmark notes in melodic phrases are presenting in large leaps often in contrasting motion. This also represents a blurring of schemata 1 and 2, as there are moments of disjointed angular leaps in contrary motion and moments of large interval leaps in the same direction (both ascending and descending) all contained in a single melodic fragment. The Section C material is more of a blurring of schemata than a fusion of schemata (similar to the blurring of schemata 1 and 4 in B) because there is not a completely new gestural schema created from the fusion of characteristic gestural identities, nor is the section long enough to establish or develop an implication of new gestural material. What Section C accomplishes is a temporary slowing of energy and simplification of the materials that have already been presented; a kind of reflection on all previous motivic development with gradual liquidation. **Example 10** shows a brief excerpt from Section C with the outlined melodic contour demonstrating elements of schema 1 and elements of schema 2.

Sections D is dominated almost entirely by schema 5, the fusion of schemas 1 and 3 and/or 2 and

3. This schema is of particular interest because it contains variation of melodic contour depending on its inclusion of schema 1 or schema 2, but the resultant compound gesture is relatively similar because of the commonality of fusing with schema 3. The gesture utilizes an ascending or descending melodic fragment with disrupted by a single repeated pitch or it employs an angular fragment (characterized by contrary melodic motion) with the repeated pitch interruption. The repeated pitches are no longer held to a frozen register, nor do they follow any specific trajectory of durational expansion or compression as they did in Section B. However, the melodic characteristics of schemata 1 and 2 undergo an audible transformation of registral and durational expansion. In the beginning of section D all material is presented mostly in the low and middle range of the piccolo and is gradually expanded to the far reaches of the instrument by the end of the sections (both low and high). The melodic fragments also transform from short melodic bursts of energy to longer sustained tones. Measure 170 begins with a sustained G6 quarter-tone flat held for four sixteenths of a quintuplet, which is a fairly long duration compared to previous material in *Superscriptio* which is mostly rapid 16<sup>th</sup>-64<sup>th</sup> note durations. Measure 170 begins the process of gradually sustaining each note for longer durations (sometimes accompanied by a trill), which simultaneously triggers the gradual removal of the repeated pitch portion of schema 5, liquidating into new versions of schemata 1 and 2 by the end of Section D.

It is important that a distinction be made between between the fusion of schemata 2 and 3 in Section B and in Section D. In Section B the rhythmic element of repeated pitches is the foreground melodic characteristic that is presented, the only semblance of schema 2 being the large registral leaps in contrary motion. In Section D the fragmented melodies that fuse schemata 2 and 3 can be clearly divided into two categories: the melodic portion and the repeated portion of motive. The categorical division of contour and melodic shape create an entirely new identity (and new possibilities for motivic development) when fusing schemata 2 and 3 in Section D, a distinction that cannot be applied to the fusion of the schemata in Section B. **Example 11** provides an excerpt of the 2-3 fusion of schema 5 in Section D as compared to schema 2 in Section B.

Section E is a final battery of gestural energy that returns to the highest register of the piccolo.

Section E lasts only 19 measures and contains very little recognizable material from previous sections. There is a lot of rising and falling melodic material, but not enough to fully recognize the gestures as being characteristically schema 1, nor is there enough regularity in contrasting melodic motion to constitute schema 2. There is no use of repeated pitches, leaving nothing related to schema 3, and consequently no representation of the fused schemata 4 and 5. This begs the question as to where this material is derived. All material in Section E is most clearly derived from the end of Section D and revisits the implication of blurred material in Section C. The short melodic phrases that appear in Section C create an obscured relationship of schemata 1 and 2, though not a complete fusion of the ideas. This implication is fully realized in Section E, which bears no immediate resemblance of schema 1 or 2, though is not foreign enough that it isn't relatable to material that was presented earlier in the work. This is achieved through rapid changes in melodic direction, increasing the duration of select pitches to disrupt any continuous gestural contour and the inclusion of the trill on sustained notes. To claim that there is absolutely no resemblance to schema 1 or 2 would be false, as there are grace note figures and brief moments of melodic contour characteristic of schemata 1 and 2. These characteristic melodic fragments can be easily seen when looking at the notated score, but in the context of hearing the piece these moments get lost in the flurry of notes as they happen so quickly and the melodic shape in note-to-note relationships changes so rapidly from continuous direction to contrary motion and back. **Example 12** shows an excerpt of Section E in which elements of schemata 1 and 2 can be seen in the notation, but may not necessarily be heard in the context of listening to the piece.

The end of *Superscriptio* comes quite abruptly, almost as if it is just cut off in the middle of a phrase. In an interview with Richard Toop, Ferneyhough states that the form of *Superscriptio* is “in a sense, non-existent” and that he “decided then that [he] didn't want to pursue the topic any further.”<sup>12</sup> My hypothesis on the peculiar ending of *Superscriptio* is not that the ending came about from boredom of an idea, but more out of a completion of the working out of the gestural and developmental implications created from the onset of the piece. The overall trajectory of this composition is fairly organic in that an

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12 Toop, “On Superscriptio,” 6.

initial pair of ideas is presented followed by a new idea fused with an old one, further fusions of ideas into the eventual destruction of any recognizable surface-level melody, rhythm or gestural shape. Like Cox, Ferneyhough utilizes varied repetition of his schemata throughout *Superscriptio* in a way that establishes a developmental framework (though the composer might disagree) and musical meaning through the implications created and realized over the course of the piece. It would appear that the overarching narrative of the piece is presentation of disparate materials and the gradual fusion of those ideas to the eventual destruction of identity for all. In that regard, it is plausible that Ferneyhough reached a very deliberate ending as Section E achieves the “de-synchronization of materials” mentioned in the composer’s own quote about the structure of *Superscriptio*. Any further exploration would involve a resurrection of destructed schemata or the introduction of new ideas not yet presented.

As with Franklin Cox, *Superscriptio* is not the sole example of Brian Ferneyhough’s composition output that relies on the use of varied repetition of gestural schemata to create localized and large-scale development of material. *Time and Motion Study II* for cello and live electronics utilizes live tape delay lines to record and playback melodic material played by a cellist in which what the cellist plays is heard played back at a time delay of 9 seconds from one delay line and 13 seconds from the second delay line. While the performer continues to play through the notated score and develop materials, the initial instances of those ideas are heard through the sound system, creating a sense of moving forward but also looking (or hearing) backward in time to the origin of ideas. This is an example of literal repetition of ideas through the use of technology. The implication of this repetition takes on a new narrative meaning in *Time and Motion Study II*, but the use of repetition and patterning plays a central role in establishing that narrative. A later work, *in nomine a 3*, for piccolo, oboe and clarinet, also uses literal repetition of a three-note melodic idea that is presented in the same rhythm and register each time it appears. The use of the three-note schema also has the same formal function in which it is used to close one section and launch a new section. In addition to the three-note motive Ferneyhough creates localized repetition of textures by opening each section with a high density of loud fast-moving notes followed by a point of resolve characterized by a sustained pitch at an incredibly soft dynamic to contrast. This extreme contrast

of texture and dynamic is presented as five individual sections with the three-note schema separating section two and three and sections four and five.

As demonstrated in the analysis above, the use of varied repetition in *Clairvoyance* and *Superscriptio* is a central element of the developing the musical material of each piece. Though the individual methods of Cox and Ferneyhough are different, the prevalence of this method as a unifying factor in their compositions demonstrates that patterned schemata and varied repetition is paramount in establishing surface-level formal and syntactical relationships, both localized and overarching. These relationships are also important for cognitive understanding of the music, as they provide aural anchors for the listener amid a complex framework of multi-dimensional parametric development of materials. Furthermore, this method is not unique to the two compositions discussed herein, but can be found just as clearly in other compositions spanning large portions of both composers' output. One could also infer that because of the importance of schematic development in the works by Ferneyhough and Cox that similar results could be found in the works of other composers associated with the New Complexity, though further research would be required before a definitive statement on that topic can be made.





### Example 3

Arch 1 (m. 3)

Arch 2 (m. 7)

Arch 3 (m. 11)

Arch 4 (m. 16)

Arch 5 (m. 20)

The first five presentations of the “arch” schema in *Clairvoyance*. Each presentation of the gesture contains different rhythmic values and different pitches, but the general trajectory and energy gain of the gesture remains intact

### Example 4

Composite 1  
A = Schema 1  
B = Schema 1  
C = Schema 1

Composite 2  
A = Schema 5  
B = Schema 3  
C = Schema 1

Composite 3  
A = Schema 1  
B = Schema 1  
A+B = Schema 4

Composite 1  
A = Schema 1  
B = Schema 5  
C = Schema 3

Composite 2  
A = Schema 4  
B = Schema 5

Composite 3  
A = Schema 3  
B = Schema 5  
C = Schema 4

Composite gestures beginning in Section C of *Clairvoyance*. Three schema combined to make one measure-length composite gesture. Some measures contain only two schemas (measure 3 (top) and measure 2 (bottom)), but in the case of the top example the two schemas when added together form one large version of schema 4

### Example 5A

Example 5A shows a musical score with various dynamics and articulations. The dynamics include *f*, *mp<sub>sub</sub>*, *mf*, *ff*, *f<sub>sub</sub>*, *p<sub>sub</sub>*, *f<sub>sub</sub>*, *mp*, and *p<sub>sub</sub>*. The score is divided into sections labeled Schema 4, Schema 2, Schema 5, Schema 3, and Schema 1. The notation includes slurs, accents, and other musical symbols.

Beginnin of fragmentation of schemata in Section E. The music above resembles material in the opening, but all gestures are extremely truncated from their original presentation and only contain segments of what originally made up longer gestures and phrases

### Example 5B

Example 5B shows a musical score with two staves. The dynamics include *ppp*, *p*, *poco*, and *mf*. The notation includes trills, glissandi, and other musical symbols. The score is divided into sections with various markings and tempo changes.

Approaching the end of Section E (and the end of the piece) wherein fragments of the meandering semitone and quarter-tone melody appear between longer glissandi that move higher in the tessitura of the cello while simultaneously decreasing in dynamic

### Example 6

Example 6 shows a musical score with a single staff. The notation includes a 12-tone row, which is a sequence of 12 notes used to govern all aspects of pitch, rhythm, duration, and proportion in the piece.

12-tone row used to govern all aspects of pitch, rhythm, duration and proportion in Superscriptio

## Example 7

Section A mm. 1-59	Primarily Schema 1, fully takes shape by end of section Schema 2 introduced but not fully developed
Section B mm. 60-119	Schema 1, mostly ascending trajectory Schema 3 Schema 4 introduced as fused version of 2 and 3 heard as a single gesture
Section C mm. 120-139	Combination of schema 1 and 2; blurs distinction between the two but does not entirely fuse them. Primarily schema 2 throughout
Section C mm. 140-198	Schema 4 and schema 5. Version of schema 4 differs from original presentation of schema 4 in Section 2 in that the presentation in C is as two distinct ideas juxtaposed
Section E mm. 199-218	Schema 1 fragmented and developed beyond recognition in its original form Schema 2 fragmented with large leaps in register

Table outlining the presentation and development of schemata in each section of *Superscriptio*

## Example 8

**veloce**  
(♩ = 56 ca.)  
*sempre giusto*

*p* *mf* *f* *mf* *ppp* *p* *mp* *pp* *mp*

Opening measures of *Superscriptio*. The rising gestures in mm. 1-3 and 4-5 represent schema 1 whereas m. 4 represents the first fragmented instance of schema 2.

*p*  
(sempre) (\*)

Measures 14-16 of *Superscriptio*. Bracketed measure is the first long instance of schema 2 and the last instance of schema 2 presented in any substantial duration for the remainder of Section A.



### Example 11

Example 11 is a musical score for a single melodic line. It features several bracketed sections indicating specific melodic gestures. The first section is marked *mf* and *pp*. The second section is marked *pp poss.*. The third section is marked *mp*, *f*, and *p*. The fourth section is marked *f* and *p*. The score includes various musical notations such as notes, rests, and dynamic markings. Above the staff, there are some annotations like *ben marc.* and *10:12*.

Bracketed sections represent schema 5, a combination of schemata 2 and 3, but different than the presentation of the fused schemata in Section B. In Section B the two were fused to create a single gesture of repeated pitches leaping register. In Section D they appear as two distinct parts of a single gesture which contains an angular melody with a repeated pitch at the end or middle of the gesture

### Example 12

Example 12 is a musical score consisting of two staves. The top staff is marked *(cresc.)* and *(p)*. The bottom staff is marked *(cresc.)* and *(p)*. The score includes various musical notations such as notes, rests, and dynamic markings. Above the staff, there are some annotations like *ben marc.* and *10:12*.

Excerpt of Section E leading to the final measures of Superscriptio. In this section the most clearly identifiable schemata are 1 and 2, but the rapid change in melodic contour and direction makes it nearly impossible to tell which of the two schemata is being utilized, representing a complete breakdown in what were once clearly definable and recognizable melodic, rhythmic and gestural materials.



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