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A STUDY OF THE RELATIONSHIP BETWEEN MOTIVE AND STRUCTURE
IN BRAHMS'S OP. 51 STRING QUARTETS

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In 1873, Brahms completed the two op. 51 quartets. These were not the first string quartets Brahms composed, but they were the first that Brahms allowed to be published. He found the string quartet difficult; as he confided to his friend Alwin Cranz, he sketched out twenty string quartets before producing a pair he thought worthy of publishing. Questions arise: what aspect of the string quartet gave Brahms so much trouble, and what in the op. 51 quartets gave him the inclination to publish them for the first time in his career?

The op. 51 quartets are essential to understanding the evolution of Brahms's compositional technique. Brahms had difficulty limiting his massive harmony and polyphony to four solo strings. This difficulty was compounded by his insistence on deriving even the accompaniment from the opening main motivic material.

This study investigates the manner in which Brahms distributes the main motivic material to all four voices in these quartets, while at the same time highlighting each voice effectively in the dialogue.

Chapter I discusses general characteristics of the op. 51 quartets, the historical circumstances of their publication, the influence of motive on structure, and the use of a cryptogram with a motto motive.

Chapters II and III examine motivic organization and its influence on structure in the op. 51 quartets. Chapter II in particular focuses on the cryptogrammic use of the main motive and its role in many harmonic and tonal ambiguities. This is intriguing in that the programmatic content leads to unorthodox formal features. The unconventional tonal process in the expositions is presumed to have a necessary function in the movements. Chapter II also attempts to show how tension created by the cryptogrammic use of the motto motive generates the unusual proportion of the first movement of the A-minor quartet.

Finally, the Epilogue sums up the most conspicuous features in the quartets and assesses their historical and evolutionary position in Brahms's creative career.

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CHAPTER 1

INTRODUCTION

A Historical Perspective of the Publication of Brahms's Op. 51 Quartets, and His Struggle in the String-Quartet Genre

The two op. 51 string quartets, the C-minor and the A-minor, play a special role in Brahms's evolution as a composer. Moreover, all of Brahms's string quartets, dating from the 1870s, are essential to an understanding of Brahms's approach to motivic organization and its effect on harmony and form.

The two op. 51 quartets were published together in 1873, and a third in Bb major came out three years later as op. 67. As he tried to relate to this difficult musical form, Brahms sketched out at least twenty string quartets before considering a pair (op. 51) worthy of performance and publication.¹

It is not certain, however, when Brahms began to work on the op. 51 quartets. In fact, although the first string quartets of op. 51 appeared in the year 1873, Brahms may have begun experimenting with string quartets as early as 1853 when his piano sonatas (opp. 1, 2, and 5) appeared.

¹ Henry S. Drinker, The Chamber Music of Johannes Brahms (Philadelphia: Elkan-Vogel, 1932), p. 68.

If so, the op. 51 quartets, and the C-minor in particular, appear to have lain dormant for a long time.

Undoubtedly, a string quartet was brewing in his mind from a very early stage of his creative life. R. H. Schauffler surmises that the inception of the op. 51 quartets, and the C-minor in particular, dates back to 1857.² If one considers the possibility that the op. 51 quartets may have originated along with the piano sonatas of 1853, then the op. 51 quartets are the result of almost twenty years of compositional gestation.³

On one occasion Brahms told his friend Alwin Cranz that he had written and destroyed twenty string quartets during these years.⁴ Although there is no way of knowing exactly how many years Brahms meant by "these years," it is not difficult to guess that Brahms experimented with the string quartet and that he struggled with those first attempts at the genre. In 1865 Joachim wrote to Brahms to ask if the C-minor string quartet was ready. Apparently it was not, for Joachim inquired after the work again in 1867 and 1869; this also indicates Brahms's struggle in the medium of the string quartet.⁵

² R. H. Schauffler, The Unknown Brahms (New York, 1932), p. 56.

³ Ibid., p. 69.

⁴ Daniel G. Mason, The Chamber Music of Brahms (New York; the Macmillan Company, 1933), pp. 88-89.

⁵ Ibid., p. 89,

Brahms's publisher Simrock was very anxious to receive some quartets. In June of 1869 Brahms wrote to Simrock from Lichtenthal near Baden-Baden to beg his patience, mentioning a possible rehearsal, scheduled to occur before forwarding of the quartets to the publisher. In the same year, Brahms sent Clara Schumann the two outer movements of the C-minor quartet, and she was favorably impressed. In June, Clara mentioned in her diary that she had heard two lovely quartet movements by Brahms.⁶

It is not clear if the rehearsal Brahms heard influenced the further delay in publication. At any rate, the quartet was held back for further amendment despite his friend's encouragement. Polishing repeatedly, Brahms finally completed the score and sent it to Simrock for publication in 1873.

Tovey theorizes that Brahms was not pleased with his earlier quartets, and that his displeasure was caused by the necessity of limiting his massive harmony and polyphony to four solo strings.⁷ Mason agrees with Tovey's analysis and claims that "internal evidence" confirms it.⁸ Although Tovey's analysis hardly seems applicable, such "internal evidence" is apparent in the op. 51 quartets. Brahms was

⁶ Max Kalbeck, Johannes Brahms (Deutsche Brahms-Gesellschaft, 1913-22), p. 451.

⁷ Donald F. Tovey, "Brahms," Cobbett's Cyclopedic Survey of Chamber Music, ed. Walter W. Cobbett (London: Oxford University Press, 1929-1930), Vol. 1, p. 173.

⁸ Mason, op. cit., p. 89.

more accustomed to writing thick textures of massive sonority like those in his first piano sonatas (1853), first piano trio (op. 8; 1853-54), two string sextets (opp. 18, 36; 1858-60, 1864-65) and first two piano quartets (opp. 25, 26; 1861-64).

Brahms may have withheld the op. 51 quartets because of some doubt about their quality. He may not have been sufficiently confident with the medium of the string quartet in every technical aspect, since the piano was then the medium of performance with which he was most familiar. A partial explanation for his destruction of twenty or more quartets may be found in the extreme scrutiny to which he subjected all of his compositions.⁹

Yet the real reason for the lengthy gestation of op. 51 may lie elsewhere. As can be expected, Brahms was challenged by Beethoven's string quartets, opp. 130, 131, 132 (the Grosse Fugue) and 135, and was confronted with the problems of reconciling typically romantic sonorities in the

⁹ Brahms's pathologically cautious and self-critical attitude in creating satisfactory pieces in a given form caused him such intense excitement that he frequently found himself with creative energy left over. Because of this, many of his works are in pairs in the same genre, and were produced in immediate succession. The two string quartets of op. 51 are one such case in which the first work, more compact, dramatic, and energetic in character, provides drastic contrast with the second, which is more gentle, lyrical, and spacious. The other sets of two are the piano variations (op. 24; 1861 and op. 35; 1862), the overtures (op. 80; 1880 and op. 81; 1881), the clarinet sonatas (op. 120; 1894), the piano quartets (op. 25; 1861 and op. 26; 1862), and two sets of two symphonies (no. 1; 1876, no. 2; 1877, and no. 3; 1883, no. 4; 1884).

contextual requisite of classical form. Infusing the traditional form with a new spirit in the medium of the string quartet was not easy. But more importantly, Brahms insisted on writing obligato accompaniment parts; i.e., the inner part of the second violin, viola, and cello that are almost always derived from the opening main motivic material.

Although he was following in Beethoven's footsteps, Brahms perhaps was reluctant to face a direct comparison of his string quartets with Beethoven's. There is no doubt that Brahms struggled in dispensing the main motivic material as evenly as possible to all four voices. But, at the same time, he knew that he must not lose the diversified participation of all four voices. This goal is difficult to achieve with the piano's thick texture.

Perhaps the lengthy gestation of the op. 51 quartets and Brahms's reluctance to publish them resulted from his technique of organizing the main motivic materials in four-part texture. Early in his career, Brahms felt secure in expressing himself in thick texture, such as in the medium of piano or a medium with piano (e.g., piano quartets). In the op. 51 quartets, which are analyzed in Chapters II and III, priority is given to motivic over harmonic considerations, and this directly influences the structure of harmony and form. In general, Brahms shows this not only in total architectural features, but also in the organic growth of the shaping and reshaping of the original idea,

especially into contrasting themes and transitional or bridging materials.

The above features also appear in the piano sonatas of 1853, but there is a substantial difference in the organization of motivic materials and in the aspect of tonal polarity of the sonata form. The tonal contrast between the first and second themes in the op. 51 quartets takes secondary importance to that of thematic and motivic contrast. The contemporaneous musical conflicts early in his career may have led Brahms to hold back the op. 51 quartets until he was confident in experimenting with tonal distribution in the sonata form (see. footnote 10). He knew that he must write string quartets, but not before he was very sure that his work was as good as he could make it.

Finally, another possibility concerning Brahms's reluctance to publish the op. 51 pair of quartets immediately after they were written is that he might have been concerned about the explicit motivic reference in his C-minor quartet (first movement) to Mozart's C-minor piano concerto, K 491. The two works share many similar elements, especially in the opening statement of each first movement. A brief comparison between the two is discussed at the end of Chapter III.

The Meaning of Motive in Brahms's
Op. 51 String Quartets, and Its
Influence on Structure

A seed is planted--it germinates and ultimately puts forth leaves and flowers. In music, this seed is a motive. Once the motivic seed begins to germinate, the powerful genetic information is transmitted into every component of the leaves and flowers. The result, a fully grown plant or a tree, can be comprehended only in terms of the process of constant shaping and reshaping by the grower, according to his envisioned architectural entity as an organic whole.

The above analogy may describe the very nature of Brahms's music--monomotivic, with an embryonic seed--with respect to its organic growth, which in turn generates the evolutionary force in the course of development and transformation. This motivic seed, often planted at the very beginning of a composition, plays a vital role in Brahms's music, perhaps more so than with any other composer of his time. Brahms, like his predecessor and spiritual mentor Beethoven, belongs to that category of composers who hammered his initial idea into many different shapes without losing its basic identity.

Although he was a retrospective composer of traditional forms, Brahms did not strictly adhere to the common structural requisite; rather, he exploited and modified

earlier formal traditions to the furthest extent in order to accommodate his own creative ideas. Consequently, to Brahms the sonata form was not a predetermined rigid scheme or mold into which musical ideas were poured.

The so-called development section in each quartet's sonata form movement is merely a formal labelling, since the whole movement is one continuous organic growth and is developed homogeneously from the smallest motivic cell in a nucleus of musical ideas. Consequently, Brahms's powerful, sometimes even exhaustive motivic transformation process may at times appear to cause the structural ambiguities in his music.

Motivic penetration by way of transformation may seem common in most nineteenth-century music. In Brahms's music, however, it is not by chance that a certain musical gesture of a motive or a fragment of a theme occurs at a specific place in the music. What is more, his frequent and unconventional musical gestures are fully intentional, creating the special Brahmsian quality which is quite different from that of his contemporaries.

Although Brahms wrote in classical style, his nature was essentially romantic. Therefore, the term "classic-romantic" is perhaps more fitting in characterizing Brahms's music. As James Webster observed with respect to the sonata form principle in romantic temperament, the structural scheme of sonata form underwent a significant modification

from the classical tradition, particularly in the concept of tonal polarity:

In Romantic styles, the focus on the explicit "content" of music, on original themes, on continual thematic transformation, and on dynamic processes inhibited the full integration of complex structure along classical lines. The Romantics believed that a sonata-form exposition was governed more by the contrast between the "first theme" and the "second theme" than the tonal polarity between the keys of the first and second groups.¹⁰

This statement is particularly accurate with respect to the op. 51 quartets. In the opening movement of the C-minor quartet, the initial rising minor third--a motivic cell--also constitutes the second theme with contrasting contour; hence, the second key is minor instead of the usual major key. Furthermore, the fourth movement, whose second theme results from a subtle transformation of the opening motive within the same key context, even though it is ambivalent, substantiates Webster's observation. The traditional tonal polarity plays a secondary role. Likewise, in the first movement of the A-minor quartet, tonal polarity is almost absent due to the emergence of the false second key before reaching the true second key area, where the main motive of the first theme also dominates.

¹⁰ James Webster, "Schubert's Sonata Form and Brahms's First Maturity," 19th-Century Music, Vol. II, No. 1 (July 1978), p. 18.

Unlike classical models, Brahms's music often abounds with harmonic and melodic complexities, which sometimes cloud the formal structure. For example, the music of Brahms is developmental both thematically and harmonically from the very beginning of the exposition, thereby creating an inseparable reciprocal relationship between the first and second themes. It often exhibits "circular" or "spiral-like" structural tonal shifts, which is a feature usually reserved for the development section. Therefore, Brahms's development section is considerably shortened, and gives the impression of being intentionally truncated. The op. 51 quartets also exhibit the above features.

In Brahms's music, there is the problem of structural ambiguity. In order to understand the structural deviation, it is necessary to understand the function and meaning of the motive and its transformation with respect to the organic whole as designed by the composer. Likewise, to correctly understand the structural coherence in Brahms's music, it is essential to interpret the digressing harmonic events and deviation from the structural norms from the view of a coherent whole. Particularly, since unconventional elements in Brahms's music seem to result from persistent motivic transformation or development, and since the chain of musical activities in each part is the direct result of this embryonic motivic cell's characteristic development, an accurate analysis of the main motive or the original seed is

a critical requisite in understanding Brahms's structural design.

In Brahms's motivic transformation, each musical event originates in the progenitor or embryonic seed; its kinship with subsequent sections invariably exists, at times explicitly and at other times implicitly. Philip Friedheim discusses some of the problems with the thematic aspects of sonata form, and carefully distinguishes between "thematic transformation" and "thematic development" in nineteenth-century music:¹¹

In the latter, a passage, often sequential in character and harmonically unstable, is constructed from a short motive derived in turn from a longer theme. It exploits the possibilities inherent in a single melodic fragment. Structurally, the developmental passage refers back to the portion of the original theme from which it stems, and must be understood in relation to it. Thematic transformation, on the other hand, results in a new, self-sufficient theme, which can even engender its own development section. It need not depend for its comprehension on the listener's ability to relate it to the material from which it is derived. In transforming a theme, one takes the entire phrase rather than a portion of it, and subjects it to a specific procedure, such as inversion. Sometimes simple devices such as a change of tempo or mode may radically alter the character. Since the application of this technique results in new material rather than in an expansion of old

¹¹ Although Friedheim differentiates the two terms, they will be employed interchangeably in the analysis, for the codification of the motives in the op. 51 quartets according to these two terms is not the intention of this writer nor is it necessary. However, the fundamental underlying concept behind the two terms is beneficial in understanding the derivation of motives from a progenitor in the analysis of the op. 51 quartets.

material, it appears more often within an exposition than a developmental section.¹²

Such is the case with the op. 51 quartets. As mentioned, the more elaborate method of thematic (or motivic) transformation eliminates the need for key polarity as a support for the basic tonality. Ultimately, as in the op. 51 quartets, preserving a central tonality in the tonal scheme of the sonata form seems to be of secondary importance. As Webster observed, this feature is due simply to the exclusive motivic development from the outset of the music. It is vividly displayed in the C-minor quartet (see Chapter III). Friedheim further notes the influence of the above technique on Brahms's expositions, though he does not refer to specific musical examples:

Brahms's fascination with possibilities of transformation coupled with his own lyric gift often makes the expositions of his sonata-allegro movements more inventive and compact than the developments. In these works, thematic transformations usually take one of three forms: (1) inversion, (2) the derivation of accompaniment figures from previous thematic material, and (3) application of a new rhythmic pattern to the original melodic line.¹³

This exhaustive motivic transformation from the outset of the exposition profoundly affects the ways in which musical material is organized, particularly in the

¹² Philip Friedheim, "The Relationship Between Tonality and Musical Structure," Music Review XXVII, I (1966), p. 40.

¹³ Ibid.

proportional balance of all parts. Therefore, in analyzing Brahms's music, the term "development section" may require reassessment of the traditional viewpoint, especially since the development sections--in the op. 51 quartets in particular--are less developmental than the first, second, and closing theme groups, let alone the transition. Though the op. 51 quartets are not included in his discussion, Webster notes numerous cases in which the transition areas connecting the main key areas refer explicitly to the main opening motive. In fact, in the op. 51 quartets the transitional or bridging materials make explicit reference to the main motive, the progenitor.

Gustav Jenner, who studied composition with Brahms in 1888, gives a glimpse of Brahms's attitude toward the sonata form principle. It is said that Brahms told Jenner to study Beethoven's and Schubert's piano sonatas in particular.¹⁴ Jenner notes that a sonata form must be built logically from a theme and must be the consequence of the main idea.¹⁵ That is, musical form is thus dependent on, and consequent to, the initial motivic idea. Jenner also supports the theory that the external form in Brahms's music is a mere abstract framework, which is dictated by the natural unfolding of an embryonic progenitor.

¹⁴ Gustav Jenner, Johannes Brahms als Mensch, Lehere, und Künstler: Studien und Erlebniss (Marburg: Elwert, 1905), p. 60.

¹⁵ Ibid., p. 6.

Arnold Schoenberg coined the term Grundgestalt (basic shape) from observing the embryonic function of the motive in much of Brahms's music. Schoenberg, in his essays "Composition with Twelve Tones" and "Brahms the Progressive," employed, among many other works, the two op. 51 quartets in elucidating those aspects of Brahms's creative practice which are unconventional and which point at the same time toward the music of the future. Another term, "developing variation," is also defined in these essays. This term refers to the technique of constructing a motive or theme through the continual development of a basic idea using procedures such as inversion, fragmentation, or extension. Schoenberg says that Brahms's use of motivic development is more concentrated and pervasive; it permeates all aspects of the texture, affecting even the metrical framework and phrase structure. These characteristics lead Schoenberg to consider Brahms's music as the most advanced manifestation of the music of the future.¹⁶

To achieve variety and freedom in every part of the music, Brahms allows the internal energy of the basic motivic material to follow the momentum generated by the free unfolding of motive; thus, a considerable amount of development has already taken place even before the opening of the actual development section. In the process, the resilient germ-like motive may at times occur in an easily

¹⁶ Arnold Schoenberg, Style and Idea, ed. Leonard Stein, trans. Leo Black (New York, 1975), p. 129.

identifiable expansion, sometimes in an elusive contraction, where the motive may be reduced to a mere interval or a few pitches. The result is often an unrestricted musical language, with irregular phrasing, rhythmic variety, and, most important of all, the priority of motive over harmony. The result is structural ambiguity.

Another intrinsically Brahmsian character is the dichotomy in thematic statement (see chapters II and III, pp. 68-70, 234-37); that is, Brahms generally presents a motivic or thematic idea in a direct and straightforward manner in a developmental and transformational process, but at times he also deliberately avoids straightforward relationships in order to conceal the identity of the progenitor.

Following Tovey's suggestion, the present study has as one of its main tasks the search for compositional "internal evidence." A detailed investigation of motivic development and organization in the op. 51 quartets will provide compositional reasons for their lengthy gestation and will help to discover the hidden conceptual principle in the shaping of musical structure.

The Cryptogram of the Motto Motive and Its
Application to the Op. 51 Quartets

Of particular interest in the op. 51 quartets is the cryptogrammic formulation of motives, and their function and effect in structure. In both quartets Brahms uses motto motives that represent his friends, experience, and ideas.¹⁷

Occasionally Brahms uses the cryptogram, a playing with words or letters; hence, motto motive. Allen Forte points out that in the C-minor quartet, Brahms uses the pitches C, A, and Eb (Es=S) to portray Clara Schumann.¹⁸ However, the above notes are important structural harmonic regions at a deeper level. Other than that, they are not used as so called motto motives which act as an identifiable motivic unit throughout the music; they are only used as a symbolic gesture referring to the name of Clara Schumann. But in the A-minor quartet, the cryptogram motive is an identifiable, complete unit and plays a most important role, not only as a genuine motive, but also as a means of solving the problem of harmonic and thematic ambiguity (see premise 2 in Chapter II, p. 25).

In general, the motto motive, comprised of the first letters of a name or idea, acts as an influential motive or

¹⁷ Max Kalbeck, op. cit., 4th ed. (1921), I, p. 98.

¹⁸ Allen Forte, "Motivic Design and Structural Levels in the First Movement of Brahms's String Quartet" The Musical Quarterly, Vol. LXIX, No. 4 (Fall 1983), p. 502.

as a capricious emblem throughout a piece.¹⁹ However, the motto motives in Brahms are generally used merely as an opening gesture, such as in the initial notes F-A-E (frei aber einsam: free but lonely) in the first episode (F major) of the finale in piano sonata, op. 5 (1854; earliest known motto motive citation), another F-A-F (admittedly F sharp) in the Ballade, D major, op. 10, No. 2, and the more familiar one, F-A-F (frei aber froh: free but happy) in the Third Symphony, just to cite a few.²⁰

The A-minor string quartet of op. 51, however, intentionally and exhaustively employs the motto motive F-A-E more than other works containing motto motives; hence it is the main source of the thematic content governing the music. The above motto motive occupies a major portion of the motivic development or transformation and lays down the compositional basis at the beginning; it also contributes to the characteristically relaxed mood of the piece. In fact, it is one of the most intriguing of Brahms's compositions in that the cryptogrammic motivic manipulation obviously suggests a programmatic element--although Brahms is generally not associated with extra-musical and programmatic elements. Christopher Reynold notes the changing view of Brahms's compositional aesthetics:

¹⁹ Eric Sams, "Cryptography" The New Grove Dictionary of Music and Musicians, ed. Stanley Sadie (London: Macmillan, 1980), 5, pp. 78-82.

²⁰ Christopher Reynolds, "Choral Symphony by Brahms?" 19th-Century Music IX, No. 1 (Summer 1985), p. 21.

Post Romantic commentary was comfortable with an image of Brahms as a composer whose throttled feelings found therapeutic release in music usually termed "absolute" in order to distinguish it from works with extra-musical and programmatic associations. But lately, armed with quotations from Brahms's letters and the recollections of his friends and acquaintances, scholars from diverse backgrounds have begun to chip away at the graven image of Brahms as a paragon of absolute music.²¹

The motto motive, F-A-E (frei aber einsam) used in the A-minor quartet, is originally attributed to Brahms's friend Joseph Joachim.²² Although the motto frei aber einsam is said to have come from Joachim, its background and subtle meaning is actually more appropriate to Brahms's character and lifestyle than that of Joachim because Joachim, who once was married, had at least experienced the life of a family man.²³ Therefore, it may be safe to assume that Brahms borrowed the idea of the cryptogram from Joachim to portray humorously his own real-life circumstance--being a lonely bachelor but free as a bird. With this assumption, the motto frei aber einsam may thus be treated in the analysis as if it were Brahms's own motto, even though he

²¹ Reynolds, op. cit., p. 3.

²² Kalbeck, op. cit., p. 98.

²³ Joachim was still married to his wife Amalie when the op. 51 quartets were published (1873); in 1881 Joachim was divorced from his wife. Brahms sided with Amalie in the marital dispute, which caused a severe rift in the friendship between Brahms and Joachim.

claimed that frei aber froh (free but happy) was his motto.²⁴

The cryptogram, which plays one of the most important roles in the A-minor quartet and in the first and last movements in particular, constitutes the essence of many structural and harmonic ambiguities. The cryptogram of the motto motive also provides answers to many questions with regard to chord formations and locations in the music. That is, an examination of the quartet in relationship to the main motive F-A-E, which is almost the sole motivic basis of the A-minor quartet, will aid in deciphering not only many ambiguities of the structure but also in questionable harmonies (vertical arrangements of motives) appearing in the later stages.

The occurrence of the main motive (F-A-E) in various vertical arrangements also reflects the hidden meaning of frei aber einsam in the unusual formation of chord structures. They appear many times in the second inversion (six-four) at the most cadentially crucial points (e.g., the chord A-D-F on the cadential down beat: discussed later in connection with the development section). They are

²⁴ Peter Latham, Brahms, J. M. Dent & Sons Ltd. (London, 1975), p. 125. In fact, it does not matter whether the motto motive frei aber einsam is attributed to Joachim or to Brahms with regard to the cryptogrammic interpretation of motive in the analysis, because the motto motive (F-A-E) itself is the main motivic brick in building the entire music. The meaning of the motto motive, however, is used as if Brahms's own, as argued above, for the sake of injecting a point of humor into the deciphering of the ambiguous harmonic and melodic events.

structurally inexplicable but can be understood when the background meaning of the words "free but lonely" is associated with the musical context. For example, when one is free (as the motto indicates--being not a family man with due responsibility), one may not have a stable place; hence, the avoidance of the root position chord at cadential points. This basic attitude toward life, as will be seen in the analysis, is effectively depicted in the A-minor quartet and is reflected by playing with the words frei aber einsam.

The exclusive employment of the motto motive in the A-minor quartet, and in the two outer movements in particular, demonstrates the true characteristics of "monomotivicism," where every subsequent musical idea results from the development or transformation of the original idea, while its basic identity is retained.

With these as the basic hypotheses, this study seeks to understand motivic, harmonic, and structural organization by pursuing not only the motto motive F-A-E, but also the literal meaning of the motto "free but lonely."

A Perspective on the Use of an Arbitrarily
Invented Motto Motive as the Basis
for a Composition

Since the A-minor quartet is built exclusively on the motto motive, it is necessary to make a general comment on how this motive influences the character and overall structure of the music. The freely invented motto motive as the basis for a composition may require a serious artistic judgment in the creative process of music. Playing with words in music--the highest art-form--belongs in the realm of only a great craftsman such as Brahms. But basing music on a cryptogram using a motto motive requires extreme technical proficiency, because a composition's musical aesthetic should not be interrupted by the whimsical manipulation of an extraneously formulated motive, which itself might work against the natural unfolding of the motive.

Music as an expressive art-form must not compromise itself in expressing a program. From the compositional point of view, a motto motive formed by the first letters of the words in a name or phrase, is certainly a less desirable compositional basis than an inborn motive, for internal energy is better generated with the built-in motive than with the extrinsically conceived motto motive. A gifted composer can create a masterwork based on a motive, whether

it is intrinsically conceived, as in the C-minor quartet, or extrinsically invented through the free juxtaposition of letters, as in the A-minor quartet. But music as an expressive art-form must not compromise itself in expressing a program.

To a degree, this accounts for the differing characteristics of the two op. 51 quartets. The general character of the C-minor quartet, whose main motive is intrinsically generated, is coherent and compressed in interactive motivic organization, while the A-minor quartet, whose main motive (a motto motive) is extrinsically formulated, is turgid and requires ample space for its ever-expanding manipulation of the motto motive. Also in the A-minor quartet, the need to set up the motto motive in the beginning explains the unusual length of the subdominant opening (see Chapter II).

This is not to say that the subdominant opening in the A-minor quartet in any way decreases the music's architectural value. The use of a freely formulated motive forces an unusual opening as in the A-minor quartet, whereas the use of inborn motive allows for compactness as in the C-minor quartet. Also, each of the two op. 51 quartets is built on a different type of motivic cell. By observing the small motivic unit in the C-minor quartet and the relatively longer, well-defined motive of the A-minor quartet, it will be shown that the end result of the composition of each

quartet or the plant, so to speak, is merely the natural consequence of a motive or seed whose growth controls the work's organic development and overall external frame. As Jenner indicates (cf. footnote 14), the two op. 51 quartets are good examples of how a characteristic motive effects the outcome of a piece not only at higher levels but also in local levels.

One key aspect of this study is concerned with motivic organization and its effect on structural coherence. Because of this author's interest in the motto motive's influence on motivic organization, an analysis of the A-minor quartet appears first.

CHAPTER II

A-MINOR QUARTET: FIRST MOVEMENT

Premise

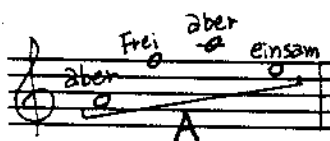
The A-minor quartet, whose character is quite different from the economically structured C-minor quartet, allows ample space for the active role of the motto motive and a few other related motives. An analytical guideline is therefore necessary in analyzing the first and last movements of the A-minor quartet.

The motto motive F-A-E is the generative force in shaping the character of the A-minor quartet. Therefore, the analytic procedure of breaking an entire thematic unit into smaller cells and affixing a label to each (dissimilar) unit--a common practice in motivic analysis--will be avoided.

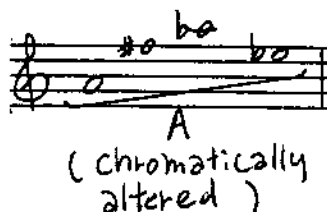
A few basic premises will be applied to both the first and last movements. To avoid confusion, however, only those immediately necessary premises are given here, leaving others to be discussed in later portions dealing with specific points of interest. The following premises apply only to the A-minor quartet.

1. The main motive A (see below) includes its inversion, retrograde, and permutation (reordering). Therefore, all transformations of the original shapes will be identified as

motive "A" with the description of each transformation in parentheses--e.g, A (permutation) or A (inversion). The word "original shape" also identifies a pitch-class collection, which can be subjected to transposition and is not associated with any particular rhythmic pattern.

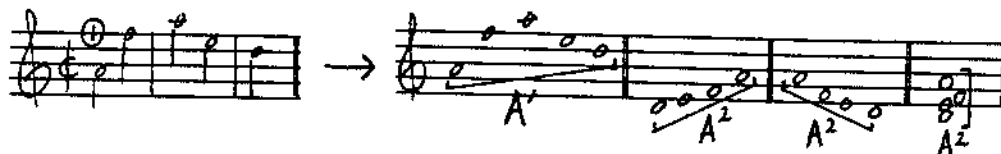


2. As long as the pitch set is identical to the notes in motive A, the same letter A is retained regardless of the chromatic alteration of the original motive A. The words "chromatically altered" in parentheses will then be used for identification.



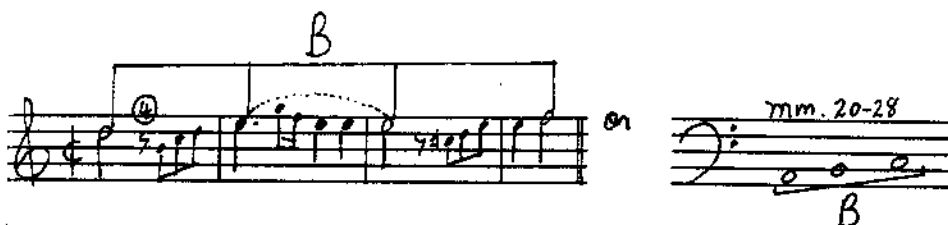
"Chromatically altered" will always imply the same pitch set in motive A, A-F-A-E (or F-A-E). Since the chromatically altered motive A, Ab-F#-Eb (from A-F-E) plays as important a role as the original motive A with respect to the cryptogram and structural events, it assumes an independent identity, but is always dependent on the original motive A for its function in the piece. Therefore, the interchangeability of a pitch or note (i.e., from A to Ab or to A#) will apply to the main motive A. In this sense, pitch-class here applies not only to octave duplication but also to all chromatically altered notes of motive A that share the same letter name. The altering of pitches--Ab, F#, Eb of motive A--may be regarded as the cryptographic distance (a half-step) from the original motive F-A-E, as if Brahms were changing the situation, "free but lonely"--the original motive A.

3. The motives that result from the addition of the first note D in measure 3 (as a complete rhythmic unit) will retain the label A to identify it in relationship with the original motive A. However, Arabic numbers will be added to differentiate from the original motive A.



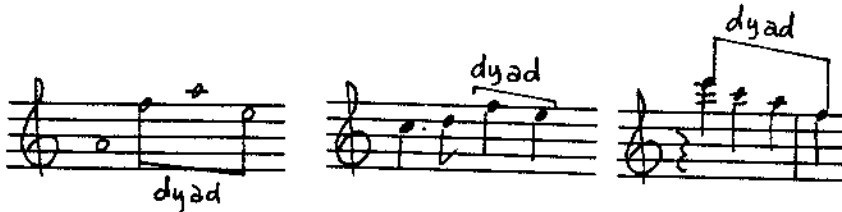
As illustrated, the three rearranged versions of A², whether linear, vertical, or retrograde, will all take the same labelling in order to identify them in connection with the original motive A.

4. Another important motive, labeled B in the music, is assigned to the interval of a third.



Motive B is also subject to transposition, retrograde, and inversion, but no rhythmic pattern is assigned to this motive.

5. The two notes, E-F (or F-E) from the original motive A (F-A-E) will be simply identified by the word "dyad," for they appear as a pair (vertically or linearly) many times in the piece.



This dyad, however, is not subject to transposition. It always appears with the original pitch set, because the two letters E and F are the first letters of the words "einsam" and "frei" (lonely and free) respectively. They present the opposing forces of the conflict in Brahms's lifestyle (see p. 31 concerning the price of being free). It will be shown that the dyad representing "free" and "lonely" will be a key to understanding many ambiguous harmonic events. Also an aspect of dichotomy arising from the mutually opposed concepts of these two words will be discussed from the viewpoint of structural significance.

These five basic premises will serve as the key in this study. A few additional premises will be examined at more appropriate points, since they are best dealt with and understood in the immediate context of the discussion.

The following two notational guidelines are provided here for the sake of clarity.

1. In identifying specific pitches, a pitch-class name is represented by capital letters, and specific pitches are indicated in the traditional manner.
 e.g., C=pitch class.
 c2=the exact pitch one octave above middle C.

2. Analytical notation and diagrams may vary in differing situations. However, they will be kept relatively consistent and are self-explanatory. Some diagrams may appear to use Schenkerian reductive notation, but are not intended to be Schenkerian in approach (though Schenker's influence is not denied). They are used only as analytical tools to facilitate, supplement, and illustrate points under discussion.

Finally, because of the cryptogrammic use of the motives, there will be a considerable number of cross-references. Although undesirable, this is necessary and unavoidable in such an exhaustive motivic analysis, where cryptogrammic manipulation of pitches forms the basis of motivic organization.

Exposition

Setting the CharacteristicMood at the Beginning

One is first struck by the prominence of the first four notes of the first violin, a1-f2-a2-e2. A question immediately arises: are they components of the key of A-minor or of D-minor? From the outset the music sets an off-course mood (so to speak) not only by the ambiguous key implication of the motto motive in first violin but also through the cello's groundbass-like pattern beginning on the subdominant D in the principal key of A minor (Ex. 1).

Ex. 1. mm. 1-13

Allegro non troppo (Verifications 1878)

1. Violine
2. Violine
Bratsche
Violoncell

A feeling of unsettledness is inevitable, not only because of the strong subdominant but also the ambiguous

bass line (cello, mm. 12-13), and the last chord (m. 13) of the first theme group which gives the impression of deliberate truncation of the root position (i.e., V-V4/2-i6 in mm. 11-13). Following a threefold dominant preparation (mm. 9-11), the root unexpectedly slides down a step in measure 12 and ends on the imperfect close in measure 13 (first inversion). The scale of the bass line (cello), which has only a single whole note per measure in the entire first theme group, nonetheless paves the way to the tonic key of A minor.

However, the key of A minor is not confirmed until measures 8, 9, and 10; from there the Bb chord in first inversion (m. 8) becomes the pivot chord of bII (Neapolitan) in A minor in order to move from D minor to A minor. Then, Brahms moves straightforwardly to confirm the key of A minor (version a in Ex. 2; this reconditioning aspect is dealt in pp. 43-45).

The strong dominant preparation in measures 9-11, however, is a welcome relief from the ambiguity of key center. But no sooner is there relief in the journey toward the goal of the principal key, than that sense of relief is eradicated by the unexpected side-sliding step motion of the bass line (mm. 11-13, cf. alternative--version b). Such a harmonic progression at the end of a musical activity is by no means unusual. However, the avoidance of a root position at the long-awaited cadential point after a strong dominant

Ex. 2. mm. 7-13

Handwritten musical score for Example 2, measures 7-13. The score is in 4/4 time and consists of two systems, (a) and (b). System (a) is labeled "Redundant?" and shows a first violin part with circled notes 7, 8, 9, 10, 11, 12, and 13. System (b) is labeled "Alternative" and shows an alternative first violin part with circled notes 7, 8, 9, 10, and 11. The score includes a key signature of one sharp (F#) and a common time signature (C).

preparation should not be viewed as trivial or without specific intent. It may be related to the cryptogrammic nature of the motto motive, frei aber einsam (i.e., unsettledness--having no root in a "free but lonely" life of a man--perhaps as in Brahms's own).

The opening motive a1-f2-a2-e2 of the first violin plays a significant role in shaping the organic growth and character of both the first and fourth movements. In the four-part texture, Brahms delegated the notes of the main motive, A(aber), F(frei), A(aber) and E(einsam), to the first violin. He gave a merely filled-in alto voice to the second violin; seemingly innocent quarter-note triplet figures to the viola; and a succession of whole notes that

resembles a ground bass to the cello. It is easily sensed that the first violin contains the singularly important motivic components. It is not immediately apparent, however, that these motivic components are to become the most important ingredients in establishing the direction of the music (Ex. 3).

Ex. 3. mm. 1-7



Throughout the movement, the three major motivic components, labelled A, A' and B in Example 3 (see premise items 1, 3, and 4), are at times kept intact and at others varied. However, the development of each component's association by transformation (inversion, retrograde, and permutation) is unmistakable as the music unfolds. These initial motivic components, which comprise the first thirteen measures of the piece, produce different sizes of subordinate motives, transitions, elaborations, and codettas.

As will be evident in the analysis, the exclusive employment of the motto motive in this quartet, and in the two outer movements in particular, demonstrates the true characteristics of "monomotivicism," in which every subsequent idea is the development or transformation of the original seed while not losing its basic identity.

Setting Non-Harmonic Tones and Foreshadowing
Their Structural Role in Later Stages

The ambiguous opening in the "wrong" key associated with the motto motive A (referred hereafter to as main motive A) sets up the direction of the music. Generally in Brahms's music, the mood and character may change drastically, but pitch content (specifically pitch-class) stays fundamentally intact.

This is the case with the non-harmonic tones in the viola part (shown in Example 4) that later become the motive of the second theme and development section. The viola part in a quarter-note triplet figure $\downarrow \downarrow \downarrow$ in cut time (2/2) does not seem to assume any significant role at the outset (cf. Ex. 1) by simply filling the inner voices. For the ease of reading, the music is reduced to a four-part vertical arrangement (Ex. 4).

Ex. 4. mm. 1-10

The musical score for Example 4, measures 1-10, is presented as a four-part vertical arrangement. The top staff is a treble clef with a key signature of one sharp (F#). The bottom staff is a bass clef. The middle two staves are labeled 'viola' and contain a quarter-note triplet figure. The score includes various accidentals (sharps, naturals, flats) and circled annotations (1) and (2). The time signature is cut time (2/2).

The first four non-harmonic tones (mm. 1-4) are unmistakable in their identity, although they are embedded in such a way--almost hidden in the fast-moving quarter-note triplet figures--that they become hardly audible. The idea of minimizing the audibility of the non-harmonic tones at the outset in this manner may be construed as the composer's intentional effort to conceal the identity of the non-harmonic tones. However, the viola's first four non-harmonic tones will subsequently emerge as a powerful motive, revealing themselves dramatically when they become prominent chord tones later.

Initially, all non-harmonic tones faithfully resolve within each measure: the last non-harmonic tone in the viola, G# (m. 4), whose identity is concealed by a surrounding tritone (in the diminished-seventh), is also resolved in the same measure (Ex. 5).

Ex. 5. mm. 3-5

The image shows a handwritten musical score for three staves, measures 3-5. The top staff is in treble clef, the middle in alto clef, and the bottom in bass clef. A circled '3' is in the first measure of the top staff. The music consists of quarter notes and eighth notes, with some notes marked with 'x' or 'o'. The notation is somewhat messy and appears to be a working draft.

The eventual resolution of the tritone--from augmented fourth to major sixth in mm. 4-5--seems to be of secondary importance

The series of unheralded non-harmonic tones and their resolution is completed by measure 4, as if to say that a very important mission of the non-harmonic tones, which needed to be set up at the very beginning, has now been successfully completed. Now the viola, containing no more non-harmonic tones, blends well with the other voices in finishing the first statement of the theme in measure (mm. 1-13).

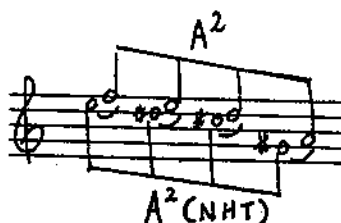
There exists an extraordinary relationship between the main motive A and the non-harmonic tones: the pitch-class set of the non-harmonic tones, E-D#-C#-G#, is a transposition of the motive A1, A-F-E-D by a half step (both are 4-14 [0237] in pitch-class set; Ex. 6).

Ex. 6. mm. 1-4

The diagram illustrates the relationship between Motive A1 and the Viola's Non-Harmonic Tones (NHTs). On the left, a treble clef staff labeled 'V.I.E.' shows Motive A1 (A-F-E-D) and Motive A2 (A-G-F-E) with pitch-class set (0237). An arrow points to the right, where a bass clef staff labeled 'Viola: NHTs' shows the non-harmonic tones E-D#-C#-G# and Motive A2 (A-G-F-E) with pitch-class set (0237). The interval between the two sets is labeled '(tr. 1/2 step)'.

Motive A1 is also exactly the resolution of the non-harmonic tones in the viola--the first non-harmonic tone E to F, the second D# to E, the third C# to D, and the fourth G# to A respectively (Ex. 7).

Ex. 7. mm. 1-4



This seemingly unimportant set of non-harmonic tones in the viola also is the immediate reflection of the main motive A. The harsh harmony arising from literally superimposing the chord tones over the non-harmonic tones is hardly noticeable here. For now, the non-harmonic tones in the viola are merely a fleeting existence buried in the quarter-note triplet rhythmic figure. The non-harmonic tones, however, will eventually become alive (and hence dramatic) later in the second theme and development. Even the order of the initial appearance of the non-harmonic tones will correspond to that of the tones of the second theme. This will be shown in Example 8.

Having established the direct relationship of non-harmonic tones in the viola to motive A, we will now examine the second theme (beginning in measure 46), to see how it is related to these non-harmonic tones. Finding an origin of the second theme is a necessary step here because, as mentioned in Chapter I, Brahms's second theme invariably refers to the first theme but not in straightforward manner. In tracing the origin of the second theme, however, it is

possible that the second theme might have come from other segments of the music rather than from the non-harmonic tones in the viola part. The answer to this question, however, will be discussed in the development section, where the relationship between the nonharmonic tones and second theme will finally become clear (cf. Ex. 45). Therefore, the two probable origins of the second theme will only be discussed here, leaving the answer in later discussion of the development section.

The second theme with its two probable origins is shown in Example 8.

Ex. 8. mm. 5, 46-52, 1-4

The musical score for Example 8 consists of three staves. The top staff is a single melodic line with a circled '5' above the fifth measure. The middle staff is for Violin I (VI. I) with a circled '46' below the first measure. The bottom staff is for Viola with a circled '1' below the first measure. The Viola part features a triplet of notes in each measure. The Cello part is also shown. Lines connect the circled numbers to specific notes in the top staff, illustrating the relationship between the second theme and the non-harmonic tones in the viola part.

The second theme can be traced not only to the non-harmonic tones in the viola, but also to the short motivic figure in measure 5, which was a segment of motive B (cf. Ex. 3). The relationship between the second theme and the notes in

measure 5 seems convincing, in that the structurally important pitches of the second theme e2 (m. 46), g2 (m. 47), f2 (m. 49), and e2 (mm. 51-52) reflect the same notes in measure 5. The above pitches are also agogically more prominent. They also participate as chord tones, with the exception of the pitch g2, which is an appoggiatura to the subdominant.

However, when the non-harmonic tones in the viola is applied to the second theme, the relationship between the two is rather subtle, and not immediately apparent. The initial notes E and D# in the second theme (mm. 46-47) are the first two non-harmonic tones of the viola. The subsequent note C# over four measures (mm. 48-51) and the enharmonic notes Ab and G# of the cello (mm. 49, 51-52) are the same as the two remaining non-harmonic tones of the viola, C# and G#.

All non-harmonic tones except the initial note E are so strongly accented on downbeats that they overpower the surrounding chord tones. The order of their appearance is also exactly the same as the series of the non-harmonic tones in the viola part at the beginning (i.e., E-D#-C#-G#, cf. Ex. 7).

It is obvious that the three notes, D#, C#, and G# of the four-note series, E, D#, C#, and G#, must be treated as non-harmonic tones in C major if they are to be used in that key. However, the manner in which they are treated--as

integrated in to the C-major context--is noteworthy. The first note E in the second theme explicitly assumes the role of a structurally important chord tone in measure 46. But when reappearing in measure 48 (see the music), it becomes a strong non-harmonic tone on the downbeat over a dominant-seventh harmony, thus becoming more distinguishable than in its earlier appearance where it blends well with the harmony.

The subsequent non-harmonic tones D# (mm. 46-47) and C# (mm. 48-51) also should not be ignored; note their prominent positions on the strong beat and their rhythmic value (♩.), which is longer than that of the resolved note (♯). Finally, the last note, G#, appears in measure 49 first as Ab (cello) and later as G# in measures 51-52 (cello, viola, and second violin). Here, G# in the cello (m. 51)--previously a mere accented non-harmonic tone--becomes the chord tone in the following measure (m. 52), as if to indicate that an important presentation of the above four notes E-D#-C#-G# has now been completed, just as they were at the outset--no non-harmonic tones were to be found in the viola part after the initial announcement of the series of non-harmonic tones (mm. 1-4).

The behavior of these non-harmonic tones in the recapitulation needs to be briefly mentioned here, since a comparison will further clarify the role of these non-harmonic tones in the exposition.

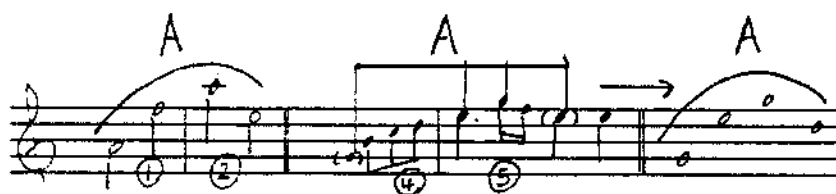
The non-harmonic tones in the viola of the first tonal group are all eliminated in the recapitulation (the first tonal group) a further indication that their service is no longer required, because they were employed as chord tones in the second theme and development sections (this aspect will be treated in detail in the discussion of the development section). However, these four notes, E, D#, C# that once had a major share as the motivic tones, particularly in the second theme and development, become chord tones in the second theme area of the recapitulation. That is, the second theme returns in the tonic major (A major) rather than in the tonic minor (A minor)--thereby E, D# (as raised fourth), C# and G#, being components of A major, no longer act as the non-harmonic tones.

We have so far looked into the two probable sources of the second theme--one from the series of non-harmonic tones in the viola part at the very beginning, and the other from the short motivic figure in measure 5 (cf. Ex. 8). As mentioned, the detailed discussion in finding the true origin of the second theme will be delayed until the discussion of the development section, where the significance of these non-harmonic tones is brought out fully.

As seen earlier, the series of non-harmonic tones in the viola was actually the immediate reflection of the pitch class content of motive A transposed down a half-step. The

short motive in measure 5 can be regarded as the immediate development (transposition) of the main motive A, when the whole rhythmic phrase in measures 4 and 5 is taken as a unit (Ex. 9).

Ex. 9. mm. 1-2, 4-5



The above example shows how an original idea can immediately be developed by a simple change of rhythm. Indeed, the transposed version of motive A shown in the third column in Example 9 is the closing theme of the exposition.

Contrast in a predominantly monomotivic piece may be achieved by varying the contour while retaining the pitch content of the theme. Therefore, the pitch-content of the first four non-harmonic tones (viola) will play one of the most important roles in the music.

The Procession from One Key to Another in an Extremely
Limited Time Span, and the Premature Arrival of the
Harmony of the Second Key in the First Key Area:
Melodic Motive Becomes Harmonic Motive

It has often been observed that in Brahms's music an emphasis on motivicism frequently overrides harmonic context--hence, many harmonic ambiguities result. Indeed, this A-minor quartet is no exception. However, in the cryptogrammic context, the motto motive is involved in a much more significant way. The following illustration is a case in point.

The reason for the subdominant beginning may have to do with the letters of the main motive A. The letters F, A, and E of the motto motive are important ingredients if Brahms is to play with the meaning, frei aber einsam (free but lonely). As shown in Example 7, all non-harmonic tones, deliberately set up at the beginning, gravitate to a D-minor chord. Thus, Brahms did not have much choice of harmony (i.e., choice of opening key) in this context, because he chose the above words, F, A, and E from "frei aber einsam" as his opening motive in this quartet.

Generally, the A-minor quartet is considered more pensive and relaxed, with a true romantic tone.¹ This characterization, however, is only partially valid. It is

¹ Donald S. Tovey, Essay in Music Analysis: Chamber Music (London: Oxford University Press, 1944), p. 225.

true that the A-minor quartet is the less restrained than the C-minor quartets. However, there is something labored in the transition and development sections. It will be shown that Brahms makes this laborious section quite simple, but not without a price (see p. 52).

The length of the first theme group (mm. 1-13) is thirteen measures. The first theme section, however, is comprised of only ten measures if the last three measures are not considered; i.e., mm. 11-12 are the repetition of the previous two measures (mm. 9-10), and the last measure (m. 13) is the beginning of a new section (cf. Ex. 2). Out of these ten measures, the tonality of the first eight measures is clearly D minor (Ex. 10). It is unusual that not only one or a few measures but the major portion of the first theme is in a key other than the tonic key of A minor (the passage is rearranged in triadic formation as there is only one chord in each measure).

Until measure 7, the D-minor tonality is prolonged by voice-exchange between the first violin and cello, as shown at b). Although there are intervening harmonies, they simply reflect the underlying D-minor harmony with voice-exchanges (shown by the dotted line), and the dominant-seventh chords in measures 5-6 further confirm the D-minor tonality. The important question here is how the composer reconditions the harmonic process in moving from D minor to A minor in such a short span of three measures. How can a

Ex. 10. mm. 1-13

a)

b)

[d]: i — [a]: V — i₆

listener perceive a harmonic transition as being smooth in the duration of only three measures?

There are three factors operating to make a smooth transition possible.

First, the pedal tone in the viola contributes (rearranged as a single whole note in each measure; Ex. 11).

Ex. 11. mm. 1-13

Viola:

Cello:

As previously mentioned with regard to the possible origin of the second theme (cf. Ex. 8), the viola contains not only

the concealed non-harmonic tones but also the pedal tone, which is sustained until it finally moves to Bb in measure 7. It then moves to E (mm. 9-12) before reaching the final note C in measure 13. Although the pedal tone A is in an inner voice, the duration of 7 measures is convincingly long enough that what we have heard reveals, in retrospect, as much A minor as it does D minor.

Note that the bass line (cello), which generally assumes the role of tonal assertion, does not contain a single tonic pitch A until measure 20. This fact is quite contrary to Brahms's own demand that the bass in general must be the bearer of the harmony² (is this to connote perhaps the rootless state of wandering man?). Meanwhile, the pedal tone A of the viola minimizes the feeling of abrupt key change.

Second, the Bb triad in first inversion (bII6 in A minor) in measure 8 is a very important pivot chord here. This B-flat triad in measure 8 is heard at the same time as bII in the new key of A minor. But this perception results from the melodic construction, especially in the second half of the first theme.

Measures 8, 9 and 10 may seem like any regular modulation in which a pivot chord needs at least one to two extra measures in order to be interpreted in the new key. In modulation using an already altered chord in the old key

² Karl Geiringer, Johannes Brahms (Vienna, 1934), p. 189.

as a pivot chord in the new key is nothing unusual. However, this is not the case here. Such a synchronized perception to the ear in both D and A minor by a single chord Bb is not the least bit trivial. The altered chord Bb in measure 8, functioning as VI in the key of D minor, is perceived as bII in the new key of A minor at the very same moment it is still heard as VI in the old key (version c in Example 12).

Ex. 12. mm. 7-9

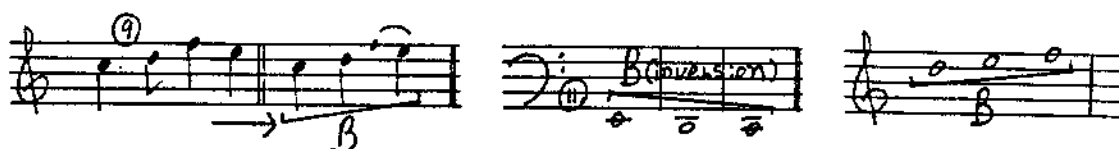
The image contains three handwritten musical staves labeled a), b), and c).
 a) Labeled 'Brahms:'. It shows a melodic line in D minor. Measure 8 has a question mark above it. The notes are E, F, G, A, Bb, A, G, F. Fingerings are 2, 3, 1, 3, 2. Below the staff is 'V(?)'.
 b) Labeled 'alternative'. It shows the same melodic line. Measure 8 has 'b6 5' above it. The notes are E, F, G, A, Bb, A, G, F. Fingerings are 2, 3, 1, 3, 2. Below the staff is 'V'.
 c) Labeled 'A minor'. It shows the same melodic line. Measure 8 has 'b6 b2' above it. The notes are E, F, G, A, Bb, A, G, F. Fingerings are 2, 3, 1, 3, 2. Below the staff is 'V'.

In version a) of the original score, the pitch c2 (b7 in D minor) is of interest. The melodic direction in measure 9 (versions a, b) may seem to cause the pitch bb2 (m. 8) to assume a synchronized melodic function in both keys. The note b7 at a) moves up to 1 instead of down to 6. Therefore, version b) as alternative may be preferred where b6 moves down first to 5 and then to raised 7, C#, before proceeding properly up to the tonic (d2) in measure 9.

Furthermore, the melodic interpretation in D-minor of version a) is less convincing because of the bass note E (cello, m. 9) that implies an A-minor six-four chord. Therefore, as in Brahms's version c), shown with the bracket, bb2 assumes the pivotal function between the two different key areas.

Third, what seemed a redundant in measures 11-12 is a necessary reinforcement of the goal harmony, A-minor. In so doing, however, the side-slipping of the bass line E-D-C in measure 10-13 (i.e., evading the root position at the cadential point) does not essentially weaken the key of A minor. Thus, this bass line in step motion can be related to the event of the preceding motive B (Ex. 13).

Ex. 13. mm. 9-13



This melodic line at measure 9 (version a) reflects motive B. The note f2 (lowered 6th) is a non-harmonic tone in a cambiata figure, which is audibly more pronounced than the resolution tone e2. As the above suggests, the cello line in measures 11-13 (version b) is the retrograde of motive B, moving almost abreast with the same shortened motive in the

upper voice (first violin, mm. 9, 11). Motive B in measures 11-13 needs more time to unfold than the ones in the upper voices.

The dyad E-F in the resolution of f1 to e1 immediately influences the following section. Measures 13-20 are quite unusual with respect to the key scheme in sonata form. The second key of C major signals its strong presence prematurely in the first key area of A minor (cf. Ex. 14). The accented C-major chord in measure 15 with the root in long duration in the bass may be incongruous to the very nature of the sonata form, in which the second key is reserved for the forthcoming second theme, for the dramatic effect of tonal polarity.³

Also, this section (mm. 13-20) at first glance appears to be rather redundant, of a somewhat interpolative nature with no particular significance to the melodic and harmonic continuity of the first theme. However, this section may be regarded as foreshadowing the vertical chord formation--the most important harmonic motive that will later be used in many moment-to-moment situations. Also, this section not only relieves a previously established harmonic tension by the verticalization of motive A, but also provides an answer to the unusual C-major chord in measure 15 (see Ex. 14).

³ Donald Francis Tovey, Beethoven (London: Oxford University Press, 1944), p. 73.

Motives A and A' are profusely employed here not only linearly but also vertically (Ex. 14).

Ex. 14. mm. 13-17

Example 14 shows the relationship between the verticalization of motive A and its horizontal (linear) application. First, at c) the notes of motive A are shown vertically as a harmonic motive (the fifth C is missing; indicated by x). Its vertical arrangement can become an either F six-five or F7 with the fifth (C) omitted. At the same time, version b) indicates that the harmonic content of motive A is resolved, although a permutation of motive A, F-A-C-E (F7, mm. 13-15), is realized via arpeggiation (version a). This is the first time motive A appears in vertical formation--another very important aspect of this quartet--a harmonic motive.

Going back to the previously mentioned dyad E-F (cf. Ex. 13), one hears f2 in measures 9 and 11 resolving to e2 in the same manner as shown in version d. The scale degrees just heard were undoubtedly from F to E (b6 to 5) in A-minor scale. This same progression of scale-degrees b6 to 5 is repeated twice in measures 13-15 (Ex. 14, version a; bracketed), as in measures 9-11. Version b) shows how the ear can perceive it as a large appoggiatura chord in which the chord FACE (VI7), lasting two measures, resolves to the equally strong C-major chord. The drive toward the resolution at this moment is strongly felt because of the unsettling conflict set up by the dyad in the outer-most voices, as shown at b). Generally, in the resolution of an appoggiatura chord, the non-harmonic tones of the uppermost part may resolve downward while the bass remains stationary. But in version b) the notes of the inner parts, F and A, resolve down by step to E and G, respectively, and the note G, which has been conspicuously missing up to this point, has a strong share in fulfilling the C-major triad.

Although it may seem unusual, the C-major triad is an unavoidable consequence here. Thus, the C-major chord even before the second key is an inevitable resolution in the dyad from F to E. It is apparent that motivic considerations take precedence over harmonic ones. Thus, this seemingly ambiguous position of the harmony in the structural scheme is the direct result of the concern to resolve the dyad.

The chordal section beginning in measure 15 also came from the previous idea, motive B, which is realized by the cello's falling fifth (Ex. 15).

Ex. 15. mm. 15-20

The musical score for Example 15 shows two systems of music. The first system, labeled '2)', contains measures 15-18 and is marked with a circled '16'. The second system, labeled 'b)', contains measures 19-20 and is marked with a circled '9'. An arrow labeled 'Augmentation' points from the first system to the second. A bracket labeled 'B' spans the first system. An upward-pointing arrow is at the end of the second system.

The repetitions in Example 15, one by an augmentation (version a; mm. 19-20) and the other by a literal restatement (version b; mm. 9-10), are not a mere patchwork but are a natural and proportional addition in order to settle into the tonic key of A minor. One noticeable feature is the dyad, f2-e2. As noted before, the pitch f2 behaves as a non-harmonic tone resolving to e2. This was obvious from the initial statement of the first theme (Ex. 16).

The tonality of F major (or F minor), which relates to the note F in *frei*, is rarely present throughout the piece. Brahms's favorite progression (or modulation) toward the flat side is missing here (see chapter III; in the C minor Quartet the harmonic progression toward the flat side determines the direction of the music).

Ex. 16. mm. 4-5, 9-10, 13-15



It has been shown that motive A is being realized both linearly and vertically, and that an initially distinctive idea (motive A) becomes highly intense and multi-faceted, and complex in a relatively short time (only 19 measures). The many potent elements contained in the first theme are now poised for future development in ensuing sections.

Transformation Journey of Motive A:

The Expedition of a "Free
But Lonely Man"

As was the case at the first major cadential point in measure 13, the final tonic chord in measure 20 after the strong dominant preparation appears to be brief and weak. No sooner has the music found some relief in the preceding closure than is the new event incorporated into the cadential passage, leading directly to another section (connoting thereby the state of restlessness of a free but wandering man).

Although the first violin and cello finally land on the tonic A (m. 20), the inner voices (second violin and viola) after a quarter rest begin immediately with a diminished seventh sonority built on D#, hence negating the anticipated full cadential repose. This D# diminished seventh negates the feeling of repose at the most crucial cadential point coming out of the long unstable home key. While the first violin rests an entire measure (m. 21) the second violin expands the interval of a minor sixth (a1-f2) to a major sixth by changing the pitch f2 to f#2 at measure 20. However, the interval of a major sixth A-F# becomes a part of a diminished seventh sonority (together with the viola and cello parts) before resolving to a dominant chord in measure 21.

This transition (mm. 20-45) is most extraordinary in that its character is almost completely different from that of the preceding section, while the same motivic ingredients are preserved. The basic constituent of the transition is identical to that of the first theme group. Webster pointed out that Brahms's many transitional passages contain fleeting references to the main theme.⁴ The "fleeting" reference in this section, however, is rather explicit (see Ex. 17). At first glance this transition appears to be very different from the preceding section; with successions of diminished-seventh chords and the flight of fast moving

⁴ James Webster, "Schubert's Sonata and Brahms's First Maturity" 19th-Century Music 3 (1979), pp. 52-71.

notes, particularly in the second half of the transition. This passage therefore appears to be improvisatory or even fantasia-like.

Another extraordinary and puzzling aspect in this transition is the pedal tone C (cello), held over five measures (mm. 30-34). This phenomenon can also be related to the previous sonority of C major in measure 15. Generally, the role of the transition in sonata form is to provide a smooth harmonic change or a tonal shift toward the second key. However, this pedal tone C diminishes the effective emergence and arrival of the second key. Why such an obvious musical "miscalculation"? Was Brahms compelled to do so or was he just being capricious in portraying, perhaps, the footloose character of a free man?

The "flight" passage (fast moving eighth notes--inner voices) in measures 35-45 also interrupts the arrival of the second key. Thus, the answer to the aspects of the premature C before the second key of C major and other relationships between the first theme group and transition lie elsewhere, as shall be demonstrated in the following illustrations.

As briefly mentioned earlier, the interval of a minor sixth is now expanded to a major sixth (m. 20) between the first and second violin (version a; Ex. 17). The second violin in measure 20 has the harmonic major sixth while the first violin rests. When the first violin enters

Ex. 17. mm. 20-23, 24-25, 25-27

on f#2 (measure 22), another harmonic major sixth is formed with the second violin. At b) the viola and the first violin also display the transposed motive A (in permutation). Although the notes A (m. 20) and F# (m. 22) are separated in time, the identity of the major sixth is unmistakable (note that the same intervals are interspersed in other voices). Actually, the first violin itself can be seen as an expanded version of motive A if a1 in the second violin (m. 22) is replaced with a (pitch) of the first violin (m. 20), as shown below (Ex. 18).

Ex. 18 mm. 20-23

Brahms's attentiveness to both pitch and interval class is obvious in Example 18. Here, the pitch class content of motive A (permutation, with chromatic alteration) is the same as the main motive A except for the accidentals (#). That is, a certain interval may be expanded or contracted by a semitone, but the same pitch name is maintained. Although they may seem dissimilar on the surface, the varied appearances can always be traced back to their progenitor. Whether it is on the immediate or remote level, the extent of motivic excursion occurs always within the boundaries of the progenitor--the original motive A. The following will provide further support to this point.

As explained, the expanded interval of the major sixth (A-F#) accommodates the diminished-seventh chord, D#-F#-A-C (mm. 20, 22), from where the B-major chord in root position subsequently emerges (mm. 23-25). Up to measure 25, the B-major sonority, with the diminished-seventh (A#-C#-E-G) and six-four chords (B-E-G#), is prominent. The diminished-seventh chord on A# in measure 24 is once more stated in measure 26, but this time it resolves in "non-dominant" fashion to a G-major chord with the B in the bass. The G-major chord in first inversion is not reinforced at this point as was the previous B-major chord. Thus, the G major chord with B in the bass quickly turns into a B diminished-seventh in measure 27 before the bass B finally reluctantly leaves its nest, moving up to C in measure 27, at which point a pedal begins (mm. 28-34).

Now, after such an insignificant harmonic excursion, a certain scale pattern in the bass line emerges; it appears that Brahms is traversing the bass line scale from A to C (minor third). Example 19 shows the basic harmonic progression, revealing that the traversing of the bass line A-B-C is the true musical intent.

Ex. 19. mm. 20-45

The image displays two systems of handwritten musical notation. The upper system consists of two staves: a treble clef staff and a bass clef staff. The bass line is heavily annotated with notes, accidentals, and slurs. Above the first few measures, the text "A (chromatically altered)" is written. A circled number "20" is placed in the first measure of the bass line. The lower system is a single bass clef staff showing a close-up of the bass line. It features notes A, B, and C, with arrows pointing to them from below, each labeled with the letter "B".

In general, the main purpose of the transition after the first theme group is to prepare the key of the second theme group. Then, in light of the above, the area of G major (mm. 26-27) may act as the dominant of the second key C major when the bass line has reached the pitch B in the bass (m. 27). Also, the transition has progressed substantially

since the end of the first theme group. But Brahms moved on to the pitch C, leaving the impression that the G harmony had nothing to do with the preparation of the dominant for the second key. Once again, the unexpected diminished seventh chord on C (mm. 28-29) gives the impression that the upward-moving scale pattern of the bass line is going to continue. But this time it is halted at measure 30, implying the bass note C is the final stop. The traversing of the interval of a minor third A-(B)-C is complete at this point, thereby the upward motion is stuck (so to speak) at the pitch C (mm. 30-35), with no apparent need to go further. The intended aim is achieved--the third in the bass line. Now that the music has reached the pitch C, overriding other possible harmonic progressions in the process of the minor third, the scale-degree C happens to be the very destination of the transition. Then, a question arises: does this C-major area assume the key of the second theme? The answer to this question is illustrated in the following.

As noted earlier, the transitional section clearly demonstrates a labored side of the composer, whether that labor is uneventful, simple, or complicated. The effort to preserve motive B in the bass prompts manipulation, and this manipulation results in a premature statement of the pitch C in the bass line. The pedal tone C stretches over seven measures (mm. 28-34), and even though the upper three voices

move in fast, fantasia-like flight, the pedal tone's prominence is unquestionable.

Returning to the interesting aspect of the note B that fills in the interval of a minor third A-C in the bass line, we may ask the question, What can a composer do with a passing note B in order to bestow on it a measure of importance? The following may provide an answer.

The harmonies that can be built on the bass note B are B major and B minor, E major and E minor (six-four chord), G major (six chord), and B diminished. If the B minor can be included in the realm of the B major harmony (with interchangeability of the mode), then five different chords are possible. Indeed, all five harmonies are employed on the bass B, as shown in example 19 (indicated by the arrow), during the journey of the bass line A-B-C. The A# diminished-seventh chord in measures 24 and 26 are there only to help identify those five varieties of harmonies through the functions of secondary dominant ($vii^{\circ}7/B$) and non-dominant ($vii^{\circ}7/b-G$) respectively. When the pitch C, which is not yet meant to be the second key, is naturally and finally reached in measure 27, the only choice left for a harmonic opportunity on the note C is to weaken its identity based on C. Thus, the two possible chord choices, an Ab triad in first inversion and a C diminished seventh chord, are chosen in measures 27 and 28-30. The pitch C (m. 30) in the bass as the final stop at this juncture now has

nothing else to do but remain as the pedal tone. The pitch C in the cello (also C in the first violin, m. 30) with its resonant sonority, however, is an unwanted harmonic area before the second theme. The only proper measure to take in order to weaken the unwanted sonority without totally denying its existence is to build harmonies that will distract from the feeling of a key center based on the pedal tone C. This is precisely the case here. Indeed, the chain of diminished-seventh chords over the pedal tone C in measures 30-34, which considerably weakens the feeling of a key center on C, deceptively leads us into the true dominant preparation beginning at measure 35. The passage at measures 35-45 thus gives the impression of an interpolation (a necessary one) due to the premature C's in the bass. From measure 35, however, the devious event arising from traversing motive B in the bass is finally corrected and guided in the proper direction for the true preparation of the dominant G major for the second key of C major.

The above assertion that motive B prompted such an interpolation (or interruption) of a fantasia-like passage before the true return of the second key can be further corroborated in the recapitulation; this interpolation-like section is completely deleted in the recapitulation and this fantasia-like material is not to be found either in whole or in part anywhere else in the piece. The logic of the above may be that a temporary material once needed earlier in

redirecting the musical discourse following motive B is no longer necessary in the recapitulation after its numerous appearances in the exposition and development. Example 20 shows the relationship between the exposition and transition with regard not only to motive B but also to motive A (Ex. 20).

Ex. 20. mm. 20-42

The image shows a handwritten musical score for Example 20, measures 20-42. The score is written on two staves (treble and bass clef). Motive A is shown in three variations: 'A (chromatic)' in measures 20-29, 'A (incomplete)' in measures 30-31, and 'A (chromatically altered)' in measures 32-42. Motive B is shown in measures 20-29. A 'permutation' of motive A is shown in measures 32-42. Circled numbers 20, 30, and 42 mark the beginning of these sections. The notation includes various accidentals (sharps, flats, naturals) and slurs.

Brahms's attentiveness to pitch and interval class, as discussed earlier, is one of the most noticeable features. In so doing, the pitch or interval contents may be realized either in a literal or transposed version with rhythmic variety. Those important notes may occur at structurally important points or may be hidden, functioning as decorative or auxiliary notes. The latter is the case with the C-minor quartet. But in the A-minor quartet, the ensuing motivic materials drawing from the opening motive A refer much more directly to the progenitor.

Although the structurally higher and longer notes in the transition are chromatically altered, they no doubt come from the original motive A. Again, Brahms here plays with words--an adventure to free himself from his real life situation of being "a free man but hopelessly lonesome" (cf. premise 2), but he could only go as far as the interval of a half step in either direction--F(frei) to F#, E(einsam) to Eb, and A(aber) to Ab--as shown in Example 2. Also of interest is that this fantasia-like transitional section, based on a chromatically altered motive A, may be regarded as a description of the mental state of a wandering man with no roots.

As briefly mentioned before, this transition's harmonic procedure also refers to the first theme group (Ex. 21). In the first theme section (version a), the Bb chord in first inversion at measure 8 functions as a pivot chord. Though it lasts only one measure, the identity of the Bb chord is as strong as the expansive D-minor region at the beginning, due primarily to its strategic location in redirecting the course of the music (cf. Ex. 12). Accordingly, the transition (version b), identified as an interpolation, contains a substantial Db harmony (mm. 35-37), which acts as bII in C-major proceeding to the dominant. Although this Neapolitan harmony is not in first inversion as in the corresponding Bb chord of the first theme section (version a), the fairly long region of the

Ex. 21. mm. 1-12

The musical score for Ex. 21, mm. 1-12, is presented in two versions, a) and b). Version a) shows a transition from a diminished seventh chord (labeled [d]) to a Neapolitan chord (labeled VI₆) and then to a dominant chord (labeled [a]). Version b) shows a transition from a diminished seventh chord (labeled [a]) to a dominant chord (labeled [C]). The score includes two systems of staves (treble and bass clef) with various musical notations, including notes, rests, and accidentals. Circled numbers 1 through 46 are placed throughout the score to indicate specific measures or notes. A bracket labeled 'A' spans measures 10-11 in version b).

Neapolitan undoubtedly reflects what has preceded, as shown in version a).

In the transition (version b), which reflects the first theme section, another very important motive--the octave from motive A--plays a major role as the outermost voices of the diminished-seventh, which is almost hidden by the running passage.⁵ Another interesting aspect in the transition is the idea of repetition, not literal, but rather in spirit. When the music finally reaches the dominant, one may expect the imminent arrival of the second theme of C-major, as in version a) in Ex. 22.

⁵ Though the octave motive is as significant as other motives in the piece, it is not identified with a label. It will simply be referred to as the octave motive whenever necessary.

Ex. 22. mm. 42-46,

The image shows a handwritten musical score for two versions of a passage, labeled 'a) alternative' and 'b) Brahms'. Version 'a' shows a transition from measure 41 to 46, with 'Th. II' appearing at the start of measure 42. Version 'b' shows a similar transition but with a 'Redundant (or interpolation)' section between measures 42 and 46, where the first violin has a complex passage. Both versions end with 'Th. II' at measure 46. The score is written on four staves (Violin I, Violin II, Viola, and Cello/Double Bass) in G major and 4/4 time.

As shown in the two versions above, the expected arrival of the second theme after measure 42 (version a) is interrupted once again by the first violin passage (version b).

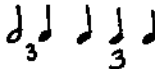
It is evident that the feeling of turgidity in the music is inevitable, because of the constant transformation (reshaping) of motive A up to this point. The music is expanded to a great length by the reshaping of motive A from the very beginning. This is particularly evident in the transition. The duration of the transition is longer than the preceding first theme group by six measures. The turgidity of the transition may be said to result from Brahms's efforts to emphasize the progenitor. This in turn prompted the unusual, premature entry of the C-major harmony of the second key, although the confirmation of the second key arrives much later.

Another redundant section is the first violin solo passage that redirects the course of the music toward the arrival of the anticipated second key in measure 46. Here a question may be asked: What prompted this first violin solo passage while all other voices rest? After the constant reshaping of motive A, which gives the feeling of turgidity, would it not be perhaps a bit more logical to arrive at the second key straightforwardly, as shown in version a) in Example 22? It has been shown that a new idea is never fully engaged without an earlier appearance in the previous sections (this aspect is discussed in section V). An idea may seem new, but it always has its vestige in the past.

Returning to the above question, we find that the seemingly redundant solo passage of the first violin also has to do with its past (Ex. 23).

Ex. 23. mm. 42-46

It has been shown that motives A, A₁, and B have been predominant up to this point but motive A₂ has not, except

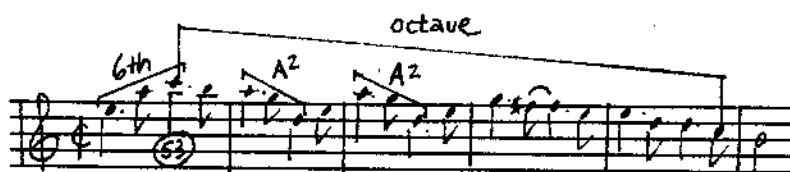
in the first violin and viola at the very beginning (see Exs. 6-7). One noticeable feature so far is Brahms's maintenance of a straightforward relationship between motives A, A1, and B.⁶ As has been seen in Examples 6, 7, and 14, the rearranged version of motive A2 will be prominent in the development section, not only in linear but also in vertical context. The use of motive A2 in the vertical context was shown in Example 14. The solo passage, though seemingly redundant, foreshadows the use of motive A2 in a later stage. Furthermore, motive A2 in the development section is employed in various guises--in its prime, inversion and retrograde forms. Of particular interest is the reordering of the cello's first four notes as the four-note downward scale f2-d2-c2-b1 in measure 44 (Ex. 23). Finally, the rhythm  (m. 45) prepares the closing passage of the transition for the long awaited second key and the theme in C-major (m. 46).

⁶ Although Brahms's music in general is characterized by the avoidance of straightforward relationships, Schoenberg, on the contrary, considered Brahms's music (particularly op. 51, the C-minor quartet and op. 99, the cello sonata in F major) as a direct and straightforward presentation of ideas, without any patchwork, without mere padding and empty repetition, (see "Brahms the Progressive," Style and Idea, p. 415 and Jonathan Dunsby, Structural Ambiguity in Brahms, Leeds University: UMI Research Press, 1976, p. 1 and Bibliography). The two opposing views above on Brahms's music are certainly present in this quartet, in which the elusive but straightforward motivic unfolding is the generative force of the music's mobility.

The Dichotomy of Eye (Visual) vs. Ear (Aural)
and Setting Up the Motivic Unfolding
(Inversion) for Later Use

Since the first part of the second theme has already been discussed in connection with the non-harmonic tones in the initial viola passage, one other significant aspect will be discussed here: the activity of the boundary motivic intervals. After the initial statement of the second theme in measures 46-52, the second phrase (mm. 53-58) is a spinning off from the first phrase (Ex. 24).

Ex. 24. mm. 53-58



This phrase, seemingly unrelated to any of the previous motivic materials in both pitch and interval content, outlines the minor sixth, motive A2, and the octave (cf. Ex. 21 version b, and footnote 6).

The identity of motive A2 in this phrase certainly is clear. The exact repetition of motive A2 in succession in measures 54-55 clearly defines the boundary interval of the perfect fifth of motive A2. The immediate repetition of motive A2 is the only such instance in the music. This may be viewed as a purposeful emphasis of motive A2. The

following discussion will deal with the dichotomy of the second theme, in which Brahms manipulates the non-harmonic tones from the viola passage.

The second theme displays a strong kinship to the non-harmonic tones of the viola part at the beginning, although the surface designs between the two appear quite different. Arriving at the first and second violin parts (Example 25), we may ask a question--what is the key of this passage, C major or A major (Ex. 25)?

Ex. 25. mm.49-51

[C]: V⁷ - iv₆ - V - - - I_c

As shown in version b), the passage appears to be in A major, but containing the lowered submediant scale degree F resolving to E. All strongly accented notes would indicate that the music is in A major, not in C major. However, the ear perceives the passage in C major, conditioned by the two bottom voices (version a) and the effect of the tonality

already established. Certainly, the problem of key orientation in this passage may be coincidental, but the composer's manipulation of the non-harmonic tones is obvious. As shown in version b), it is a case of "what one sees is not what one hears," so to speak (i.e., visually A major but aurally C major). The overpowering non-harmonic tones (C#'s) in the upper voices would have the wrong key identity had it not been for the bottom voices. This is the result of the composer's effort to highlight the identity of the non-harmonic tones of the viola (E, D# [here D-natural], C#, G# [or Ab] in the cello).

A bridge-like section (mm. 58-61) connecting the first and second statements of the second theme contains motive A on the transposed dominant level (Ex. 26).

Ex. 26. mm. 58-61



This passage, which explicitly refers to motive A, functions as a bridge between the first and second statements of the second theme. However, its primary function is to foreshadow the event that will occur later in the closing theme (cf. Ex. 35). The question here, however, is not the

relationship between certain shapes of motive A, but the dualistic nature of motive A. One should notice that the motive transposed to the dominant (G major) can also be read in C major or minor (cf. Ex. 26, bottom voices are not shown), with no change in motive A. The previously shown key dichotomy of the upper two voices in A major coexisting with the two bottom voices in C major (Ex. 25) clearly serves as a model for this A vs. C dichotomy. Motive A on the dominant appearing in the bridge section will become more prominent in the closing theme group on C minor and major.

The significance of the above discussion is that an idea, whether it is directly or indirectly related to the preceding material, is always first stated at the least expected moment and is realized in a later stage to the fullest extent. Such is the case in the second part of the first theme group (mm. 13-20, vertical usage of motive A), in the transition (chromatically altered motive A and the motive B), and in the solo passage of the violin (motive A2, Ex. 23).

This constantly expanding musical idea contributes to the feeling of turgidity; the transition (26 measures) is longer than the immediately preceding section (the first theme group, 20 measures), and the second theme group (36 measures) is longer than its immediately preceding section, (the transition, 26 measures), and the closing theme group

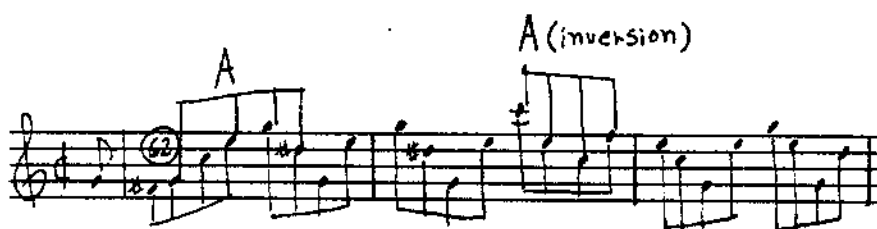
(46 measures) is a longer than its preceding section (the second theme group, 36 measures).

The nature of the motivic relationship between motive A and the second theme, which required close scrutiny (see Ex. 8), will become clear in the development section. The relationship between motive A and the closing theme is nonetheless explicit, since the basic contour of motive A is kept unchanged in the closing theme group.

Brahms's conscious manipulation of intervals in a motive--here with respect to motive A--requires an in-depth discussion. As stated in the premise, the analytical approach to thematic material in terms of prime, inversion, retrograde, and retrograde inversion will not be of primary interest of this paper. (The application of serialism employing these terms will be discussed in Chapter III in connection with Allen Forte's study of the first movement of C-minor quartet). Still, we can not fail to see such motivic manipulation procedure, as implied in Example 13 with the relationship between motive B (prime) and its retrograde inversion or inversion.

Immediately following the reference to motive A in the bridge section, a running figure in the first violin (mm. 62-63) over the second violin, which carries the second statement of the second theme, employs motive A. Also, the same passage presents the inversion of motive A (Ex. 27).

Ex. 27. mm. 62-65



An inverted form of motive A (i.e., literal inversion) may be found elsewhere, particularly since the many arpeggiated figures from the second statement of the second theme (first violin, beginning at measure 62) resemble the contour of motive A. As shown in Example 27, however, the literal inverted form of motive A appears here for the first time. As emphasized previously, the special feature of this movement is that no new idea is to receive full treatment unless it has already been introduced. Therefore, this seemingly insignificant running figure serves to foreshadow events in the ensuing development section. Indeed, the literal inverted form of motive A is extensively employed in the development section (mm. 177-180, viola), recapitulation (mm. 183-188, 188, viola), and coda (mm. 323-328, cello--retrograde also).

Noteworthy also is the unexpected appearance of the literal inverted motive A in the form of arpeggiated eighth-note figures at a time the musical focus is on the theme-carrying inner voices (Ex. 28), particular the viola, which moves in parallel thirds with the second violin.

Ex. 28. mm. 62-66

One may question here whether the eight-note figure on the second beat of measure 63 results from intentional manipulation of the inverted version of motive A, or whether its appearance is purely happenstance in the process of decorating the inner voices? This is a significant point because the inverted version of motive A is as viable in later stages as its original presentation. In order to further verify the significance of this arpeggiated figure, a comparison will be made between the corresponding passages in the exposition (Ex. 27) and recapitulation, and later between this string quartet and the four-hand piano arrangement of the same quartet by the composer.

The second theme group in the recapitulation is a version of the corresponding passage in the exposition transposed down a minor third, with a slight change on the on the second beat of measure 231 from the corresponding measure 63, as shown in Example 29.

The only other incident of alteration between the corresponding passage in the exposition and recapitulation

Ex. 29. mm. 62-64, 231-233

is in measures 110-119 and 278-286 respectively. The changes here may be regarded simply as the result of the necessary redirection of the harmony and melody in modulating from one tonal region to another.

It should be noted that if Brahms had transposed the second theme of the exposition down a minor third in the recapitulation (from C major to A minor), the eighth-note figure in the corresponding measure (m. 232) would have appeared as version a), not as version b), as Brahms has done (Ex. 30).

The second theme groups of the exposition and recapitulation match note for note (viz., down a minor third in the recapitulation) with the above noted exception in measure 63. In the comparison of versions a) and b), it can be seen that version b) of Brahms is the same as version a) as far as the harmony is concerned, but not in the voice leading (or voice distribution) in the first and second violins. As the example illustrates, the viola and cello lines are

Ex. 30. mm. 63, 231

Handwritten musical score for Example 30, measures 63 and 231. The score is in two systems, each with a treble and bass clef. Measure 63 is labeled "A (inversion)" and "a) Recap:". Measure 231 is labeled "b) Recap:". A circled section in measure 231 is labeled "Brahms:". Arrows indicate "Exact Transposition" between the two systems. Handwritten notes below the staves describe the harmonic structure: "(3 Roots, 1 3rd, no 5th)" for measure 63, "(same)" for the circled section in measure 231, and "(2 Roots, 1 3rd, 1 5th)" for the final part of measure 231. Circled numbers "63" and "231" are also present.

identical in both versions. They are the exact transposition of the corresponding lines in the exposition (m. 63). However, the two hypothetical upper voices in version a) are exchanged in Brahms's own version b). Consequently, the harmony on the last eighth note in version a) has three roots, one third, but no fifth, while in version b) it has two roots, one third, and one fifth. The last eighth-note chord in measure 231 (version b) contains a full triadic sonority.

From this observation, one may conclude that after the appearance of motive A in its inverted version, it is no longer needed in the recapitulation; it has already served its purpose in the development. This conclusion can be further corroborated by the following illustrations.

It should be mentioned that the music will flow logically to measure 232, whether or not the voices between

the two upper parts are exchanged, as shown in Example 30. The only change between the corresponding measures of the exposition and recapitulation may have been prompted by Brahms's attentiveness to the voice-leading principle, gained from studying the music of Bach and earlier composers (Ex. 31).

Ex. 31. mm. 231-232

At a) there are two consecutive parallel octaves, whereas at b) there is only one parallel octave. Since version a) is the exact transposition of measures 63-64 of the exposition, there are two consecutive parallel octaves here as well. It may appear that Brahms is obliged to make a change as at b) from the second beat in measures 231-232 in order to avoid parallel octaves between the first violin and and viola, or to not allow two consecutive parallel octaves.⁷ However,

⁷ It may be of interest that Brahms collected examples of octaves and fifths (see "Brahms's Octaves and Fifths" trans. Paul Mast, The Music Forum, Vol. 5, (1980), pp. 1-12. Brahms collected more than 100 examples of parallel fifths

version a), which keeps the inverted form of motive A, is certainly a possible choice since it does not drastically weaken the voice leading. But Brahms opted for version b). This can be regarded as supporting the significance of the innocent eighth-note figure in anticipation for its later use in the development.

For the sake of interest, let us reverse the above situation of the exposition and recapitulation. What if Brahms had the eighth-note figures in measure 63 as in a) of the following example, which would be an exact transposition of the recapitulation (Brahms's version b; Ex. 32).

Ex. 32. mm. 63-64, 231-232

The image shows a handwritten musical score for Example 32, comparing two versions of measures 63-64 and 231-232. The score is written on two staves, with the top staff in treble clef and the bottom staff in bass clef. The key signature is one flat (B-flat major or D minor). The time signature is 4/4. The notation includes eighth notes, beams, and dynamic markings like 'p' and 'f'. The top staff is labeled 'a) Expo:' and 'b) Recap:'. The bottom staff is labeled 'alternative:' and 'Brahms'. The notation is annotated with 'altered' and 'Brahms' above the respective sections. The measure numbers 63 and 231 are circled at the bottom of the staves.

and octaves in the works of earlier composers. His purpose was not merely to collect them but, rather, to present a theoretical study on the topic--to find out under what conditions these progressions were possible or even desirable.

The only notes altered at version a) to match exactly with Brahms's version b) in the recapitulation are those in the first and second violins (shown by the bracket). If the matter of the exact inversion of motive A (m. 63) is not an important compositional consideration, then the alternative (version a) would have been more pianistic than the real version. The four-hand piano arrangement by the composer shows an interesting notation in this passage, as shown in Example 33.⁸

Ex. 33. mm. 62-64

The image shows a musical score for two violin parts, labeled 'Primo' and 'Second'. The score is in 4/4 time and covers measures 62, 63, and 64. In the Primo part, measure 62 is circled. A bracket above the Primo staff from measure 63 to 64 is labeled 'A (inversion)'. The Second part also shows the corresponding notes for these measures.

It would be of interest to see how Brahms highlighted the inverted motive A in the exposition. The four-hand piano arrangement shows an exact correspondence to the string quartet. An important aspect in Example 33 is the notation of the inverted motive A in the primo part. While

⁸ The four-hand arrangement of the op. 51 quartets and all other like arrangements, except op. 11, are published by Nicolaus Simrock.

the eighth-note arpeggiated figures occupy two staves, the inverted motive A occupies only one staff. All these eighth-note figures are within an octave range, but it is apparent that Brahms wanted the performer to play gl with the left hand except in the inverted form of motive A. Brahms could certainly have used two octaves. Here, he highlights the inverted form by isolating and placing it on the top staff, evidence of the importance of the inverted form of motive A and a foretelling of its future use. An additional point of interest is the rather un-violinistic nature of the first violin's arpeggiated figures; they are pianistically conceived. From the idiomatic performance point of view, version a) in Example 32 would be preferable. Still, Brahms opted for unidiomatic version of the inverted motive A. All these would suggest that the choice in measure 63 is not random but intentional, in order that the particular figure may later be exploited to the fullest extent.

Adding Weight to Bridge Sections by Explicit Reference
to Both Main Motives A and B. The Closing
Theme--Result of the Chromatically
Altered Motive A's Resolution

The second statement of the second theme (mm. 63-77) is much the same as its first statement except that it is placed in inner voices (second violin and viola). The second statement leads again into a bridge-like section (mm. 78-81), which is the exact transposition (a perfect fifth down) of the previous bridge-like section in measures 58-61 (cf. Ex. 26). In the second statement of the second theme, motive A is given to the second violin (c1, a1, c2, g1; mm. 79-80), while the first violin with the running eighth-note figures refers to another form of motive A (g1, e2, g2, d2 in measures 78-81).

Both bridge sections contain not only motive A, but also motive B (Ex. 34).

Ex. 34. mm. 58-61, 78-81

The image shows two musical staves in bass clef. The top staff is labeled "1st Bridge" and contains measures 58, 59, 60, and 61. The bottom staff is labeled "2nd Bridge:" and contains measures 78, 79, 80, and 81. Below the 2nd Bridge staff is a cello line labeled "Cello: (1) ... (13)". Arrows point from the cello line to the 2nd Bridge, and from the 1st Bridge to the 2nd Bridge, indicating a transposition relationship. Motive B is marked in both bridge sections.

The above example in chordal arrangement shows its motivic relationship to the opening cello line.

As noted before, a feeling of turgidity in this movement may be attributed to the exhaustive use of motive A. Accordingly, disparate as it may seem on the surface, its identity always refers to the opening section (mm. 1-13). Motives A, A1, A2, and their permutations have so far been relatively domineering, but not so with motive B. However, in these bridge sections, with motive B, for the first time refer to motive B of the opening section (cello), though motive B here is varied (inversion and retrograde).

It is clear that the first bridge section (mm. 58-61) connects part 1 and part 2 of the second theme in the key of C major, and the second bridge (mm. 78-81; transposition of the first bridge) connects part 2 of the second theme and part 1 of the closing theme in C minor. Of interest here is the failure of the transposition between the two bridge sections to bring about any key change in the second theme area. The first bridge leads to C major; the second bridge leads first to C minor and then later to C major. Brahms simply stated the bridge section twice--first in G major and second in C major, both within the second key area. A question here is, Why would Brahms restate a redundant-like second bridge in C major that did not affect key at all? The only possible answer to the above question is that the composer's main concern in the bridge is not to change the key but to refer to motive B to the bass line of the beginning.

The cello so far has not participated in outlining motivic materials. Occasionally, as noted above, it outlines harmony in the form of motive B, but always on a deeper level, as shown in Example 19. The division of the cello line in the form of motive B (cf. Ex. 34) corresponds to the structurally important notes of the bridge sections, and those notes that cannot be grouped in the form of motive B belong to the dyad F-E.

Also, in these bridge-like sections motive B becomes active, before other motives soon actively appear in the development section.

The second bridge section finally paves the way to the closing theme group, which is, as mentioned earlier, nothing more than motive A in a transposed form (Ex. 35).

Ex. 35. mm. 86-93

The image shows two staves of handwritten musical notation. The top staff begins with a circled measure number '86'. The notation includes various accidentals (sharps, flats, naturals) and rests. The bottom staff features two sections of music, each labeled with the letter 'A' underneath, representing a transposed form of motive A. The notation is dense and includes many accidentals and rests.

The short-lived first C-minor area prepares the return of the corresponding closing theme in the key of A minor in the recapitulation, which begins in the key of A major.

It has been shown that Brahms is very attentive to the pitch-classes of the main motive, or to the pitches that share the same letter name (E or Eb, F or F#, and A or Ab) regardless of where the motives appear. The closing theme in Example 35 is actually the exact transposition of the original motive A down a major second. Of interest here is that when motive A is transposed down a step, the identity of the key (C minor or major) becomes clearer than in its first appearance.

So far, motive A appeared either in very short duration (generally one or two measures), or in the transformation in which the notes of motive A are transformed into non-harmonic tones (cf. Ex. 4, p. 33). But in the closing theme here, motive A is expanded to four measures (mm. 86-89), but it actually extends to eight measures if its repetition in measures 90-93 is added. In the process of augmenting motive A, many decorative notes are added, while the bottom three voices outline the key of C minor.

As shown in Example 35 the decorative notes F#, Ab, and Eb (or D#) are major components in expanding the main motive A. These notes have already been employed in the three upper voices, while motive B (confined to a minor third) was in the bass line (Exs. 19-20). In Example 20 motive B was explained with respect to Brahms's adventure to free himself from the predicament of frei aber einsam. But there he could only expand the distance of a half step from each

note--F to F#, A to Ab, and E to Eb respectively. Now here, as shown in Example 35, all ventured-notes above fall back to the original motive A (resolution), as if Brahms is going back to the original situation, frei aber einsam. It is very obvious, in retrospect, that Brahms is truly playing with these words.


However, in the following example of the closing theme, the chromatically altered notes F#, Ab, and Eb overpower the notes of motive A (chord tones), as if struggling between the choice of to-be-free or not-to-be-free (Ex. 36).

Ex. 36. mm. 90-97

At the same time, in order to strengthen the notes of the transposed motive A (g1, eb2, g2 and d2), the non-harmonic notes F# and Ab assume prominence in their position in all four voices. The non-harmonic notes--F#, Ab, and Eb--occupy

four measures (mm. 90-93) before they finally resolve to motive A on the second beat in measure 93. They are non-harmonic tones, but their gravitation toward the original situation--F(free), A(but), and E(loneliness) is overwhelming (cf. premise 2). There may be nothing unusual in setting up a harmony in which the non-harmonic tones (F#, Ab, and Eb) are more active than the chord tones as, shown in Example 36. But the non-harmonic tones, still fresh from the transition between the first and second themes (cf. Ex. 19), play an uncommon role when they were trying to overwhelm the original motive A. These venturesome notes that began from the first transition find their proper place here--the chromatic notes, F#, Ab, and Eb thrive here. They all resolve to the original motive A after the venturesome but risky journey from the bondage of loneliness to freedom. The prevailing idea of playing with words and their implied meaning in connection with Brahms's own lifestyle is humorously projected in the closing theme.

Additional interesting facts here have to do with motive B and the dyad E-F. The bass line F to E (cello) in measures 93-94 set up a first inversion triad (I6), avoiding root position again. The note E in the cello (m. 94), which was the last note of the inverted (or retrograde) form of motive B (C-D-E), forms the dyad with the following note (F). Motive A has been used in various forms, but this dyad always appears in its original form. The dyad is presented

three times (mm. 93-98) in rhythmic values () longer than the three upper voices. No matter what occurs in other parts, the basic underlying conflict of freedom and loneliness always exists.

Apart from the cryptogram above, the music itself displays agonizing conflict. The harmony set up by the bass note F in measures 93-95 is the dominant chord in third inversion that needs to resolve. But it does not resolve down by a half step when it reappears in measure 96--the bass note F (cello) becomes the root of the subdominant harmony. Though it soon moves on to another harmony, it is here that the F-major harmony appears for the first time. It reappears only once briefly in measures 255-256. The F-major harmony, as subdominant in C minor or submediant in A minor, is noticeably absent in the first movement, despite Brahms's preference for the subdominant and submediant regions.

Although the conflict of the dyad is set up in the closing theme, the domineering force of Eb, F#, and Ab requires relief. Finally, the resolution of the chromatically altered notes of motive A finds its place in the closing theme--this time--rightfully to the key of C major (Ex. 37).

The statement of motive A in C major is also the fulfillment of the incomplete motive that appeared briefly in measures 4-6 (see Ex. 9).

Ex. 37. mm. 105-109

The Opening Interval of Motive A--the Minor and Major Sixth as Harmonic and Melodic Motives

While the first violin (cf. Ex. 37) displays an explicit relationship to the original motive A, the bass line also reflects motive A, but in interval context (bracketed). The series of three intervals in motive A, namely, a minor sixth, a major third, and a perfect fourth (from a₁-f₁-a₁-e₁) resembles the leaps of the bass line in Example 37. Of the above three intervals, the initial minor sixth, from a₁ to f₂ (see Example 17) and its expanded version, the major sixth, from a₁ to f₂[#], play an important role in establishing the boundary interval (harmonic; cf. Exs. 17, 18). It will be progressively evident that the interval of a major sixth in motive A takes a prominent role as events unfold. It is not unusual that Brahms tends to break up the main motive to create a different motive for

development, for motive A has been employed to an exhaustive degree.

Moving back to the beginning, one finds another important interval motive that later plays a major role. It has been shown that the opening interval of a minor sixth in motive A had to do with a major sixth in the cello and viola at the first major cadential point in measure 13 (Ex. 38, version a).

Ex. 38. mm. 13-18.

The major sixth in the cello and viola at a) was explained earlier in relationship to Brahms's intentional avoidance of root position in measure 13. The first C-major chord at b) also has been discussed in connection with the harmonic scheme of the sonata form. The bass lines at versions a), b), and the rearranged version c) show the prolonged interval of a major sixth C to A, which corresponds to the boundary interval of the major sixth in measure 13. At b)

the inner notes of the major sixth are filled in as stepping stones to reach the final note A from the C below. Version d) shows the rearranged version of c) in a scale-wise pattern. At d), as noticed earlier, the subdominant note F is missing.

The major sixth, whose identity is well established here, is poised for further development. The boundary intervals, whose internal organization at times may be different, are always the same, referring to motive A.

In the first part of the closing theme (cf. Ex. 35), the harmonic rhythm was extremely slow--there were only two harmonies, C minor (i) and its dominant (V) in ten measures (mm. 84-94). The harmonic rhythm in part two of the closing theme, however, is relatively faster than the previous part. If all the roots of each harmony are extracted and put into a scale-wise pattern (Ex. 39), then their relationship is exactly the same as in Example 38.

Ex. 39. mm. 104-109

The image shows a handwritten musical score for Example 39, measures 104-109. It is written on a grand staff with a treble clef on the upper staff and a bass clef on the lower staff. The notation includes various notes, rests, and chord symbols. Section 'a)' is the first part, with circled notes '104' and '105' in the bass clef. Section 'b)' is a second part, and section 'c)' is a third part. Arrows and brackets indicate relationships between the sections.

At a) only the representative harmonies of each measure are presented. Although the order of appearance of each harmony (root) is not the same as in the earlier case, the boundary interval of a major sixth in the rearranged version c) is the same. Also of interest is the omission of the subdominant note F (version c), just as in Example 38. The only difference between the Examples 38 and 39 is that in the former case, the reference to the interval of a sixth is explicit, whereas in the latter case the reference is implicit. This is appropriate only in order to make the structural relationship more subtle.

The boundary interval of a major sixth also had appeared earlier, before the closing theme. At the bridge-like section, the rearranged scale version of the extracted roots not only shows the boundary interval of a sixth, but also reflects the major sixth in the first violin (in measure 59; Ex. 40).

The initial interval, g1-e2 of motive A (m. 59), is reflected in the bottom voices in longer duration (four measures long). Again, at b) the subdominant note C is absent.

The third statement of the closing theme begins at measure 110 (not shown), but it soon changes its direction to bring out the boundary interval of the minor sixth in two outer voices, Bb (first violin) and D (cello) in measure 114. The Bb, as a non-harmonic tone, appears even in the

Ex. 40. mm. 58-61

same register as in measure 8. It functioned there as a pivot chord (the Neapolitan). Moreover, the analogous place in the recapitulation (mm. 281-282) emphasizes a Bb chord in first inversion (i.e., Neapolitan in A major). This is another proof of Brahms's attentiveness to certain motivic intervals as well as to pitch class. The two boundary notes may function as non-harmonic tones at times, but they are always structurally related at a deeper level.

The canonic entrance of motive A after its exhaustive use beginning in measure 120 seemed to be moving directly to the development section, but rather it sets up the repeat of the exposition. The first violin rests for a while to recuperate (so to speak), since it soon carries motive A again. The exposition, which contains only one idea, motive A, was expanded to an unusual length, yet Brahms demands its repetition.

Before proceeding to the development, the manipulation of motives A and A1 (breaking them down into smaller cells) needs to be discussed, because a similar method is soon employed in the development section.

The opening motive A is primarily comprised of five intervals, but of six intervals when the last note D in measure 3 is added to it (Ex. 41).

Ex. 41. mm. 1-2



The intervals a_1 (minor sixth), a_4 (octave), and a_5 (dyad-half step) have already been observed as active motives. The total six cells from motives A and A1 are the components of many isolated harmonies. Motive A generally occurred in a linear context with rhythmic varieties, but all components of each interval of motive A are spread out within a single measure, as shown in Example 42.

At a) the harmony has all the intervals of motive A, and at b) it has all the intervals of A1, when the half step (a_5) is replaced by the whole step (a_6) in the cello. At c) all five intervals of motive A are realized from the bottom up in the six-four position before it resolves in the next measure (m. 119). A question about the validity of the

Ex. 42. mm. 94, 100, 118

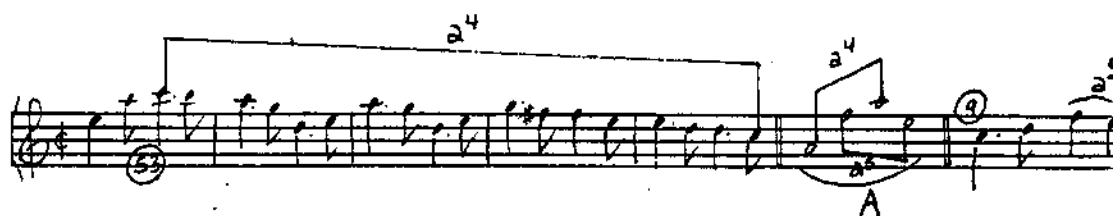
The image shows three musical examples, labeled a), b), and c), arranged in three columns. Each example consists of three staves: a top staff in treble clef, a middle staff in treble clef, and a bottom staff in bass clef. The music is in C minor. Example a) is marked with a circled '94' and shows a sequence of notes with intervals labeled a^1 , a^1 , and a^3 . Example b) is marked with a circled '100' and shows intervals labeled a^2 , a^1 , and a^4 . Example c) is marked with a circled '118' and shows intervals labeled a^3 , a^5 , a^5 , and a^5 . Below the staves, there are labels for dyads: a^5 (dyad) under the first two staves of a), a^6 (dyad) under the first two staves of b), and a^6 (dyad) under the first two staves of c). The notation includes various note values, slurs, and accidentals.

above example may arise at this point: Is this storing of all the intervals of motive A1 in one measure really the composer's intention? One striking observation with respect to each interval of Example 42 is that the six intervals all come in the exposition at the end of long and busy activities. Versions a) and b) are the tail portion of the first closing theme in C minor (mm. 86-94), and version c) is the cadential passage after the second closing theme (mm. 104-117). Thus, each measure, containing all intervals of motive A1, gives the impression of finishing off the previous busy events in a relaxed manner via increased note values, slowing down the pace of the music. Furthermore, no non-harmonic tones are present.

The non-harmonic tones also give an impression of rounding off the preceding active intervals of motives A and A1 in terms of collecting and placing them into one place (storing, so to speak) for a rest. At c) in particular (m. 118), the evidence for the above perception is strongly felt due to the absence of the first violin. In measures 118-119 the thrice-stated closing theme finally comes to a conclusion. It is precisely here (m. 118) that the first violin rests for the first time after the initial brief rest at the end of the first theme group (m. 21). The first violin, which was very active as the uppermost voice in projecting motive A throughout the exposition, well deserves a pause at this point. Furthermore, the rhythm, as noted earlier, slows down considerably in the three bottom voices (whole and half notes). The best way to collect each component of motive A1 in one place after their exhaustive activities is to put them in one vertical dimension, instead of spreading them over four or five measures as in the closing theme groups. This is exactly what Brahms did here, putting every component of motive A within a single measure. In addition to the two most busy intervals (sixth and half step), the intervals of the octave and third were also active in the preceding events (Ex. 43) and in the transition (cf. Ex. 21).

As explained above, the tail section of the exposition, (the end of the closing theme group), not only rounds off

Ex. 43. mm. 53-57



what has preceded but also sets up the new stage for the development section. The exhaustive journey of motive A, coupled with other motives, now demands a change in the direction of the music. As mentioned before, monomotivicism creates the "hyper" sonata. However, it is done without wrecking the proportional unity nor losing vitality and interest in the unusually long journey of the exposition.

Development

Non-Harmonic Tones Set Up at the Beginning Become
Chord Tones--the Source of the Second
Theme in the Exposition

The character and mood of the development differs from that of the exposition. However, the development is a good example of the alteration of general character and mood while maintaining motivic content. This is accomplished

mainly by transforming the main motive into different shapes, while changing the pitch content of the progenitor.

A question raised previously with regard to the origin of the exposition's second theme (cf. Ex. 8) has been put off until now because it is answered in the development section.

In a monomotivic piece, variety in each musical activity may be accomplished by transforming the main motive, while retaining its basic identity. The outward character between each section might appear disparate, but internal motivic content is always related.

As might be expected, the development is considerably short in comparison with the exposition and recapitulation. The exposition and recapitulation have 128 and 107 measures respectively, whereas the development has only 54 measures. As previously mentioned, a feeling of turgidity in the exposition resulted from the exhaustive use of a single idea, motive A. In the exposition the first and second themes were repeated, and the closing theme was stated three times, each time with its own bridge-like section.

It has also been observed in Brahms's music that development section in general is very short if the exposition displays a developmental character. Also, when the exposition is unusually long compared to the development, the exposition in general is not repeated. In this case the development usually begins with an exact or

similar statement of the opening theme or motive, giving the effect of a repetition of the exposition. This feature, employed extensively by Beethoven, is also used here, except that Brahms repeats the exposition after exhaustive use of motive A in the exposition.

In order to provide a strong contrast in the A-minor quartet, the development displays a most extraordinary trait. It is very compact and is improvisatory or fantasia-like, yet its major motivic contents refer directly to motive A. The explicit reference to motive A at the beginning of the development (shown in Ex. 44) may be no surprise, but what follows later (Ex. 45) not only highlights the non-harmonic tones of the viola at the beginning (mm. 1-4) but also provides answers to the ambiguous harmonic progressions. Thus, the non-harmonic tones, employed like an emblem in the exposition, finally find their identity here.

The development begins with motive A, transposed (Ex. 44).

At a) the predominant notes in outlining motive A are C#, D#, E, G#, and B, implying the mode of C# minor. At b), while motive A (the first violin and cello) is presented linearly, it is also realized between the same two voices with the three intervals from motive A (shown by the circle). What makes the two outer voices highlight motive A is the total absence of the two inner voices--the second

Ex. 44. mm. 129-133

The image shows a handwritten musical score for Example 44, measures 129-133. The score is in 4/4 time and consists of four staves: Violin I, Violin II, Viola, and Cello/Double Bass. Measure 129 is circled in the Violin I staff. Motive A is marked in the Violin I, Violin II, and Cello/Double Bass staves. Measure 130 is circled in the Violin I staff, and the fingering '6 - 3 - 4' is circled in the Violin II staff. The key signature changes to C# minor in measure 129.

violin and viola. They strengthen the identity of motive A in the two outer voices.

Stressing the importance of the non-harmonic tones of the viola, we will now answer the question raised in Example 8 (p. 37) regarding the source of the second theme. During the first five measures of the development (Ex. 44), the key of C# minor is sudden and startling, because it comes without preparation. Although the first C#-minor chord (m. 129) might be interpreted as the result of a deceptive cadence (m. 128; D#-diminished triad or B major with an interpolated root B), the C#-minor harmony is not a logical connection from the previous section, with the exception of the ongoing basic shape of motive A.

The dominant G#-major harmony that should precede the C# minor, appears belatedly in measure 130 and becomes the prevailing force in the following section (mm. 132-147). When it comes to a close in measure 147, the final C# tonic harmony is in second inversion, not in the expected root position.

The unprepared C#-minor harmony as the beginning of the development is very harsh to the ear. Its sudden appearance seems to be impatient for its prompt recognition. It seems, however, that the sudden appearance of the C#-minor tonality has to do with the non-harmonic tones of the viola.


As shown in Example 44, each note of the first C# minor triad and motive A (first violin) reminds us of certain notes heard repeatedly before. The notes C#, E, G#, and D# shown in Example 45 are exactly the same notes as the non-harmonic notes of the viola at the very beginning of the piece (Ex. 45, also cf. Exs. 4, 6, and 7).

Ex. 45. mm. 129-131

The image shows musical notation for Example 45, measures 129-131. It consists of two staves: the top staff is for the Viola and the bottom staff is for the first violin. The Viola part shows a sequence of notes: C# (circled 1), E (circled 2), G# (circled 3), and D# (circled 4). Above the first measure of the Viola part is a triangle labeled 'A²' containing the notes C#, E, G#. The first violin part shows a sequence of notes: C# (circled), E (circled), G# (circled), and D# (circled). Above the first measure of the first violin part is a triangle labeled 'Dev:' containing the notes C#, E, G#. The notes C#, E, G#, and D# in both parts are circled and connected by lines, indicating their relationship. The Viola part ends with a triangle labeled 'A²' containing the notes C#, E, G#.

Now, it is clear that Brahms's attentiveness to the pitch-class of the non-harmonic tones is the result of the key of C# minor. Brahms's emphasis not only on motive A but also on the non-harmonic tones overrides the usual harmonic progression in that the C#-minor harmony, which seemed almost out of the context, becomes the opening harmony of the development in spite of its harshness to the ear. Thus, those non-harmonic tones of the viola that were almost hidden in the quarter-note triplet figure at the beginning become explicitly the main source of the development section.

These non-harmonic tones in the viola now become the structurally important chord tones; they dominate the development section. They also signal their relationship with the structurally important notes of the second theme in the exposition--E, D#, C#, and G# (more answers in Ex. 50). The four notes here in the development section refer back to the same notes of the second theme.

However, the non-harmonic tones in the viola (motive A) now change the mood and character drastically. An unsettling mood prevails, with not-so-easily resolved suspensions; the rhythmic figure  in the canonic sphere in all the voices heightens the pace and tension of the music. The G#-major triad in second inversion at measure 133 (V4/2) does not resolve in the following measure (m. 134), but when it finally resolves from F#1 down to E at measure 135 (cello), the upper three voices still remain on

their same pitches (triple suspension), thus creating the harsh sound (Ex. 46).

Ex. 46. mm. 133-137

The makeup of the above chord also proves to be that of the non-harmonic tones of the viola. Now, all combined notes of the consecutive two motives of A (version b) are contained in the chord at measure 135 (version a; B and B# are interchangeable).

As has been observed, motive A (or A1) either in horizontal or vertical formation was the major element in the unfolding of the music. The verticalization of motive A actually began from the very beginning of the piece (cf. Ex. 14, p. 49), but the chord in measure 135 is the first appearance that exclusively consists of the non-harmonic tones of the viola (C# appears in the following measure). In the development the vertical realization of motive A plays a major role. Example 47 shows how motive A, set up as a model, is realized both linearly and vertically in the development (versions a, b).

Ex. 47. mm. 1-2, 13-14, 129-30, 135, 129-131, 135

In the vertical formation, the fifth is missing because an interval of fifth is not presented in the original motive A. Example 47 also shows that whether the chord is complete or incomplete, the boundary interval of a major seventh and its inversions will always be present in the vertical formation of motive A.

Changing the surface design but keeping the inner element is not a new idea in Brahms's music. This may generally be accomplished by changing meters and rhythm. Brahms's metric and rhythmic ambiguities are fundamental and fully intentional aspects of compositional technique. But this is not the case here. The actual rhythmic figure in the development is basically the same as in the exposition. The meter is not changed and there is no section that temporarily overrides the notated meter. The major rhythmic figures in the development come from measure 3 (first violin) and the quarter-note triplet figure of the viola in the exposition. Therefore, altering the character yet preserving the main element is done primarily by juxtaposing

the intervals of motive A in a vertical formation. Consequently, almost all the notes until measure 147 display strong kinship with the initial non-harmonic tones of the viola.

Example 48 shows that motive A in both linear and vertical contours are the main material in the first part of the development (Ex. 48).

Ex. 48. mm. 133-147

A

[C]: V₄ - IV₃ - V₄ - i₆ - N₆ - II - i₆ - V - i₆ - V - i₆ - bII - i₆

As was the case before, motive A, composed of the non-harmonic tones E, D#, C#, and G# of the viola, is augmented to twelve measures. The g#1 in measures 133-135 is a structural note. Although the g# chord is not in root position, it takes the structural position simply by being the top note. The e1 in measure 138 is the first stable note after a series of unresolved chords, and is confirmed again in measure 141. The g#1 in measure 143 acts as the delayed resolution note of the chords in measures 133-135.

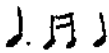
The pitch d#1 in measure 144 is the final confirmation of root position after the same preceding harmony in measure 142. Although motive A here does not have exactly the same contour as the original motive A, it certainly reflects the original motive by octave expansion in measures 138, 141, 143, and 144.

When the first part of the development finally comes to a close via the Neapolitan chord (mm. 146-147), the six-four chord with G# in the bass, contrary to expectation, is the final chord, occupying the entire measure (Ex. 49).

Ex. 49. mm. 147, 1-4

This unexpected six-four chord, again, reflects the non-harmonic tones of the viola. As g# was the last and lowest note in the initial series of the non-harmonic tones at the beginning, the same note also occupies the lowest position

of the chord in measure 147. Brahms's attentiveness to pitch-class and even to the order of appearance in the series of the non-harmonic tones now overrides the expected stable harmonic position at the crucial cadential point. Brahms's intention for the non-harmonic tones of the viola is clearly manifested here once again not only in the actual pitch-classes but also in their order of appearance.

Having established the foothold of the non-harmonic tones of the viola in the development, we may return to the question about the validity and the source of the second theme. The short motivic figure in measure 5, with the three preceding eighth notes from measure 4, was regarded as a development of motive A at a different pitch level (cf. Ex. 9). The pitches in measure 5 (e2, g2, f2, and e2 in the rhythmic figure ) were considered another possible source of the second theme (mm. 45-51), because of their similar contour to motive A. But the real source of the second theme may be found elsewhere. The ambiguous key context, either in C or in A major, emerged in Example 25 because of the strongly accented non-harmonic tones in two upper voices (the first and second violins). However, the key of C major in the second theme was determined by the bottom two voices (the viola and cello), which have only the C-major diatonic scale (the reason is obvious--to counter the perception of A major in the upper two voices; see Ex. 25, version b). Example 50 below also clarifies Brahms's intention, and it is as much intentional as functional.

Ex. 50. mm. 46-50

2) Th. II

b)

A^2 (from Viola's NHTs)

from Cello
mm. 49, 51, 52

Viola: NHTs

At a) the highest pitch g_2 in measure 47 is a non-harmonic tone in the subdominant chord (bottom voices are not shown), but it (g_2) is presented to support the outlining of motive B (retrograde) as shown at b). Including the bass note A_b (or $G\#$) of the cello in measures 49 and 51-52, as shown at b), the scale then implies $C\#$ minor ($e_2-d\#_2-c\#_2-g\#_1$). Interestingly, they are not only exactly the same notes as the non-harmonic tones of the viola, but also appear in the same order as at the beginning of the music (cf. Ex. 7 and 49).

The identity of the non-harmonic tones of the viola, which were hidden in the exposition, are clarified in the development. It is clear that the non-harmonic tones of the viola emerge as the true source of the second theme, whose structural tones were E , $D\#$, $C\#$, and $G\#$. In retrospect, the corresponding element between measure 5 and the second theme is not in pitch-class but rather in rhythm (cf. Ex. 8).

Another characteristic of the non-harmonic tones in the viola is found immediately after the six-four chord in measure 147 (Ex. 51).

Ex. 51. mm. 147-149, 151-153

a)

b)

In a) the first chord and viola (circled in the example) spells the original non-harmonic notes of the viola, not only in a vertical but also in a linear context (B-natural in m. 148 is filled in). At b) the same pattern follows, but with the material of motive A1. This may be viewed as an attempt to strengthen the identity of the non-harmonic notes of the viola even at the expense of the six-four chord on the down beat in each measure. It also becomes clear that the six-four chords at the cadence are related not only to the non-harmonic tones but also to the order of appearance. As a matter of fact, the six-four chord at b)

is the transposed version of the viola's non-harmonic tones up by half step. Consequently, their true origin is from motives A and A1 (cf. Exs. 6-7).

The six-four chords on the down beat in Example 51 are of great interest. Would the ear expect the six-four chord to resolve on the next beat? The answer is yes, but the six-four chords do not progress to the dominant; they moves to the first inversion of the same chord in next measure. This is the reverse of the usual order in outlining the six-four chord position, in that the six-four chord may come after root position when the triad is arpeggiated.

The avoided dominant harmony, which should follow the six-four chord in measure 147, however, was previously very active, as well as the Neapolitan (cf. Ex. 48). Therefore, the six-four chord in measures 147 and 151 are out of context, because there is no sense of conclusion, particularly after the intense drive of the dominant harmony (for 19 measures) prior to the six-four chords.

The harmonic procedure, though ambiguous it may seem, is always closely bound up with the pitch classes and cryptogram of the main motive. Naturally, the cryptogram of motive A, "free but lonely," exerts an influence on this crucial point of the cadence--there is no root in a free and footloose man's life--hence the unstable six-four chord occupies the place that a root-position chord should occupy.

The exhausted motive A now takes a rest in measure 153, where motive B, which has relatively been inactive, begins. It originally appeared at the beginning, like other motives, in the third D-E-F (cf. Ex. 3). It has, so far, not been presented in its original form (pitch class) and has always been attached to other prevailing motives, as in examples 10, 19, 34, etc. Motive B also shows a relationship to dyad E-F (from D-E-F), which came from the main motive A (hence, monomotivic). The following example displays motive B and its inseparable relationship to the dyad (Ex.52).

Ex. 52. mm. 153-162

The image shows a handwritten musical score for Example 52, measures 153-162. The score is written on two staves, likely violin and bass. A large bracket labeled 'B' spans the first six measures. The bass line in these measures is marked with '6' and circled measure numbers '154' and '158'. A diagram labeled 'Dyad Conflict' shows two horizontal lines with arrows indicating a relationship between notes. A smaller bracket labeled 'B' is above the final two notes of the piece. Below the staves, the text 'M6th' is written.

The note D of the first violin beginning in measure 153 is expanded to five measures (up to measure 158) via parallel chromatic movement of the bass line (F to F#). The intervals of a sixth from measure 153 stop in measure 158. The highest two pitches f3 and f#3 coupled with pitch e3 in

measures 159-160 display the pinnacle of Brahms's emotional conflict--"frei" or "einsam" (pitches f and f# are interchangeable).

The dyad E-F with its venturesome notes Eb-F# has appeared many times. When the dyad is presented in the uppermost voice (mm. 159-160), the four-eighth-note figure with its in-and-out motion (f2 or f#2 to e and vice-versa) might be best suited for the programmatic expression of a wailing sound, so speak. This may be regarded as Brahms's conflict in having to choose either "frei" or "einsam." Truly, the many repetitions of the dyad E-F and E-F# in short rhythmic values give the impression of being caught in some kind of agonizing struggle to find a way out. The note F# was generally associated with the idea of adventure, such as in the dyad from E-F to E-F#, and in motive A from A-F-A-E to A-F#-Ab-Eb (cf. Exs. 19-20). The venturesome pitch f#3 soon falls back to the pitch f3, meaning the freedom is his choice. The cryptogram in such a programmatic expression is one of the most interesting aspects in this quartet (see Chapter I, quotation--footnote 21).

After presenting motive B in measure 161 as a gesture concluding the preceding event, Brahms finally decides how to resolve the conflict between freedom and loneliness. The final decision is reached through an agonizing flight across the teeming dissonance of diminished sonorities with the participation of all four voices in unison (Ex. 53)

Ex. 53. mm. 161-165



After the final agonizing decision in favor of freedom (i.e., from E to F, not to F#), the music from measure 167 gradually relaxes with a considerably slower pace. The turmoil that afflicted him so greatly now subsides with the return of motive A, which then leads to the recapitulation beginning at measure 183.

While the cello of motive A signals a false recapitulation in measure 165, Brahms still lingers on the F# in measure 167 in the altered form of motive A, A-F#-A-E (not shown). The canonic entrance of motive A in measure 177 finally presents motive A in inversion (viola), which was foreshadowed in measure 63 of the exposition (cf. Exs. 27 and 54). Motive A in inversion, which has been absent so far, is presented here. Thus, motive A in inversion (viola) for the first time appears all alone even after motive A in the other voices has stopped sounding.

As was the case in other parts, the character of the surface in the development appeared to be vastly different from that of the exposition, but the organic growth that

shaped the major events of the development was still based on the same idea of the exposition. The development section is also quite compact, and tells the story through the cryptogram, so to speak.

Also, the development appeared very difficult and perplexing on the surface. Its direction was not clear-cut with the many unresolved six-four chords at the major cadential points. Once the meaning of the cryptogram was revealed, however, each event in the development became clear. Again, the manipulation of the words with an emphasis on motive A took precedence over the harmony.

Recapitulation

The Non-Harmonic Tones of the Viola: Released from
the Mission of Telling the Story
in the Recapitulation

Many ambiguous melodic and harmonic events in the exposition and development sections become clear in the recapitulation. However, the questions regarding the significance of the non-harmonic tones of the viola and the conflict set up by the dyad E-F in the exposition were best answered in the development section. Also, the short

development section provided a strong contrast to the lengthy first movement. The transformation and cryptogrammic use of motive A in the development was a welcome relief, notwithstanding the monomotivic nature in the music.

Generally in sonata form a tonal conflict of two opposing keys in the exposition is resolved in the recapitulation. Perhaps the most unusual aspect of the exposition was the substantial strength of the C major harmony (the key of the second theme) in the first theme group. The pedal tone C of the cello part in the transition also was a very rare case in light of the tonal layout of the sonata-form. It has been seen that these unusual features were due to the monomotivicism, which had priority over harmony. In general, the resulting harmony was largely due to the vertical combination of motive A. The expected harmonic or melodic progression detoured around or veered from the course many times. Therefore, the recapitulation seems to try to unravel the previous confusion.

Each part in the recapitulation generally corresponds to the analogous part in the exposition, but there are a few parts that are either altered or totally absent in the recapitulation. Interestingly, those places are precisely the spots where answers to the ambiguous events in the exposition may be found.

The first most conspicuous differences in the recapitulation are the absence of both the transition and the non-harmonic tones of the viola. The non-harmonic tones of the viola may no longer be necessary in the recapitulation once they have fulfilled their mission in the exposition and development--enhancing the source identity of the second theme (see p. 95). The lengthy transition between the first and second theme groups in the exposition was in fact longer than the first theme group--an unusual feature in sonata form. Almost all the transition in the exposition is deleted in the recapitulation. The first three measures (mm. 202-204) of the transition and the solo passage of the first violin in the recapitulation are the only materials that kept from the exposition.

It may seem natural that a portion of the lengthy transitional material of the exposition may be truncated partly or eliminated in the recapitulation. In general, this is not an arbitrary maneuver for controlling the overall unity of the sonata form. In this quartet it may have to do with Brahms's cryptogrammic motive A "free but lonesome."

At this point a brief survey of the transition in the exposition may help in finding a cause for the absence of the transition in the recapitulation. Again, the cryptogram sheds light on this question. As discussed in Section IV (p. 53), the transition was felt redundant because of its

character of interpolation or fantasia. Furthermore, the transition had nothing to do with modulation.

As shown in Examples 19-20 (transition) three elements were involved in such an unusual unfolding of events. First, the notes of motive A, F-A-E, played a cryptogrammic role. In so doing the notes of motive A were altered by the distance of a half step--A to Ab, F to F#, and E to Eb, by which Brahms meant to escape from the situation of life "free but lonely." Even over the pedal tone C, these altered notes were a dominant force. However, the distance of a half step was all that Brahms could manage in hoping to escape his present situation of "free but lonely." Thus, the chromatically altered motive A in Example 19 signaled Brahms's inner struggle. His indecisiveness in choosing either side of "frei aber einsam" was decided at the end of the development section (cf. Ex. 53) through the dramatic conflict of the dyad E-F (the note F had last say, being the last note). Now in the recapitulation he may not want another emotional struggle: it may be time to settle down, hence the chromatically altered motive A is no longer needed. Second, a few measures of the transition (mm. 202-204) soon disintegrate and move directly to the solo passage of the first violin (mm. 210-213) in order to prepare the home key of A minor.⁹ Third, there is also no

⁹ Michael Musgrave defines this kind of disintegrating transitional material as "liquidation" in The Music of Brahms, (London: Routledge and Kegan Paul, 1985), p. 112. He says "A particularly notable feature of Brahms

need to bring back the fantasia-like section (mm. 30-37) of the exposition to the recapitulation. The fantasia-like section in the exposition was regarded as an interpolation leading the dominant preparation for the second key of C major (the actual dominant preparation began in measure 38).

The prematurely-emerging pedal-tone C (mm. 30-34) was the result of traversing the third A to C in the bass line. Consequently, the opportunity for a divergent harmonic progression on these three bass notes A-B-C was very limited. Therefore, as shown in Example 19, only a few possible chords that can be built on the middle note B--B major, E major and minor six-four, G major first inversion, and B diminished seventh--were employed before reaching the goal note C in measure 28. Again, the emphasis on motive B overrides other harmonic considerations; the above harmonies built on B were meaningless in terms of the functional chord

interpretation of inherited principles is his treatment of the transition process, whereby the characters of one section are gradually displaced by those of another, a process which Schoenberg was later to identify as characterized through the term "liquidation" and which was one of many very powerful links between his own thought and that of Brahms." Schoenberg, however, defined the term "liquidation" in his book Fundamentals of Musical Composition, (ed. Gerald Strang and tr. Leonard Stein [New York, 1967], p. 58) in relation to phrase-connection. He says "The technique to be applied in the continuation is a kind of development, comparable in some respect to the condensing technique of liquidation. Development implies not only growth, augmentation, extension and expansion, but also reduction, condensation and intensification." Both statements above do not give any specific accounts to show how liquidation is exactly carried out. Regardless, the transition in the recapitulation here is the result of condensing the process of eliminating the unnecessary chromatically altered motive A.

progression--they only relate to the bass note B, which happens to be the middle note in traversing the minor third A-B-C. The three points above are reasons for the almost total absence of the transition in the recapitulaton.

Paradox: By Virtue of Their Absence, the Non-
Harmonic Tones of the Viola
Are Further Corroborated

The remarkable non-harmonic tones of the viola, which later proved to be the main source of the second theme, further corroborate their strong identity, paradoxically, by being absent in the recapitulation. When motivic material in the exposition did not return in analogous places of the recapitulation, the identity of motivic material becomes all the more distinctive, even paradoxical. The non-harmonic tones of the viola are now deleted altogether in the recapitulation. The viola part, which began as a nonentity in the exposition because of its mere filler function, now has motive A in inversion in the recapitulation instead (Ex. 54).

In hindsight this is another case in which, once the non-harmonic tones of the viola have fulfilled their mission of playing a major motivic role in the exposition and development, they are released from this mission, so to

Ex. 54. mm. 183-191

speak. Now the importance of the non-harmonic tones of the viola has been well proved. In retrospect, how interesting it is that the non-harmonic tones--E, D#, C#, and C#--embedded in the least detectable place, a triplet figure, turn out later to be one of the most potent elements. When missing in the analogous place of the recapitulation, they are all the more remembered.

The absence of the non-harmonic tones of the viola at the recapitulation, however, result in a change in the bass line (Ex. 55).

The altered bass notes occur in the analogous sections between measures 3-5 at a) and measures 185-187 at b) of the exposition and recapitulation respectively. At b) the change from B-natural in measure 3 to Bb in measure 185 is the result of an effort to comply with the inner voice of the viola, which carries motive A in inversion (cf. Ex. 54). More importantly, the absence of the viola's non-harmonic

Ex. 55. mm. 1-13, 183-195

tone C# in measure 185 of the recapitulation also affects the change of the bass line here. The viola's non-harmonic tone C# in measure 3 related better to the bass note B-natural there, as the supertonic note C# in B minor. Since the non-harmonic tones are deleted in the recapitulation, the Bb chord in measure 185 (at c, shown by the voice exchange) is preferred to that of B-natural. Furthermore, the following dominant E major needs to be confirmed by the Neapolitan Bb chord to reach the tonic key of A-minor in the recapitulation. The Bb-major chord at c) in the recapitulation now occupies over six measures in voice-exchange. Since the non-harmonic tones of the viola are not in the recapitulation, the music moves on straightforwardly to the tonic key of A-minor.

As explained in Example 12 with regard to the melodic aspect, the note Bb (or the Bb chord) is an indispensable element in reconditioning the passage from D minor to A minor in a limited time span. The Bb chord is presented

once more in measures 281-283. The final Bb chord (mm. 280-283, cf. Ex. 56), preceded by its own dominant-seventh at the end point of the recapitulation, reminds us of all the previously-heard Bb chords.

Motive B (mm. 283-284, Ex. 56) follows the sonorous Bb chord immediately. The sole presence of motive B in the viola and cello while the two upper voices are silent is for association with the Bb chord (cf. Ex. 55 version a).

Ex. 56. mm. 280-286

The image shows a musical score for four staves: Violin I, Violin II, Viola, and Cello. The key signature has one flat (Bb) and the time signature is 4/4. Measure 280 is circled. Motive B is marked in measures 283-284 in the Viola and Cello parts. The score shows a recapitulation of a theme group, with the final Bb chord in measures 280-283.

The relatively inactive motive B, interspersed now in all four voices has its strong share of time and space. Motive B, C-D-E, in measures 284-285 was first presented in the first theme group (cf. Ex. 15), but is in the retrograde (cf. Ex. 13).

Coda

Secondary Development

No sooner had we felt the cadence in measures 288-289, than another development-like section begins in the coda.¹⁰ The major motives A and B, and the dyad are once more clearly delineated, mostly in their original form.

Motive A, which was presented by only the first violin at the beginning, is shared with the second violin--the melodic note e2 (second violin, mm. 290) and the notes c3-e3-b2 (first violin, mm. 291-292). The same motive is immediately repeated by the second violin in measures 293-296. Finally, the original motive A, which has not appeared in its original form a1-f2-a2-e1 since the opening, is presented for the first time in the first and second violins, (mm. 299-300 and 302-303).

The cryptogrammic interpretation of motto motive A acted as a clue in deciphering many unusual events of the music. Here, another motto motive is presented. Beginning

¹⁰ The coda in this quartet is not merely a process of confirming the tonic key that had an ambiguous beginning. The fusion of motivic materials heard before occupies the major portion of the coda in the character of development (or transformation). The short development section, the actual core of which was the non-harmonic tones of the viola, not the original motive A, may have prompted such a development-like coda. Charles Rosen coined a term "secondary development" for this kind of development Sonata Form, (New York: Norton, 1980), pp. 104-108, 276-280. This coda may be classified as a secondary development.

in measure 301, the viola presents a new motive F-A-F which overlaps motive A, F-A-E (Ex. 57).

Ex. 57. mm. 301-303

The above motive indicated by letter "X" came from Brahms's own motto motive frei aber froh ("free but happy"), which is used as the opening motive of the third symphony. At the final stage of the music, the fusion of the motto motive frei aber froh, and frei aber einsam reflects (humorously ?) Brahms's inner struggle in remaining a bachelor all his life.

Immediately after the fusion of the two motto motives, motive B becomes active in measures 305-311 (Ex. 58). Motive B was previously presented many times, but always in transposed form. The well delineated section in measures 305-314 seems reserved just for motive B in original form, while the bass (cello) imitates the opening bass line of the exposition (not shown here).

Ex. 58. mm. 305-311

The dyad E-F, as might be expected, is presented next, this time embedded in the permutation of motive A (Ex. 59).

Ex. 59. mm. 315-320, 13-14

The permuted motive A at a) originates from motive A in measure 13 in the first movement. The relationship between motive A and the dyad E-F has become clearer at a later stage of the music, as shown in the above example.

The final concluding section, beginning in measure 321 presents motive A (viola) once more in its original form (Ex. 60).

However, motive A in retrograde is presented here for the first time. The second violin in measures 323-324 and the cello in measures 327-328 (example not shown) present motive

Ex. 60. mm. 321-324

The image shows a musical score for measures 321-324, consisting of four staves. The notation includes various rhythmic values, accidentals, and articulation marks. A circled number '321' is present in the second staff. The annotation 'A (Retrograde)' appears twice: once in the second staff and once in the third staff, indicating the retrograde form of motive A.

A in retrograde. Motive A has appeared linearly, vertically, in inversion, and permutation, but never in retrograde. It is interesting that the retrograde of motive A is preserved until the last section of the piece.

One conspicuous feature in the first movement is the fact that a token appearance of a motive foreshadows its full usage in a later stage, as with the inverted form of motive A in measure 63 (cf. Ex. 27). As explained, its initial appearance was uneventful; it became active in the development section. The same applies to the first four non-harmonic tones of the viola, which blossomed in a later stage of the music.

A gesture foreshadowing the retrograde of motive A is not found. Perhaps this is the reason for delaying the appearance of motive A in retrograde until the very last moment of the first movement.

As has been observed, all major motives employed in all previous sections are collected and developed once again in this coda. Therefore, the term secondary development for the coda is justifiable. The coda, however, is less adventurous than the short development section in terms of motivic and harmonic excursion; too extensive a divergence (transformation) in the coda would do disservice to the tonic key-confirming function of the piece.

Fourth Movement: Finale

Non-Harmonic Tones of the Opening Motive Become
Chord Tones in Ensuing Sections: A Trait
from the First Movement:

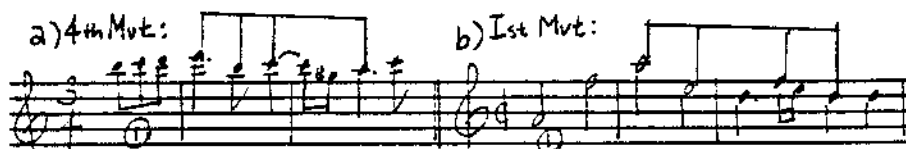
As was evident in the first movement, the mood and character may be altered in the chain of events, but the pitch-content in general is the same; this is a trait from the first movement. Accordingly, an analysis of the fourth movement apart from the first movement is meaningless because of the intrinsic motivic relationship between the two.

In any sonata form, the two outer movements may display a mutual relationship to some extent, but these two outer movements display a strong motivic relationship. Even the divergent mood and character in different parts of the movement result from the juxtaposition of the same motivic content.

The form of the fourth movement is best analyzed as a rondo--ABAB'AB'' with a coda on A. The contrasting B part contains divergent developmental material each time it reappears. As in the first movement, turgidity in the formal aspect of the fourth movement is also the result of the juxtaposition of its opening motive with the main motive A of the first movement.

Michael Musgrave points out the motivic relationship between the first and fourth movements (Ex. 61).¹¹

Ex. 61. mm. 1-2; first movement, mm. 1-3



In a comparison of the above two motives a) and b), the relationship is quite convincing in terms of not only intervals but also contour.

Apart from the above insight, however, Brahms's main effort in presenting the opening motive here is to set up the non-harmonic tones, b2 and g#2, in outlining the A-minor triad--the same process as in the first movement (cf. Ex. 7). The significance of the non-harmonic tones in this movement becomes even more apparent when the same pattern is immediately repeated, each time with the non-harmonic tones becoming chord tones (Ex. 62).

¹¹ Michael Musgrave, The Music of Brahms. (London: Routledge and Kegan Paul, 1985), p. 114. If we are to look for a similar contour of a motive in the preceding materials, whether it be in immediate or distant ones, we certainly may be able to come across a spot that resembles the shape of the opening motive. As a matter of fact a figure,



(first violin) at the end of the first movement (mm. 327-328) resemble the opening motive of the fourth movement.

Ex. 62. mm. 1-6

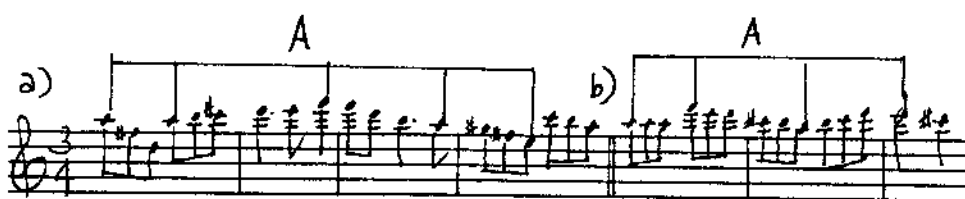
Interestingly, this same phenomenon provides a clue in finding an answer to ambiguous harmonic and melodic events later, just as the non-harmonic tones of the viola did in the first movement.

Since the opening motive is directly presented in rondo design--that is, the opening motive reappears unaltered--it is not identified with a letter. Therefore, the words "the opening motive" will always mean the very opening motivic figure of the first two measures, as shown in Examples 61 and 62.

The non-harmonic tones of the opening motive (cf. Ex. 62), bear a more easily identifiable relationship to the ensuing events, unlike those of the viola in the first movement. The first two non-harmonic tones, b^2 and $g\#^2$, become chord tones of the E major triad in measure 3. This may be happenstance. But it may be set up this way deliberately, not only as an immediate development, but also for future expansion of the opening motive. The following two non-harmonic tones $a\#^2$ and $f\#^2$ in measures 4-5 again become the chord tones of the D-major triad in measure 6,

although the a#2 is changed to a2-natural to make it a chord tone of the D-major triad. Once their identity is changed, the non-harmonic tones immediately become chord tones of motive A (Ex. 63, and see see item 2 in the premise on the interchangeability of pitch)

Ex. 63. mm. 6-9, 23-25



At a) the pitches a2 (from a#2 in m. 4) and f#2 are the main components of the first D major triad. Also, they become not only chord tones but also a part of motive A at a higher level (versions a, b). The idea of altering pitches, yet relating them to the main motive A came, from the first movement--changing notes F-A-E into F#-Ab-Eb. The above idea that began with the cryptogrammic aspect in the first movement still influences the process of unfolding the non-harmonic tones in the fourth movement. This extraordinary feature will be further manifested in the aspect of resolving ambiguous harmonic events.

Motivic Augmentation

The progressive augmentation of the opening motive is another distinctive feature in this quartet.¹² After the brisk statements of the main thematic unit in measures 1-8 and 14-20 (here the viola carries the thematic unit), the bridge section in chordal style follows (Ex. 64).

Ex. 64. mm. 25-34, 1-2, 7-8

The image displays two musical staves. The upper staff, labeled 'A' (Permutation)', covers measures 25-34 and features a dense sequence of notes with various accidentals (sharps, flats, naturals). The lower staff covers measures 1-2 and 7-8, showing a simpler melodic line. Vertical lines connect the notes in the lower staff to the notes in the upper staff, demonstrating the process of motivic augmentation and permutation.

The opening motive of the two measures (version b) is now enlarged to three measures (version a). The tail section of the opening motive in measures 7-8 is also enlarged to three measures. While the enlargement of the opening motive is taking place, motive A1 in permutation embraces all above activities. This feature also shows that mood and character is changed from one section to another while pitch-class is

¹² See "Aspects of Motivic Elaboration in the Opening Movement of Haydn's Piano Sonata in C# Minor," Aspects of Schenkerian Theory, ed. David Beach. (New Haven; Yale University Press, 1983), pp. 77-93.

kept intact. Accordingly, motive A in permutation actually began from the beginning, but at a higher level, as shown in Example 65.

Ex. 65. mm. 1-13

A (Permutation)

The musical score shows a grand staff with treble and bass clefs. A bracket above the first eight measures is labeled "A (Permutation)". Below the staff, measures 1-13 are numbered in circles: 1-2, 3, 4-5, 6, 7-8, 9-10, 11-13. The lyrics "Einsam Frei aber" are written above the treble staff in measures 11-13.

This progressive motivic enlargement, used as a means of expanding one idea, is accomplished not only in pitch-content but also in interval content, as shown in Example 66.

The opening interval of a perfect fourth $b2-e3$ is expanded immediately to three measures (mm. 1-3), but more importantly, it is also expanded over eight measures (mm. 1-8) in inner voices. The chromatic progression $a2$ (second violin) to C (viola) of the perfect fourth composes out the empty perfect fourth of motive A, although the outer pitches are not the same as those of the opening perfect fourth.

Ex. 66. mm. 1-9

Interestingly, when comparing the opening section of the fourth movement with that of the first movement, one finds that the first phrases of both movements have exactly the same length--thirteen measures. In the fourth movement, however, the first phrase is repeated, but with a different voice distribution (written out) and the viola carries the theme. Also of interest is that each bridge section of the first and fourth movements (mm. 13-20 and 25-37 respectively), contains the main opening motive. There are other cases of motivic enlargement in the movement and they will be dealt with as they appear.

While the first violin has an unusual, wide stretch in measure 31 in outlining motive A1 (cf. Ex. 67), the cello forms the interval of an augmented sixth with the first violin.

Ex. 67. mm. 31-34

A'

The image contains two musical staves, labeled a) and b). Above the staves is the label 'A'' with a prime. Staff a) shows measures 31, 33, and 34. Measure 31 has a circled number '31'. Measure 33 has a circled number '33' and contains an augmented-sixth chord. Measure 34 has a circled number '34'. Below the bass line of staff a), there are brackets and the notation '#iv^{xt6}?' under measures 31, 33, and 34. Staff b) is labeled 'alternative:' and shows a different resolution for the augmented-sixth chord in measure 33, with the notation '#iv^{xt6} i⁶/₄' below it.

At a) the augmented-sixth chord is not resolved normally to the six-four or dominant chords, as shown in alternative version b). The dominant E-major chord on the third beat in measure 36 (not shown) cannot be considered a delayed resolution because it does not connect the progression in terms of voice leading from the last augmented chord in measure 33. The augmented chords had demanded an immediate resolution because of the threefold repetition (actually it is repeated four times when the last chord F7 from the previous activity in measure 30 is included). The avoidance of root position, a prevailing feature in this movement, perhaps again has to do with the cryptogram of motive A, particularly when the uppermost voice repeatedly sounds the augmented fourth (viz., a3-d#3). However, the question of the bass line's lack of resolution remains unanswered. We will discuss this in connection with the B part (see Ex. 73).

The rhythmic structure of the beginning of the finale is worth considering. From the very beginning, the rhythm of the opening motive in the first violin does not comply with the notated meter of 3/4 (Ex. 68).

Ex. 68, mm. 1-3

The image shows three musical staves labeled a), b), and c), each with a first violin line and a bass line. Staff a) shows the first violin line with a 3/4 time signature and a melodic line of quarter notes. Staff b) shows the first violin line with a 2/4 time signature and a melodic line of eighth notes. Staff c) shows the first violin line with a 3/2 time signature and a melodic line of half notes. The bass lines in all three staves provide a consistent 3/4 pulse.

Brahms's notated meter 3/4 at a) can be heard in two ways, as shown at b) and c). While the first violin carries the opening motive, the three bottom voices provide the basic pulse of the notated meter 3/4. At b), however, the outcome of the basic pulse in the first violin is 2/4 and not 3/4, because the melodic line is convincingly divided into groups of two quarter notes until the meter changes to 6/8. The agogic accent of the first violin also helps give the aural perception of 2/4. Also, the meter in the first violin can also be heard as 3/2 if the three groups of each two quarter notes are combined into a single group, as shown at c) by three half notes within one measure. The three different meters, 3/4 (notated) and the others 2/4, and 3/2, are all in simple time, but the division of the first violin by the agogic accent creates a hemiola with the bottom voices.

Hemiola in Brahms's rhythm is a generative force. But there seems to be a mathematical aspect to consider; that is, the changed meter of the aural perception (not the notated meter) is divided proportionally in certain numbers of notes regardless of the note's value. At b) in the above example, the two-quarter notes (2/4) in each measure are immediately followed by two dotted-quarter notes (6/8), and at c) the three half notes are immediately followed by two groups of two three-eighth notes (6/8). In other words, no matter in what context the change of rhythm is viewed, the actual numbers of notes in each measure--from two quarter notes to two dotted-quarter notes ($\text{♩} \text{♩} \rightarrow \text{♩.} \text{♩.}$) as at b), and from three half-notes to three eighth-notes ($\text{♩} \text{♩} \text{♩} \rightarrow \text{♪} \text{♪} \text{♪}$) as at c) are the same. This feature, the exact number of notes following immediately after its model regardless of rhythmic value, seems to be a hallmark of Brahms's music. An ambiguity arising from the conflict between the notated meter and what is perceived aurally constitutes a fundamental and intentional aspect of Brahms's compositional technique. This aspect--rhythm as the generative force--also plays a major role in motivic enlargement.

Transition--the Same Idea From the First
Movement (Harmonic Aspect)

The harmonic progression of the short transition section (mm. 37-44) prior to the second theme of part B is identical to that of the first movement. In Example 21 (version b), the bass note Db (bII) acted as a catalyst in changing the key. The first and second violins in measure 40 simply slide down a half step from A to Ab, thus creating a momentary flat-II (Ab) of the G-major harmony, which leads to the key of C major (Ex. 69).

Ex. 69. mm. 37-41

Ist Mvt: Tr

[a]: (V)-(I₆)
(III)-bII₆/V-V

C

[a]II bII V I
C

As in the first movement, a simple inflection of one note, A to Ab, synchronizes not only the melodic but also the harmonic direction. The feeling of an abrupt change in both directions is minimized. One noticeable point in this transition section is the considerable reduction of the

activity of each voice by the thinning of texture, which in itself signals a change of event.

The lyrical second theme in C major, providing a contrast to the preceding tumultuous and wailing character, begins directly out of the dominant harmony set up at the end of the preceding section. In hindsight, the uneventful, calm transition section is quite appropriate when compared with that of the first movement. It was noted that the transition of the first movement seemed labored (cf. Exs. 19, 20 and 21), but in the finale Brahms has relinquished the previous circumstance because motive A and B are not his primary concern here. This may be the reason for the straightforward modulation.

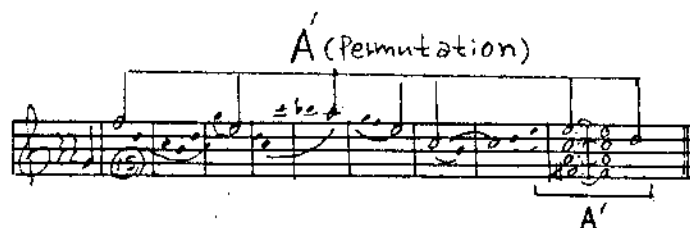
The contrasting second theme is shared by the two outer voices--the first violin and cello. The cello, which has not had any of the thematic material, now participates actively in presenting the second theme, but it does so one or two steps ahead of the first violin (Ex. 70).

Ex. 70. mm. 43-54

As shown in the voice exchange, most of the structural melodic notes in the first violin (half notes) are surrounded by the added intermediate notes (quarter notes). The expansion of the melody in the two outer voices by voice exchange, which is not immediately apparent, has been seen numerous times in the first movement. The melodic line of the first violin is virtually a replica of the cello line. The F# half-diminished seventh chord in measures 54-55 reminds us of motive A, F-A-E (Brahms is known to have been fond of the half-diminished seventh chord).

Example 14 c) from the first movement (p. 49) shows two possible formations, a six-four and a major seventh chords in motive A. Since the main motive A in a vertical formation was as viable as a linear one, any chord (vertical) that shares the same letter name item is not a coincidence (see premise, item 2). Example 71 below shows motive A with simultaneous functions, melodic (linear) and harmonic (vertical).

Ex. 71. mm. 15-24



In general, the melodic line in Example 70 indicated the harmonic region of F major, or D minor, rather than C major. In the second theme area as in Example 71, however, these notes of motive A1 must be realized in the key of C-major. Thus, the intermediate notes that befit the C major harmony function here as the key element of assisting motive A1 in the context of C major. From measure 58 motive A1 is loosely reflected, twice by the first violin (mm. 58-71) and once in the cello (mm. 79-85). The motive itself may not identify a key, but when the intermediate notes are added, the key becomes clear.

At this juncture a clear pattern emerges with respect to the character of development-like sections. In a rondo, as noted before, the opening motive of part A is generally presented straightforwardly without noticeable alteration (development). If a developmental idea is to be placed in this movement, it would be in the tail section of part B, because the true development, part C, is missing (hence, it is classified as a rondo, not a sonata rondo).

In light of the above point, the following two tail sections in part B are of great interest with regard to the developmental aspect (Ex. 72). Since the two outer voices follow one another an eighth note apart, Example 72 is shown in chordal formation. The second theme at the beginning of part B, and particularly its bass part (cello), now assumes a leading role as the main melodic

Ex. 72. mm. 91-99

line, because it sounds ahead of the first violin. The cello in Example 69 appeared one or two measure ahead of the reflected line of the first violin. Now here, as in Example 72, the cello line is simply more elaborated with its own melodic scale. Some of the notes (intermediate quarter notes) in the second theme play a secondary role in highlighting motive A, but finally here every note of the second theme shown at b) functions in its rightful role. Moreover, the staccato of the cello articulates and highlights the second theme while the first violin only hints motive A1 (compare with Ex. 70).

The augmented-sixth chord on the third beat of measure 97, which was spelled as a major seventh (F#-A-C-E) in the analogous measure 53, is now spelled F#-Ab-C-Eb (a German sixth). This chord, no doubt, alludes to motive A in terms of Brahms's venturesome attitude toward playing with the

words frei aber einsam. The notes F#, Ab, and Eb just happen to be the components of a German augmented sixth (here as a diminished third, F#-Ab), but they cannot be construed as merely a coincidental augmented chord, for it is a major cadential point. The notes of motive A altered by a half step, as pointed out numerous times before, are the result of the venturesome escape, so to speak, from the unaltered situation of "free (F) but (A) lonesome (E)."

Highlighting a Contrasting Portion by Placing
It Immediately Prior to the Return
of a Familiar Portion

As mentioned above with regard to the closing section of part B in the rondo design, it is here that true development takes place. It provides not only the most disparate character, but also an answer to the question raised in Example 67 with regard to the lack of resolution of the interval of an augmented sixth. This extraordinary connection to Example 67 sheds light not only on the above question but also on the non-harmonic tones of the opening motivic figure (Ex. 73).

Example 73 answers precisely these two aspects: 1) the significance of the non-harmonic tones, set up at the beginning of the opening motive, in providing the major

Ex. 73. mm. 1-8, 102-108

The image shows a handwritten musical score for Example 73, measures 1-8, 102-108. The score is written on four staves. The top staff is a single melodic line, starting with a circled '1'. The second and third staves are a piano accompaniment, with a circled '102' at the beginning. The bottom staff is a bass line, with a circled '31' at the beginning. The score is heavily annotated with arrows, circles, and lines, showing connections between notes across staves and measures. A section of the bass line is labeled 'Resolve' with a question mark below it.

components of a later harmonic event (just as in the first movement), and 2) the resolution of a previously unresolved harmonic event. With regard to the former case, the exact same feature has already been seen in the first movement, where the unsuspecting non-harmonic tones at the beginning became the most powerful source of later activities. The non-harmonic tones in the first movement had an equally strong, if not stronger, influence as the main motive. The

same influence is also felt here. As shown by the dotted line in the Example 73, the first violin outlines a diminished-seventh chord beginning with the pitch g2 in measure 102. Although the first two pitches, g2 and bb2, are not the pitch classes of the initial non-harmonic tones, b2 and g#2 (cf. Ex. 62), the identity of the pitches g2 and bb2 unmistakably relate to the first two non-harmonic tones by pitch interchangeability (see item 2 in the premise).

Compared to the previous section in a fast harmonic rhythm (mm. 91-99), the harmonic rhythm here in Example 73 slows down considerably, while the rhythm itself is intensified by imitation in all voices, outlining the diminished-seventh chord. In measure 106, however, the harmony is dramatized by the non-harmonic tones bb1 (a#1), f#1, and the last note e2, which were set up in measures 4-5 of the opening motivic figure (the first circle with an arrow). What makes the relationship between the chords F#-Bb-E and the two non-harmonic tones F#, A#, along with the last note E of the opening motivic figure, more apparent is that the chord F#-Bb-E (simultaneous presentation) is non-functional in conventional chord progression. The spelling of the chord itself seems to highlight the notes-- F#, Bb and E, because the following D-major triad (m. 106, second circle) has no relationship to it in terms of a dominant-to-tonic progression. Although the two upper voices move down a step in the same measure, the purpose of

all the notes in measure 106 is only to identify the non-harmonic tones of the beginning. As far as its harmonic identity (m. 106) with respect to the preceding and following measures is concerned, it becomes outstanding simply by its being non-functional (discord). Thus, the chord in measure 106 paradoxically highlights its obvious relationship to the initial non-harmonic tones--a feature that was most prominent in the first movement. The D-major triad (second circle) also corresponds to the same harmony in measure 6 of the beginning.

When the cello slides down a half step from F# to F-natural in measure 107, the sonority with D# in the second violin is that of an augmented-sixth chord which reminds listeners of the previous section. We have a vivid memory of the end of part A (see Ex. 67) where the bass line of the cello did not progress from F to E in resolving the augmented chord. As shown in Example 67 (version b), the sonority of the Italian sixth (repeated three times) did not resolve in the bass line (m. 34). However, here the Italian sixth in measure 107 turns into a French sixth when the viola plays the note B on the last beat. This time the augmented interval between the outer voices properly resolves to the octave; that is, the cello and the first violin resolve a step down and step up respectively to the dominant, unlike the previous instance. The chord formations in measures 31-33 and 106-107 are almost

identical (Italian and French sixth respectively), but only in the latter is the augmented chord properly resolved. The non-harmonic tones first articulated the main opening motive, but here act as legitimate chord tones. More importantly, they act as the main source of a development-like section in part B, which is needed to provide a strong contrast to part A. Once again, the actual material used to provide the ultimate contrast came from previous, familiar materials (the non-harmonic tones).

As the music unfolds, the relationship between the main motive and the non-harmonic tones becomes more and more obvious. This aspect will be dealt with as it appears. It is quite natural to provide a strong contrast at the end of part B before the return to part A. This is achieved by using the initial non-harmonic tones (in a vertical formation) to highlight and articulate the restatement of the opening motive. After the long-awaited resolution of the augmented chord, as in Example 73, now the fast-moving passage in unison voices (mm. 109-115) provides the contrast to part A. Even in this radically altered mood, the inner source of the material is again very familiar (Ex. 74). The last three measures (mm. 112-114) of part B in the example above undoubtedly relate to the fragments of the motivic figures in measures 8-9. Here in measure 112 it took slightly longer to unfold--three measures as compared to two (motivic enlargement).

Ex. 74. mm. 112-114, 8-9



After the restatement of part A, its tail section ushers us this time into the key of F major, in which the second theme of part B begins (m. 144). Of interest in the bridge-like section (the tail section of part A) is the reversed of motivic enlargement--motivic contraction, so to speak (Ex. 75).

Ex. 75. mm. 129-133



The contraction of the motive here is centered around the interval of a perfect fifth. As shown in the example above, the melodic line, b2-a2-g2-d#2 over three measures (mm. 129-131), is immediately followed by a repetition, utilizing two measures (mm. 132-133). This melodic line does not relate to the main motive in terms of pitch class, but its contracted version fulfills the many incomplete occurrences of a perfect fifth, which had appeared for the first time in

measures 25-30 (cf. Ex. 64). The interval of a perfect fifth, though implied in the process of enlarging the opening motive, is fulfilled for the first time here--the last non-harmonic tone d#1 is properly resolved to e1.

The perfect fifth, used to provide contrast, also plays a very important role. This fact is clearly shown by the opening interval of a perfect fourth, whose complement is a perfect fifth. The perfect fourth is mainly associated with the opening motivic figure, but the perfect fifth is inherently linked to the main motive A1 as shown in Example 76.

Ex. 76. mm. 25-37

The musical score for Example 76, measures 25-37, is presented in a grand staff format. The key signature is one sharp (F#). The time signature is 4/4. The score consists of two staves: a treble staff and a bass staff. The treble staff contains the main melodic line, while the bass staff provides a simple accompaniment. The music is divided into measures 25 through 37. A large bracket labeled 'P5th' spans the entire section from measure 25 to 37. Smaller brackets labeled 'P5th' and 'A1' are placed above the treble staff, indicating specific intervals and motives. The notes are mostly quarter and eighth notes, with some rests. The bass staff shows a simple accompaniment pattern.

It has already been seen in Example 64 that the section in measures 25-30 resulted from motivic enlargement. However, it also had to do with motive A1 of the first movement. In Example 76 (rearranged in chordal formation) the true

underlying identity of the section--the interval of a perfect fifth--is revealed.

The interval of a fifth, which was not realized on an immediate level, was presented clearly on a remote level (shown by top bracket). It took longer to unfold through enlargement as did the analogous opening motivic figure (Ex. 66). The motive from the note E in measure 25 to A in measure 37 is associated with motive A1.

In retrospect, the interval of a perfect fifth in Example 75, prior to the return of part B, is accomplished by contracting the opening motive (transposed). As noted earlier the development-like contrasting section occurs immediately before the restatement of part A or as here part B.

Interval Prolongation

The second half of part B' begins in measures 155-161 with an introductory passage. This passage, displaying the interval of a perfect fifth again, takes six measures to unfold with interspersed long rests. This passage came from an analogous section of the previous part B (Ex. 77). As can clearly be seen in Example 17, not only the motive but also the interval is taking longer and longer to unfold. In measures 58-63 the interval of a perfect fifth (or

Ex. 77. mm. 59-63, 155-162

The image shows two staves of musical notation. The top staff is a single-line staff with two treble clefs. The first staff shows a perfect fifth interval between two notes, labeled 'P 5th' with a horizontal line above it and an arrow pointing to the interval. The second staff shows a transposed perfect fifth interval, also labeled 'P 5th' with a horizontal line above it and an arrow pointing to the interval. The bottom staff is a single-line staff with two treble clefs. The first staff shows a sequence of notes with accidentals (sharps and flats) and a circled measure number '59'. The second staff shows a sequence of notes with accidentals and a circled measure number '156'. The two staves are connected by a vertical bar line.

perfect fourth) took five measures, but it takes eight measures in this section (mm. 155-162), although the interval is transposed here. At its initial statement in part B, the interval of a perfect fifth was not employed extensively, but now it is one of the main sources of contrast in part B'. The perfect fifth also refers back to motive A2 as shown in the example above. All internal notes of motive A2 may not be presented, but its two boundary notes are used. The transposed version of the perfect fifth beginning in measure 155 is also hidden, not only by its separation in time but also by a registral change in measures 157-158.

Immediately following is the extensive employment of the perfect fifth, but it is now used in all four voices in imitation (Ex. 78).

The canonic entrance clearly outlines the overlapping of perfect fifths. Moreover, the first perfect fifth is the same as in motive A2.

Ex. 78. mm. 162-171

After an ample display of the interval of a perfect fifth, a section very similar in character with wide leaps (intervals) follows (mm. 173-185). Although the first violin has wide stretches, the ascending chromatic bass line of the cello reminds us of something we have heard before (Ex. 79).

Ex. 79. mm. 171-186

The prolonged interval of a minor sixth in the bass line comes from the development section of the first movement, measures 154-159 (cf. Ex. 52, p. 109). There is a very similar relationship between the first violin in Example 52 (first movement) and in Example 79 (fourth movement). In Example 52, the beginning the parallel sixths of the first violin and cello are e₁ and G in measure 154, not d₁ and F in measure 153. In Example 79 the bass line also traversed a minor sixth from G# to E (octave displacement) through the motion of a parallel sixth with the upper voice. This resembles the bass line in Example 52 of the first movement. The two highest notes of the first violin in Example 52 are e₁ and f₁ (or f#₁), which are symbolic of the conflict between einsam and frei. In the fourth movement the cello has the dyad E and F (or F#). Eventually Brahms settles on E (einsam) by way of a pedal tone (mm. 186-196) prior to the return of part A.

It has been shown that both the perfect fifth and the sixth (major or minor) serve as predominant intervallic sources throughout the piece. Furthermore, it is inherently related to the first interval of a minor sixth of motive A.

The first violin in Example 80 confirms the dramatic gesture of the conflict of the dyad E-F.

At a) the dyad f₃-e₃ and the subsequent dyads in shorter rhythmic values are the culmination of the conflict "free but lonesome." Additionally, in measure 194 the pitch f₃,

Ex. 80. mm. 194-198

The image shows a handwritten musical score for measures 194-198. It consists of two staves: a treble clef staff (top) and a bass clef staff (bottom). Measure 194 is marked with a circled '194' and a bracket labeled 'dyad' above it, spanning the first two notes of the treble staff. Measure 197 is marked with a circled '197' and shows a melodic line in the treble staff. Measure 198 is marked with a circled '198' and shows an arpeggiated figure in the bass staff. A double-headed arrow labeled 'Inversion' points from the treble staff of measure 197 to the bass staff of measure 198. The end of the score is marked with 'NHTs (A)' and 'NHTs'.

an appoggiatura to the e3, highlights the wailing nature of the conflict. The vertical interval of a minor ninth, E-f3 to the octave E-e3 between the first violin and cello in measures 194-195, is also symbolic of the conflict, in that the upper pitch f3 (freedom) is constantly pulled back to the pitch e3 (lonesome). Also, this reflects the scale degrees b6-5 of A minor, which have already been discussed in connection with the beginning of the first movement. The dyad is inherently the product of the scale degrees b6-5, as shown in Example 14. What is more interesting in the above example is the inversion shown in version b). The arpeggiated figure in eighth notes in the cello (m. 198) is the exact inversion of the same figure in the violin in the previous measure. In so doing, the two chords formed by the non-harmonic tones in the first violin and cello--D#, G#, and B, with the top voice E--have a significant meaning in the piece. The other chord formed by the non-harmonic tones

A-C-F and with the initial note E (dotted line) needs no explanation, because its relationship with motive A is most apparent. However, the chord of D#-G#-B formed by the non-harmonic tones of the cello in measure 198 (version b) plays a primary role later, and more importantly becomes the means to solving the question of previous ambiguous harmonic activities. A discussion of this will soon follow, as it occurs toward the end of the piece.

The strongest feature in the first and fourth movements that has been thus far discussed is that the unsuspecting non-harmonic tones of previous events became structurally-important chord tones in later sections. This feature, though not explicitly apparent, was always closely related with the main motive A.

The Priority of the Harmonic Usage of Motive A
(Vertical Formation) Toward the End

Toward the end of the music, there are a number of dramatic events that serve to confirm all the ambiguous events that are directly related to the cryptogram. The thematic materials in part A and the first part of part B (the second theme) are generally the same when they recur in subsequent sections. As mentioned before, it is always at the tail section of part B that any development or radical

alteration occurs. However, nearing the end of the piece, Brahms finds the opportunity to develop the motives further.

A most extraordinary feature occurs in measure 320 (Ex. 81) after a full measure rest in all four voices (m. 319). The first violin presents a fragment of the opening motive in half notes (Ex. 81).

Ex. 81. mm. 320-331

The fragment of the opening motive in the first violin e3-b#2-c#3-g#2-a2, in measures 320-323 is repeated in the ensuing measures 324-327, while the bottom voices provide harmony accordingly. Beginning in measure 328, however, the shortened (measure-wise) fragment of the opening motive is presented in dotted half notes, e3-c3-e3-b2 (mm. 330-331).

The harmonic progression to this point has not been unusual. However, in the last two measures (mm. 332-333) the first violin has the line e2-a1 and the cello the line F#-F natural. The first chord F#-A-E (m. 332) and the


second chord F(natural)-A-E present a succession of most unusual discordant progressions, especially the second chord F-A-E in measure 333. At the fermata, a jarring harmony is presented--the major-seventh chord (with the fifth missing)--and it is preceded by the equally strong discord of a half-diminished seventh chord. Also this slow-paced chordal section, in which the first violin e3 assumes the role of a pedal tone, is somewhat the reverse of the section in measures 186-197 (no example shown), where the pedal tone E was in the bottom part, the cello. What once was the wailing voice of einsam in the bottom voice now assumes the same role in the top voice, but with more intensity. Now the clashing sound in measure 333 at the "fermata" is motive A, A-F-A-E (F-A-E), a melodic motive at its first appearance, but here a harmonic motive in its last appearance.

The harmonic usage of motive A prevails at this later stage of the music. The resulting discord readily reflects Brahms's agony, because time is running out for him in choosing an alternative to his lifestyle. The end of the music nears. This is also the consummate case in which the harmony, which has been many times ambiguous in terms of conventional chord structure and progression, is clearly bound up with the main motive. This is also the most dramatic gesture in manipulating the words, a process begun at the beginning of the piece.

Of particular interest in measure 333 is the absence of the note C from the F major-major seventh chord. In the four-part texture, Brahms assigned the root F to the cello, the third A to the first violin and the seventh E to the second violin and viola. Brahms deliberately left out the fifth (C) in the vertical formation of motive A to be consistent with its original make-up. The dominant E (second violin and viola) creates a conflict with the F (cello) not only in terms of the dissonant interval formed, but also in manipulating the words, frei or einsam. Finally the dominant E settles Brahms's struggle in weighing either side of "freedom" or "loneliness" for his life. Alas, he favored the side of "loneliness" by dispensing two E's to the two inner voices, hence faithfully remaining a lonely bachelor the rest of his life.

In hindsight, it becomes clear that the verticalization of the main motive A in the first movement and the opening motivic figure in the fourth movement is as viable as the linear presentation of the original motives. This idea now proves to be the most valid one, whether it is applied to the main notes of the motives or to the non-harmonic tones which directly articulate the main motives throughout the entire piece.

Codetta

After the explicit confirmation of motive A in vertical formation, the codetta begins in a brisk tempo in the key of A minor (m. 334). The first violin alone carries the opening motive in an evenly-paced rhythmic figure , while the three lower voices mainly provide the harmony.

As mentioned earlier, the concluding section provides the answer in unequivocal terms to the question raised in earlier events. Beginning in measure 342 the non-harmonic tones that existed side by side with the main motive and its harmony (Ex. 80, b) assume a role in the active harmony, and the resolution of the bass line as in Example 73 (p. 142) is once more confirmed here (Ex. 82).

As shown in the example above, the parts of the cello (higher than the viola in register) and viola (mm. 342-345), which are in the same rhythm as the opening motive, outline the basic triad using the notes G#, B, and D. The first and second violins at the same time provide pedal tones on E as well as other non-harmonic tones. From the very beginning of the movement the first two non-harmonic tones b2 and g#2 (m. 1, Ex. 61) became major chord tones in the next measure. Likewise, the viola, beginning on the second beat in measure 342, has all the non-harmonic tones--d (or d#), b, and g#--which now become the chord tones (cf. Ex. 80, b). Though prominent from the very beginning as non-harmonic tones (cf.

Ex. 82. mm. 342-352, 198, 31-32

Exs. 62), the notes B and G# along with D (or D#-interchangeability) never fail in revealing their identity, whether they appear as chord tones or as non-harmonic tones. The cello, however, linearly outlines an F major-major seventh, shown by the dotted and beamed line. The missing C is now filled in, which also corresponds to the boundary interval of a major seventh in measure 343 (first and second violins). Also in that same measure the bottom two voices have the same triad as above (G-B-D). The two lines in the violin and the cello concurrently fulfill a double function: 1) confirming the dualistic role of the

non-harmonic tones in assuming a different identity in earlier and later stages of the music, and 2) the verticalizing of motive A within a span of four measures (mm. 342-345, cello).

The question raised with respect to the resolution of the interval of the augmented sixth in measures 31-32 is once more answered but in a different way from the previous examples (Exs. 67, 73). In Example 67 the resolution of the augmented sixth was quite explicit in the bass line, where the cello side slipped from F to E (mm. 107-108). However, as shown at b) in Example 82, the cello has a most extraordinary line, moving from F in measure 349 (on the last beat) to E in measure 352. In measures 349-352 the resulting harmony is the augmented sixth (German), which finally resolves three measures later to the octave through the cello's F (m. 349), C(m. 350), A(m. 351), E(m. 352)--motive A--and finally concludes the long journey of the music.

The cello presents a permutation of motive A in the process of creating and resolving the augmented sixth chord simultaneously. In so doing, the conflict between the frei and einsam of the dyad (mm. 349 and 352 in the cello) is once more presented. But the conflict is settled, not only in the literal final resolution of the augmented-sixth chord (augmented sixth F-D# to the octave E-E), but also in the cryptogram itself--the word einsam has the last say over the word frei.

CHAPTER III

C-MINOR QUARTET

Foreword

In the C-minor string quartet Brahms intensified his effort to strengthen motivic unity among the parts of the sonata form (cf. Chapter. I). This quartet's restrained, inwardly directed chromaticism contributes to its tragic, somber, and turbulent character. Unlike the first movement in particular of the "hyper sonata" A-minor quartet, the C-minor quartet is quite short, lasting only about 29 minutes. The first movement takes less than 11 minutes, including the repetition of the exposition. Apparently Brahms wanted not only to make this quartet as compact as possible but also to ensure that it was worthy of publication, particularly since it was his first string quartet.

Brahms surely knew Beethoven's monumental string quartets (see Chapter I, p. 4). No doubt this knowledge contributed to the lengthy gestation time in completing and even in releasing the op. 51 quartets for publication. Mozart's piano concerto in C-minor (K. 491) exerted influence as well. Indeed, many features of the first movement of Brahms's C-minor quartet, especially the opening

statement, resemble those in Mozart's K. 491 (1876, the same year as Figaro K. 492).¹ K. 491 also displays an inwardly directed tragic side due to angular melodic chromaticism, a feature shared with the first movement of Brahms's C-minor quartet.

The two op. 51 quartets display vastly disparate characteristics, yet they often correspond where motivic transformation or development is concerned. In both the C-minor and A-minor quartets, the relationship between motive and harmony is close; in the C-minor quartet, however, this relationship seems more direct.

Although this study does not focus primarily on the first movement, it is this movement that initiated the investigation of motivic relationships and their effect on structural ambiguity in the op. 51 quartets. Although it contains some questionable motivic partitions, Allen Forte's analysis of the first movement is of great interest with respect to the motivic derivation of the initial thematic statement and its application to the rest of the movement.²

¹ As indicated in Chapter I only a brief comparison will appear at the end of the discussion of the first movement.

² Allen Forte, "Motivic Design and Structural Levels in the First Movement of Brahms's String Quartet" The Musical Quarterly, Vol. LXIX, No. 4, (Fall 1983), pp. 471-503. The article unfortunately contains many mistakes in designating motives with Greek letters and with the extra symbols for the transformations; i.e., inversion, retrograde, and retrograde inversion. For example, the head motive of the second theme (m. 36, Ex. 1, p. 481) should be alpha (α), not alpha retrograde (α'), and the motive lambda inversion (λ) in the bass (m. 45, Ex. 2, p. 482) should be just lambda (λ),

His approach is unique: he deals with motivic design by using the techniques of twentieth-century serial music-- prime, inversion, retrograde, and retrograde inversion. He treats motivic design in detail and gives brief overviews of form and rhythm.

At the end of the article, Forte briefly mentions a certain motive's connection to the names of Brahms's friends (motto motive)³ The use of the cryptogram as a problem-solver in ambiguous melodic and harmonic contexts has already been discussed in connection with the A-minor quartet. The cryptogram in the A-minor quartet was the most salient generative force in the music. But in the C-minor quartet, it is only vaguely suggested.

Forte's primary concern in the analysis is that all subsequent motivic ideas find their original identity in the initial statement of the first thematic unit, such as in that of the first violin in particular. But the very unusual feature of Forte's analysis is that several motivic cells taken from the initial thematic unit go through transformation via inversion or retrograde etc., and the transformed cells are identified in each of the following sections.

just to cite a few. However, these are presumed printing mistakes.

³ Ibid., p. 501.

A similar technique was applied to the A-minor quartet in this study. But in the A-minor quartet, the relationship between motives A, B, the dyad, and the non-harmonic tones of the viola was explicit without arbitrarily breaking the main thematic unit into smaller cells: hence the music is monomotivic. Forte's analysis of the C-minor quartet, however, with many motivic cells (11 primes) in addition to their transformed shapes of inversion, retrograde, retrograde inversion, and with few intervallic motives, implies that the music is based on multiple motives.

Forte's analysis of the first movement is intriguing in light of twentieth-century serial techniques, but it raises questions with regard to the derivation of many motives from the initial thematic unit and the motive's relationship to following motives. The article, however, is very complex due to the assigning of Greek letters to many items in the premise and the use of three added symbols--a hyphen (-) for inversion, superscript(') for retrograde, and a hyphen and superscript (-') for retrograde inversion. Whenever needed in the present discussion, however, the literal terms--inversion, retrograde, and retrograde inversion--will be used. The primary interest here is not to question the validity of Forte's methodology. The article, however, is used only to clarify the discourse of the present analysis.

A concentrated analysis of the fourth movement will reveal many traits shared with the first movement; it will

also shed light on some ambiguous motivic and harmonic aspects of both movements. Investigating the fourth movement only would be futile, for the main motive in the fourth movement finds its basis in the first movement. Thus what happens in the fourth movement is largely due to what has happened in the first movement, just as was the case in the first and fourth movements of the A-minor quartet.

The one and only motive in the fourth movement is actually the continuation of the same motive of the first movement. The fourth movement opens forcefully in the subdominant, not in the tonic. The reason for the "wrong" key opening here, however, will be more explicit than that of the first movement of the A-minor quartet. As noted earlier, monomotivicism, not multi-motivicism, in both the first and fourth movements is the reason for the ambivalent key opening, by which a contrast is sought to offset the exhaustive employment of only one main idea throughout the piece.

Many aspects of motivic and harmonic development common to two outer movements will be readily evident in the fourth movement. The most salient feature of the op. 51 quartets--the answering in the later stage of questions raised in the earlier stage--will also be evident throughout the investigation.

First Movement

I

The first movement opens with a rising stepwise minor third (tonic). The whole initial thematic unit without pause follows this germ-like motive. The momentum started by the dotted-quarter-note rhythm continues until it runs out of breath in measure 7, where the fiery upward drive in the first violin is abruptly reversed by a half step, down from ab_3 to g_3 (Ex. 1).


Ex. 1. mm. 1-14

The musical score consists of four staves. The top staff is for the first violin, the second for the second violin, the third for the viola, and the fourth for the cello. The tempo is marked 'Allegro'. The key signature has one flat. The first violin part begins with a rising stepwise minor third in measure 1, followed by a dotted-quarter-note rhythm. In measure 7, there is a half-step downward turn from Ab_3 to G_3 . The viola part sustains an open octave throughout measure 8. The score includes dynamic markings like 'p' and 'cresc.'.

While the viola sustains the open octave through all of measure 8, the cadence felt on the dominant in measure 7 is suddenly negated by the precipitous two-octave plunge into another half-step downward-turn from g_1 to f_1 in measure 9. The viola, as in the preceding measure, sustains again the

open octave F. The music finally centers around the subdominant region F minor in measure 11. The opening statement ends on the single note F# in measure 21 (cf. Ex. 3). The first statement is immediately repeated but with a different voice distribution (mm. 23-32) and leads into the second key area (Eb minor) beginning in measure 35.

Although the music begins on the tonic note, the first phrase (mm. 1-7) does not give a convincing feeling of the tonic C minor; it rather suggests that the piece opens with a major submediant harmony (VI, Ab) due to the overwhelming Ab major sonority in the second half of the first phrase (see Ex. 1).

This harmonic interpretation is supported by the following points: 1), the note f#1 in measure 2 does not act as a leading tone to the following note g1, which in reality has only a fleeting existence because of its brief appearance () in the brisk tempo. For this reason, the interval of a diminished seventh, formed by the melodic leap down from eb2 to f#1, does not resolve, and this interval acts as if it were simply floating in musical space. And 2), when another melodic leap of a perfect fifth down (eb2-ab1) is presented in measure 3, the harmony of the previous diminished interval is perceived as a chromatically altered chord on the raised fourth scale degree, #iv4/3, together with the bottom voices (German sixth). The note Ab becomes A natural in the following measure (m. 4), but it

soon is changed back to Ab in the ensuing three measures (mm. 5-7), where the full-fledged submediant major harmony (Ab) exerts its force via the supporting bass notes.

In retrospect, it may be perceived that the preceding ambiguous harmonic activities were only part of the prolonged Ab major harmony. Therefore, the downward scale in the cello in the first measure may be considered to have actually begun from the third scale-degree C in the Ab-major scale, not from the first scale-degree C in the tonic C minor scale; hence, in measure 7 the cello ends on the third degree C in Ab major. No sooner has the cello reached this scale degree than it changes direction and leaps up a perfect fifth from C to G (as part of a half cadence).

Interestingly, this is precisely what happens in the A-minor quartet (Ex. 25, version b, p. 68) where one does not hear what one sees, so to speak. In hindsight, the C-minor chord that undoubtedly outlined the tonic harmony at the beginning (mm. 1-2, the two notes C and Eb in particular) turned out to be rather a part of the Ab-harmony, not of the C minor. Therefore, the harmony in this first phrase is possibly heard as the Ab-major submediant. However, more importantly and with respect to the primary melodic line, the first phrase may be heard as 1-b6-5 with the initial note C in unison at the very first measure (Ex. 2). So powerful is the melodic line 1-b6-5 that it immediately spills over into the following section in the key of F

Ex. 2. mm. 1-22

minor.⁴ The unexpected turn of melodic and harmonic activities in measures 7 and 9 dictates that the harmonic goal is the subdominant F, not the usual G (from the usual tonic to dominant phrase opening). In this unusual section, the motive-like melodic line 1-b6-5 is heard in different keys up to measure 21, as shown in Example 3, where the last pitch F# was preceded and followed by a half rest. This F# also seems to be floating all alone in musical space, just as the first f#1 in measure 2.

The primary melodic line 1-b6-5, in F minor (mm. 11, 13), tonic C minor (mm. 15, 17), B minor (mm. 19-21), and finally once more in G minor (m. 22) are the result of the opening event. One noticeable feature is the abrupt change

⁴ Walter Frisch observed the same melodic line 1-b6-5 (he has it as 8-b6-5) but failed to see its origin in the deeper level of the opening phrase where the direction of harmonies gravitated toward the flat side (or dark side, cf. Ex. 7). See Walter Frisch, Brahms's Sonata Structure and the Principle of Developing Variation (unpublished Ph. D. diss., University of California, 1981), p. 197.

of melodic and harmonic direction as in measures 7 and 9 accomplished by the movement of a descending half-step in the first violin and an ascending perfect fifth in the cello (cf. Ex. 1).

The half step in the soprano and the ascending perfect fifth in the bass best accomplish the transient conclusion, both melodically and harmonically, for there is not a great amount of space for reconditioning a phrase for a cadence in this very economized first movement. This same method can be seen elsewhere whenever a sudden change or a new beginning is desired (see mm. 31-32: this will further be discussed with respect to the method of cadencing suddenly).

This influential melodic motive, 1-b6-5, which dictated the ensuing harmonic procedures, ended on the melodic line B-G-F# (1-b6-5 in B minor context) with support of the ascending bass line D-E-F# (3-4-5) in measures 19-20. The final note F# all alone in measure 21 gives an impression that it is stuck or floating until the arrival of the notes G-Eb-D (1-b6-5 in a G minor context) in the next measure (m. 22), which notes then prove to be the melodic line 5-3-2 in the tonic C-minor.

Schoenberg notes that the B-minor region is the most remote deviation from the tonic C minor in the beginning of a piece.⁵

⁵ Arnold Schoenberg, Structural Functions of Harmony, W. W. Norton & Company, Inc. (New York, 1954), p. 78.

Ex. 3. mm. 21-23



He interprets the F# as a modulation to the minor mediant region (B minor) of the major dominant (G) from the original C minor key, and says, "the region of the dominant's mediant minor (Dm) is an extremely remote point scarcely appropriate to introduce tonic C minor." He further states, "far-reaching deviations, resulting from remote progressions, occur frequently in Brahms's music."⁶

As remote as it may appear to be, however, the melodic and harmonic shift does not seem to be so abrupt because of the ongoing melodic and harmonic line 1-b6-5. No matter where the motive ends, the ear tends to follow the changing harmony with no sense of abruptness because of the ongoing melodic line, 1-b6-5.

This lonely and isolated pitch F# (m. 21), however, plays an influential role both in what precedes and in what follows. In the former case, the lone F# at the end of the first thematic statement (m. 21) refers directly to the first F# in measure 2 because of its same floating existence. The same F# in the diminished seventh in measure 2 of the first violin part may have seemed resolved in measures 18-19 (the two outermost voices Eb-F# of the

⁶ Ibid.

diminished seventh properly resolve inward from the diminished seventh to the perfect fifth), but the F# is still carried over to measure 21. In the latter case of what follows, the F# will be interchanged with Gb, which will influence the forthcoming second key of Eb minor (Eb-Gb-Bb) instead of Eb major (we will discuss this fact fully in the second key area, cf. Exs. 4-5). However, so powerful was the melodic motive 1-b6-5 even in the B-minor region, the viola and cello still carry the same melodic motive 1-b6-5 in the G-minor context once more (G-Eb-D), hence giving an impression of resolution from F# to G immediately before the second statement of the main thematic unit.

II

As Schoenberg observes (see Ex. 3), the B-minor region, where F# functions as the dominant, is far removed from the tonic C minor, although the F# there did not shock the ear as much. However, Allen Forte notes the singular importance of the pitch-class F#; it foreshadows the Eb-minor tonality of the second theme through the interchangeability of the enharmonic pitches F# and Gb, hence Eb minor (i.e., triad Eb-Gb-Bb).⁷ This further supports the influence of the F# on the future direction of the music. The second key Eb minor begins in measure 34 and eventually returns to Eb major in

⁷ Forte, op. cit., pp. 486, 492.

measure 53. Although Forte does not elaborate the relationship between F# and Gb, it is conceivable that the two notes are related. The time-honored F#'s relationship to the future Gb may be first seen in Brahms's four-hand piano arrangement in which the notation differs from that in the string quartet in analogous places (Ex. 4, cf. footnote 8 in Chapter II, p. 78).

Ex. 4. mm. 79-81

The image displays two musical staves side-by-side, labeled 'Piano:' and 'Strings:'. Each staff consists of two systems of two staves (treble and bass clef). The key signature is three flats (Eb minor) and the time signature is 3/4. In the Piano version (left), the first violin part has a circled F# in measure 79 and a circled Gb in measure 80. In the Strings version (right), the first violin part has a circled Gb in measure 79 and a circled F# in measure 80. Both versions feature a first ending bracket in measure 81. The piano part includes a first ending bracket in measure 81, and the strings part includes a first ending bracket in measure 81.

In the corresponding measures (m. 79) of the two versions where the main thematic unit returns in Eb minor, the F# of the viola (string quartet) is notated as Gb in the piano's primo version, as shown in the previous example. This is the only place in the two versions that Brahms notated enharmonically. This may reveal a relationship between the F# and Gb. Forte, however, finds their relationship much earlier in the transitional material in measures 29-30 (Ex.5).⁸

⁸ Ibid., p 486.

Ex. 5. mm. 29-31

The major sixth of the cello in Example 5 is undoubtedly related to the enharmonic interval of a diminished seventh in measure 2 because of the indelible memory of the earlier unresolved leap, the notated eb2 down to f#1, which then functioned as the major sixth, not the diminished seventh.

The notation of Gb instead of F# in Example 4, however, may also have been carried over from the previous cadential passage in measures 31-32. Generally, in preparing the second key, whether Eb minor or Eb major, the dominant harmony (Bb) is vital. The dominant harmony here (mm. 31-32), however, is not prepared, but suddenly emerges out of nowhere through the combined effort of linear and harmonic voice-leading patterns--the downward half step in the soprano and the upward root movement of a perfect fifth in the bass (Ex. 6).

A sense of conclusion of the previous section is inevitably felt, and, what is more, this method best

Ex. 6. mm. 30-32

accomplishes a sudden transient cadence within the extremely limited space. In order to achieve the cadential effect, the same process occurs not only in the two outer voices of Eb to D in the soprano, and Eb to Bb in the bass but also in the inner voices: the half step slide, from Gb to F in the viola (m. 31) strengthens the feeling of a break (cadence on Bb). The note Gb in the viola (m. 31), in retrospect, forces the cello to spell out the note Gb in measure 30, instead of the F#; hence the major sixth. The cadential method, as shown in example 6, is very effective for such a transient cadence when there is no customary modulating cadential process.

III

As was the case in the first statement of the main thematic unit, the harmonic progression in the second statement (mm. 23-32) is also quite ambiguous when viewed from the traditional key-changing process. The second statement of the main thematic unit does not prepare the dominant Bb for the second key (Eb major or minor). Perhaps, there is insufficient time or space to use a proper process in such a condensed frame of the music. The following further addresses the effect of such an abrupt cadence in connection with the beginning of the second theme.

The Ab-major harmony established at the beginning takes up an entire measure (m. 27), then becomes Ab minor in the following measure. Eb major and minor chords suddenly appear in succession in the following two measures (mm. 29-30). This harmonic procedure does not establish a feeling of reaching the second key of Eb until measure 31, where the same procedure of the downward half step in the soprano and upward root movement of the perfect fifth in the bass occurs, just as in measures 7 and 9 (cf. Ex. 6). The viola also slides down a half step from Gb to F to strengthen the cadential feeling. The same procedure follows immediately in the next measure (m. 32), but now the downward half step motion Gb to F in the viola is

transferred to the top-most voice, or first violin (see Ex. 6), then the pedal tone Bb in the viola signals the change of key.

The above cadential process, emerging from a non-modulatory passage (mm. 27-30), happens so fast and in a least-expected place, so that one feels the impact of the break only after it has happened. Because of a combined linear motion (1/2 step in the soprano), and harmonic motion (perfect fifth up in the bass), the effect of the cadence is paradoxically much stronger than in those places where a cadence is gradually prepared.

Because of the effect of the cadence (mm. 31-32), what follows immediately gives the impression of a new beginning. Because of the psychological effect of a break or abrupt cadence, a few writers, such as Walter Frisch Frisch⁹ and Edwin Evans,¹⁰ regard measure 33 as the beginning of the second theme (Ex. 7).

However, the two measures (mm. 33-34) continue the cadence outlining the dominant-minor ninth (V^{-9}) and the Eb-minor six-four, with the viola carrying the pedal tone Bb. These two prolonged measures may be eliminated to immediately begin the second theme, following the double cadential statements. But, so great is the impact of the cadence that

⁹ Frisch, op. cit., p. 201.

¹⁰ Edwin Evans, Handbook to the Chamber & Orchestral Music of Johannes Brahms, Charles Scribner's Sons, (1933-35), p. 101.

Ex. 7. mm. 30-35

the dominant harmony is prolonged for two measures at the beginning of the second theme.

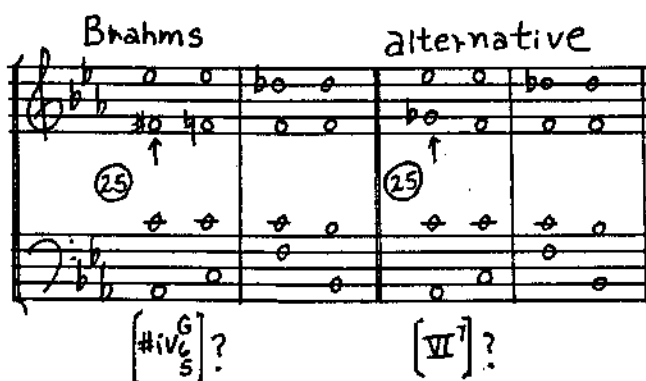
In light of the economy of this piece, the alternative version (the elimination of measures 33-34) is certainly conceivable. But Brahms seems to have been forced to opt for his version due to this non-conventional cadential formula in connecting the first and second themes. There is no transition except for two successive powerful statements of the linear and harmonic motion of the outer-most voices (mm. 31-32)--hence the inevitable spill-over of the dominant harmony into two extra measures (mm. 33-34).

The dominant-ninth chord (V^9) in measure 33 ushers in the second key area, Eb minor. The previous cadential passages are quite remarkable for the short space allotted; a similar process of reconditioning a phrase by harmonic means in a limited time span has already been observed in

the first movement of the A-Minor quartet (see pp. 45-46). Creating urgency at the cadence in the context of the combining linear and vertical elements is perhaps the best means in establishing the repose.

Another unusual harmonic progression also occurs in measures 25-26 where F# over Ab (an augmented sixth) and C (a tritone) in measure 25 resolves downward instead of in the customary upward direction (Ex. 8; see also a comparison with the Mozart's similar version in Ex. 20, p. 202).

Ex. 8. mm. 25-26



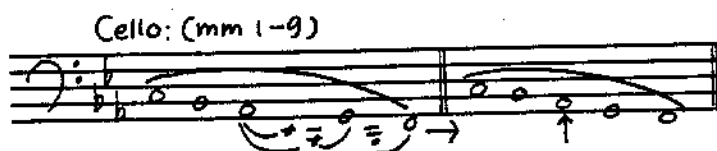
The image shows a handwritten musical score for two systems: 'Brahms' and 'alternative'. Each system consists of two staves (treble and bass clef). In the Brahms system, measure 25 features a treble staff with notes F# and Ab, and a bass staff with note C. An arrow points to the F# note. Below this system is the chord symbol $[\#iv_{6/5}]?$. In the alternative system, measure 25 features a treble staff with notes F and Ab, and a bass staff with note C. An arrow points to the F note. Below this system is the chord symbol $[VI]?$.

The unusual half-step motion from F# to F-natural in the second violin foreshadows what is to come later in measure 32 where the F# becomes Gb (via enharmonic spelling). It immediately influences the second theme's half-step motion, from gb2-f2, in measure 35 (first violin). Also, as in the previous example, the spelling of the diminished seventh eb3-f#2, (m. 25) instead of the major sixth eb3-gb2 (alternative version) signifies the interchangeability of

the enharmonic spelling, which influenced the the choice of the second key of Eb minor (see Ex. 15 for a probable reason for such a half-step inward progression from F# to F natural).

Brahms's preference to move in a downward direction both in tonal regions (to flat sides) and in linear movement makes the F-minor harmony to appear first in a piece supposedly in C-minor (cf. Ex. 2). This bypasses the customary dominant region (Ex.9). This is also a feature in the fourth movement.

Ex. 9. mm. 1-9



In Example 9 the bass line, which carries the primary harmonies, travels down rather than up a perfect fifth. In so doing, the Ab major submediant harmony is emphasized as a connecting step to the G, which subsequently moves downward to F. The Ab major submediant chord, which is a prominent harmonic entity throughout, is thus a natural intermediate step in the downward perfect fifth motion.

Forte also notes the significance of this first-inversion Ab chord, as this particular position appears many

times in this movement. The same first-inversion position of the Ab chord begins the second movement Romanze and in the fourth movement, in measures 33, 95-97, 223-225. Because of the apparent importance of the Ab chord in first inversion, Forte traces its origin to the first measure (first violin) through the various transformations--inversion, retrograde, and retrograde inversion (Ex.10).¹¹

Ex. 10. m. 1



Regardless of the validity of the method used to derive the Ab-major chord (first inversion) from the first measure, the relationship between the two--the first "prime" C-minor six-four melodic line (arpeggiation in measure 1) and its becoming the Ab chord in first inversion through "retrograde inversion"--is certainly an interesting aspect (cf. Exs. 1 and 2). The whole phrase shown earlier (Examples 1-2) is claimed to have been heard intrinsically as the prolonged Ab major submediant harmony in first inversion although the first two measures visually outline the tonic C minor triad. However, the origin of the Ab chord, though different in Forte's view, was the result of hindsight, particularly in

¹¹ Ibid., p. 476.

the downward motion of the bass line (cello). Therefore, the implied harmonic identity of the first two measures is revealed in a later stage--what first seemed to be C minor with the triad C-Eb-G (the fifth G was almost a non-entity until measure 7) turns out to be a part of Ab major. Thus, the C minor six-four position in the first measure (4th, 5th, and 6th notes as the progenitor of the Ab6 harmony as in Forte's example above is unlikely.

As indicated in example 9, the Ab harmony is a natural by-product of emphasizing the downward perfect fifth (C down to F), hence the Ab harmony (first inversion) itself becomes its own origin. Because of the overpowering Ab harmony at the beginning, the feeble C minor triad in the first two measures is engulfed. This is another interesting case in which one does not hear what one sees (C-minor triad) in the music. Similar feature also occur frequently elsewhere (see Ex. 31 and Ex. 25 in Chapter II).

Because of the special cadential treatment, the exact beginning point of the second theme is not clear. It is necessary, therefore, to discover if there is any relationship between the two themes via some kind of transformation. This transformation may take place in many subtle ways such as intervallically (harmonic), melodically (linear), or in other transformation devices, such as inversion, retrograde, and retrograde inversion.

The immediately identifiable relationship between the two themes exists in the head motive of a rising minor third in measures 1 and 35. The rising minor third in measure 35, which originally set out in the tonic (m. 1), begins in the dominant (Bb in Eb minor). It is clear that the second subject begins in measure 35 because of this rising minor third. Forte also points out the relationship between the two rising minor thirds (Ex. 11).¹²

Ex. 11. m. 1

The image shows two staves of musical notation. The top staff is labeled 'Th. I' and 'Th. II'. Theme I (Th. I) is a rising minor third (C-D-Eb) labeled 'Prime (a)'. Theme II (Th. II) is a rising minor third (Bb-C-B) labeled 'Retrograde Inversion (a')'. The bottom staff shows the transformations: Prime (a), Inversion (ā), retrograde (a'), and retrograde Inversion (ā').

Example 11 shows that Forte regards the inner intervals of the initial minor third as the prime factor, and then transforms them through inversion, retrograde, and retrograde inversion. The relationship strictly explained in terms of these three transformations may pose a problem, as shall be discussed later. The intervals of a minor third--a whole step and a half step (C-D-Eb), or a half step

¹² Forte, op. cit., p. 481.

and whole step (D-Eb-F)--in the example play a decisive role in the derivation of the transformed motives. Regardless of the internal intervalliç relationship, the two main motives' rising third undeniably shows a relationship. Because of this intervallic (boundary) relationship, the two preceding measures (mm. 33-34) prove to be the continuation of the cadence from measures 31-32.

IV

The closing theme follows the minor and major second key areas; this time in the key of Eb major, beginning in measure 71. Forte traces its origin to the descending first three notes of the bass line (Ex.12).¹³

While tracing the origin of the rising major third of the closing theme to the first descending three notes of the cello, Forte further relates the rising major third to the rising minor third of the main motive in terms of minor to major transformation (interval complement). The reason for the association of the major third of the closing theme with the minor third of the first theme, he further explains, is

¹³ *Ibid.*, pp. 483, 476 (item 10). Forte, however, did not indicate from where the descending major third originated (identified as epsilon ϵ in the table of motives). It is assumed that the descending major third came from the first three descending notes of the cello (mm. 1-5), since the descending major third cannot be found elsewhere. The descending third is only one of the two motives in Forte's example (the other one, the interval of an octave in the viola, measure 7, designated by theta) that are not originated from the first violin part.

Ex. 12. mm. 1-5, 71-73

that the analogous closing theme in the recapitulation (mm. 212-214) outlines the motive, c3-d3-e3 (major third), in the first violin which exactly corresponds to the pitch classes of the initial motive c1-d1-eb1 (minor third) in the first measure (Ex. 13)¹⁴

Ex. 13. mm. 1, 213-215

Because of the analogous pitch classes of C-D-Eb and C-D-E in the previous examples, Forte also considers that in the closing theme the major rising third, eb2-f2-g2, has its

¹⁴ Ibid., p. 494, Example 19.

origin in the descending major third of the bass line (mm. 1-5) due to their interchangeable relationship (i.e., from minor to major).

A clear relationship between the beginning of the closing theme and that of the first theme (head motive) can be established despite the obvious differences in the boundary intervals--minor third and major third. With respect to Forte's examples, the question here is--Which is the origin of the closing theme, the cello's descending major third in measures 1-5, as indicated in Example 12, or the head motive of the first theme, as in example 13? As explained in examples 1, 2 and 9, the beginning cello line emphasizes the submediant major harmony in the process of moving downward in the initial octave C to great C (mm. 1-7)--a characteristic of Brahms's music (this feature is more compelling in the fourth movement).

Although Forte makes it clear that each motive's relationship is primarily an intervallic event, finding the origin of the closing theme becomes ambiguous due to the relationship (Ex. 13) of each opening rising third in the first and closing themes. Therefore, Forte's finding of the rising major third in the cello (mm. 1-5) and relating it to the major third of the closing theme, as in example 12, is questionable. What is more, the first three notes of the cello, expanded over five measures, may not be considered as an identifiable unit, since there is no clearly divisible

unit in the scale. Additionally, when an interval is symmetrical such as the major third in the closing theme, the distinction by transformation via inversion, retrograde, and retrograde inversion is meaningless, particularly when the inner intervals of "primes" such as in alpha, beta, and epsilon in his table of motives are the primary basis for the derivation of other motives.

As shown by Forte in the previous two examples, the inherent relationship in terms of resemblance between the first, second, and closing themes in the exposition, particularly in Brahms's exposition (monomotivic in nature), should play the decisive role in tracing the origin of a motive. Therefore, the relationship is not likely to exist (as in Example 12, where the cello's three descending bass notes are the origin of the ascending major third of the first violin in the closing theme). Likewise, the origin of the submediant major chord (Ab6) is questionable, as shown in Example 10. For the same reason, the downward motion of the scale naturally prompts (see Ex. 9) an emphasis on the flat side of the harmony (bVI) to get to the dominant (m. 7), which then acts as another stepping stone to the goal note F (m. 9). The subdominant harmony, whose momentum grows from the beginning, prevails over other harmonies in the first part of the exposition.

Having discussed these points, one can go to a section in the second key area in measures 42-52 which appears to be

an interpolation. This section is unusual in that measures 45-52 in particular interrupt the established continuity of the music, as pointed out by Forte (he regards this section to be the developmental episode).¹⁵ In fact, the higher harmonic level of this section reflects what has previously been established in the harmonic event of the first and second theme groups. In order to prove this, we will discuss the immediate local harmonic level of this section and compare it with the higher level of all the preceding harmonic gestures (first and second theme groups).

After the completion of the first part of the second theme in measure 41, the direction and character of the music appears to be quite different from that of the preceding sections. In reality the motivic activities up to measure 36 were melodic events with step motion, based on a well-delineated harmonic background. The melodic intervals of the first violin beginning in measure 41 are now composed of many non-stepwise intervals. Beginning in measure 45, the melodic line in each voice, however, appears returning to the stepwise motion (half step), and then centers around a₂ of the first violin in measures 45-52. In measure 53 it finally moves to b_b2 where the long expected true second key E_b major returns via an abrupt harmonic shift (the cello suddenly slides down a half step from A-natural to A_b, see Example 14 for more elaboration).

¹⁵ Ibid., pp. 472, 488.

The first violin in measure 45 has mostly the intervals of an augmented second and fourth (V-9, cf. Ex. 17). In the next measure (m. 42), however, those previously unresolved intervals are resolved in the harmonic progression from the dominant-minor ninth of Bb (V-9) to the tonic Eb minor (i): the root Bb moves up a perfect fourth to Eb (Ex. 14).

Ex. 14. mm. 41-48

The image shows a musical score for Example 14, measures 41-48. It consists of two systems of staves. The top system contains measures 41, 42, 43, 44, and 45. The bottom system contains measures 46, 47, and 48. The notation includes notes, rests, and accidentals. Handwritten annotations include circled measure numbers (41, 42, 43, 44, 45, 46, 47, 48), Roman numerals (V-9, i), and chord symbols in brackets ([Eb], [Ab], [Db], [Gb], [Cb=b]). Arrows indicate root movements between measures. A large arrow labeled 'a)' points to the first system, and another labeled 'b)' points to the second system.

The same harmonic procedure of root movement up a fourth is repeated in the following measures (mm. 43-44) through inversion at the fifteenth (shown in Example 17). From measure 45 the same harmonic procedure follows, although the surface of the music appears to be changing (Ex. 14). As shown at b) the notation in measure 45

changes. The music moves toward the flat side with the same root movement (a fourth up). But for the sake of convenience in reading, flats are replaced by sharps, as Brahms has it in the music. Just as in the previous measures, root movement up a fourth in measures 44-45 is once more repeated with exactly the same harmonic content (i.e., V-9-i in version a). Although the same harmonic progression of root movement a fourth up is only implied, it is again felt in the following measures (mm. 45, Db to 48, Gb). However, the ongoing progression of the root movement a fourth up is finally stopped in measure 48.

The harmony in the subsequent measures lingers around the notes A, D, and F# (and F-natural, as shown in Example 15); the music has yet to settle down with the definite feeling of a tonal center, despite the repetition of the highest pitch a2, thus giving a brief impression that the music is arrested on the pitch a2 but anxious to move away from it. As shown in measures 41-48 (Ex. 14), the music eventually will arrive in the B-minor (or major) region, if the same harmonic progression of root movement a perfect fourth up is to continue (from Gb to Cb, a question mark in measure 48). The extracted roots shown in version b) clearly show the successive root movement of a fourth up, but the would-be final progression from the roots Gb to Cb (or F# to B) is avoided in measure 48. The reason may be that the final stop on B (Cb) from the ongoing root movement

up a fourth may perhaps be an undesirable harmonic region in the second key area because of its leading tone relationship to the tonic key C minor. Moreover, the leading tone harmony already heard at the end of the first theme group (mm. 19-21, see Ex. 2) need not be restated during the second key of Eb minor.

When this ongoing but disintegrating harmonic progression of root movement up a fourth has reached measure 48, it is forced to stop there, because there seems to be no easy route to reach the long-awaited second key of Eb major if the same progression were to continue. Thus, the music simply lingers on in the very remote and ambivalent harmonic region of either D (Ebb) major (or minor) or A (Bbb) major, as shown in Example 15.

Ex. 15. mm. 47-54, 25, 9

a) $[A]: vi - \frac{V_3}{12} - IV_6 - iv_6 - I - \frac{V_4}{2} - I_6$
 $[D]: iii - \frac{V_4}{2} - I_6 - iv - V - [E^b]$

b) $\textcircled{53}$ $\textcircled{54}$

c) $\textcircled{25}$ $\textcircled{9}$

Although the repeated highest pitch a2 alternates with g#2 a half-step below for four measures (mm. 49-52), giving thereby the feeling that music is stalled on a2. The

underlying harmony displays its unwillingness to settle down. The harmony of the interpolation section, as shown at a), can thus be heard in the context of either D or A major. But the D major feeling (with an interchangeability of mode) is stronger than that of A major due to the presence its dominant harmonies $\dot{V}4/2$ (m. 48) and V (mm. 51-52). Following the prolonged A-major chords with a2 in measure 51-52, the harmony in measure 53 suddenly shifts from A major to $Bb4/2$ by way of the cello's half-step slide from A-natural down to Ab, and the first violin's half-step up from a2 to bb2 (version b). Finally, the music has found its way to Eb major. Although this sudden shift is rather startling, the cello's half-step downslide in measures 53-54 reflects what has already been heard in measure 7, as shown in b) in Example 15. So startling is the sudden harmonic shift that it reminds one of the same half-step slide from ab3 to g3 heard in measure 7. Likewise, another indelible half-step slide gbl-f1 in measure 9 may in retrospect have influenced the viola's half-step inward motion in the treatment of the augmented sixth in measure 25, as shown in version c).

In hearing d the startling harmonic shift here, this momentum of root movement a fourth up is the very reflection of what has previously taken place--the same root movement of a fourth up, on a higher level, as shown in Example 16 below.

Ex. 16. mm. 1-54

The previous example 14 shows that the harmonic movement is exactly the same on a higher level in the first and second theme groups. At a) in example 16 the representative harmonic regions in the first theme group (C minor, F minor, B minor, and C minor) correspond exactly to those of the second theme group (Eb minor, Ab minor, D major, and Eb major). Version b) shows that a spiral-like harmonic movement of each section in the exposition is root movement up a fourth (perfect or augmented), if the restatement of the first theme (mm. 23-31) is eliminated since it has been presented at the beginning. At b) the relationship of root movement up a fourth in the exposition (as a whole--version b) and in the interpolative section (as a segment--version c of Example 14) is the same, although the beginning and ending notes are different.

The earlier-established main idea, whether motivic or harmonic, influences ensuing sections. The chronology of the influential root movement above, however, is reversed; that is, the higher level (exposition, Example 16) precedes the local level (a segment--version c of Example 14). This

is another telling instance that the priority of motivic consideration (as in Example 15, versions b and c) overrides that of harmony, which was also a prevailing feature in the A-minor quartet.

As noted earlier Brahms tends to move his harmonic progressions in a series of root movements a fourth up, hence the subdominant region prevails in this piece. What is once set up at the beginning (a melodic or harmonic motive) will most likely act as a progenitor, thus shaping the direction of the music not only on local but also on higher levels.

Of additional interest here is the inversion at the fifteenth (Ex. 17) signals the veering of the musical direction (the same is also a feature in the first movement or as in the fourth movement, in which the same inversion signals the detouring statement of the main motive in C# minor--so close to the main motive in the tonic C minor, yet so remote; see Ex. 40, p. 232).

The inversion at the fifteenth occurs only once in each movement. As shown in Example 17, the root movement up a fourth at the local level is precisely initiated here.

Ex. 17. mm. 41-44

V

Forte compares Beethoven's Pathétique Sonata (op. 13) with this C-minor quartet. Among the similarities mentioned are the key relationships of the first and second subjects (C minor to E♭ minor), the main motive's rising minor third in the same register, the dotted rhythm (♩. ♩), and the retrograde motivic accompaniment in Beethoven's sonata (left hand part). Hence he claims this same idea of retrograde can be applied in the analysis of Brahms's motives, such as shown in Examples 10 and 12).¹⁶

As indicated earlier, there seems to be a particular link between this first movement and that of Mozart's piano concerto in C minor, K. 491. The following brief comparison of the two first movements will shed light not only on significant structural relationships, but also on some of the ambiguous motivic and harmonic aspects in Brahms's first

¹⁶ Forte, Ibid., pp. 472, 475.

movements.

The following example shows the opening statements in both the first movements (Ex. 18).

Ex. 18. mm. 1-5; Mozart K. 491, mm. 1-9

The image contains two musical staves. The top staff is labeled 'Brahms:' and shows the first five measures of his C-minor first movement. It begins with a treble clef, a key signature of two flats (C minor), and a 3/2 time signature. The first note is C, the second is Eb, and the third is Ab. The bottom staff is labeled 'MOZART: III 6' and shows the first nine measures of Mozart's K. 491 first movement. It also begins with a treble clef, a key signature of two flats (C minor), and a 3/4 time signature. The first note is C, the second is Eb, and the third is Ab. Both staves have circled numbers 1, 2, and 3 under the first three notes of each piece to highlight the similarity.

It clearly shows that more than a coincidental similarity exists between the two. In fact, Mozart's principal theme, particularly in measures 1-4, is the main source of the entire concerto either tonally or motivically, just as is the case in Brahms's C-minor first movement. The first note C in Mozart is the tonic key of the piece, and the second note Eb is the second key, and the third note Ab is structurally important throughout the piece. In Brahms the first note C assumes the tonic key (though the Ab harmony prevails in the opening phrase; see Ex. 2), and the accented second note Eb (as a passing tone is not considered) is the tonic of the second key. The third important note F# in measure 2 has a direct influence on the B-minor region (mm. 19-21, B-D-F#), and on the minor second key (F# becomes Gb,

hence Eb-Gb-Bb; see Exs. 4 and 8), and, most of all, on the interpolative section in which D major (D-F#-A) stands out over A major (see Ex. 15).

The Ab-major triad in first inversion in Mozart is one of the most salient features in Brahms's first movement. In Brahms's opening, the major submediant Ab-harmony predominates the opening phrase until it finally resolves to the dominant and subdominant in measures 7 and 9 respectively (see Ex. 1).

As pointed out by Forte, the Ab-major triad in first inversion is a prominent force in the entire piece because its identity is established at the beginning. Although the Ab-harmony as a whole in Brahms's opening phrase is noticed only in hindsight, Mozart's version of the Ab-harmony is immediately more conspicuous. In Mozart, a listener would naturally expect the third note to be G (m. 3) on a strong beat in the expectation of completing the tonic triad, as many other composers of his time would have done. But Ab, instead of G, on a strong beat (a half note) appearing in measure 3, overshadows the G that follows, and then moves directly to F# in the next measure. Therefore, the note G cannot be heard as a resolution of the note Ab in the completion of the tonic minor triad. The same procedure also occurs in Brahms where the note G in the first and second measures functions neither as a member of the chord (C minor) nor as a resolution of the F# (m. 2) because of

its fleeting existence. As was the case in Brahms, Mozart's version is similar in that one does not hear the expected C minor triad, although one sees it in the music, because the third note Ab does not function as an appoggiatura to the note G.

Consequently, Mozart's opening theme in measures 1-3 is in Ab major, not in the tonic C minor. Also, the Ab harmony in Brahms, as shown in Example 2, plays an important role not only in the first movement but also in the second movement which is in the key of Ab. Likewise, the Ab harmony in Mozart, besides being important in the opening phrase, is also an important key area in the development (mm. 309-320), before the G-minor region is reached by the orchestra (mm. 321-329). Ab is also the key of the second episode in the second movement, and of the fourth variation in the third movement.

Another corresponding element between Mozart and Brahms is the function of the initially prominent note F#. In Brahms the F# from the diminished seventh (eb2-f#1) is used interchangeably with the major sixth (i.e., eb2-gb1, cf. Exs. 4-5), which eventually influences the choice of the second key, Eb minor. In Mozart the F# of the diminished seventh does not influence the second key. But F# becomes the major harmonic area in a development-like passage (mm. 226-233) in the second key of the solo exposition, just as in Brahms's developmental episode (Forte's term) in the

exposition (D major from D-F#-A). As explained earlier (Exs. 15-16), the note F# is the crucial note in determining the key of D major just before the sudden shift to the true second key of Eb major (F#'s relationship to the second key Eb minor has already been mentioned).

The tritone C-F# is also a significant element in both Brahms and Mozart. As noted at the beginning (pp. 8-9), the note G in the first measure of Brahms is not heard as a resolution of the F#. The resolution to G is felt only in measure 7, and it is soon negated in measure 9 by another turn of half step from gbl to f. Remarkably, Mozart uses almost the same procedure. The unmistakable tritone in the unison section of the strings betrays this expectation; instead of resolving to gl from f#1 in measure 4, it (f#1) jumps up to eb2, as has happened two measures earlier (eb1 in measure 2 jumping to abl instead of to gl in measure 3 to outline the C-minor triad). The second note G in measure 5 again is not heard as a resolution because of its passing function. As if to frustrate the listener, the last note f#1 (♩) in the same measure again jumps up to abl and passes right through the note gl on the way to fl natural, betraying again the expected resolution to gl, just as Brahms did in the opening phrase and in measure 25 (cf. Ex. 18). However, the remarkable feature in both Mozart and Brahms is that the unresolved tritone at the beginning is later resolved in no uncertain terms: in Mozart in the

development section (mm. 302-305) in F minor; and in Brahms at the end of the recapitulation, (mm. 216-219, 220-223), as shown in example 19.

Ex. 19. mm. 216-219; Mozart K. 491, mm. 1-4, 302-305

The image contains three musical staves. The top left staff is labeled 'Mozart:' and shows a tritone (F and C) in measures 1-4. Below it is an 'alternative' version of the same tritone in measures 302-305. The top right staff is labeled 'Brahms:' and shows a tritone (F and C) in measures 216-219. The bottom left staff is labeled 'Dev:' and shows a 'Resolved' version of the tritone, where the notes are separated by one measure.

The alternate version in Mozart is surely the expected one for those whose ears are trained in traditional tonal harmony. The forceful unison rendition of the strings in measures 302 to 305, finally fulfills the long-awaited resolution of the tritone. In Brahms, however, the relationship is much more obvious because the cello (mm. 216-217) has exactly the same motivic figure (rising third and falling seventh) as at the beginning. The tritones of Brahms and Mozart above, however, are the result of the linear realization in which the two notes of the tritone are separated by one measure (Brahms) and three measures (Mozart). When the tritone is presented simultaneously, however, it does not behave as above, as illustrated in Example 20.

Another remarkable similarity between Mozart and Brahms is the tritone's unconventional behaviour, in the context of the clearly outlined augmented sixth chord. When the notes of the tritone (C-F#) or augmented sixth, (Ab-F#) are presented simultaneously, they do not resolve outward but progresses inward, as shown in Example 20.¹⁷


Ex. 20. mm. 24-26; Mozart K. 491, 8-13

The image contains two musical examples side-by-side. The left example is labeled 'Mozart:' and shows two staves: 'Oboe:' and 'strings:'. It highlights measures 8 and 10. A bracket above measure 10 indicates a tritone (F#-C) resolving inward. The right example is labeled 'Brahms:' and shows two staves: 'Oboe:' and 'strings:'. It highlights measure 25. A bracket above measure 25 indicates a tritone (F#-C) resolving inward. Both examples have a question mark above the tritone resolution.

The notes F# of the tritone and augmented sixth chord in both Mozart and Brahms all resolve to F natural. As shown by the brackets above, the F# in Mozart's measure 10 and in Brahms's measure 25 resolves inward (cf. Ex. 8). Even the voice-leading pattern of the augmented intervals embedded in augmented-sixth chords ("Italian" in Mozart, "German" in Brahms) are similar. The only difference between the two, besides the timing of the resolution, is that Mozart resolves the tritone in the development, whereas Brahms

¹⁷ Graham Phipps, "Comprehending Twelve Tone Music as an Extension of the Primary Musical Language of Tonality" College Music Symposium Vol. 24, No. 2 (1984), p. 42.

resolves the tritone finally at the very end of the recapitulation (Ex. 19).

In retrospect, it should be observed that the *gl* () in the second measure was not meant to be a resolution. Also, because of the ambiguous character of the opening, the resolution figure of Brahms (Example 19) is immediately repeated in the following measures (mm. 220-223, not shown in example), as if shedding light on the previous problematic spot (m. 2) by declaring the long-awaited resolution clearly and loudly.

It is said that Beethoven admired Mozart's C-minor piano concerto, K. 491.¹⁸ Surely, Beethoven's Pathétique Sonata in C-minor was influenced by it. Although there are no documents proving that Brahms studied Mozart's C-minor concerto, it is not unreasonable to surmise that Brahms studied both pieces of Mozart and Beethoven, which in turn influenced his C-minor quartet, particularly the first movement.

¹⁸ George R. Marek, Beethoven, Biography of a Genius, (New York: Thomas Y. Crowell Co, 1961), pp. 203-204.

Fourth Movement

I

The last movement, which is in some ways similar to the first movement, also displays some features of internal organization found in the last movement of the A-minor quartet. The finale of the C-minor quartet, like its first movement, is also intense and restrained in character due to its compressed nature, effected by motivic unity.

As has often been observed, the two op. 51 quartets display different emotional intents. But motivic organization and developmental procedure are remarkably similar in both quartets: on the surface character and mood may change, but the internal elements remain fundamentally the same. This has already been observed in the first and last movements of the A-minor quartet. But this occurs mostly within a single movement, where the usual pitch content remains the same when the seemingly disparate events are stripped down to their bare elements.

As in the last movement of A-minor quartet, the external form of the C-minor finale defies an accurate description; it does not conveniently fit any existing structural model. Perhaps the fourth movement can be understood when viewed from the aspect of the single-movement sonata form; thus, the common terms for demarcation, as have been employed so far, are used in this

discussion. This unusual formal aspect will be addressed at the end of the discussion of this movement.

The finale opens in the subdominant with a unison statement of the main motive--a tour de force --just like the first movement of the A-minor quartet. The initial rising minor third and the immediate plunge of a diminished seventh interval forces our recalling of the first movement. Indeed, this is the contracted version of the first movement's opening motive (eight notes in the first movement vs. six notes in the fourth movement; Ex. 21).

Ex. 21. 1st movement, mm. 1-2; 4th movement, mm. 1-2

The image contains two musical staves. The left staff is titled "1st Mvt:" and shows a melodic line in G minor (one flat) with a circled first note (G). A bracket underneath the staff spans eight notes, labeled "8 notes". The right staff is titled "4th Mvt:" and shows a melodic line in D minor (two flats) with a circled first note (D). A bracket underneath the staff spans six notes, labeled "6 notes".

Before observing the motivic development in detail, it is important to note some of the obvious reasons for this movement's subdominant opening. It is necessary, at this point, to keep in mind that the second statement of the first theme in the recapitulation of the first movement is in the subdominant instead of the usual tonic. Therefore, the subdominant opening in the fourth movement is foreshadowed in the first movement, since the opening motives (rising minor third and leap of a diminished

seventh) of the two are almost identical (cf. Ex. 21). In general, in the recapitulation of a single-movement sonata form, the second statement in the first theme group is eliminated, but not so in the first movement of the C-minor quartet. Also, the third movement allegretto is in F minor, which links well to the subdominant opening of the fourth movement. These features point to the fact that the subdominant opening, which uses the head motive of the first movement, is not as much of a surprise as it appears to be. Also, this indicates, as has been observed, Brahms's favorite harmonic region, the subdominant. However, the subdominant (D minor) beginning of the first movement of the A minor quartet results from the construction of the initial motive using the four notes a1-f2-a2-e2 (motive A befits D minor). Also, the equally important first four non-harmonic tones of the viola all resolved to a D-minor, not to an A-minor chord (see Exs. 6-7).

As there are compositional reasons for the above subdominant opening in the A-minor quartet, there are also two interesting reasons for the subdominant opening in the last movement. First, it is not desirable to open the finale using a motive identical to the opening of the first movement (see Ex. 1). Second, and more importantly, not only is this motive different from the opening motive of the first movement (at least scale-degree-wise), but also it produces the missing (but expected) C-minor key (or scale),

to be immediately followed by itself in retrograde in the bass line (Ex. 22).

Ex. 22. mm. 1-6

The image shows a musical score for Example 22, measures 1-6. It consists of two staves: a piano unison in the first two measures and a cello line in retrograde for the next five measures. Annotations include 'a)' pointing to the first five notes of the F-minor scale, 'b)' pointing to the retrograde line, and 'Retrograde' written below the cello line. Intervals of a sixth and an octave are also indicated.

As shown in Example 22, the dramatic opening in the first six measures lays the ground-work for the whole movement. The unison beginning in the first two measures undoubtedly outlines the first half of the F-minor harmonic scale (shown at a). These first five notes of the F minor scale are immediately taken over by the cello in retrograde over the next five measures in longer note values. The cello completes the C harmonic minor scale when the two notes Eb and C (mm. 5-6) are added, as shown in version b). At b) the first interval of a perfect fifth from C down to F and the second interval of a sixth from C down to Eb from the

same scale are also of singular importance as intervallic motives in the piece. Thus, the F-minor opening of the main motive not only enables the beginning of the finale in a different identity from the first movement but also, at the same time, presents the expected tonic key C minor by immediately retrograding the opening motive in measures 3-6 (version b). However, the C harmonic minor scale at this point is incomplete because of the missing note D (this missing link, so to speak, in the C harmonic minor scale will be addressed in the appropriate place along with the two intervals, the sixth and the octave (cf. Ex. 25).

Having heard the C harmonic minor scale in the cello, we find, in hindsight, that the presentation of the motive on the subdominant level is the continuation of the C harmonic minor scale from the first movement, in which the notes F and B, the major two internal notes defining the C minor tonality (the tritone and its resolution), are noticeably missing (Ex. 23-a; see Ex. 28 for further elaboration).

Ex. 23. 1st movement, m. 1; 4th movement, mm. 1-3

a) 1st Mvt 4th Mvt b) 4th Mvt: Alternative(?)

As version a) indicates, the music begins from the fourth scale degree of the C minor harmonic scale. Version b) also shows the alternate opening version of the fourth movement with the main motive beginning on the tonic note C, instead of on F. Obviously this version is rejected, for it would be identical to the opening of the first movement.

What is significant throughout the whole movement, however, is the absence of the rising minor third and the downward leap of the diminished seventh in the tonic, as shown in the alternate version, b). The choice between retaining and rejecting the main motive with respect to key context is indeed an intriguing aspect, for somewhere in the music the main motive in the key of C minor may be expected to appear, at least once or perhaps more. This question, however, will be answered in the development and recapitulation, where the answer itself, interestingly, poses a question (cf. Ex. 40).

Another interesting point in this hypothesis is that the newly formed scale (version a) would also have implied an Ab major tonality, if the note B-natural is considered to be a non-harmonic tone. Therefore, in hindsight, the Ab major tonality shown in version a) would also have implied a similarity to the bass line of the beginning of the first movement (cf. Ex. 2). As has already been observed in the A-minor quartet, the ambiguous opening of the music either melodically or harmonically is the most conspicuous feature in the two op. 51 quartets.

In the first movement, it was observed that a few unusual harmonic and melodic events that veered from the expected course were the result of a predetermined compositional unfolding whether they were on a local or higher level (cf. Exs. 13, 15). In addition to opening in the "wrong" key, the sudden unison is also unexpected. However, the real surprise comes in the following measure (m. 6), where the expected tonic note C is replaced at a strategic cadential point (in the first violin and viola) by C#, thus creating an augmented sixth with the cello's Eb (Ex. 24).

Ex. 24. mm. 5-7

Because of this unexpected C# in the first violin and the viola, the music detours around the supertonic region (D), with the note C# acting as the leading tone to the D in measures 7-8. The supertonic harmony, however, soon becomes the secondary dominant to the G-major harmony in measure 8. But this G-major harmony does not lead to the expected tonic

key of C minor, even after it (G major) becomes a dominant seventh in measure 10; rather, it paves the way for the second statement of the main motive in the subdominant (m. 13). Therefore, the music, supposedly in the key of C minor, remains in C minor only so briefly--one measure (the second half and first half of measures 5-6 respectively) out of twelve measures of the opening statement.

Although the C-minor tonality does not appear frequently (if at all), it is still somehow present because of the manner the bass line is set up in measures 3-6 (cf. Ex. 22). Thus the bridge-like section (mm. 7-12), though implying the dominant harmony by its own dominant (D major/minor), seems to be redundant in the natural flow of the music. There is a substantial amount of D harmony at the end of the phrase (mm. 7, 9), which does not lead into the expected dominant G harmony. Also, these repeated four eighth-note figures in the first violin (not shown) give the impression that the music is halted--hesitant to move on. This same phenomenon was observed in an interpolative-like section in the first movement (see mm. 45-52, and Ex. 15 version a). The harmony emphasized in this bridge-like section is D major (or minor, m. 9), although it is presented side-by-side with the G major chord (Ex. 25). The D harmony purposely emphasized by the eighth-note running figures seems to be there for its own sake, it does not lead or assist in taking the phrase to the expected tonic key, C minor. As mentioned in connection with the

Ex. 25. mm. 1-9

[C]: 1 4 7 b6 5 4 3 1 3 2 2 4 4 2 2

[D]: I I

octave in the bass line in Example 22 (version b), the missing note D in the C harmonic minor scale in retrograde has found its identity in this bridge-like section, which occurs before the second statement takes place. Although the second scale-degree D does not occur in the initial statement of the octave, the fulfillment of the octave by the late addition of the note D to the C minor harmonic scale gives the much needed support of the tonic, C minor, especially in this tonally-ambiguous region.

The above fact, derived from observing the first statement, becomes even more evident when the second statement is examined. The second statement in measures 13-21 is almost identical to the first statement, except in the beginning, measures 13-14 (not in unison). However, the long-awaited cadential point of the second statement, as shown at b) in Example 26 below, is the condensed version of the analogous section of the first statement in measures 5-7 (version a, shown by brackets in each version). In the second statement, Brahms bypasses that portion of measure 6, in which D major was temporarily tonicized using

Ex. 26. mm. 3-7, 15-20

its leading tone C#, and moves directly to the note f#2 within the same measure (m. 17). As a result, the D-major passage in measures 5-7 (at a) is contracted to half a beat (bracket at b, m. 17) in the second statement. Moreover, at b) the contracted version is immediately repeated in measure 19, reinforcing the earlier aborted cadential passage in the first statement. This is another instance in which a later statement provides answers to harmonic and melodic ambiguities--a feature proven to be prominent in both op. 51 quartets. The detour, necessary to complete the octave in the bass line, is eliminated in the second statement. In retrospect, the aborted cadential route in the first statement proves to be only a temporary (though forced) means for the fulfillment of the primary purpose--the completion of the previous incomplete octave C through the harmonic minor scale.

The evaded C-minor tonality, however, takes up a forceful position in the transition by way of motivic enlargement and by voice-exchange in the main motive as shown in versions a) and b) in Example 27 below.

Ex. 27. mm. 4-5, 21-23

The image contains two musical staves, labeled 'a)' and 'b)', illustrating a motif in C minor. Staff 'a)' shows a rising minor third in the lower voice (circled 21) and a top voice extending the main motive. Staff 'b)' shows voice-exchange between the lower voices (circled 21 and 23) and a top voice extending the main motive.

The transition beginning in measure 21 explicitly refers to the original motive of a rising minor third in the lower voices by voice exchange, while the top voice actively extends the main motive. (Progressive motivic enlargement is one of the main characteristics in the last movement of the A-minor quartet). The voice-exchange introduced in the lower voices between the viola and cello, acts to conceal the identity of the main C-minor motive that should have begun the fourth movement. Obviously, voice-exchange is used to prolong a harmony.

Before discussing the transition, however, one needs to address a certain interval, namely the tritone, and its usefulness in defining a key in connection with voice-

exchange. The tritone between the two outermost voices in measures 3-5 (B and F) acts as a frame for the tonality of the music, but it is concealed by the voice exchange. (B and F in Ex. 28).

Ex. 28. mm. 1-5

The musical score for Example 28, measures 1-5, is presented in two parts, (a) and (b). Both parts are in 4/4 time and feature a key signature of two flats (B-flat and E-flat). The notation consists of two staves: a treble clef staff and a bass clef staff. In part (a), the treble staff begins with a half note B-flat in measure 3, and the bass staff begins with a half note F in measure 3. These two notes form a tritone. The score shows the progression of these notes through measures 3, 4, and 5, with various rhythmic patterns and accidentals. A circled number '3' is placed in the treble staff in measure 3. In part (b), the treble staff begins with a half note F in measure 3, and the bass staff begins with a half note B-flat in measure 3. This also forms a tritone. A circled number '1' is placed in the treble staff in measure 3, and a circled number '3' is placed in the bass staff in measure 3. Both parts conclude with a final cadence in measure 5, indicated by a double bar line and a fermata.

The musical score for Example 28, measures 1-5, is presented in two parts, (a) and (b). Both parts are in 4/4 time and feature a key signature of two flats (B-flat and E-flat). The notation consists of two staves: a treble clef staff and a bass clef staff. In part (a), the treble staff begins with a half note B-flat in measure 3, and the bass staff begins with a half note F in measure 3. These two notes form a tritone. The score shows the progression of these notes through measures 3, 4, and 5, with various rhythmic patterns and accidentals. A circled number '3' is placed in the treble staff in measure 3. In part (b), the treble staff begins with a half note F in measure 3, and the bass staff begins with a half note B-flat in measure 3. This also forms a tritone. A circled number '1' is placed in the treble staff in measure 3, and a circled number '3' is placed in the bass staff in measure 3. Both parts conclude with a final cadence in measure 5, indicated by a double bar line and a fermata.

The first tritone in measure 3 does not resolve until measure 5, and then through voice exchange. At a) the resolution of the tritone in the two outer voices, within the context of a dominant seventh chord, is delayed by the intervening F-minor triad. However, if one reads the opening note F of the rising minor third as the bass note of

the F minor triad (as shown at b) then the formation of the tritone can be placed back at the first measure. Then the harmony of the opening statement, until the brief, first appearance of a C minor chord in first inversion (m. 5), is all dominant seventh, emphasized by the two outer pitches, B and F. The beginning of the piece is in the "wrong" key, but the "correct" key is presented in such a concealed way that the musical flow suggests the principal key of C minor. Since Brahms wishes to avoid the main motive of the first movement (the rising minor third), the subdominant beginning in the fourth movement in a forceful unison somehow enables him to compensate for the surface C minor tonality with the tritone B-F in the outer voices. Although the given key of C minor is not truly heard until the end of the first theme group, it is present there due to the tritone's strong gravitation toward a C minor harmony.

At this point it is noteworthy to observe an interesting relationship between the opening of this movement and that of the first movement of the A minor quartet, which also opens in the subdominant (see Ex. 10, p. 44). As explained in connection with interval motives, voice-exchange is a convenient tool in expanding a motive or a harmony. This feature, which was found in the first movement of the A-minor quartet, is also prominent in the fourth movement of the C-minor quartet. The following example shows the expansion of an interval motive by voice exchange (Ex. 29).

Ex. 29. mm. 3-8

The voice-exchange in version a) in Example 29 is virtually the same as in version b). At b), however, one of the voices is an inner voice (second violin). Although voice-exchange is generally limited to the two outermost voices, the prevailing interval motive of the tritone, as a means of supporting the harmonic frame is a noticeable feature here. In a comparison with version c), although the intervals (tritone and major sixth) are not the same, the voice-exchange emphasizes the given tonic key, as shown in a), b), and c). In the first quartet, the Bb triad in first inversion (m. 8, the Neapolitan sixth) gravitates to E major, the dominant of A minor (cf. Ex. 12, p. 46).

II

This section deals with the aspects of transition and the second theme together, to see how the opening motive is transformed to become the second theme. More importantly, this section will show how Brahms viewed the exposition of the sonata form with respect to the contrast between the first and second themes (cf. footnote 10, p. 9). However, Brahms's different view on the sonata-form principle is the result of his emphasis on the priority of motivic over harmonic considerations. The following analysis will demonstrate this new viewpoint of Brahms on the sonata form.

The principal tonic, C minor, although implied by its dominant seventh, appears only briefly before the perfect authentic cadence in measures 20-21. The transition, beginning immediately after the cadence on C minor, is considerably slower in harmonic rhythm, relaxing the newly-found home key of C minor.

The transition is relatively long, as in the A-minor quartet. The lower voices carry the main motive of the rising third on the tonic, subdominant, and dominant levels, while the top voice has the main motive in eighth-note running figures (cf. Ex. 27). This transition, acting as a bridge to the second theme, does not modulate to the second key of Eb major but, rather, ends in C minor at a decisive cadential passage in measures 32-33. It is important,

therefore, to determine exactly where the transition ends and the second theme begins; this will reveal the hidden motivic relationship between the first and second themes of the exposition. Consequently, tonal polarity in Brahms's sonata form takes a secondary role to thematic content.

The melodic event in measures 32-33 concludes the phrase but does not coincide with the harmonic event; there is no modulatory harmonic progression. Thus, the demarcation of the transition from the beginning of the second theme has been blurred. This argument, however, is made not for the sake of demarcating the transition and the second theme, but because an interesting dichotomy in the melodic and harmonic activities exists, occurring concurrently at this crucial cadential point: One certainly feels a change of melodic direction because of the conclusive melodic event in measures 31-32, but harmonically one does not feel a change because the principal key (C minor) remains (Ex. 30).

The transition, with melodic events in the tonic and dominant, makes another point of closure, remaining still in C minor. This demarcates the end of the section (mm. 31-32). The question, then, is where does the second key together with an identifiable second theme (or motive) begin--in measure 33 or in measure 42? Except the second violin, all melodic lines indicates the phrase ends with a melodic interval of the perfect fifth in measures 31-32, giving an impression of cadencing the preceding activity and

Ex. 30. mm. 31-34

beginning with a new theme by using gentler linear motions beginning in measure 33. In measure 31 the viola has the leading-tone to C minor, but in the next measure the leading tone is dropped, and the last note C in measure 32 becomes a pedal tone in the cello for the following two measures (mm. 33-34). The order of the full G-major chord in measure 31 and the empty G chord with no third (m. 32) should have been reversed if the intended cadence of the dominant harmony is to be strengthened to mark a new start. However, a conclusion is felt by the way the melodic activity is set up (leaps of perfect fifths).

Although the cadential process is weak, the feeling of a change in measures 32-33 is undeniable because of the altered melodic construction in the upper three voices, which now move predominantly in stepwise motion, as shown in Example 31.

Ex. 31. mm. 33-35

Th. II?

(33)

II(vi)I, ii°

E^b

(Retrograde)

5th

6th

6th

[C]: i (?)

In the above example, the pedal tone C in the cello implies a C minor tonic, but the three upper voices outline an E^b major tonality. In spite of the pedal tone C, one simply cannot ignore the active melodic movement in E^b major in the upper staff. Furthermore, the supertonic (ii°) in measure 33, functioning as the diminished leading-tone triad via an interpolation of d1, support the implication of E^b major in the upper three voices. Here, again, is a dichotomy between the ear and eye--the ear hears it in E^b major, while the eye perceives the music in the key of C minor. In fact, despite the C pedal in measures 33-34, the E^b major becomes more evident as the music progresses. As a result, measure 33 is precisely the point where the second key begins with the well-contoured theme that comes from the main interval motive of the beginning. The second theme is even consist of the same pitch-class. This is a hallmark of Brahms's music--the second theme, though different on the

surface, can invariably be traced back to the first theme. This also is the feature in the first movement of the A-minor quartet. This serves to further substantiate the claim that measure 33 can be heard as the beginning of a new section despite the ambiguity in the immediate harmonic environment. The harmony in measures 36-37 briefly cadences on C minor, but it soon changes in measure 38 and moves on to a Bb harmony which finally confirms the second key, Eb major.

As shown in Example 31, the motivic interval of the second theme refers back to the opening subdominant interval motive. As was the case in the first movements of the C-minor and A-minor quartets, the main motive of the first theme proves to be the source of the second theme. However, in the second theme, the melodic interval of a sixth is prolonged to measure 37 to complete the octave. The first octave in the cello at the beginning, however, detoured around C#, which needed the second scale-degree D to complete the octave, from C to great C (Ex. 32, cf. Ex. 25).

At the initial presentation of the octave in Example 25, the interval of a sixth alone is enough to define the key of C minor. The missing note D in the octave is added later by a detour through the note C# (first violin and viola in m. 6). In the second appearance of the octave as here, however, the note D rightfully and forcefully finds its place, and it is reinforced by half-step motion from Db (mm. 35-36).

Ex. 32. mm. 33-35



As mentioned earlier, a dichotomy exist. The scale of the C octave (harmonic minor) first outlines the principal key C minor (Ex. 22). But in its second appearance with the interchanging of Bb and B-natural, the tonal orientation is Eb major. Perhaps Brahms's intention with respect to the octave is to preserve the identity in two different tonal areas. But an immediate problem arises--changing the key, yet preserving the octave. This is perhaps the cause for the dichotomy of "ear versus eye" (Ex. 32). In hindsight, the absence of a modulatory passage in the transition can be explained from the viewpoint of the motivic octave, c1 to c; its identity is closer to C minor than to Eb major; hence, a normal oricess of key change is lacking (Ex. 33). The completion of the octave, as in the initial bass line, is Brahms's major concern. In measures 36-37, the full cadence on C minor is an indication of the desire to complete the octave. After the motivic octave is well established, the music arrives at the expected second key,

Ex. 33. mm. 33-37

Th. II

octave

6th

33

37

[C]: I (?)

[Eb]: II (?)

and, beginning at measure 37, the C-minor tonality is not heard again until the end of the first theme in the recapitulation. In fact, the C-minor tonality is noticeably absent for a long time, for the order of presentation of the first and second themes in the recapitulation is reversed. (This feature will be discussed later.)

In summary, a few observations from the previous examples are appropriate. First, the preservation of the octave, particularly with the two boundary notes c2-c1 in the top voice, does not facilitate the initiation of the second theme in Eb major. Second, with little regard for harmony, and despite the lack of a modulatory passage, the pitch or interval content in the top voice alone can qualify as the second subject. Third, and more importantly, the C-minor tonic key, which should be avoided in the second key area, intrudes into the territory of the second in order to preserve the motivic octave, which befits the C natural minor scale. This explains the absence of the C-minor tonality until the recapitulation is well-established,

because this intruding tonality is now "on hold," so to speak, until the last part of the recapitulation to make up for the unbalanced tonality, which was originally caused by the priority of the motive over harmonic considerations. The reminiscence of the C-minor tonality, caused by the presence of the pedal tone C (mm. 33-34) in the area of second key, also explains the inseparable relationship between the makeup of the first and second themes. Consequently, the preceding tonic key spills over into the second key. Interestingly, this feature is reversed in the first movement of the A-minor quartet, in which the second key, C major, prematurely arrives in the first key area; (cf. Ex. 14, p. 49).

These hypotheses are not meant to say that Brahms could not begin the second key area with the exact same motivic content as the first theme. No doubt, Brahms could have reconditioned the end of the fairly long transition, particularly in measures 31-32 negotiate a modulation. However, Brahms's intention was to recall the major sixth and octave of the main motive, keeping it intact in the second key, which bypasses the modulation and causes an ambivalent key context. Instead, Brahms's intention in the composition was to emphasize the contrast between the first and second themes.

In the beginnings of both measures 42 and 54 (Ex. 34 below), the intervals of a sixth (version a with octave

displacement) and an octave are explicitly outlined, accentuating their affinity with the beginning of the movement (Ex. 34).

Ex. 34. mm. 42-49, 54-58

In measures 44-45 at a) a motivic fragment in C minor, which is separated from the unit explicitly refers to the main motive in the subdominant opening and to the pitch-class of the first movement (mm. 1-2). Once the key Eb is firmly established, the octave in the second key area moves freely. In the second key area in measure 41, however, the motives of octave and sixth are based on the rhythm-- $\text{♩} \text{♩} \text{♩}$. This comes from the very beginning of the second theme (m. 33) in the second violin and viola--a quarter rest and three-quarter notes followed by a eighth rest and three-eighth notes (i.e., $\text{♩} \text{♩} \text{♩}$ becomes $\text{♩} \text{♩} \text{♩}$).

III

In the second key area, the rhythmic figure heightens the activity. This rhythmic drive culminates in measure 68, where the original main motive is strongly restated in the first and second violins, followed by a slightly altered version of the motive two octaves lower (mm. 70-72). Although there is no break in the flow of the music, the development, which dispenses the main motive in an interesting manner, begins here with a change in rhythm and texture (Ex. 35).

Ex. 35. mm. 67-72

The image shows a handwritten musical score for two staves, treble and bass clef, in 4/4 time. The key signature has one flat (B-flat). The notation includes various rhythmic figures and rests. Above the treble staff, there are two annotations: "Beginning of Dev?" with a bracket over measures 68 and 69, and another "Beginning of Dev?" with a bracket over measures 70 and 71. The measure numbers 68 and 70 are circled in the treble staff. The bass staff contains a continuous line of notes, including some triplets and rests.

Of particular interest in these two successive statements of the main motive is , however, the question as to where the development actually begins, measure 68 or measure 70. In classical sonata form, there will be a clear demarcation

using a double with repeat sign at the end of the exposition. But here the music omits this procedure and proceeds directly into the development section.

The absence of demarcation between the exposition and development in this particular context is not without significance. It appears appropriate to mark measure 68 as the beginning the development, with the restatement of the main motive. The character of this movement, like that of the first movement, is restrained and also economically compressed in its motivic organization. Because of these characteristics, perhaps, there is no room for an identifiable break between the exposition and the development, either melodically or harmonically. More importantly, there is no need to repeat the exposition, since the main motive is a major element in the development section. Brahms perhaps follows a practice came from Beethoven--the main theme is recalled in full as the beginning gesture of the development, when the exposition is not repeated. Beginning the development without a break may be viewed as an attempt to emphasize the motivic content rather than highlighting the tonal polarity of the sonata form.

The development, though very short, is well-delineated through segmentation. Although the main motive is intact, the harmony underneath it is changed to the dominant, Bb major (mm. 71-81). The music settles down to homophonic

texture after very busy melodic activities in each voice. In this section the motivic content does not seem to relate to any previous activities. The two harmonies, the Bb fully-diminished seventh (mm. 73-75) and the Eb-major triad (m. 78) basically prolong the Bb harmony. However, a major portion of the beginning harmony is concentrated on the fully-diminished seventh chord, although Bb major is the goal harmony of the Bb fully-diminished seventh chord (i.e., non-dominant function). The Bb fully-diminished chord is extended mainly by voice-exchange in the two outer voices, as shown in Example 36.

Ex. 36. mm. 75-81, 6-7

The harmony in measures 73-75 (not shown) is the same diminished seventh, shown at a). It is clear that the main harmony in measure 73-78 is merely a prolongation of the

same harmony by the voice-exchange, as indicated in b). Version b), however, shows not only the voice-exchange in the outer voices a tritone apart as in the beginning (cf. Ex. 28), but also the similar pitch-class content between the first and second violins of version b) (top staff) and the first violin and the cello of version c), shown with a bracket. The argument here is not the idea of voice-exchange but the relationship between the initially-distinctive harmonic motive as in c) and its application in a later stage of the music as at b). This relationship is generally retained through voice-exchange. When there is no distinctive linear motivic activity, as in example 36, intervals become the major motivic cells. The relationship between versions b) and c) may seem to be weak at this point, but it becomes obvious when it reappears in the recapitulation.

It is to be noted that this section (mm. 73--80), a segment of the development, reappears in the recapitulation down a minor third (mm. 159-171), following closely the second theme (there the second theme appears first). Of interest in this section also is the fact that although the analogous section appears down a minor third, the main harmony, a tritone and a diminished seventh, is reminiscent of a previous gesture.

The voice-exchange with the tritone, as shown in Example 37, actually comes from the beginning, measures 1-5. The two notes of the first and second violins in measure 166 form an

Ex. 37. mm. 166-170, 1-5

The image shows a handwritten musical score for measures 166-170, measures 1-5. The score is written on two staves (treble and bass clef). It shows a complex harmonic structure with various notes, accidentals, and dynamics. A circled '166' is in the first measure. Arrows point to specific notes in the later measures. A circled '5' is in the fifth measure. The text '(mm. 1-5)' is written in the fifth measure.

augmented second, Bb-C#. In measure 168, these two notes are relegated to the position of the two outermost voices; C# in the first violin is changed to Db in the cello, second bracket. Although this augmented second is a natural part of the fully diminished seventh chord, it also refers to the distinctive interval of the diminished seventh that appears at the beginning of the piece in measure 2. Here, the augmented second from the diminished seventh unfolds linearly through voice-exchange of the tritone. Disparate it may seem on the surface, the innermost element always refers back to the very beginning, whether it be motivic or harmonic (i.e., intervallic).

In measure 82 the main motive of the rising third dominates. The main motive, which first appears in the transitional section in measures 21 and 27, has its second appearance here; it begins on the tonic note C in the bass and outlines the Ab-major chord. However, the primary

interval of this section is again the interval of a sixth in the bass line (Ex. 38).

Ex. 38. mm. 3-5, 82-92

The head motive, appearing in A minor in measures 110-112 (not shown here), leads to a display of the interval of a sixth in measures 114-119 (Ex. 39), which then ushers the music into the recapitulation, beginning first with the second theme (m. 124).

Ex. 39. mm. 114-119

Although the internal notes do not have the same intervallic relationships, the boundary interval is kept intact.

IV

The final F-minor section, beginning in measure 93, leads into an almost identical statement of the second presentation of the main motive found in measures 13-15. Every motivic element of this development section explicitly refers to the main motive of the beginning. Although there is much resemblance between the first and last movements, the use of the main motive in the last movement, the rising minor third and falling diminished seventh, without its disintegration into smaller cells, is a welcome contrast to the first movement in which the smallest possible cells, the rising minor third in particular, plays a major role in the music.

The main motive and the bottom voices of measure 13-15 are recalled intact in measure 94, alluding prematurely to the recapitulation. But the direction of the music is changing, because the final two notes (mm. 95-96) build first an Ab major-minor seventh (mm. 98-100) and later an Ab minor-minor ninth (m. 101). The next section in measures 102-108 is the inversion at the fifteenth of the previous section (mm. 94-102), the only such occurrence in the fourth movement (Ex. 40, a and b, and cf. Ex. 17).

As shown in Example 23, the main motive, which never appears in the tonic key C minor, appears visually to be in C minor in a different register; but the enharmonic change

Ex. 40. mm. 94-97, 101-105

The image displays four musical staves labeled a), b), c), and d).
 Staff a) shows a musical passage in F minor (one flat) with measures 94-97. It features a treble and bass clef. A circled number '99' is present in the first measure of the bass line.
 Staff b) shows the same passage in C# minor (three sharps). An annotation '(Inversion at the 15th)' with a downward arrow points to the 15th measure. Circled numbers '101' and '102' are present in the first and second measures of the bass line, respectively.
 Staff c) shows a variation of the bass line from staff b) with a circled number '101'.
 Staff d) shows another variation of the bass line from staff b) with a circled number '102'.
 Arrows indicate the relationship between the staves: a downward arrow from a) to b), a double-headed vertical arrow between b) and c), and a diagonal arrow from b) to d).

moves the music to C# minor, as shown in version b) in Example 40. The inversion at the fifteenth using the main motive from F minor to C# minor, is of special importance and interest here. At this point, the exhaustive use of the head motive, the rising third and the falling diminished seventh, which has already been extensively emphasized in the first movement, seems redundant. Brahms's persistent use of the head motive in various keys therefore prompts him

to look for an other key, possibly the tonic C minor rather than F minor, which has already been used extensively since the beginning. At this point in the music, the question arises as to what key is most suitable if the main motive were to appear in another key. The choice may include either the tonic key or the dominant G minor, even though the main motive has not appeared in these keys in the movement. It is important to remember that the main motive in the recapitulation (m. 194) also appears in the subdominant as at the beginning. Therefore, the main motive in the tonic key would be an ideal choice if it is going to appear at all.

However, as previously mentioned, the total absence of the main motive in the tonic key has to do undoubtedly with the composer's wish to avoid a similar statement of the main motive of the first movement, a rising minor third and a falling diminished seventh. The identity of the head motive has been well established, not only in the first movement but also in the fourth movement, such as in measures 21-22, 25-26 (G minor), 27-28, 82-83, and again in the development section. Example 40 then serves to answer the question that has been raised. Another interesting aspect, with regard to the appearance of the main motive in all three keys--C, G, and F-minor appear in the discussion of the recapitulation (cf. Ex. 41).

Version b) in Example 40 is the inversion of version a) at the fifteenth; that is, the main motive in F minor is transposed to C# minor. However, the resulting key is not C# but Db minor (eight flats), as indicated at d). It is no surprise, however, to see that Brahms notates the transposed main motive in C# minor instead of in Db minor, which would have been cumbersome both to notate and to read, as shown at version d). But the primary focus is not how Brahms notates this to facilitate the reading but how he deliberately brings the main motive in C# minor through the enharmonic spelling of Db minor. Brahms's intention in so doing seems to be obvious: the main motive's identity in C# minor is closest to the tonic key C minor in terms of the actual intervallic distance (version c). But what is more, the identity of the main motive in C# minor actually is the same as the main motive in C minor. The main motive in C# minor shares the same ledger lines with the main motive in C minor, as indicated in versions b) and c). The paradox here, however, is that the notation of the main motive in both C and C# minor, by sharing the same ledger lines, looks identical, yet the two keys are, at the same time, remote in tonal relationship. Incredibly, while purposely avoiding the main motive in the tonic C minor, Brahms makes up for it, so to speak, by presenting it visually. Therefore, while C and C# may seem closer, they are fundamentally different in tonal context. This shows the composer's

humorous side in playing with the visual aspect of the notation.

The dichotomy, which Brahms has already enjoyed in many other places, is the sole intention of the composer's playing with the main motive. Since the main motive in the tonic key never appears throughout the whole movement, this, in turn, prompts him to search for the notation that will create the missing main motive in C minor through an optical illusion.

Another interesting fact in light of the above discussion is that if Brahms wants to recall the main motive in C# minor through the inversion at the fifteenth without changing the notation, then he must place the main motive in E minor in measures 94-101, which will retain the intervallic relationship of the minor third, from E minor to C# minor. The main motive in E minor, however, precedes an F-minor section (mm: 85-93), which is ordinarily not a desirable distance for a key change a half step because of the leading-tone relationship of E to F. This supports the claim that the recall of the main motive is to identify the tonic key in C# minor in the development (mm. 94-97) only through a notational change--the enharmonic spelling of Db minor in C# minor. As whimsical as it may seem, this aspect of Brahms's manipulation of the main motive corresponds to the use of the cryptogram of the A-minor quartet.

Indeed, this becomes more apparent when the expected, but missing occurrences of the main motive in the tonic and dominant keys are juxtaposed in the recapitulation.

The first theme beginning in measure 194 in the recapitulation finally returns in F minor as at the beginning. The final notes, falling diminished seventh and major third, of the main motive, however, are not the same as in the exposition. Only the head motive, a rising third (mm. 194-195), is retained here (Ex. 41).

Ex. 41. mm. 194-198

The image shows three staves of musical notation. The top staff is labeled "Recap:" and contains measures 194, 196, and 197. The middle staff is labeled "a) main motive in C" and the bottom staff is labeled "b) main motive in G". Arrows point from the brackets in the middle and bottom staves to the corresponding measures in the top staff.

As shown in Example 40, two of the "tail notes" (the falling third [c2-ab1], mm. 2-3) of the first theme in the exposition are omitted in the recapitulation and replaced instead by the statements of the other tail notes--from versions a) and b) (shown by brackets and arrows), which

have never been employed in this movement. This theme in a new guise is actually the result of combining the three keys--F minor, C minor (version a), and the minor dominant (version b). It is important to remember that the main motive containing a rising third and falling diminished seventh does not occur as a whole unit in the fourth movement. Consequently, the newly-formed theme embraces the two falling diminished sevenths and one major third in the keys of C and G minor. This should serve as an answer to the puzzle of the missing tail notes in the main motive in the tonic key (Ex. 41, versions b) and c). Just as in Example 40, Brahms is very conscious of the lack of the main motive in the tonic key, and he searched and found here a solution to have the main motive appear in the tonic.

Avoiding the head motive in the tonic key is logical, since this would be identical to the head motive or rising third of the first movement. But there is a plausibility for presenting the head motive in the key of the dominant. This is as viable as F minor, and it is vital if the tonic C minor is to be strengthened, particularly when the head motive in the tonic key is missing. The head motive in the dominant, nonetheless, never appears in this finale. In fact, not only the head motive is in the dominant, but also the dominant harmony G itself is noticeably lacking, just as in the first movement.

As has been observed in the opening phrase, Brahms progresses not from the tonic to the dominant, but from the tonic to the subdominant, usually by moving toward the flat side. One other possible reason to avoid giving the main motive in the tonic key, however, is that if Brahms were to recall the exact main motive of the beginning in the recapitulation in the tonic or dominant key, the result would also be too far away from the tonic C minor center (Ex. 42).

Ex. 42. mm. 1-5

[c]: i [g]: iv_6 V_6 iv_6 V V_2 ic

[g]: i [d]: iv_6 V_6 iv_6 V V_2 ic

The result would be far less desirable than the main motive in F minor as far as the preservation of the tonic key is

concerned. For the C minor tonality has been a rarity in a supposedly C minor piece, Example 42 shows the recalling of the main motive in the dominant would result in the key of D minor, which is farther away from C minor. As shown in Example 42, Brahms obviously rejects these in the recapitulation introducing new theme made of fragments of the main motive in tonic and dominant keys.

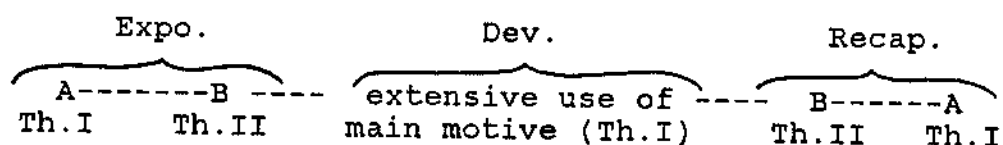
V

The interval of a sixth (cf. Ex. 39) in measures 114-115 sets up the return of the second theme in C major in measure 124. The second theme appears first in the recapitulation. As shown in Example 31, the upper three voices (mm. 124-125) outline C-major triad. In hindsight, it is clear that the process has created a situation where one does not hear what one sees in the music.

The following discussion concerns the reversed order of the first and second themes in the recapitulation and the ambiguous external formal aspects in view of the sonata-form principle.

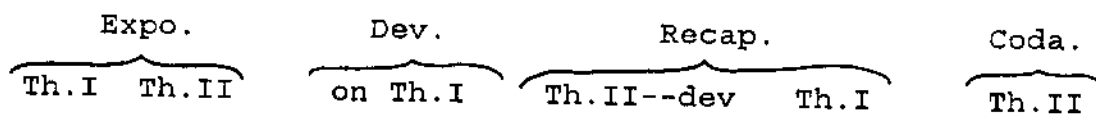
In the recapitulation the second theme appears first in measure 124, with the first theme following later in measure 194 in the subdominant (cf. Ex. 41, where the first theme is referred to as the newly-formed theme). The reason for the

reversed order is not difficult to ascertain. Since the main motive from the first theme (and the rising third in particular) is the major motive content of the development, it is better to begin the recapitulation with the second theme (see Ex. 31). This provides a contrast, as shown in the diagram below.



In fact, this presentation of the main motive of the first theme in the recapitulation is quite separated by a good distance from its last presentation in the development (in A minor, mm. 110-111), and only making a brief appearance once later (in D minor in measures 159-160).

A large portion of the developmental section (mm. 68-83), which was previously noted as an unusual structural feature of the composition, is brought back in the recapitulation down a minor third, giving the impression that the development section is being repeated, especially since it closely follows the second theme. This is illustrated in the following diagram.



After the welcome contrast of the chordal section (mm. 181-191), in which the lower three voices are in unusually high registers, the first theme finally returns in measure 194. The dramatic addition of the diminished seventh to the main motive in all three related keys, F minor, C minor, and G minor, confirms the home key of C minor, because the "semi-new" theme rides on the prolonged dominant seventh harmony in measures 192-195. As in the exposition, the first theme in the recapitulation, however, lacks the tonic C minor as in the exposition. Because C minor key has thus far been avoided, the coda, beginning in measure 231, exerts the C minor harmony almost exclusively by the C pedal during the entire section.

Because the order of the first and second themes is reversed in the recapitulation, the second theme expectedly constitutes the motivic content of the coda (Ex. 43).

Ex. 43. mm. 231-239

Coda: Th. II

The image displays two staves of musical notation. The upper staff, titled "Coda: Th. II", shows a melodic line in C minor starting at measure 231. The lower staff shows a bass line with a trapezoidal shape indicating an octave glide, labeled "octave" and "6th".

This coda, beginning virtually identical to the initial presentation of the second theme, would have given the impression of continuation of the recapitulation (see the above diagram) had it not been for a decisive cadential break in measures 225-230.

Since the key orientation of the second theme in the recapitulation is ambivalent, the return of the second theme in the coda via a full cadence--V7 (mm. 225-230) to i (m. 231) is appropriate to compensate the lack of tonal certainty in its previous appearance.

The motive of the second half of the coda reflects the diminished seventh and its resolution to C minor, which occurs for the first time (Ex. 44).

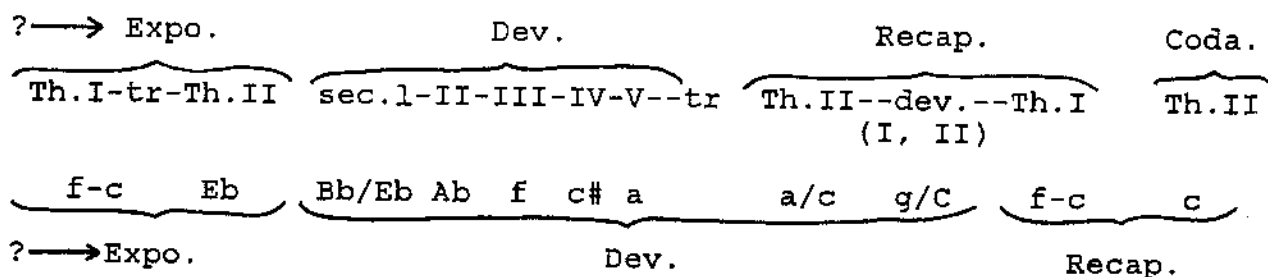
Ex. 44. mm. 227-228, 237-240, 246-248

The image displays three handwritten musical examples, labeled a), b), and c), on a single staff each. All examples are in G minor (two flats: B-flat and E-flat) and 4/4 time. Example a) shows two measures starting with a half note G4, followed by quarter notes A4, B4, and C5, then a half note B4, and finally a half note G4. The measure numbers 227 and 228 are circled. Example b) shows six measures, starting with the same two-measure figure as in a), followed by four measures of a descending eighth-note scale: G4, F4, E4, D4, C4, B3, A3, G3. The measure number 237 is circled. Example c) shows two measures, starting with a half note G4, followed by quarter notes A4, B4, and C5, then a half note B4, and finally a half note G4. The measure number 246 is circled. An arrow points from the end of example a) to the beginning of example b).

Version b) is the enlargement from two measures to six measures of the same figure of measures 227-228 (version a)

as well; the figure in measures 246-248 (version c) is the enlarged version, two measures to three measures of the figure from measures 19-21. Brahms reinforces the diminished seventh, formed by the pitches eb3-f#2, which are notes of the main motive in C minor (cf. Ex. 41, a).

The external form in the finale is of particular interest due to the exhaustive use of the main motive. The key of each presentation of the theme is a major factor contributing to this. The main motive, which originated in the first movement, did not change in terms of the motive's contour. The main motive in the fourth movement, however, is certainly expected to go through transformation to some degree, presumably in the development, but it is kept intact with no alteration; it is so persistent that the beginning of both the development and coda is heard as a continuation of the preceding section, both harmonically and melodically. Thus the demarcation of the over-all external frame is ambiguous, viewed from the textbook sonata form, as shown in the diagram below.



The demarcation shown by the bottom arrow is of particular interest because the relationship between the exposition and recapitulation is easily identifiable in light of the first and second theme of the "text book sonata form." The demarcation shown by the upper arrow, however, is also a logical layout in view of the reversed order of the first and second themes in the recapitulation. Thus, the emphasis of the main motive in the development section forces the return of the second theme to be the first in the recapitulation. Also, for the needed contrast, the interval motives of the sixth and octaves are well suited for contrast than the similar main motive of the rising minor third and falling diminished seventh.

The overlapping of the first two sections of the development with the recapitulation is certainly unusual. The power of the main motive, however, whose momentum began in the first movement, does not allow a transformation due to the intensely economized process in this movement; hence, the main motive never appears in the tonic key of C-minor in the finale.

Epilogue

Brahms wrote many works in the same genre in pairs. It has not been substantiated, however, that Brahms produced the two op. 51 string quartets in succession, although they were published as a pair (1873). Additionally, it is not clear which was written first; Brahms claims to have written and destroyed around twenty quartets.

The remarkable motivic and harmonic similarity between Brahms's C minor quartet and Mozart's C-minor piano concerto (first movement) would suggest that of the two op. 51 string quartets, the C-minor quartet was written first at a time when Brahms could not have been sure of its publication. The A-minor quartet, and its first movement in particular, displays a more relaxed emotional content than the intensified C-minor quartet. In the A-minor quartet, Brahms seems to indulge in abundant space, allowing only a few motives derived from the transformations of only one basic idea (monomotivicism). What is more, the cryptogram in the music seems to suggest that his mind was now unbridled, and that he was no longer aware of the looming shadows of his predecessors--Beethoven's string quartets in particular.

Although the two quartets are very different on the surface, the organization and procedure of motivic manipulation are very much similar. Each work is based on one basic idea or a progenitor through transformation mostly

inversion, retrograde, and retrograde inversion; and each shows a tendency to move toward the flat side, hence toward the subdominant. In developing clear-cut and resilient motivic cells (the rising minor third and falling diminished seventh in C-minor quartet, and motive A's a1-f2-a2-e2, in A minor quartet), Brahms transforms motive A by means of the inversion, retrograde, and retrograde inversion. Through these devices, Brahms is able to produce so much out of so little. This is even more evident in the A-minor quartet, in which the motto motive (motive A) is employed both linearly and vertically.

In the A-minor quartet, the six-four chords at many crucial cadential points may seem structurally inexplicable, but become clear when the emotional background meaning of the words "frei aber einsam" (free but lonely) is applied in the context of both the programmatic and cryptogrammic natures. The vertical arrangement of the main motive, F-A-E, also results in unconventional harmonic progressions both on large or local levels.

Because of the persistent motive A, the first movement of the A-minor quartet is identified as monomotivic. The strong desire to resolve the interval of the major seventh, F-E (from F-A-E), results in the premature appearance of C major tonality even before the real second key area arrives. Because of this, the main motive A immediately goes through various transformation in order to provide variety (i.e.,

chromatically altering a motive; cf. Exs. 19-20). Once all conceivable harmonies are exhausted in moving through the cello's rising minor third (motive B), the unavoidable last note C (from A to C) once again leads to the unwanted harmonic region even before the arrival of the second key (cf. Ex. 14). This brings in relatively a fairly long fantasia-like passage (mm. 30-38) which is necessary to recondition the route to the dominant preparation of the forthcoming second key. Consequently, the first key area in the exposition is greatly expanded. The premature arrival of the C-major area is somewhat precarious but its presence is not wholly undermined due to the sustained C pedal in the three upper voices. The confusion caused by delaying the real arrival of the second key also necessitates a long cadence on the dominant G (the solo passage of the first violin).

One of the most important motivic aspects in the exposition of the first movement of the A-minor quartet may be the concurrent transformation of motive A (the non-harmonic tones of the viola). This transformation occurs almost simultaneously with the original motive: the chord tones of the main motive A in the first violin are transposed down a half-step so as to become non-harmonic tones in the viola.

The non-harmonic tones in the viola become the principal notes of the second theme. Thus, despite the

drastically altered character and mood of the second key area, the main contents of both key areas are virtually the same--a salient feature of the A-minor quartet.

This remarkable feature is not immediately obvious but becomes clear when the music reaches the developmental section where the non-harmonic tones of the viola, using the same pitch classes, are the main content and contour. Therefore, although it appears different in character, the development section is in reality less developmental than the exposition.

As in the C-minor quartet, Brahms's motivic relationship tends to be ambiguous at the outset. But when a need to clarify the motivic relationship arises, Brahms does so succinctly, often by referring specifically to the progenitor (cf. Exs. 2, 11, Chapter III).

One conspicuous feature in the op. 51 quartets is Brahms's tendency to move toward the flat side of harmony. While this is not unique to Brahms, his his division of the octave into the lower fifth (i.e., $C \leftarrow F \leftarrow C$, instead of $C \rightarrow G \rightarrow C$ in C octave) generates the predominance of the subdominant region. The above division of the octave perhaps warrants further discussion; suffice it to say that in the op. 51 quartets, the emphasis on the lower division of the octave ($F \leftarrow C$) creates a strong subdominant region. The resulting subdominant harmony not only begins the A-minor quartet, but also becomes the goal in the opening phrase of the C-minor quartet.

Of all the features of Brahms's compositional technique in the op. 51 quartets, the most conspicuous is the priority given to motivic considerations over those of harmony on both large and local levels. As Webster discusses (Chapter I), the traditional tonal polarity in the sonata form takes a secondary role to thematic contrast between the first and second themes. This feature is most vivid in the first and last movements of the C-minor quartet. With Brahms's emphasis on motivic (or thematic) content, the customary key change for the second key area of the exposition become almost non-existent.

The outstanding feature of all in the op. 51 quartets is the "monomotivicism." In spite of the surfaces dissimilarity in events, the basic organism remains fundamentally unaltered. Therefore, it may be said that monomotivicism is the central compositional device in the op. 51. In these perspectives, the two op. 51 quartets, though seem disparate in character, may have been written in succession, indicating thereby an evolutionary step in Brahms's compositional maturity.

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