

SUBDOMINANT TENDENCIES IN THE FIRST MOVEMENT OF BEETHOVEN'S STRING QUARTET IN B FLAT, OP. 130

In a discussion regarding musical expectation, Leonard Meyer argues that: "Revision of opinion [...] is [...] important in the perception of form. [...]he listener often finds it necessary to revise his opinions of what is still to come in the light of an unexpected present. Thus the meaning and significance of the slow introduction to a sonata form movement will depend in part upon later developments which may take place in the allegro. The significance of the slow introduction to Beethoven's Piano Sonata, Op. 111 is quite different from that of the introduction to his String Quartet, Op. 130. The Sonata creates strong tension and suspense relative to the impending allegro which, because of what we know about sonata form in the classical style, is expected. The [introduction to the] Quartet creates much less tension but serves as a source for many later developments as well as a factor in the articulation of events within the allegro proper. These differences become clearer and more specific as each work unfolds (Meyer 60)."

By contrasting these two excellently chosen examples of sonata movements that begin with a slow introduction, Meyer demonstrates one of the many ways in which memory conditions the present perception of musical structure. In the case of Op. 111, a long and dramatic *maestoso* opening leads into the allegro, which is then free to develop along its own lines. The introduction is therefore remembered as an intense yet predictable structural feature. In a very different manner, the relaxed *adagio* that introduces the quartet is neither long nor dramatic, yet its reappearance at several key places within the movement requires that the listener continuously 'revise' their perception of the meaning of the introductory material. Given that the *adagio* plays such an important structural role in the movement as a whole, it may become inappropriate to refer to it as an introduction at all.

It is to the adagio that we will now turn our attention. Example 1 is the complete 14 measure introduction.

Quartett N° 13.
Adagio ma non troppo.

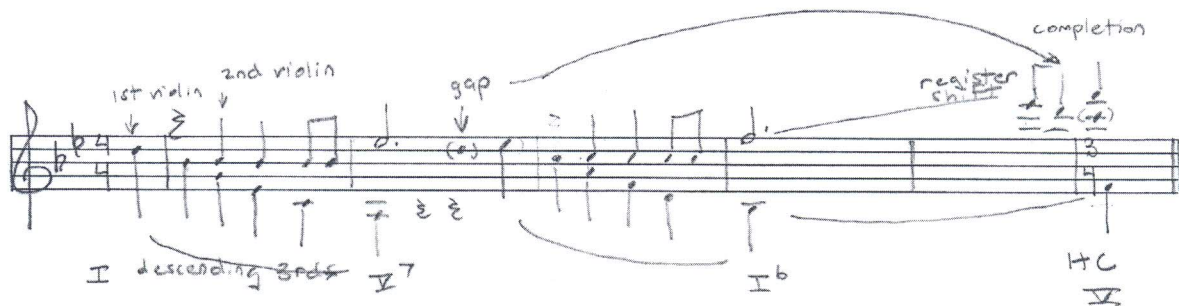
The image shows a handwritten musical score for a string quartet. The title is 'Quartett N° 13.' and the tempo is 'Adagio ma non troppo.' The score is for four instruments: Violino I, Violino II, Viola, and Violoncello. The key signature is C minor (three flats). The score consists of 14 measures. Handwritten annotations include 'Half cadence' at measure 7, 'descending triad' at measure 8, 'cresc.' (crescendo) at measures 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, and 14, and 'dim.' (diminuendo) at measures 12, 13, and 14. There are also handwritten notes 'Bb: I' and 'V' at the beginning of the score.

Example 1 Adagio, mm. 1-14. Phrase and harmonic annotation.

These 14 measures are extremely organized and clearly formed, and constitute a well-shaped stimulus series (Meyer 161). The opening 4 note chromatic gesture unfolds into a ii-I6-V progression which is answered by its consequent as a ii-V-I resolution in bar 4. The rising gesture of bar four is sequenced through measures 5 and 6, arriving on V7/V and a strong Half cadence in m. 7. From here an imitative pattern winds its way through all four instruments while articulating the key of C minor. At measure 12, c minor resumes its role as ii in the key of B flat, and leads into V7 for another Half cadence at m. 14. The ensuing allegro that begins directly on

the B flat tonic is therefore no surprise. The listener's preparatory mental set (Meyer 73) expects an allegro 'first theme' group in the key of B flat major, and the introduction has prepared this key area by emphasizing its dominant through the use of half cadences.

Since the preparatory mental set does not exclude well-formed slow introductions, the only real surprise at the start of the allegro, shown below in Example 2 in melodic reduction, is that we have shifted from the meter of 3/4 to that of 4/4.



Example 2: Melodic reduction of the first allegro statement, mm. 15-20.

Meyer posits the fascinating idea that “styles in music are basically complex systems of probability relationships” (Meyer 54) and that these probability relationships, or tendencies, manifest themselves in the nomenclature of our musical vocabulary (Meyer 56). I would like to add to this concept the suggestion that these linguistic terms of crystallized probability often reveal themselves as directional binaries.¹ Thus, the perceived binaries of antecedent/consequent, dominant/subdominant, leading tone/tonic, half cadence/full cadence, tension/release,

¹ The world of perception is full of binaries. Many of these are false: communist/capitalist, religious/heathen, third world/first world, tonal/atonal. Many of them imply a non-directional mutual exclusivity: black/white, night/day, canine/feline, square/circle (as in: you can't drive a round peg into a square hole) I suggest 'directional binary' as a term for binaries that attain meaning only in an action/reaction relationship. The ultimate prototype of this is naturally 'if/then', often understood as 'first/second.' A rhetorical device of consequent/antecedent may still retain meaning, but only if understood as standing in relationship to its generator, the antecedent/consequent construct. Quite importantly, a directional binary must NOT be confused with a syllogism. That would require the binary "if/then" to unfold into a "therefore," a decidedly ternary conclusion.

conflict/resolution, dissonance/consonance, development/recapitulation, and many others, have found their way into our set of mental expectations.

Meyer defines a “Law of Good Continuation”, which requires a smooth curve of motion and change within a continuous process (Meyer 92, 93). Mere repetition may not lead to good continuity, but instead to saturation (Meyer 93). For this reason, the over-repetition of a term in a directional binary may actually inhibit continuity. Though there is no universal rule requiring that a half cadence be followed by a full cadence, a series of half cadences within the same key strongly suggests that one shall be forthcoming. Thus, the half cadence that abruptly terminates the short allegro entrance at m. 20 represents the third in a series of half cadences in B flat major beginning with those at mm. 9 and 14.

In mm. 21-24, the adagio reintroduces itself, this time in the key of F major. The main melody is shared between cello and viola this time, but otherwise it is essentially a transposition of mm. 1-4. A weak full cadence in F then leads to a re-entry of the Allegro theme, also in the key of F. Several ambiguities have now asserted themselves. A well-formed introduction leads ~~to~~ a fragmentary allegro episode. The introduction returns in the dominant key, but does not complete itself. The Allegro returns in the dominant, and at this point the listener may wonder if the insertion of the adagio was merely an unorthodox device designed to lead the material into its second key area.



Example 3 mm. 20-31

Example 3 shows the reiteration of the allegro theme in the dominant key, which gives rise to the probabilistic expectation that it will cadence in F major, first in a half cadence and then in a full cadence to close out a period and strengthen the secondary key area. At measure 30, the music makes a sudden and drastic about face, frustrating the expected half cadence and modulating directly back to B flat major. Not only is the harmonic motion frustrated, but a registral leap in all instruments creates incongruity. The combination of these elements opens up a large structural fissure. The allegro theme is restated in B flat from mm. 31-37, where a full cadence in B flat major finally affirms the tonic. What follows from mm. 37-51 may be viewed as transitional material. An expectational rift arises due to the fact that this material remains almost exclusively in the tonic key, only modulating briefly to F major in mm. 49-50. At this point at mm. 51-52, a chromatic scale (an inversion of the opening adagio gesture) leads up to a long D flat, which is reinterpreted as the dominant in the rather unexpected secondary key area of G flat major. This is shown in example 4. F major, then, was not only stated in the wrong

place and then violently usurped (the middle of the first theme area), but it is almost entirely bypassed at the transition between theme groups.

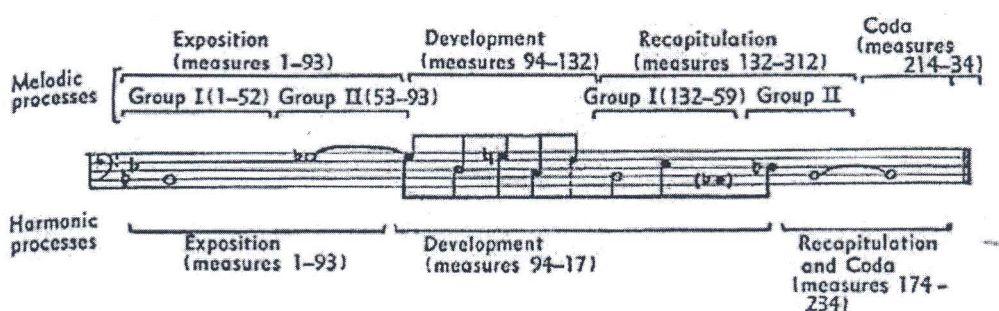


Example 4 mm. 47-59

The exposition of this movement, then, creates several important structural dissonances that must be engaged in later parts of the form. Meyer claims: “All that need concern us about the exposition section is the fact that there is a general congruence of harmonic and other processes and that from a tonal point of view there is a motion from B-flat to G-flat (Meyer 126).” He believes that the main interest lies in the transition from the development to the recapitulation, where he shows that a “bifurcation of process” creates a structural tension between the expected return of the allegro theme, and a stable tonic key area.

“An enharmonic change at the beginning of the development section (measure 97) establishes the key of D major. At measure 104 a new process is established, which is regular and very well organized from the point of view of figuration. The harmonic motion of this process consists in a regular progression through the circle of fifths, from D to G to C minor and so forth. Because this is a time-honored norm of harmonic progression in the classical style, it

establishes an especially powerful tendency toward continuation. The other processes established continue along with the harmonic movement until the tonality of B-flat major (the tonic) is reached. At this point the bifurcation occurs. For the melodic, rhythmic, textural, and other processes begin to recapitulate the materials of the exposition section while the harmonic motion continues on through the cycle of fifths, from B-flat to E-flat, skirting A-flat, to D-flat (Meyer 126-7).” In support of the last paragraph, he includes the following diagram of the entire movement.



Example 5. Harmonic graph of the entire movement. (Myer 127)

While I don't disagree with the details of this analysis, I will argue the case that this bifurcation of process is the result of disruptions of tendencies that began in the exposition. The circle of 5ths progression to which Meyer refers is the result of a harmonic tendency toward the subdominant direction. In this case, the process overshoots the home key and ends up in D flat, 5 flats instead of the expected 2. According to Charles Rosen, this tendency weakens the tonic, because it reinterprets a former root as a 5th in a new harmony (Rosen 26). Movement in the dominant direction strengthens the tonic because its own root is reinterpreted as the 5th of the tonic.

Recall that the exposition of Op. 130 stated and then subverted the dominant, which serves to weaken the tonic. In a sense, a parallel process is occurring in both the exposition and

recapitulation that serve to weaken the tonic either by de-emphasizing the dominant or emphasizing the subdominant. The structural gap opened up at m. 30 when F major was unable to close is answered in the recapitulation not by a reaffirmation of its role as a dominant, but instead affirmed as part of a larger tendency towards a weakening of tonic.

Rosen argues that: “the flat mediant and submediant are largely subdominant keys, and are used like the subdominant to weaken the tonic, and lower tension (Rosen 27).” Flat VI and Flat III are further down² the subdominant side of the circle of 5ths, and that is the primary strength behind this argument. These keys do not generally reinforce tonic because they do not have strong probabilistic tendencies toward it. Sharper keys have a strong tendency to resolve down to the tonic, and therefore tend to strengthen it. In the key of B flat, the keys of Flat VI and Flat III are G flat and D flat, respectively. It is not incidental to our argument that these happen to be the keys that represent the second key areas in both the exposition and the recapitulation. The rejection of the dominant (F major) and the instatement of a subdominant ‘type’ of key, (G flat major), is an important tool used by Beethoven to subordinate the tonic to subdominant influences. By violating these expectations, Beethoven uncovers a different level of structural organization within the movement. The ubiquity of subdominant tendencies in the first movement of Beethoven’s Quartet Op. 130 weakens the traditional tonic/dominant

² A note on the use of prepositions in musical descriptions. As medium sized beings living on a medium sized rock, it is not surprising that most of our language has some relationship to the force of gravity. Even seemingly neutral words such as ‘around’ reveal our bias that such a preposition connects objects that are within a plane that operates parallel to the force of gravity. In music, we speak of melodies floating ‘over’ an orchestra, ground basses ‘beneath’, an appoggiatura as a dissonance from ‘above.’ There is no physical property of sound which makes it so, but given that we so easily grasps concepts of high and low, there is no reason not to speak of ‘falling 5ths’ and moving ‘down’ the subdominant side of the circle of 5ths. In the rhetoric of classical language, there is a dramatic ‘rise’ to the dominant key, which bestows it with a type of potential energy that strengthens the tonic. The subdominant, being ‘beneath’ tonic tends to ‘descend’ (yes, I know these are not all prepositions, but they still reveal our gravitational bias), and in doing so, weakens the tonic.

relationship expected in sonata form, and by doing so illuminates interconnected levels of motive, key, and structure across thematic and harmonic groups.

Let us return to our opening adagio. Example 6 is a melodic graph of mm. 1-14.

Example 6. Annotated melodic graph of mm. 1-14.

There are two important features to observe here: A chromatic voice exchange in m. 14 resolves the gap created by the uncompleted G (an upper neighbor to F) from m. 1. This exchange marks the G flat, and indeed the entire diminished sonority on beat 2 of m. 14, for memory. The second important feature to notice is that a pattern of descending 5ths permeates the structure of the adagio. A ii-V-I progression at the opening expands to a vi-ii-V-I starting in m. 7. From mm. 9-13, a prolongation of ii leads into the half cadence at m. 14. Since these progressions remain within B flat, and begin on the dominant side of tonic, the motion in the subdominant direction does not yet weaken the key area. Were the process to be expanded into a cycle of key areas and to continue past B flat we would end up in E flat major. This is precisely what happens in the recapitulation at m. 137, when an entire statement of the allegro theme is stated in the subdominant key.

The sabotage of F major that occurs at m. 30 deprives the dominant of its potential energy, forcing it to return to B flat too early. The gentle falling 5ths progressions of the opening adagio take on new meaning as the premature ‘falling 5th’ of F to B flat deprives the transition to the second key area of a strong dominant. Instead, as was mentioned early, we end up in G flat major, which is 4 flats down on the subdominant side of the circle of 5ths. The music remains in G flat major from m. 53 all the way until the end of the recapitulation (m. 90), at which point an F flat (see example 7 below) suggests that G flat has been reinterpreted as will now become the dominant of the key of C flat, an even more ‘subdominant’ key. It does not proceed to C flat, but instead returns to the opening key of B flat in the first ending, and in the second ending, G flat is reaffirmed as it leads into the development.

Example 7. Measures 89-98 End of the exposition and the beginning of the development.

Meyer pointed out that an enharmonic respelling of G flat to F sharp major at the end of the development leads to D major (Meyer 126). Unfortunately, he seems to miss the devastating significance of this moment. David Schwarz has pointed out that while the circle of 5ths is an inevitable construct of our current theoretical model, there is in reality no such thing. Instead, he argues, there is an infinite spiral of 5ths towards the dominant and subdominant in opposite directions. When viewed from the correct angle, this coil will resemble a circle. The artificial nature of this apparent circle is betrayed by the 'enharmonic keys' (Dflat/C#, Gflat/F#, Cflat/B) that forcefully connect parts of the spiral into a temporary omnibus strip. But the tension of subdominant and dominant forces do not merely disappear, instead they represent a strange nether region of key areas in which composers are forced to make somewhat abrupt leaps from 'flat to sharp' or 'sharp to flat.'

Thus, when Beethoven respells G flat to F sharp in m. 94, he deftly re-characterizes the key area as one which is very far 'up' on the dominant side of the circle of 5ths when compared to B flat major. Thus endowed with enormous potential energy, The ensuing falling 5ths progression that begins on 104 spirals down to tonic, and as we have seen, is unable to stop its process and continues past tonic all the way to D flat at m. 147. The Major 3rd modulation down to D from F#/Gflat that occurs at m. 95 represents a continuation of process that began with the motion from B flat to G flat in the exposition. Were the enharmonic respelling not to have taken place, the key of E double flat major would surely have dragged the music into a subdominant abyss. That the respelling takes place at a decidedly non-dramatic sound term (a pianissimo fragment of the allegro theme, m. 94), points to an ingenious way of disguising meaning. The meaning of this spectacular moment, therefore, is an example of evident meaning, meaning that

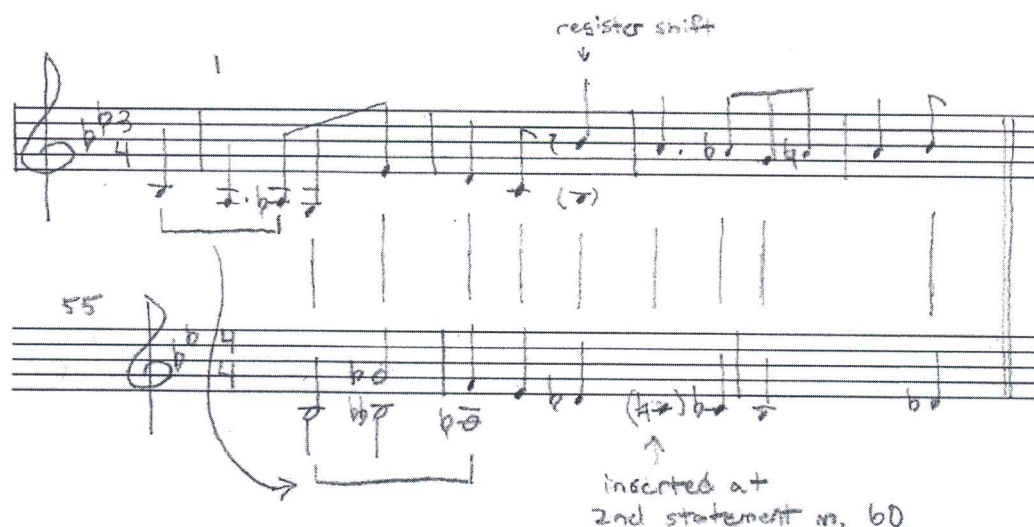
arises after listening (and in this case, studying the score), and when all other meanings are comprehended (Meyer 37).

The problem posed by the adagio 'introduction' still haunts the movement. Well formed and complete at the opening, its incomplete four measure intrusion at m. 21 demands an answer. The brief adagio bits that recur at mm. 92, 95, and 99 appear to serve the ambiguous needs of the opening of the development. There may be clues in the coda which begins at m. 212. Shown in example 8, truncated versions of the Adagio and the allegro playfully leapfrog across each other.



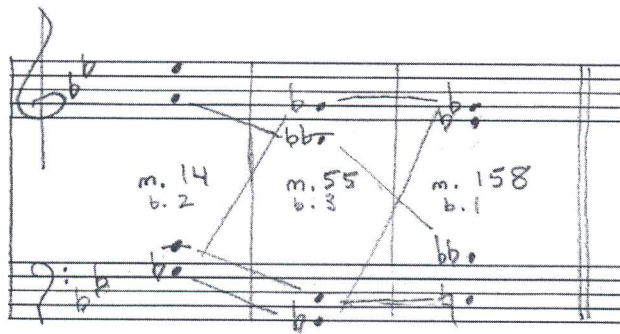
Example 8 Mm. 212-219. The beginning of the coda.

When only the adagios are considered, there does not appear to be much cross-structural reference other than the simple act of memory recall. Given the well-formed adagio opening, the weakly structured 1st theme groups and key areas, and a general emphasis on subdominant tendencies, the fulfillment of our expectations involving the adagio may in fact be found in the second theme groups. Example 9 compares the melodies of the adagio with that of the melody in G flat found at m. 55.



Example 9. Melodic comparison of Adagio and 2nd theme.

Remarkably, the second theme is nearly an exact pitch transposition of an inner line of the adagio melody. The second statement of the G flat melody at m. 59 is indeed an exact transposition. In example 9, I also included the 2nd violin line in the second theme, which descends from B double flat to A flat; an enharmonic reference to the Bflat-A-A-flat motion that began the adagio. Furthermore, the harmony that I earlier claimed was marked for memory at m. 14 beat 2, (a diminished 7), is here respelled as an incomplete C fully diminished 7th chord. I would hardly dare make this point if it weren't for the fact that this same exact chord, now a complete fully diminished 7th chord, occurs on the downbeat of measure 158 as a vii7 of D flat, right at the beginning of the second theme group in the recapitulation. Thus, the second key areas gain evident meaning (Meyer 37) as a result of referential harmonic and motivic structures first heard in the opening adagio. The three sonorities are compared in example 10.



Example 10. Diminished chords marked for memory.

At m. 170, the second key area finally modulates to the key of B flat. Gone are the dissonant chromatic tones and diminished 7th chords. A pure, almost entirely diatonic statement winds its way ecstatically up through the higher textures of the instruments, signifying that this moment represents the tonal closure of the movement, instead of the expected dramatic return at the end of the development. Closing material starting at m. 190 brings the music towards its coda, but not without one final excursion into the subdominant at m. 207, when a transposition of the end of the exposition suggests E flat major. A final statement of the allegro theme closes off the movement with a comforting full cadence in B flat major.

Consistent subdominant tendencies weaken and inhibit both the dominant and tonic forces throughout the first movement of Beethoven's String Quartet, Op. 130. In this way, expectations arise which do not reach fulfillment in a traditional manner. The subordination of tonic weakens the placement of first key areas, yet this serves to heighten the effect of the motivic relationships between the adagio and 2nd key areas. A continuation of a circle of 5ths process sabotages the dramatic return of tonic at the recapitulation, yet the genesis of this process, the enharmonic respelling of G flat to F#, represents a triumph for dominant/tonic forces that may only be realized in retrospect. That this triumph cycles itself back to the subdominant regions may simply be a fulfillment of expectations posed by the subdominant forces in the

exposition. In a sense, this movement has not actually undermined the importance of the dominant and tonic, but has instead re-evaluated their position along a relative spectrum. Tonic becomes dominant of a subdominant, which in turn becomes a dominant of a new subdominant. If we move far enough down this spiral and then leap to the 'sharp' side, we are allowed to see the subdominant as a kind of negative space around dominant.

This pull toward the subdominant arouses an overall affective response that may wish for completion in later movements. Or perhaps completion is never achieved, and the emphasis on subdominant is to be considered a subject of itself. The remaining movements of both the original and 'revised' versions are in the keys of B flat minor, D flat, G, E flat, and finally B flat. With the exception of G major, the rest of the movements are in keys that are decidedly further down the flat side of the circle of 5ths. Though a thorough analysis exceeds the scope of this study, it is of interest to note that Beethoven's original finale, the Grosse Fugue, progresses through key signatures of 3 and then 4 flats before returning to the expected 2. Perhaps the structural gap opened at m. 30 in the first movement was Beethoven's clever way of alerting the listener to the fact that the dominant will be subordinate to the subdominant throughout the work. A role reversal of this magnitude would surely contribute to a unique affective experience.

BIBLIOGRAPHY

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