Unity and Process in
Roberto Gerhard’s Symphony No. 3 “Collages”

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Unity and Process in Roberto Gerhard’s Symphony No. 3 “Collages”

1. Introduction .................................................................................................................. 3

2. Stylistic Phases of Roberto Gerhard’s music ............................................................... 5
   - Gerhard as a serialist composer ............................................................................. 10
   - Beyond serialism: the late mature style ................................................................. 13

3. The Compositional Backdrop for the Symphony ......................................................... 16

4. A skeleton of the work? The twelve-tone row of Symphony No.3 ............................ 21

5. “The series in 12-note composition” (1960): a starting point for understanding the formal conception of the work? ............................................................... 31

6. Formal process in the different domains of the work: continuation versus closure .................................................................................................................. 41

7. The structural role of the tape .................................................................................... 48

8. A larger picture of the Symphony ............................................................................. 52

9. Bibliography .............................................................................................................. 58
**Introduction**

Roberto Gerhard’s Third Symphony “Collages” (1960) is one of the most compelling orchestral works in the Spanish composer’s oeuvre. It presents most of the crucial aesthetic questions that preoccupied Gerhard throughout his artistic life – including the use of Spanish traditional music, the exploration of *musique concrete* and the use of serial techniques as compositional syntax. This paper attempts to explore which musical processes of the Symphony articulate a coherent and unitary narrative - regardless of the diversity of compositional procedures operating in the work.

Two antinomies drive the thesis. The first one involves the compositional versus the perceptual analytical approach to the symphony – the point of view of the listener and not the one of the composer will be privileged. The second one involves a twelve-tone serial approach versus a parameter-based concept of formal articulation – this last of which will constitute the backbone of this investigation.

A first step towards the understanding of this work is to research Gerhard’s compositional plan of the work\(^1\). Yet, the pre-compositional decisions of the composer – regarding music syntax and structure - may not be significant from the listener’s

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\(^1\) The only sketch preserved of the symphony is a notebook kept at Cambridge University Library where the composer wrote down the Symphony’s twelve-tone prime row and its inversions and transpositions. Such sketch refers to the work *Laude*, original title for the symphony later discarded. Apparently Gerhard never kept any of the sketches and preliminary drafts of his works.
perspective. As often happens the composer might have not consciously planned all of the sonic outcome of a work. Furthermore, elements that played an important role in shaping the architecture of the work may be impossible to trace in the audition of a piece. In other words, compositional plan and listener’s experience may be not totally synonymous.

Since the listener’s perspective is the ultimate subject of this paper, Gerhard’s compositional technique will be examined with an emphasis to its aural impact. During the time of composition of the symphony Gerhard experimented with compositional techniques tending to control and serialize all compositional parameters. Gerhard’s free handling of such techniques –as the paper will attempt to demonstrate- and the fact that such totalistic serial syntax may not account for all the sonic phenomena of the work explains why a extremely detailed description of all the serial phenomena is missing. Yet the paper tries to explore ways of understanding the formal mechanisms of the piece without relying exclusively on an analysis of the serial technique. In the process of comprehending the formal coherence and unity of the piece a substratum of Spanish folk music will be revealed; it will not determine a large-scale picture of the work; nonetheless it will be a significant element which contributes towards my aim.

Completed in 1960, Symphony No. 3 was commissioned by the Koussevitzky foundation –it was dedicated to the memory of Serge and Natalie Koussevitzky. It was premiered in London the following year performed by the BBC Symphony Orchestra conducted by Rudolf Schwartz. The work is entitled Collages; the explanations given by Gerhard regarding this title are scanty –almost reduced to the introductory notes quoted...
by musicologist Mosco Carner\textsuperscript{2} for the published score by Oxford University Press.

These notes point to the interaction between the electronic tape of the work and the orchestral tissue. Some of the possible implications of the title will be addressed in the chapter devoted to the electronic part of the Symphony.

An understanding of Gerhard’s aesthetic trajectory, which is characterized in the next section of this thesis, will help in the comprehension of the compositional forces at the time of composition of \textit{Collages}.

\textbf{Stylistic Phases of Roberto Gerhard’s music}

Few composers epitomize better than Roberto Gerhard the contradictory forces informing creative life in twentieth century music. Born in 1896, his work as a composer traverses some of the most progressive and radical periods of Western music history. Gerhard’s work never ceased to interact with all the latest ideas - from the Second Viennese School to the post-World War II avant-garde movements- reshaping compositional language. His output reveals a constant struggle to come to terms with the multiplicity of shifts that took place in musical thought throughout twenty century. Gerhard’s life choices dramatize a staunch effort to develop his own personal voice. This endeavor is illustrated by many of the views he embraced throughout his life. One example is the fact that before World War II he was perhaps the only advocate of Igor

\textsuperscript{2} Mosco Carner introductory notes to Roberto Gerhard \textit{Symphony No. 3 ‘Collages,’} (London: Oxford University Press 1972).
Stravinsky’s music in the circle of Arnold Schoenberg. Another example is his attitude during the 1950’s, when Gerhard was one of the few European musicians who championed the work of Schoenberg after the new avant-garde movement had dismissed him in favor of Anton Webern. His personality, though, should not be viewed as permanently conflicting with his time. These confrontations were a result of an effort to reach the gap between conflicting positions. Gerhard could never be regarded as a composer fully committed to a particular style or compositional technique; a fact that did not preclude him from being a strong advocate of particular composers. For example, it was thanks to Gerhard that a twentieth century music milestone such as Alban Berg’s Violin Concerto was premiered in Barcelona; or the fact that he almost arranged a position for Arnold Schoenberg in Barcelona after he had been deprived of his Berlin professorship by the Hitler regime.

In Spain, Gerhard struggled with the opposed tendencies informing cultural life. Born in Valls, Spain, Gerhard’s principal training as a composer took place in Barcelona, apart from the years he spent with Schoenberg in Vienna and Berlin. The 1914 war had frustrated his plans to study music in Munich. In Barcelona, besides studying piano with Franck Marshall and Enrique Granados, he was one of the last students of the composer and musicologist Felipe Pedrell, who had previously taught the most recent generation of Spanish musicians (which included Enrique Granados and Isaac Albeniz). Thanks to Pedrell, Gerhard became deeply involved with the study of Spanish folk music. The enormous presence of Hispanic music traditions throughout his entire compositional output was undoubtedly influenced by the work with Pedrell. However, Gerhard also felt
very close to the cultural and political movements that tried to recover and reinvigorate the identity of Catalonia, which was seen not as a region in Spain but as a potentially independent entity\(^3\). One view underlying these movements, inheritor of the Catalanian \textit{Renaixença}\(^4\), was that the Spanish nation had undermined the cultural independence of Catalonia. Gerhard translated into Catalan books from authors such as Hugo Riemann, Herman Scherchen or Ernst Toch. Likewise, in a way that reminds us of Italian contemporary composers such as Casella, Malipiero or Pizzetti, he was an active musicologist who transcribed and edited works of past Catalanian composers such as Domènech Terradellas. It is arguable whether the Catalanian-Spanish dichotomy was an issue at stake for Gerhard, particularly since he was born to a Swiss father and a French-Alsatian mother. Nevertheless it should be an element to bear in mind when discussing the cultural implications of Gerhard’s works.

If it is uncertain in the work of Gerhard the impact of the friction between Catalanian versus Spaniard identity, the conflict between traditional and modern music languages is apparent. Upon his return to Barcelona after having completed his studies with Arnold Schoenberg (1923-1928) Gerhard had to respond to accusations that he had been disloyal to his Catalanian identity. Some of his audiences felt that the young Roberto Gerhard was a composer who had not made up yet his mind about his aesthetical

\(^3\) Gerhard had an active participation in the musical board of the Government of the Generalitat created with the arrival of Catalan Autonomy in 1932.
\(^4\) Catalanian \textit{Renaixença} is a cultural movement developed during the nineteenth century, with special intensity over its second half. It urged the restoration of Catalanian language and culture. Its significance is not far from other European nationalistic romantic movements in the same period. Catalan \textit{Modernism} at the turn of the century is inheritor of the\textit{ Renaixença} spirit.
path; he was seen as an artist fluctuating between an avant-garde language intended for minorities—represented by the Second Viennese School—and a truly popular style based on the essences and legacy of traditional music. Two works completed in 1928 vividly illustrate what might have been a struggle between adopting a modern compositional language and staying faithful to popular musical roots: the overtly popular Catalanian *Two Sardanas* and the more abstract *Wind Quintet*. The different response triggered by both works, which were played in a concert devoted to Gerhard’s music that took place in Barcelona in 1929, also echoes a conflict underlying Catalanian Modernism. This conflict dramatized the opposition between the preservation and recovery of Catalan cultural roots and the universalization and modernization of them. In Catalonia, the opposition that avant-garde music experienced in other countries was reinforced by the fear that European new artistic movements would destroy their own cultural identity.

During the first decades of the twentieth century, the conflict between modernism and conservativism was extensive in all Spanish music. The disappointment that Gerhard experienced in his meeting with one of the leading composers of Spain at that time, Manuel de Falla, was caused by Falla’s bitter rejection of Arnold Schoenbergs’s music. Perhaps Gerhard was trying to find in Falla a referential figure analogous to Béla Bartók. For Gerhard, Bartók represented a truly modernist deeply penetrated by the folklore of his home country. This problematic reconciliation of the old and the new is fundamental in understanding Gerhard’s work. The effort to bring together new compositional languages and folk music was to become one of the most important creative goals of the composer. The following words, quoted from an article written by Gerhard in 1931,
points towards what remained as one of the most significant aesthetic preoccupations of the composer:

This marvelous process of transubstantiation through which Bartók’s music absorbs the folk culture of his home country and turns it into musical essences representative of modern art-music and its sonorities, responding at the same time to the advanced ideas in the unstoppable evolution of our Western tradition is, in my opinion, the most significant lesson that Catalan musicians should extrapolate from this Hungarian master.\(^5\)

The exile into which he was forced by the fascist victory in the Spanish Civil War (1936-1939) dramatically accentuated the conflict of different cultural realities shaping Gerhard’s work. It is easy to conclude that, after the tragic experience of the Spanish Civil War and its traumatic outcome, any Hispanic element informing his music would have a completely new significance. As we mentioned above, the interest in traditional music as a legitimate compositional factor is a constant throughout Gerhard’s entire output. However, the role of popular music in his compositions underwent radical transformations. Eventually, it became, as we will later discuss, a vehicle for some of the most poignant and personal statements of the author.

After a brief stay in Paris following his flight from Spain, Gerhard settled in Cambridge, England. Gradually his work experienced an increasing reputation, not only

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in England but also in the United States; his Symphony No. 4 (1967), commissioned by the New York Philharmonic Orchestra to commemorate its 125th anniversary, accounts for the positive reception that his work had overseas. On the other hand, the political exile from Spain lined up with an absolute ignorance of his music in his home country. Like some other twentieth-century exiled Spanish creators (Pablo Picasso, Manuel de Falla, etc), he was never to settle back in Spain; he died in 1970, five years before the death of Spanish dictator Francisco Franco, which signaled the end of the dictatorial regime.

**Gerhard as a serialist composer.**

Like Igor Stravinsky, Roberto Gerhard was a composer who adopted serial technique at later stages of his carrier. When Gerhard completed his first fully serial work, significant time had past since the first serial endeavors of the Second Viennese School. His first completely serial work is his Concerto for Piano and String Orchestra (1951) written more than twenty years after having completed his studies with the “inventor” of serial music. Nevertheless, it should be stressed that Schoenberg never taught specifically twelve-tone technique to his composition students. The late appropriation by Gerhard of the Schoenbergian technique deserves some attention. The reasons behind this compositional change might not be too different from the ones that inspired Stravinsky to adopt this technique—or what should be called Stravinsky’s own adaptation of serialism.
In an article title “Twelve-note Technique in Stravinsky” Gerhard discusses the particularities of the serial technique in Stravinsky’s music, with particular reference to the second movement of the work *Canticum Sacrum*. The analysis points out some particular features that were of special interest to Gerhard. Since Gerhard wrote so little about his own music, this article might become an indirect way to trace those technical problems which, as a composer, concerned him most. As stated above, Gerhard might have been one of the few, if not the only one, who endorsed the work of Igor Stravinsky in the circle of Arnold Schoenberg. This fact points out to the common interest Gerhard had in both composers, Schoenberg and Stravinsky, as compositional references; something rather uncommon in the partisan compositional arena during the twenties and thirties.

One conclusion set forth in that article is that Stravinsky’s goal was to transform the twelve-tone row into a vehicle for collections that would sound more “diatonic” than “chromatic”; in other words, his serial technique turns out into a “non-chromatic twelve-tone music.” If a twelve-tone row can be organized in a way that resembles successive diatonic partitions, then it can become a vehicle to accommodate within it collections of modal inspiration. For example, a tetrachord extracted from a Phrygian mode–present in many traditional Spanish melodies- can become a constituent of the row (as will be the case in Gerhard’s Symphony No. 3).

Thus, the desire to avoid the extensive chromaticism characterizing the music of the Second Viennese School and the possibility of incorporating modal collections seems

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7 Ibid.
to lie behind the surface of most of his serial compositions. The serial organization of the Concerto for Piano and String Orchestra corroborates this affirmation. The titles of the successive movements of the Concerto, Tiento, Diferencias and Folia not only make reference to the formal structure informing the work but also points toward the Hispanic inspiration of the melodic content of the work. The melodic designs of the work stem from distinctive intervallic successions which are segmental to the prime row of the work. Thus the row was conceived in a way that would accommodate collections of notes derived from traditional music. Composer Jan Bach, Gerhard’s student at the Berkshire Music Center in Tanglewood over the summer of 1961 gives evidence to this affirmation:

I remember him [Gerhard] commenting that while composing his Accordion Concerto [Nonet], which was performed that summer, a little dity kept going through his mind, and he had a hell of a time deriving it from the row that governed the rest of the piece.

It should also be noted that Gerhard had composed serial works before adopting a twelve-tone serial technique. The Wind Quintet from 1928 exemplifies the use of that particular compositional technique. Since the years of study with Schoenberg, the practice of structuring music according to serial organizational principles was a...
compositional approach which Gerhard resorted to from time to time. The different uses of the serial organizational principle throughout Gerhard’s work can be traced in three pieces from different periods. The Wind Quintet of 1928 deploys a structure which is based on a seven-note row that articulates the work; the Concerto for Piano and String Orchestra of 1951 makes use of a twelve-tone serial technique; and in Symphony No. 2 (1957-1959) the use of serial technique structuring pitch is expanded into a process in which the row takes control not only of pitch but also of time and duration. The expansion of the serial technique in Symphony No. 2 aims towards a formal structure controlled by serial parameters.

Beyond serialism: the late mature style.

It is difficult to demarcate the different creative periods of Roberto Gerhard; the boundaries between them are by no means clearly delineated. A problem when identifying the temporal outline of Gerhard’s work is the overlapping of pieces of different compositional styles within the same time period. An instance of that overlapping occurs with the previously mentioned Wind Quintet and the Two Sardanas - both works being completed in 1928. A similar case, yet motivated by different circumstances, occurs during the first years of Gerhard’s exile in England. As a result of his engagement with the BBC Gerhard completed some works of Hispanic inspiration with a rather conservative language. The orchestral fantasias based on Spanish zarzuelas
are from this time.\textsuperscript{11} These strikingly conservative pieces are written very near in time to works as the Concerto for Violin and Orchestra (1942-1943), written in a much more complex style and where his formal preoccupations can be sensed.

Roughly speaking, four periods can be traced in Gerhard’s music: 1) from his youthful works to the end of his studies with Arnold Schoenberg (1928); 2) from 1928 to his first serialist works (1951); 3) from the first serialist works to this date; 4) the mature style which constitutes his final artistic phase. In the final period Gerhard synthesizes many of the previous stylistic undertakings and reinterprets serialism in a very personal way.

If the Concerto for Piano and String Orchestra of 1951 is one of the works that more closely resembles the syntax of Schoenberg’s serial works, subsequent works by Gerhard gradually departed from such a compositional style.\textsuperscript{12}

The late style of Gerhard seems to have followed a twofold direction. On one hand the serial processes acquired and enormous complexity, somehow matching the concerns of the 1950’s avant-garde composers on its quest for a serial technique governing the totality of a work. On the other hand, there is a tendency towards abstract musical forms, disparity, and a freer elaboration of the musical discourse. These two

\textsuperscript{11} The zarzuela is a Spanish genre close to the Opereta. The text is sung as well as spoken. The music is usually of a light character.

\textsuperscript{12} Gerhard’s Concerto for Piano and String Orchestra was modeled after Schoenberg’s Piano Concerto op. 42.
approaches seem to be opposed and work in different directions. The first one might account for Gerhard’s preoccupation with formal consistency.

A work regulated by the complex serial technique contrived by Gerhard is his Symphony No. 2 (1957-1959). The fact that this work of about 28 minutes long took the composer almost two years to complete—an strikingly lengthy elaboration when compared to other Gerhard’s works—points to the intricacy of the serial processes deployed. In his next work, Symphony No. 3, the serial language is used in a much more flexible way, and this seems to be the case in most of his subsequent works. In the works following the second Symphony there seems to be a fluctuation between extreme control over compositional elements and development of undetermined processes. The serial framing loses its exclusivity as an organizational principle. As a matter of fact, Symphony No. 2 is re-composed between 1967 and 1968 becoming the work entitled Metamorphosis. The revision of the symphony relaxes the severity of the serial process, incorporating modifications that from time to time break the pre-compositional rules which Gerhard had self-imposed. A comparison between these two works proves an interesting issue of study in Gerhard’s scholarship. The transformation of Symphony No. 2 into Metamorphosis illustrates the stylistic changes which led into Gerhard’s late style.

The use of serial technique in the last creative period of Gerhard seems to arise from the necessity of having an ordering force in the compositional process, but at the

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13 Chapter five includes a discussion of such procedures in both works.
14 This worked was left unfinished by Gerhard. Alan Boustead edited the last movement which was left uncompleted by the composer.
same time, no to be enslaved by it. Our discussion of Symphony No. 3 will propose that
the serial syntax that Gerhard created is used in a flexible way. The American composer
Roger Reynolds, who participated in Gerhard’s composition class in Tanglewood’s
music festival in 1961, accurately summarizes what the aesthetic attitude of the
composer was:

In speaking about the serial principle, and especially in examining its
application in, for Example, Schoenberg’s Suite op. 29, Gerhard stirred in us an
excitement, an empathic feel for how the provocations of the tone-row could
nurture and guide compositional processes. Since the series is unlikely to give
you precisely what intuition might suggest is needed at each juncture,
adjustments must be made. The composer must find an acceptable, an inspired
way to adapt to the inconvenient necessity of the ‘unacceptable’ next pitch that
the series provides. Here, invention and accommodation move hand in hand.\textsuperscript{15}

As we will see, Symphony No. 3 provides a perfect example of the mixture
between a strict compositional plan and unrestricted compositional freedom.
Furthermore, such rhetorical and formal strategies in Gerhard’s late music never lost
sight of the folk substratum that shaped part of the composer’s creative mind.

\textbf{The Compositional Backdrop for the Symphony}

As previously mentioned, from time in Barcelona to exile in England, Gerhard’s
life and style had undergone dramatic changes. Nonetheless, at the time of the completion
of Symphony no. 3 the aesthetical preoccupation about accommodating folk music and

\textsuperscript{15} Roger Reynolds, “Principle and Accommodation: a Tribute to Roberto Gerhard,” \textit{The
Anglo-Catalan Society Occasional Publications} (Townbridge: The Cromwell Press,
2000): 120.
an innovative language still penetrated Gerhard’s compositional approach. Furthermore, it is in the works of Gerhard’s late period that the composer more successfully achieved the goals that Bartok’s music\textsuperscript{16} had inspired in him. Folk music heritage had been a vein that the composer constantly sought to support his musical discourse. Throughout his compositional evolution, the presence of folk elements can be traced not only in works with an overtly folk-like theme or character but also in works of more abstract nature.

Symphony No. 3 epitomizes the late style of Roberto Gerhard, in which folk material very subtly pervades important parts of the compositional fabric. The references are not obvious, but many rhythmic patterns and melodic gestures idiomatic of this late period clearly stem from Hispanic musical roots. This relationship is easily corroborated when comparing Gerhard’s deployment of a given musical feature in a work of an overtly folk-like theme or character with a work of more abstract nature where any program, direct reference or quotations from traditional music is absent. An example comparing a fragment extracted from the Symphony No. 3 with two other works will clearly illustrate the “transubstantiation” of a folk element.

The opening of the third movement of the Concerto for Harpsichord, String Orchestra and Percussion (1955-1956) quotes a melody extracted from the zarzuela \textit{La Revoltosa} by Ruperto Chapí. It is perhaps one of the best known zaruzela’s tunes in Spain. In the opening measures of the concerto’s last movement, quoted in example 3-1, the rhythmic patterns and melodic contour of the opening tutti section are almost identical to the ones found in the original model. It is unnecessary to give a more detailed analysis in order to point out the resemblances. However, these same rhythmic and melodic elements which define the zarzuela tune serve as the basis for more elaborated musical gestures in completely different contexts. One of these examples is found in his Symphony No. 4 (1967), one of the most abstract works of Gerhard’s entire output. The symphony is a continuous movement divided into thirteen extremely contrasting sections. The seventh section is a scherzo that reminds us of the music

\textsuperscript{16} See footnote 4.
Gerhard wrote based on traditional dance. This section clearly makes use of the rhythmic and intervallic cells of the Harpsichord Concerto. Example 3-2 dramatizes not only use of the anapest gesture but also the melodic contour whose notes are contained on the trichord type $[0,1,3]$. This triad, which also plays an important role in Symphony No.3, is a component that can be presented as the first three scale degrees of the Phrygian mode (sometimes called “Andalusian mode” in the context of Hispanic traditional music). This pitch ordering, which can be examined in example 3-3 is one of the most idiosyncratic characteristically Hispanic. Some musicologist have pointed that the fourth degree of that mode may be lowered in which case any of the lowest four degrees of the mode could be part of subset $[0,1,3]$.

Ex 3-1: Gerhard, Harpsichord Concerto, third movement, opening measures

17 The trichord $[0,1,3]$ is not only present in Spanish folk music as an emblem of the Phrygian mode. A melody that Gerhard used in countless times and probably is also resonating in Symphony No. 4 and Symphony No. 3 is “Retraida esta la Infanta.” The opening of this folk song is based on the same trichord. This opening gesture can be viewed as trichord $[0,1,3]$ and the anapest pattern of the zarzuela tune reversed into an almost dactyl gesture (short notes on the weak beat and longer notes on the strong beat).

"Retraida esta la infanta" as transcribed by Pedrell in his Cancionero

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Like the fourth symphony, the third symphony is comprised of an uninterrupted succession of sections of contrasting character. Section number five resembles the character of the scherzo in Symphony No. 4, and also has a similar position within the whole symphony. The rhythmic and melodic elements used as the basis for these movements are similar in the two symphonies. However, Symphony No.3 subjects the folk material to greater transformation.

Once again, the trichord $[0,1,3]$ informs much of the melodic unfolding. In example 3-4, the melodic gesture of the woodwinds that triggers the “dance-movement” and becomes the most distinctive gesture in the entire movement is comprised of the
same intervallic content as in examples 3-1 and 3-2. Most of the subsequent melodic lines, like the one reproduced in ex. 3-5, can be segmented into cells which exemplifies this trichord.

The brisk and danceable rhythm is also clearly derived from the patterns pointed out above. As ex. 3-6 illustrates, the interplay of anapest and dactyl patterns through a constant pulsation pervades the entire movement.

Ex. 3-5: Gerhard, Symphony No. 3, section 5, bars 354-355

Ex. 3-6: Gerhard, Symphony No. 3, section 5, bars 369-370

Modal and rhythmic elements from Hispanic traditions informed much of Gerhard’s output since his early works. Perhaps such a continued use shows a less premeditated deployment of folk elements; in other words, it is possible that in his late works Roberto Gerhard might not have been primarily concerned with the use of popular musical aspects. This issue comes to the fore when confronted with some musical parameters that have a weak connection with popular music. In the case of the Symphony No.3 the global choice of pitches underlying the entire work constitutes a case where the relationship with the popular substratum is more ambiguous. There are sections where the association of melodic elements with popular motifs is clear; that is the case of the fifth
section previously discussed. It is more difficult to perceive those relations in the other sections, at least from a listener’s perspective. For example, if we listen to the opening section of the Symphony by itself would be impossible to refer to a popular music context. However, since all the sections make use of the same row, as will be discussed in the next chapter, we can conclude that all the pitch relations of the Symphony are generated from the same source. That source itself is referential to popular elements. Throughout the Symphony the associations with popular roots are sometimes evident for the listener; some other times the popular element is only a generative principle manifested through analysis.

In order to discuss more in detail the pitch choices of the piece and their relation with Spanish roots we should analyze the twelve-tone row that constitutes the primary force structuring pitch in the work. The comparison between the features of the row used in Symphony No. 3 and the pitch-class succession in other works will reveal some unexpected qualities.

**A skeleton of the work? The twelve-tone row of Symphony No.3**

In order to establish whether a serial technique informs the work, the first step would be to find a basic twelve-tone row used consistently throughout the work. In the serial compositions by Roberto Gerhard it is not difficult to identify the prime form of the row since it is usually presented at the onset of the piece in a clearly articulated way.
The opening of Symphony No.3, quoted in ex. 4-1, unfolds a twelve-tone aggregate which is completed in measure 12. The consecutive ordering of the twelve pitch-class in this aggregate is projected in numerous moments throughout the work, thus suggesting a serial compositional framework. For example, from measures 29 to 36 (ex. 5-2) a new twelve-tone aggregate is completed deploying a transposed form of the row \( (T11) \).

\[\text{Ex. 4-1}\]

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\[18\] The sketch were Gerhard annotated the row of the Symphony suggests a layout of the row’s transpositions analogous to Schoenberg’s Piano Concerto op. 42. Each successive pitch-class on the row will determine the level of transposition (e.g. the second tone of the row is pitch-class E thus the first transposition starts in E and so on). I was not able to trace a consistent use of this procedure.
However, there are some musical instances which complete a twelve-tone aggregate in which the consecutive ordering of the row is disregarded. That seems to be the case in the segments following the fragment just extracted above (up to the end of the section): measures 40-41, 42-43, 44-45 (including the E of the following measure, 46-48 (including the Bb of the following measure), 49-50, 51-52 and 53-57. All these units are
constituted by twelve-tone aggregates not deploying any particular form of the row.\textsuperscript{19} This raises the question of whether these musical spans challenge the serial “canon.” Roberto Gerhard may have previously answered this question. In the context of a discussion of Arnold Schoenberg’s opera \textit{Von Heute auf Morgen}, Gerhard observed how the consecutive order of the row was not always preserved by the composer. The consecutive displacement of pitch-class had undergone permutations that did challenge the principle of invariability informing serial technique. However, the permutations in the row order took place only within the two hexachords that constituted the row. Thus the row is defined by the units resulting after performing its partition (two hexachords or three tetrachords) rather than by the consecutive order of all its members.\textsuperscript{20} For example, given a row constituted by two hexachords in which pitch-class F is a tone of the first hexachord, pitch-class F could occupy any position within the succession of tones of the hexachord\textsuperscript{21}. Somehow this conception seems to be a flexible approach between a strict twelve-tone serial technique and twelve-tone technique devoid of serial constrains.

The identity of the series will be maintained in spite of permutation, provided that this takes place exclusively within the constituent units (hexachord, tetrachord, etc), in other words, as long as these constituent units maintain their identity.\textsuperscript{22}

\textsuperscript{19} The chord in measure 39 comprises the twelve pitch-class. In our perspective, when the twelve-tone aggregate is used through the vertical space the concept of row cannot be applied. Thus this would not be an instance of a “defective” serial twelve-tone aggregate.

\textsuperscript{20} Gerhard claimed that this approach rested on the same principle in which Rameau claimed the identity of a triad and its inversions. If the quality of a triad is invariant even when the “spatial” distribution of its members changes, the same can be said of the units in which a row is partitioned. Roberto Gerhard, “Tonality in Twelve-tone Music,” \textit{The Score} (May 1952): 28-35.

\textsuperscript{21} This is the case in serial works by Schoenberg and Alban Berg.

\textsuperscript{22} Ibid., 33.
Therefore, the lack of relationship between the pitch-class succession in the twelve-tone aggregates of the first section of Symphony No.3 may be only apparent. An analysis of the constituents of the row will bring light to this issue. As we will see, these constituents are also the (vehicle) medium to incorporate into the serial compositional framework intervallic designs drawn from Hispanic traditional music’s sources –namely the trichord [0,1,3]

To divide the prime row of the work into three tetrachords seems the most logical partition considering the musical articulation of the work. From that operation we obtain two equal tetrachords [0,1,2,4] and a third very closely related in terms of its interval-class content [0,1,2,3].

Ex. 4-3

The symmetrical inner disposition shown in ex. 4-3 is not the only reason to favor a tripartite segmentation of the row. The principal driving force shaping the row of the piece was to accommodate in those partitions intervallic connections favored by the composer. As have been previously discussed, Gerhard promoted in many occasions intervallic patterns extracted from a Spanish musical heritage. The two equal tetrachords
include the intervals that generate the melodic cells of section five discussed above (ex. 3-5 and 3-6). Tetrachord \([0,1,2,4]\) contains as a subset trichord \([0,1,3]\) which represents intervallic collections present in the Concerto for Harpsichord or Symphony No. 4. Thus the serial structure was referential to a folk music context. It seems reasonable to regard the row of Symphony No. 3 as the technically refined outcome of years of work with popular music. We have seen how Gerhard, when talking about his *Nonet* to Jan Bach, referred to his intention of accommodating a preexisting melody within a twelve-tone row\(^{23}\). Even if I have not found a similar statement regarding Symphony No. 3, it is reasonable to assume that the composer had the same aim in mind.

The analysis of the constituents of the row also clarifies the internal organization within the twelve-tone aggregates of the first section of the symphony. If we reexamine this section tracing the tetrachords of the row, them we realize how they are articulated by a serial order. For example, measures 53 to 57 articulate a reverse ordering of the three tetrachords of the row:

\(^{23}\) See page 13.
Example 4-4 reflects the carefully calculated compositional plan underpinning the work. However, in a fragment like this, the deployment of the tetrachords is almost impossible to be traced from a listening experience. The partition of the row into three tetrachords does not imply that all the melodic units and segments are organized according to them. A melodic “unit” may be comprised of several pitches belonging to different tetrachords; the completion of a melodic unit may or may not coincide with the completion of a tetrachord; in other words, the units of the compositional plan, in this case the twelve-tone aggregates, may or may not coincide with the perceptible units or segments. Parameters as dynamics, register, articulation, instrumentation play a role in the formation of segments than the listener identify in a consistent way. In ex. 4-4 the tones in the top staff are perceived as melodic segments since they share the same
instrumentation, articulations and register; the boundaries of that melodic segment do not coincide with the boundaries of the units articulating the compositional plan. Thus compositional organization and perceptual structure do not always coincide.

In some other moments the tetrachordal units are articulated through the musical texture and thus, easily recognizable. Those moments coincide in many occasions with significant structural points. The opening of most of the sections -as shown in ex. 4-5- articulate tetrachord $[0,1,2,4]$ in a perceptible way; in other words, the hearing experience is able to relate the pitches of the tetrachord as constituting a segment.

Ex. 4-5

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**II. Lento** (♩= ca. 48)

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**III. Allegro con brio** (♩= 96)

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Thus, the row has two functions not always coincident in time: on one hand they constitute an organizational element within the process of completion of the twelve-tone aggregate; on the other they possess intervallic features that may or may not be used as motivic cells. As Gerhard perceptively stated:

…The closely-knit texture produced by the cellular organization peculiar to the twelve-tone technique also assumes, or is capable of assuming, that other connective function which in tonal and
Carrying on Gerhard’s analogy of a cellular organization provided by the twelve-tone technique one might ask how the twelve-tone technique would provide an organization logic to multicellular organisms; in other words, how to shift from the local perspective of twelve-tone aggregates to larger spans of music. How an organizational principle concerned with events taking place at a local scale structures the musical discourse throughout the totality of the work. Tracing the row throughout the piece provides an interesting outlook into the foreground of the work. However it works like a frame that reveals little about the musical gestures that occur within it. The more we move beyond the boundaries of each twelve-tone aggregate the harder it will be to ground the musical discourse solely on a serial principle. The absence of the tonal dichotomy of dissonance and consonance creates the necessity of resorting to a different logic of articulation. If we want to account for the work as something more than just a juxtaposition of contrasted sections, how we can account for the formal principles governing the large picture of the symphony? How we move from the “cell” to the entire organism?

Applying the serial technique to parameters other than pitch was an attempt to make the local organizational principle of the serial technique extensible to large scale relations. In the next chapter we will discuss which strategy followed Gerhard to put into

24 Ibid. 3
practice such concept. And we will also discuss to what degree the large-scale relations are controlled by serial parameters.

“The series in 12-note composition” (1960): a starting point for understanding the formal conception of the work?

The same year he completed his Third Symphony, Gerhard delivered two talks at the University of Michigan at Ann Arbor as a visiting professor. Both talks were published later under the title “The Series in 12-Note Composition”. Aside from a few articles published in the ‘50’s in the British journal *The Score*, the talks constitute the only verbal account of the compositional process involved in his late works. In the article “Developments in Twelve-Tone Technique” (1956) the composer presents the basis of his particular use of the twelve-tone system, which implies time-pitch correlations. It is not until the 1960’s talks, however, that he gives a more fleshed out illustration of his particular compositional approach. They include the only instances of a practical indication of how his pitch-durational serial organization might be applied to a specific composition. Perhaps this was one of the very few occasions in which his audience was mostly made up of composers.

“The Series in 12-Note Composition” is far from providing a decoding mechanism for all his late music. The rich style of his prose, abundant in literary and philosophical references, lacks the analytical precision of a music-theory scholar or the conciseness of a compositional manual. The technical explanations of his own system are

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25 The 1960’s talk described elements new to his compositional approach. The numerical proportions expressed by the tones of a row would not only apply to relative durations (matching the number of semitones with the number of eighth notes) but also with absolute durations (matching the number of semitones with the number of minutes of a work).
constantly intertwined with esthetic justifications for his choices or eventual criticism of the approach of other composers. Also, Gerhard never provides specific examples of the compositional process involved in his late works, instead only illustrating hypothetical cases detached from real compositions. It may be noteworthy to refer to one of the very few occasions when he talks about a specific work of his mature period. Even if his words were intended for a general audience and not only for specialists, his approach may reveal a reluctance to disclose the details of his working process. He skips any overview of the compositional constraints informing his formal elaborations, “the serial controls to which I’ve subjected the elements of tone and time.”

However, in the same article, the composer affirms an idea that will play an important role in the orientation of this paper: “Listening is concerned with the grasping of structure, with togetherness, in the literal sense of the word ‘symphonic.’” Gerhard might have been hinting at the possibility that the awareness of the compositional process involved would be not relevant to the comprehension of the work. Thus, it seems desirable to pose two initial questions. The first is to know if the compositional process explained in the articles applies to the issues of this paper (and this seems to have been seriously challenged by diverse elements), and second, whether the knowledge of those “a priori” compositional constraints is an essential or significant step to “grasping the structure and togetherness” of the symphony.

Using “The Series in 12-Note Composition” as a starting point scholar Susan Bradshaw revealed some of the pitch-time correlations of Gerhard’s Symphony No.2, which Gerhard finished just one year before Symphony No.3 (1957-59). These correlations affect both the large formal design of the piece and the local events of the

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27 Ibid.
28 This is not an unfamiliar phenomenon throughout the history of Western music. For example, we don’t need to be aware of all the numerical relations underpinning many of J.S.Bach creations to successfully apprehend his musical discourse.
piece. They stem from a basic twelve-tone row in which each pitch-class is represented by a number, obtained by counting upwards in semitones from the note Gerhard designated as first note. Those numbers are used as proportions for other parameters of the work. Borrowing Schenkerian terms we could say that the row controls the background, middle ground and foreground of the work. As the composer said:

"Pitch-values can be translated into duration-values, and vice-versa. It is thus possible to derive from any given 12-tone series a correlation set of duration-values. (...) This is to say that the time-set, in addition to being the source of all rhythmical or polyrhythmic configuration-in the same way that the pitch-set is the source of all melodic, harmonic or polyphonic configuration-must also rule articulation at all levels of form-organization". 30

A survey of the potential large and small scale implications of the basic row of Gerhard’s Third Symphony can be conducted following the analysis proposed by Brandshaw.

As illustrated in ex. 6-1 the basic row of Symphony No. 2 is divided into two hexachords. Each pitch-class in the row is assigned a numerical value, according to its position within the pitch-class space, using E, the first pitch in the first hexachord, as a starting point (instead of being designed by 0 it will be represented by 12). Thus E equals 12, F 1, G 3 and so on. If we calculate the sums of each hexachords, reduced to their lowest common denominator, we find figures that indicate the whole duration of the work in minutes. The first half of the symphony lasts about 11 minutes (sum of the first hexachord) and second half lasts 15 (sum of the second hexachord). Thus, the metronome marks would be crucial to render accurately the formal conception of the composer.

I have already suggested the suitability of dividing the basic row of Symphony No.3 into three tetrachords instead of the more common hexachordal partitioning that Gerhard chooses in many of his theoretical writings. Finding a correspondence between the lengths of the seven sections of the work (even if they are grouped into three main sections as I propose later) and the numerical proportions of the set seems hardly possible. It is extremely problematic to discover whether the “proportion set is the steering device for all time structural operations.” 31 Such detective investigation exceeds the scope of this paper. Moreover, the large number of indications undermining the metronome’s marks precision (such as accelerandi and ritardandi or fermatas of unspecified length) make it difficult to establish in advance of the performance an exact length of the work. In other words, the total duration of the piece depends on each specific performance.

31 Ibid., 61.
To the length of each different section within Symphony No.2 Brandshaw suggests that the metronome speeds (calculated in seconds) are multiples of the sum of the numerical proportions of the two hexachords. This is not the case in the Symphony No. 3. No numerical correlation exists between the numbers that the set represents and the numbers of the metronome marks.

Moving away from the large structure of the work and towards its smaller components, the use of a pitch-time correlation starts to become clearer. In the initial statement of the twelve-tone row in Gerhard’s Symphony No.2 (ex. 6-2) each pitch class is associated with a duration. Starting with F, which is presented as an eighth note, every semitone upwards in the pitch-class space (\(i<1>\)) an eighth note is added to the basic duration. The number of semitones within an octave module is proportional to the number of quarter-note pulse durations.

That very same process is used in the Symphony No.3. At the beginning of the sixth section of the Third Symphony, quoted in ex. 6-3, the smallest duration, an eighth note, corresponds to pitch-class F. I have not found a powerful reason to explain why pitch-class F is chosen to correspond with the shortest duration. The relationship between pitch-class and duration is the same as the one observed in Symphony No. 2 (ex. 6-4). The pitch material of that section unfolds T6. Not surprisingly, the mensuration canon that takes place is based on a repeated six-measure module. The number ruling the transposition of the row also rules the length of the components of the phrase. It should be noted that these rhythmic canons, based on different superimposed durational patterns are a hallmark of Gerhard’s late style. In his next symphony, and in the fragments preserved from his incomplete fifth symphony, these “canons” are the underpinning for considerably longer passages.

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32 At this point I’m skipping the “middleground” implications of the set. Bradshaw demonstrates how the lengths of the different “phrases” (she distinguishes between “section”, “chapter”, “paragraph” and “sentence” are also governed by the proportions contained in the original row. Attempts to find this correlation in the third symphony have proved unsuccessful so far.

33 The correspondence between pitch-class and durations is only broken with G, which lasts longer than three eighth notes several times.
A similar canonic procedure takes place at the beginning of the second section, starting at measure 64 (the G of bar 61 completes the twelve-note aggregate comprised of the low cluster of the piano at the onset of the section and the virtuosic gesture in the violins). T5 governs the pitch sequence of this fragment. In this case, however, the length of each pitch class does not follow the semitone/eighth note relationship. Instead, the number of semitones indicating the position within the octave regulates the basic division of the beat. E is taken as the lowest element within the octave module. In the section starting at measure 436, F was the lowest element, since the row was sounding a semitone higher—thus the transposition took place in pitch space. E and F are not
employed in this passage, Thus F# provides the basic duration for its module. Since F# occupies the third position in the octave module, the beat is divided into three parts (the F# module lasts 8 eighth notes). The G module can be regarded as an outcome of dividing the beat by four. With the G# module at order number 5 equaling a division of the beat into 5 parts and the B flat module at position 7 indicating a septuplet is clearly a link between the pitch-class number of semitones and the pattern of subdivision of the beat.

Ex. 6-4: section2, measures 75-77
A comparison between the passages just examined above reveals an important feature of the compositional process in the symphony. In terms of an overall or general compositional method underlying the entire work there is no consistency between these two musical passages, regardless of their similarities, the *a priori* technical framework underpinning the musical discourse has shifted –at least, the pre-compositional approach is different in both passages. Thus, the analytical approach taken by Brandshaw for Symphony No. 2 cannot be applied to this work.

Thus far, the role of the tape in the symphony’s construction has not been addressed. When confronting its use in the work, one is struck by how the tape too challenges the possibility of a highly regulated ordering of the pitch and durational parameters in the work. If in the music of composers such as Milton Babbitt the use of electronic and pre-recorded material represents a possibility of expanding the human

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34 The work *Philomel* provides an interesting example. When the electronic part of the piece was orchestrated the result of its performance could not render with precision the constellation of rhythmic proportions intended by the composer.
capabilities of performance (in terms of pitch and rhythmic precision) for Gerhard, the use of tape seems to introduce an element of freedom in the work, which is interesting considering the extreme precision demanded from the players. The concrete sonic material of the tape is mostly based on percussive sources of undetermined pitch or sounds with a blurred-pitch quality.

In 1960, the technical means to cue the different cuts of the tape part throughout a live performance were far from accurate. If we look at how the tape is triggered for the first time, we see the different degree of rhythmic precision demanded from the orchestra and the tape. The placement of the tape’s first “punctuation” (an unpitched attack probably drawn from a recorded percussion instrument) is clearly marked after the opening unison by the trumpets. However such exact timing can not be executed with the same accuracy in the tape as in the surrounding instruments. For example, following the metronome indication given by Gerhard, the attack of the brass and timpani quintuplet in the third measure should take place (theoretically) about 4.78 seconds (approximating two decimals) after the previous attack of the trumpets. It is impossible to approximate with such precision where the first attack of the tape would occur; depending on the performance, its perception may shift from taking place on a regular beat to one occurring on an irregular grouping.

Finally, the last consideration about the tape’s role in the serial framework of the composition is the genesis of the tape material. While the orchestral discourse takes a pitch-class row as a starting point, the tape part takes “real sounds” without modification as the raw material for further elaboration.

It is difficult to affirm whether Gerhard consistently followed his own serial technique in the compositional plan of the Symphony. As a matter of fact, the goal of this paper is not to establish if the compositional plan deployed in this work coincides with the compositional techniques exposed in his articles. Unveiling a hypothetical pitch-metrical ordering underpinning the entire piece wouldn’t clarify (at least significantly) the listening experience. It is true that the large-scale implications of the time set could be
understood using this method, as it was the case in Symphony No.2. For example, the asymmetrical lengths of the different sections of the piece could be clearly apprehended, despite the problem of accommodating each one to a pre-established duration in seconds. However, the small-scale deployments of the set are beyond the capabilities of any trained listener. As with the mensural complexities of Franco de Cologne (whom Gerhard mentions in his article), they are merely a question of augen-musik. Only a close visual study of the score (independent from any listening) reveals the time-pitch correlation found in places like sections two and six described above. The goal of this paper is to find compositional procedures connected with the hearing experience.

Like Arnold Schoenberg, Roberto Gerhard arrives at the paradox that the method of composition with twelve tones “does not concern the listener at all” even if “that is not to say that he is not affected by it.” As vividly pointed out by Allan F. Moore, it is not entirely clear how the “serial significance” would affect the listener. Gerhard went as far as affirming that “the twelve-tone technique must be understood and appraised as a new principle of tonality (…) any series may be taken as the “tonal order” which will rule for the whole duration of the work.” Later on he states, “From the listener standpoint, an order which he does not grasp intellectually may all the same condition his listening.” However there is a crucial difference between twelve-tone music and diatonic tonal music. In tonal music the interplay of consonance and dissonance constitutes the main formal procedure of articulating music throughout time. The expectation to resolve a dissonance into a consonance unfolds the musical discourse through long spans of time, establishing moments of closure or continuation. Thus, in the absence of this consonance-dissonance dichotomy and having pointed out the impossibility of apprehending as listener the compositional formal procedures set by Gerhard, how do we grasp the structure and adhesion of the work? The serial features of the work are just part of the answer to this question. A close study of the pitch schemata in the work will give significant insight. But we still need to find what elements articulate the work on larger

levels. In order to do that we will resort to elements that are not particular to the serial grammar.

Formal process in the different domains of the work: continuation versus closure

In the previous chapters we have discussed the nature of the row articulating the Symphony and its [potential] relationship with Spanish traditional music. We also analyzed the formal implications of the serial process in the Symphony; it is our understanding that neither from a compositional perspective nor from a perceptual approach would the knowledge of the fairly complex serial processes informing the work suffice to comprehend the formal articulation of the Symphony. The goal of this chapter is to propose ways in which from a listener’s perceptual point of view the larger picture of the work and the relation between the whole and the inner parts can be grasped.

In a tonal context, the dissonance-consonance dichotomy provided the basis for articulating the formal discourse. Dissonances destabilized the consonance’s firmness and created a need for resolution. Thus, dissonances would provide music with a drive and impulse towards points of harmonic completion and fulfillment. The components of the musical discourse would either move away from a consonance, creating an opening, or would return to it, producing a closing. The concepts of continuity and closure provide

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38 Affirmation based on Charles Rosen’s approach to tonal form.
a precise terminology for defining the basic operations for musical discourse. The large
design of a work is based on these parameters.

However, in the absence of a tonal framework, one would imagine other
structures and processes replace the role of dissonance and consonance. The structural
units of the discourse are extended throughout spans where the musical elements provide
a continuity until a closure is achieved.

A powerful strategy to analyze the structuring of segments and formal units
within a post-tonal\textsuperscript{39} context is proposed by Christopher Hasty\textsuperscript{40}. His formal discussion is
based on the notion that strong structural connections occur within the tones of a work
when there is a homogeneity between different domains within which these tones are
rendered. The term ‘domains’ alludes to the different fields of activity which participate
in musical syntax: pitch, contour, rhythm, timber, dynamics, etc. Whenever a group of
tones share a similar manipulation on a significant number of domains, these tones would
be perceived as a consistent unit or segment. On the other hand, if there are dissimilar
patterns within the different domains of a group of tones, these tones will be perceived as
discontinuous. This view incorporates a wide range of musical elements into the formal
evaluation of a work. Moreover, it provides a vehicle to comprehend the perception of
continuity and closure in the absence of a dissonant and consonant frame of reference.

\textsuperscript{39} Post-tonal indicates here a musical context where the interplay of consonance and
dissonance does not carry the weight of articulating the formal discourse. We find it more
precise than the term ‘atonal’ which seems to imply discarding any potential ‘tonic.’
There are instances of post-tonal music where a particular tone, because of its
hierarchical preponderance, might be regarded as a ‘pseudo-tonic.’

\textsuperscript{40} Christopher Hasty, “Segmentation and Process in Post-Tonal Music,” \textit{Music Theory
The analysis of Hasty focuses on how similar activity in different domains creates segments on a local scale. For example, in his analysis of Stefan Wolpe’s String Quartet (1969), Hasty points out how groups of no more than six notes can be perceived and heard as individual segments when they share similarities in several domains such as their contour, pitch-class interval, set-class, dynamic patterns, order of intervals, timbre or register.\textsuperscript{41}

To discuss in detail the ‘foreground’ or local events of Symphony No. 3 would be an undertaking too extensive for the scope of this investigation. Nevertheless, the propositions set forth by Hasty suggest paths to explore formal relations on a larger scale. We do not intend to follow his exact same analytical method; however it is Hasty’s emphasis on the interaction between different domains as basis for formal articulation that constitutes a methodological principle in our investigation.

Observing the activity within the various domains in different sections of the work reveals how the continuation and closure process function in the Symphony. The analysis of the activity within different fields of the work points toward the strategy followed in each moment to unfold the linear discourse of the entire work.\textsuperscript{42} Comparing different sections of the symphony reveals the very particular and idiosyncratic way in which Gerhard treats the degree of activity among different domains.

\textsuperscript{41} Ibid., 55-63.
\textsuperscript{42} The term ‘field’ is taken from Pozzi Escot and Robert Cogan \textit{Sonic Design: the Nature of Sound and Music} (Prentice Hall, Inc. 1976).
One of the first impressions the work produces on the listener is an apparent succession of static and dynamic states. The music conveys moments where a particular element of the music discourse seems to ‘freeze’ while in other moments the music seems to build a progression through the accumulation and saturation of another particular element. These auditive impressions can be corroborated and explicated by analyzing how the activity within different domains articulates a given fragment. As a matter of fact, the terms saturation, accumulation or ‘frozen space’ provide illustrative concepts to understand the strategies followed by Gerhard when articulating the work.

The continuity and forward motion towards moments of closure is achieved not only through the homogenous activity in various domains, making the listener hear different tones as belonging together, but also through an energy increase in various domains, often achieved by means of the saturation and accumulation within a particular domain. It is also possible that a segment that is perceived as unitary does not create an impulse towards closure and just functions as a transition, digression, or relaxation after a climatic point. As the analysis reveals, the Symphony is constituted by a succession of musical spans (often elided), in which the activity in one domain carries the weight of providing continuation, forward movement or a propelling sense to the musical discourse. The activity in that domain contrasts with the stable and unchanging nature of other of the domains. The discussion of four different passages of the symphony will illustrate this formal process.
The opening of the Symphony dramatizes the compositional strategy of stopping or ‘freezing’ one domain while changing the level of activity in others. The pitch-space domain remains static: each pitch occupies a fixed position that will not change throughout this span, until a new ‘frozen’ or fixed pitch group is introduced.

At the same time, the domain of rhythmic attacks and durations incrementally increases its activity, from two attacks separated by more than one measure (measures 1-3) to four attacks occurring in measure 5. The timbre and dynamics also experience an accumulation of elements with the progressive addition of instruments. Thus, the continuity and forward motion in the first eleven measures of the Symphony is achieved through the activity in the domains of timbre, dynamics and durations.\(^{43}\)

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\(^{43}\) A more thoroughly analysis of all the possible domains constituting the design of this passage would be feasible; however, it would require a lengthy discussion which we judge not necessary to understand the basic formal operations of the passage.
A different scheme informing the activity within the domains takes places later on in the same section. The continuity of the discourse is achieved through the succession of four-note melodic articulations. These groups of notes share a similar melodic contour, span a similar register space and have a similar instrumental arrangement (one ascending dyad in one instrument followed by another ascending dyad in other instrument). If the instrumental and attack saturation created continuity in the fragment previously discussed, in this fragment the continuity is achieved through melodic unfolding.

Ex. 7-2

Pitch successions with a continuation role

Melodic gestures of four notes
Each four-notes segment has the same rhythm and contains two dyads with the same contour
The continuation of the musical discourse is based in the succession of these segments
A fragment extracted from the third section illustrates how the action within the
domain of durations remains constants while the progressive saturation of pitch space and
orchestration propels a continuous forward motion.

Completely different from the three fragments discussed above is the approach
undertaken in the central section (ex. 7-4): there is a minimum of activity in all the
different domains: the attacks are widely spaced, the pitch space seems to be again
‘frozen,’ the section is sparsely orchestrated, there are no significant changes of
instruments, it is difficult to perceive melodic segments and the dynamics remain soft
throughout the moment. All these elements create a sense of stillness and a lack of
motion. This section is the only moment in the Symphony where the strategy of linear
continuity underpinning the musical discourse is abandoned. This central section, the
only in which the tape is not used, works as a hinge for the entire Symphony and originates a number of formal implications that will be discussed in a subsequent chapter.

Before addressing what the large scale implications of all these procedures are, we should take a closer look at a crucial element of the Symphony that so far has been put aside in our discussion. The role of the magnetic tape in the work determines the whole configuration of the work. Only after discussing in detail its use will we be able to address the whole design of the Symphony.

**The structural role of the tape**

The tape part of Symphony No. 3 can be considered an example of *concrete musique*—sound composition, as Gerhard preferred to call it. The basic materials of the
tape part are all of acoustic origin and do not involve electronically-generated sounds. As Gerhard stated, ‘their prime source is not the frequency oscillator but the microphone.’\textsuperscript{44} Previous to the Symphony, Gerhard had been composing music which involved the use of electronics. Those works were intended for radio plays and the theater. He developed his work in the BBC Radiophonic Workshop and in basic private studio at his home in Cambridge. According to the musicologist Hugh Davies, Gerhard’s music for the play \textit{The Prisoner} (1954) was ‘the first British score to involve tape.’\textsuperscript{45}

In the article “Sound Observed” Gerhard explained the technical process involved in the creation of two tape fragments from the Symphony.\textsuperscript{46} He gives a brief account of how two recorded drum-rolls are transformed and modified. That transformation involved changes of speed and playing the tape reversed as well as a superimposing the results obtained. Nevertheless, more interesting than the technical account of the process are the points Gerhard makes about sound-composition on tape:

\begin{quote}
The kind of sound-behaviour illustrated here is something beyond the scope of our present orchestral instruments. The operative word is \textit{behaviour}, it will be notices, not colour; colour is never of decisive importance. Instead of “behaviour” I might have used the term \textit{sound-activity}.

The electronic medium, in effect, makes possible new modes of action with sound which have greater freedom of tonal movement, of configuration and of textural weaving than those which our traditional instruments permit. (…) The actual sound-elements in themselves are less important. (…) What is important is the total animated form, the time skyline they built up through active continuity.
\end{quote}

Thus Gerhard was confronted with a compositional process which put timbre and sound color before any abstract organization of the components of a work. As Gerhard stated in the same article:

…Magnetic tape-recording have provided the composer with a new medium, whose main feature is that it enables him to work directly in actual sound, as directly as a painter, for instance, works in paint”.

This signified that the sonic rendering of a work was not controlled by any order detached from the piece itself; there was no “metaphysical” row controlling the “physical” (sonic) realization of a composition. Perhaps this was one of the reasons that lead Gerhard astray off the path of the serial structures tending to control the totality of compositional parameters.

The tape in the Symphony it is not only a source of timbre variety, but also becomes an important element in structuring the Symphony. It is characterized by its athematism. Its function is twofold.

The first function is to be an element that punctuates the orchestral tissue, in the way a unpitched percussion instrument might. The opening measures of the Symphony exemplify this function: the tom-tom, bass drum and the tape (probably a modified recorded drum), provide rhythmic attacks throughout the unfolding of the first twelve-tone aggregate. Both the percussion and the tape contribute to increase the rhythmic
activity of the segment, creating an animation that impul\se the musical discourse forward.

The second function has larger formal implications. At some points throughout the Symphony the tape establishes a dialogue with the orchestra; its relationship is like the one between soloist and orchestra in a concerto. The tape interventions are combined with the orchestral ones. This utilization of the tape is what is seems to have inspired the designation of Collages in the title of the piece. The term Collages alludes to the succession and juxtaposition of fragments of different origin (tape versus conventional instruments). Section four illustrates how is deployed the interaction between orchestra and tape: a “solo” tape fragment functions as an introduction for the section, preparing, with its short and rapidly repeated attacks, the rhythmic texture of the subsequent orchestral intervention. The tape intervention is elided with the onset of the orchestral “scherzo.” Apart from a small “punctuation” of the tape in the orchestral part, the tape does not reappear until the very end of the section. At the end of the section, the tape sounds without the orchestra, functioning as a closing statement in the section and preparing the following section.
A larger picture of the Symphony

In a previous chapter we have analyzed two fragments belonging to the first section; in each fragment the continuity of the discourse was achieved through the predominant activity within a particular domain. The forward motion created by those two segments participates in the larger formal strategy of the section. In measure 42 a clearly marked climactic point takes place; a short chord in forte played by entire orchestra after which only the resonance of the piano and the vibraphone remains. All previous fragments, such as the one discussed, have created a forward motion increasing the animation towards this moment of closure. After this culmination point in the movement, the ensuing music produces a calmer atmosphere. Measures 43-45, previously discussed, create continuity towards the second section; its function might be regarded as a defusing coda to the previous climactic ascent and a transition to the following section.

We observed how the central section, the only one which does not make use of the tape, is characterized by a motionless and static quality. The music seems to have lost the linear progression quality of the previous movements. This section is preceded by a gigantic climax at the very end of the third section (measure 248). This climactic point is very similar to the end of the first section: once again it is a short chord played by the tutti, prepared by a rest and followed by the resonance of the piano. Thus the climax of the third section (measure 248) is almost an expansion of the climax of the first section (measure 42). The formal strategy of the first movement is to create a progression and
dramatic ascent to the culmination point of measure 42; the overall formal argument of the three first sections is to create a large dramatic arch that culminates in measure 248. All previous music leads to this point. However, this culmination, because of its extreme use of dynamic and short duration that drops suddenly to a long rest, has the effect of a sudden blockage to the musical discourse. Alluding to the central movement Gerhard wrote that in retrospect it reminded him of what goes on in the mind of someone who has lost consciousness. 47 This analogy seems most appropriate: the music has lost its sense (its forward motion towards a goal) and it would not be recovered until the next section, when a new dramatic ascent that will lead to the final culmination and apotheosis of the work starts.

After the ‘unconscious’ central movement, which brings the linear discourse of the symphony to a halt, a new dramatic progression starts. Thus, the formal strategy of the final three sections is to build an ascension to the final climax; a long and sustained climax that will fulfill the dramatic trajectory of the Symphony. If the end of the third sections sounds as an interruption of the linear unfolding, the end of the last section functions as a fulfillment of all the previous developments.

The seventh and last section of the piece contains a number of elements that result in shaping its role as the culmination of the piece. The section does not begin with the deployment of either tetrachord \([0,1,2,4]\) or \([0,1,2,3]\) as in previous ones. Instead, after a two measure long powerful unison, tetrachord \([0,2,5,7]\) is introduced; the chromatic

quality has opened up into a succession of fifths. Also, the texture of measures 558-561 recalls the opening measures of the Symphony, with its trumpet calls and the piccolo and basses framing the boundaries of the pitch space. This final section articulates a big crescendo that leads to the final chord which contains all twelve pitch-classes (tutti in fortissimo). This final chord closes the dramatic narrative of the Symphony, a narrative that can be summarized as follows:

A progression throughout the first three sections is interrupted at the very end of the third section. That interruption leads to a static section, where the linear continuity and forward propelling of the work is interrupted. The motion towards the culminating point is restarted in section five and gradually builds up a progression that will conclude at the end of section seven. Thus, section seven brings a final resolution to the teleological course of the Symphony.

It is always problematic to address a work of music in terms of a subjective or autobiographical narrative informing the work. Whether the dramatic structure of the work is the vehicle for a personal or emotional significance is a question that will probably never be answered with certainty. Also, from a purely [sonic] perceptual perspective, the awareness of any narrative external to the music itself would not necessarily contribute to a better understanding of the work. It is our understanding that
the consistency and coherence of the Symphony is justified by the work itself, without having to resort to any element extrinsic to the musical discourse. Nevertheless there are powerful elements resonating in the Symphony that might point to any extra-musical significance.

Gerhard provided a descriptive image to each of the seven movements. The seven movements ‘encompass the span of ‘one’ day, from dawn to the dead of night.’ More than a programmatic and descriptive undertaking these indications have an evocative and suggestive nature. A parallelism can be drawn with another work by a composer contemporary with Gerhard; in Edgard Varese’s *Ameriques*, the composer did not intend to describe any particular place in America. Rather –as the composer stated- the work was an evocation of what America represented and signified for him.

Gerhard declared that the closing bars –the ones that we have identified as the resolution and culmination of the work- ‘are written very much in the first person singular.’ Gerhard originally thought of calling the Symphony *Laude*, instead of *Collages*. As the introductory notes in the published score of the Symphony say:

> The tacit motto of the Symphony which gives us a clue to its meaning is to be found in the words of the 113rd Psalm, verse 3: ‘From the rising of the sun unto the going down of the same the Lord’s name is to be praised.’

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48 Ibid.
49 Ibid.
50 Ibid.
An analogy between the structural progression towards the final culmination of the Symphony and the composer’s attempted ascent towards God seems plausible. The marked linear unfolding of the Symphony suggests a teleological correlation – especially since Gerhard is speaking ‘in the first person singular:’ if the dramatic unfolding of the work – a continuous motion to its final apotheosis – is were it finds its justification, Gerhard’s personal ‘drama’ – as vital and artistic trajectory – would be oriented and driven towards a superior realization. This superior realization would be the metaphysical union with God. The folk material discussed in previous chapters would be part both of the formal structure of the Symphony and the personal vital experience of the composer.

Accepting this particular reading poses the question of what significance the static and motionless central section might have. As a matter of fact, sections similar to this became an idiomatic feature of Gerhard’s late work. As we stated above, Gerhard wrote that this section reminded him of a human state of unconsciousness. When Gerhard started writing the Symphony he was already suffering from a heart condition that eventually caused his death. Several strokes affected him during the last years of his life; he experienced how his life came to a halt and revive later. Perhaps, the ‘unconsciousness’ of a human being who’s heart has ceased to beat is the ‘unconsciousness’ of the music when continuity and direction have been lost.

The few extra-musical directions left by the composer leave these conjectures open to speculation. Undoubtedly, it is the imposing architecture and the exceptional dramatic force of this work that will continue to arouse the interest of listeners and
scholars. into the personal world of the composer, trying to understand the real person who stands behind such a masterpiece.
Bibliography:


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