

CHAPTER 7

*Eleven Pitch-Class Systems in the Music of Middle to Late Nineteenth-Century Romantic Composers**II. Robert Schumann: Piano Quintet in E β , Op. 44, 1st Movement*

Schubert's two other important successors, notably Schumann and Brahms, seem to have been equally fascinated with the compositional problems (or ambiguities) imposed by pitting one system against the other. For instance, Schumann's Piano Quintet in E β , Op. 44 of 1842, a work that seems to have drawn inspiration from both Beethoven's Piano Trio, Op 70 no. 1, and Schubert's String Quintet, Op. 163, also arpeggiates the tonic minor triad over the course of the exposition of its first movement. However, Schumann's approach is more dynamic than Schubert's in that the minor third, here G β , does not create a stabilized period in itself, but appears as part of a larger progression within the bridge, already in *dominant* harmony (Schubert's strategy was to create an expanse for the missing pitch within *tonic* harmony), as β VI/V (see Ex. 7.2). Schumann is obviously following Beethoven's example here in the latter's Op. 70 no. 1 (see discussion above), in an attempt to avoid Schubert's more relaxed exploration of the minor third degree within a highly lyricized

intermediate harmonic area. At the same time, Schumann, perhaps trying not to copy Beethoven too closely, differs from Beethoven's trio in that in the latter work, the minor third degree leads off from a bridge passage that begins in tonic harmony *on the way to* the dominant, but, contrary to common practice, Schumann is already *in dominant harmony* at the start of the bridge.

Continuing with Schumann's minor third unfolding within his bridge passage, the 6β system to which $G\beta$ belongs (see Fig. 7.1 which illustrates the quintet's extended 3β matrix system), is sustained for a full seventeen measures as opposed to Schubert's relatively grandiose minor third intermediate area of 38 measures. (Compared to Schubert and Schumann, Beethoven's more classically concise parallel minor passage in the bridge of his piano trio is a paltry seven measures!). Eventually, Schumann's 6β system reverts to 3β s with the introduction of A_- (the missing pitch of the 6β system, m. 44) as the music nears its approach to the second harmonic area. Significantly, in the measure immediately preceding, the $G\beta$ harmonic area changes function from $\beta VI/V$ to that of a $G\beta$ augmented sixth, thus intensifying the progression to the dominant. By juxtaposing the $G\beta$ (and its concomitant 6β system) with A_- (as a correcting pitch to reinstate the tonic 3β system), Schumann is further working out the relationship of these two complementary system pitch classes, already begun within the opening tonic period, a gesture

that pervades the movement as a source of development. Schumann's opening statement is designed as a small ternary structure typical of Schubert's opening periods, in which an unstable middle, contrasting phrase is flanked by two more or less identical phrases, the second of which forms the counterstatement. It is in the middle period (mm. 9-16) that Schumann introduces the $G\beta$ in the bass as a passing seventh from $A\beta$ to F.

The F7 on the downbeat of m. 11 contains the $A_$ which immediately prevents the previous $G\beta$ from effecting a system shift down to 6β s. The next stage of development occurs within the bridge where, as previously stated, $G\beta$, along with the 6β system, prevails as an internal harmonic area (no $A_$ appears to redress the system shift) which has the effect of a parenthetical interruption of the dominant: the $G\beta$ arises from a 5-6 chromatic exchange with $B\beta$ (see Ex. 7.2, mm. 26-27). Finally, the $G\beta$ becomes structurally significant as an augmented sixth (m. 43) that forms a large-scale voice exchange with the opening $E\beta$ triad and which thus signifies the end of tonic harmony within the exposition. This is why, incidentally, even though the counterstatement begins on dominant harmony, it still pertains to the tonic and cannot yet be considered as initiating the dominant as a harmonic area. Only now does $A_$ return to shift the system back up to 3β s.

By using the minor third degree as an augmented sixth chord as

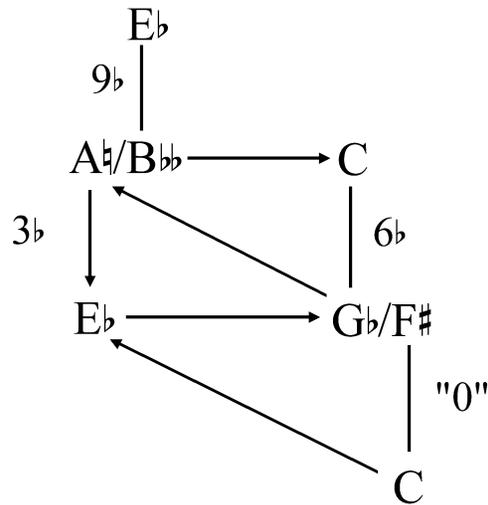
preparation for the dominant area, Schumann [Schumann's exposition], unlike both Beethoven's Op. 70 no. 1 and Schubert's Op. 163, harks back to the Viennese classicists of the previous century, especially Haydn, whose works were, by Schumann's own admission, of little interest.¹

EXAMPLE 7.2: Schumann Piano Quintet, Op. 44, 1st Movement
(Counterstatement

- Bridge, mm. 17 - 57)

¹Schumann, in criticizing Haydn's "Military" Symphony in a concert given in 1840, said, in part: "... He [Haydn] is like a regular house-guest who is always welcome and respectfully received; but he no longer holds any deeper interest for our age." Quoted in James Garratt, "Haydn and posterity: The long nineteenth century," *The Cambridge Companion to Haydn*, Caryl Clark, ed. (Cambridge: Cambridge University Press, 2005): 232. However, Schumann's disparaging remarks do not necessarily mean that he was not influenced, to some extent at least, by many details of Haydn's compositional methodology.

FIGURE 7.1: Schumann Piano Quintet in E β , 1st Movement, 3 β Extended Tonic Matrix System



Up to this point, the main system conflict has been between the 3 β and 6 β systems, more specifically, between G β and A $_$ as system-shift motivators that either raise or negate the systems to which they apply. The relationship between these two pitch classes continues even after A $_$ has formally reverted the system to 3 β s (see mm. 47-48). However, at the end of the bridge there is a lead-in transitional passage (mm. 51-56) that highlights the arrival of the second harmonic area. During this passage the previous G β s are temporarily

respelled as F#s, inviting a whole new set of tritone system-related conditions (see Fig. 7.1) that are maintained until m.101 when Gβ is reintroduced, first as part of a seventh chord and then as an augmented sixth. Throughout this lengthy period, the system conflict centers on 3βs and its complementary “0” system. As a result, the previous conflict between system pitches Gβ and A_ is now temporarily displaced by F# and Eβ. Of major interest to our discussion is Schumann’s sophisticated concept of a development process that is tightly organized around the interaction of tritone system shifts with system conflict pitch classes, and, as we shall see, PCA rises. We have already seen how Gβ becomes a motivating pitch class that is projected into ever deeper structural levels within the exposition, but how does this pitch class (as well as its enharmonic equivalent, F#), work into the PCA of the exposition in such a way that both Gβ and its conflicting system pitch class complement A_, become a source of development in their own right?

To begin, Schumann’s PCA ascents in the exposition are quite active owing to the basically chromatic nature of the thematic material, a procedure that will strongly influence Brahms. Diagram 7.1a gives an overview of the PCA rises and system shifts in the exposition of the first movement of the quintet. Unusually, Schumann has two PCA ascents from pc 0 to 7 within the first harmonic area of the movement, first

within the opening statement, and second, within the counterstatement and bridge. This is so because the counterstatement itself starts on dominant harmony and Schumann makes it very clear in the music that leads up to it, that the arrival to this middleground goal should be dramatized by a complete first segment rise of the PCA (see Diagram 7.1a for exact details). Along the way, pc 3 is first spelled as Gβ (m. 10) and then as F# (m. 12), both instances causing temporary system shifts that are corrected by each system's conflicting pitch class, A₂ and Eβ respectively. It is worth noting that pc 3 is the only pitch class within the PCA rise that undergoes an enharmonic respelling. Schumann seems to be preparing for the future possibility that both Gβ and its enharmonic equivalent, F#, will undergo some kind of developmental manipulation as the movement progresses.

DIAGRAM 7.1a: Schumann, Piano Quintet in Eβ, Op. 44, 1st Movement Exposition: System/PCA

EXPOSITION

	First Harmonic Area									
Measure:	1	4	5	10	11	12	13	14	15	16
Active System Pcs:				Gβ	A ₋	F#		Eβ		
System:	3βs			6βs	3βs	"0"		3βs sustained		
PCA:	Eβ (0)	E ₋ (1)	F (2) –	Gβ(3)	-----	F# (3)	G ₋ (4)	-----	G ₋ (4)	G ₋ (4) – G# (5) – A ₋ (6)
Harmony:	Eβ									
	I									

	Counterstatement					
M.:	17		19	20	22	27
ASPcs:					(Gβ/A ₋)	Gβ
System:						6βs
PCA:	Bβ (7)	PCA repeats:	Eβ (0) – [E ₋ (1)]	E ₋ (1) – F (2)	Gβ (3) -----	Gβ (3) sustained -----
Harmony:	[Bβ]				Gβ	
	[V, but not yet structural]					βVI/V

	Lead-in to 2 nd Harmonic Area									
M.:	43	44	45	46	47	48	51	52		
ASPcs:		A ₋			6β	A ₋			(F#/Eβ)	
System:		3βs			6βs	3βs				
PCA:	Gβ (3)		G ₋ (4) [Aβ, pc 5, is omitted]	[A ₋ (6) -----					A ₋ (6)]	

Harmony: Gβ aug. 6 → F V/V prolonged ----- Gβ aug. 6 → F A_ pedal -----
 07/V

Second Harmonic Area

M.: 56 57 58 61 62 – 64 65 66
 ASPcs: F#↗ Eβ↘ (F#/Eβ)
 System: “0” 3βs
PCA: A_ (6) Bβ (7) PCA repeats: Eβ (0) E_ (1) F (2)
 Harmony: A_ pedal → Bβ
 Piano arpeggiates a V aug. V

M.: 73 74 75 79 80– 81 83 95 96-97
 ASPcs: (F#/Eβ) F#↗ Eβ↘
 System: “0” 3βs
PCA: F# (3) G (4) sustained [pcs 2-3-4 repeated] [pcs 2-3-4 repeated]
 Harmony: A_ pedal ----- → Bβ A_ pedal -----
 07/V V

M.: 101-102 102 103 105 106 107 108
 ASPcs: Gβs↘ A_↗ F#↗ Eβ↘ holds through to the end of the expo.
 System: 6βs 3βs “0” 3βs
PCA: G (4) [Aβ, pc 5 omitted] [A_ (6)] A_ (6) → Bβ (7)
 Harmony: Gβ7 - Gβ aug. 6 C6/4/3 (deceptive) F7 D7 F7 → Bβ
 V7/V V

Starts a parenthetical interruption ----- **Codetta:** repeats the opening theme

M: 109 110 111 113 115 116 1st ending-----
 ASPcs: (Gβ/A_) (Gβ/A_) : ||

System:

PCA: PCA repeats: Eβ (0)

E_ (1) F (2) Gβ (3)
07

G_ (4) – G# (5) – A_ (6)

Bβ (7)
V

||
||

In the counterstatement, the first segment of the PCA repeats, but this time pc 3 as Gβ, as discussed above, attains much greater prominence within the harmonic unfolding, sustaining a 6β system shift over a long period of music. As a consequence, when A₋ is once more attained in m. 44, it too gains in prominence, since only this pitch class can return the system to 3βs. In order to balance the previous Gβ area, A₋, when it reaches its status as pc 6 within the PCA rise to the dominant (beginning in m. 46, see Ex. 7.2), is dramatized to such an extent that it assumes the function of bass right up to start of the second harmonic area! Thus the two system pitch-class motivators, Gβ and A₋, seem to control a significant amount of the harmonic motion of the first half of the exposition.

As the second harmonic area gets underway, in the traditional area of the dominant, F# replaces Gβ, the system conflicts now centering on “0” and 3βs. As is usual at the start of the second harmonic area, the PCA begins again from pc 0, the Eβ found in the cello part on the second beat of m. 58. Pitch classes 1 and 2 (E₋ and F₋) are found in mm. 65-66, with pcs 3 and 4 (F# and G₋) in mm. 74-75 as the lead-in to the second theme is repeated. During this lyrical, stable period, the 3β tonic system prevails, and when F# as pc 3 enters, Eβ is pitted against it, preventing a system shift. Events begin to

change with the repeat of the second theme itself beginning in m. 80. Here the F₋-F#-G segment of the PCA is repeated with F# left uncontested, therefore allowing a brief shift into the “0” system. What is interesting about this passage is that the PCA never rises beyond pc 4, G₋. An Eβ in m. 83 reverts the system to 3βs, the music once more moving to a repeat of the *lead-in* material in m. 95. The repeat initiates a dynamic, rhythmically charged transition to the codetta (there is no closing area in this exposition). Along with the repeat of the *lead-in* material comes the same three pitch classes, 2, 3 and 4, the G₋ still prevented from proceeding on to the next pitch in the series. In fact, it never does! Quite the contrary, the G₋ first moves down to Gβ, which now regains its motivic function as a source of development. Again, the Gβ triad turns into an augmented sixth as it did in the bridge, but instead of immediately resolving cadentially to the dominant, Schumann interpolates a parenthetical progression (see Diagram 7.1a) constructed from dominant seventh chords. Here the PCA is worked into the system shifts as pc 4, G₋, moves up to pc 6, A₋ (pc 5, Aβ, is omitted), in m. 103, temporarily regaining the tonic 3β system in the process. By omitting pc 5, the A₋, as part of an F7 chord, is clearly heard against the previous Gβ sonority, reinforcing the Gβ/A₋ system dyad conflict that informs so much of the movement’s harmonic development.

With the arrival of the dominant at the codetta in m. 108 (note that the thematic material for the codetta is the opening theme, a procedure followed by Mendelssohn in the D minor piano trio discussed above, and which ultimately derives from Beethoven, most probably from the first movement of his Op. 1 no. 3 piano trio in C minor), the delayed resolution to the dominant seventh from the previous G β augmented sixth is finally accomplished. So too is the PCA rise from pc 6, A $_$, to pc 7, B β . Interestingly, the missing pc 5, A β , now appears in the first measure of the codetta as part of a V7/IV within the dominant area (the note is doubled with an accent over it in the upper register in both the first violin and piano parts, and with a *forte* dynamic). Since no A β appears within the previous interpolated passage, and is therefore missing from the PCA rise, Schumann seems to have deliberately isolated the A β in order to emphasize the A $_$, and consequently the G β /A $_$ system dyad, in its place.

Instead of a formal closing period, Schumann's transition jumps right into a quite laconic codetta of only nine measures. The codetta serves a double function of both concluding the exposition with a cadential phrase, as well as rhythmically anchoring the dominant with an emphatic downbeat. In its role as substitute closing, Schumann restates the opening theme of the movement (itself rhythmically concise), a device typical of Romantic-era

closing periods following in the footsteps of Beethoven, whose chamber music sports numerous such closings (for example, Beethoven's Piano Trio in C minor, Op. 1 no. 3, first movement). Schumann's codetta thus revives the rhythmic intensity of the opening statement that had been attenuated during the extended, lyrical first period of the second harmonic area. Supporting the reinvigorated rhythmic drive, Schumann adds another PCA segment rise from the codetta to the end of the exposition, perhaps once again to emphasize the importance of the $G\beta/A_-$ relationship: $G\beta$ as pc 3 is pitted against A_- within diminished harmony, the diminished chord containing all the pitch classes of the tonic matrix system. This last PCA rise of the exposition contains all 0 - 7 pitch classes, which only adds to the chromatic intensity of the passage (see Diagram 7.1a).

Compositionally, perhaps even aesthetically, Romantic composers, Schubert among them, always seem to have had problems, at least from the hindsight of our twenty-first century, in successfully creating every increasingly dynamic, and/or propulsive, development sections. Perhaps this is due to the Romantic conception of what we might call "temporal elasticity" whereby the music ebbs and flows, now dynamic, now placid, the rhythm constantly regenerating itself after a period of repose. Temporal elasticity is characteristic of many Romantically-conceived sonata-form expositions

where, after a stormy opening, either at the very opening of the movement, or at the counterstatement (Schubert's Op. 163 String Quintet is an example of the latter), the music relaxes into a lyrical outpouring that is anticipated in the bridge and becomes manifest through the first period of the second harmonic area, only to be jump-started again at the closing.²

In retrospect, the slowing down of the phrase rhythm to allow for a lyrical or "song-like" theme at the start of the second harmonic area, can be traced back to the Classical exposition types of the *style galant* composers, including many of the Mannheim composers, J. C. Bach and Mozart (both father and son), among many others. These "aria-like" melodies were often constructed in rhythmically secure eight-measure periods broken up into 4 + 4 antecedent/consequent phrases. In these works, the phrasing of the subsequent transition that led to the closing area was non-periodic, asymmetrical, rhythmically active, harmonically unstable and chromatically intensified. The closing period restored the periodic phrase rhythm, but maintained a certain surface rhythmic activity that was often embellished with increased

²See Gregory Vitercik's insightful remarks on this Romantic tendency in his excellent study of Mendelssohn's early works: *The Early Works of Felix Mendelssohn: A Study in the Romantic Sonata Style* (Gordon And Breach Science Publishers: The Netherlands, 1992): 46 and 307-8.

chromaticism. The Romantic composers simply carried this juxtaposition of dynamic versus lyric to extremes, which worked well enough in their sonata-form expositions where harmonic areas needed to be both stabilized, to establish a background relationship between first and second harmonic areas, and destabilized, to justify cadential arrivals. But when this dichotomy was applied to development sections, it often failed.

The reasons for this lie in the very nature of what a development section was originally intended to do, that is, to connect the end of the exposition with the return of tonic harmony at the point of recapitulation. In order to accomplish this feat successfully, the phrase rhythm of the development accelerates as the music moves quickly through one harmonic area after another, either as part of a larger prolongation of a “development key” (for instance V or vi), or treating each area sequentially with more or less equal weight. Perhaps the most important task the composer must face within the development of a major mode sonata form movement is to transform the dominant from where it left off at the end of the exposition as a harmonic area, into a cadential harmony within a larger tonic progression leading into the return of the tonic at the start of recapitulation. At the point of retransition at the close of the development section, the dominant should be heard as preparing the tonic, not as a self-contained and temporarily stable

harmonic area. Thus the overall harmonic progression of the development relates to the tonic rather than to the harmonic area that ended the exposition; and, consequently, all the primary harmonic goals of the development form a large-scale tonic progression; for example, IV (as the first goal of motion), vi (as both a climactic area and as neighbor to the V) and, finally, V itself, often carrying a seventh with it in order to directly relate it to the tonic that follows. Naturally, there is a wide variety of development progressions that a composer can choose from, but the essential point is that the listener/performer should perceive the progression, and the best way to accomplish this on the composer's part, is through an accelerated phrase rhythm. Consequently, if a harmonic area within the development is ever stabilized to such an extent that it defeats the background acceleration (that is, the stabilization takes the form of a periodic, lyric episode) the rhythmic drive of the development is in danger of collapsing altogether. This is why Mozart, when he does have a lyric theme in his development, usually places it at the very beginning; once the acceleration starts, Mozart rarely, if ever, stops it until he has reached the recapitulation.

Romantic composers, however, lean heavily towards the lyric element in their pieces, most likely stemming from a deep emotional involvement with vocal music of all types, most especially opera. Lyric phrasing demands both a

periodic phrase structure and a slowing of the harmonic rhythm. If used within a sonata-form exposition, the result can be highly emotional and deeply satisfying (listen to any Schubert second or middle harmonic area theme!), but when applied to a development, the overuse of stable melodic phrases can become tiresome and uninteresting. Of course, the Romantic composer does not feel this way in the slightest. Rather, the Romantic approach to melody and phrase rhythm within the development section is just the opposite: the function of these musical elements is to achieve an almost operatic intensity in which passages of slow, almost non-existent, harmonic motion frame passionate, faster ones that build to dramatic climaxes. The whole concept of temporal elasticity that pervades the Romantic development literally depends upon the ebb and flow of phrase rhythms that either propel the music forward or retard its momentum. Compared to Beethoven's totally dynamic approach to phrase rhythm in which the rhythmic propulsion that ends the exposition is further intensified in the development, and without let up, the Romantic conception, a basically melodic one, appears often to be flaccid, even arbitrary, even though the original intent on the part of the composer may have been the opposite.

That brings us to Schumann's own solution to the problem of phrase rhythm (or the avoidance of it) in the development of his Piano Quintet. After all

the rhythmic build up at the end of the exposition, it comes as somewhat of a let down to hear the rhythm slow to a crawl at the opening of the development section. Texturally as well, the interplay between the strings and the piano that had characterized the exposition has now evaporated in favor of an overly active piano part that comprises mostly “passage work,” during which the string parts are reduced to articulating the harmonic rhythm in whole and half notes.

Further, Schumann's background harmonic plan for the development reminds one of Schubert's large-scale sequential periods that run through numerous harmonic areas lying a fifth apart, and which maintain a single phrase rhythm throughout. A design such as this, one that depends upon sequential repetition, is practically incapable of achieving any sort of cumulative tension or climax. Specifically, Schumann's development centers around two large-scale sequential periods, each one initiating a fifths cycle, the second of which conveniently leads directly into the recapitulation (see Diagram 7.1b). Thematically, each area is introduced by a restatement of the opening motivic theme followed by a steady stream of somewhat characterless eighth-notes in the piano part — the “passage work” mentioned above. At the same time, Schumann's sequential periods maintain a slow harmonic rhythm, that eventually become predictable.

These periods, without any lyric content, are unrelated to the melodic/motivic ideas expressed in the exposition. In fact, there is no development of the exposition material at all, except for a constant, unvaried, repetition of the opening theme of the movement, sandwiched in between the two sequential periods.

DIAGRAM 7.1b: Schumann, Piano Quintet in Eβ, Op. 44, 1st Movement Development: System/PCA

DEVELOPMENT		Opening motive restated (mm. 128-131)								
Measure:	116	123	128	132	138	139	140	142	143	
Active System Pcs:		Gβ			A_	(Gβ/A_)	Gβ	A_		
System:	3βs	6βs			3βs		6βs	3βs		
PCA:	Bβ (7)			Cβ (8)				C_ (9)	Dβ (10)	
Harmony:	Bβ V		aβm	----- iv (initiates a 5ths cycle)		eβm		bβm	----- sustained for the rest of the development	
									Opening motive restated	
M.:	146	150	155	158	159-60	161	162	165	167-170	
ASPs:	F#		Eβ	F#		Eβ	Gβsustained	-----		
System:	"0"		3βs	"0"		3βs	6βs			
PCA:								[Dβ as pc 10		
Harmony:	fm	cm		C9 → fm		Gβ		is kept active within	fm	
	ii					βII/ii		the harmony]	ii	
									Retransition	
M.:	175 – 179				181	183	191	195	196	197
Active System Pcs:	(Bββ/C_)						(A_/Gβ)			A_
System:	(6βs holds through	-----						-----)		3βs
PCA:							[D_ (11) – not yet structural]			(Dβ, pc 10 regained)
Harmony:	gβm				dβm	aβm	eβm	F9 →	bβm	
	(initiates a second 5ths cycle)									
RECAPITULATION										
M.:	200	201	203 – 04		206	207	210			
ASPs:	Gβ		(A_/Gβ)				A_			
System:	6βs		(6βs holds though into the recap.)	-----			3βs			
PCA:		D_ (11)	-----		D_ (11)		Eβ (0)			

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Harmony: eβm (Gβ refuses to relinquish its place
i to G_ within tonic harmony) Bβ7 V7 Eβ I (Gβ is finally displaced by G_)

The total absence of lyric material is unusual for a Romantically-conceived development. Also, what thematic material is present, is sequentially transposed without any manipulation or variation of the melodic surface. However, what is striking, and infinitely more sophisticated, is Schumann's process of working out the seminal "issues" of the movement, hidden beneath all the mundane sequential surface material. At first, we are surprised to find that Schumann's harmonic areas in the development are *entirely in minor*; however, upon further consideration, these minor-mode areas balance the predominantly major-mode areas of the exposition. Further, these minor-mode areas are not just for "color," they actually support Schumann's underlying developmental process; specifically the working out of pitch classes $G\beta$ and $A_$ as system-shift motivators on the deepest structural level, as well as the further exploration of the harmonic potential inherent in the $D\beta/D_$ dyad conflict whose presence informed so much of the exposition. As stated previously, the first group of minor mode sequential phrases begins in m. 128, twelve measures into the development. As Diagram 7.1b illustrates, the opening motive of the movement returns in this measure in the area of $A\beta$ minor. As an aside, we should note that by starting the fifth cycle on $A\beta$ minor, there is an automatic association with this pitch class and its dyad conflict, $A_$, which continues the relationship between the two pitch classes

from the exposition, but now on an even grander scale. Following this thematic restatement, the harmonies of the subsequent passage-work phrases in the piano, move in fifths through E β minor and B β minor, and finally settle into F minor; F minor is considerably extended by G β , its Neapolitan. The next cycle begins with a restatement of the movement's opening theme presented in F minor; however, F and G β now reverse their roles from the previous period: F functions here as G β 's lower neighbor.

From the beginning of the development, both G β and its complementary system-shift motivator, A $_$, play a pivotal role in directing the music into the two large-scale minor-mode fifth cycles upon which the harmonic plan of the development is based. Indeed, the entire development is controlled by continuous oscillations between 3 β and 6 β systems (the "0" system occurs rarely) that underlies the comparatively lower-level motions into the fifth-related minor mode areas. Diagram 7.1b depicts how G β is projected from a system-shift motivator to a pitch class that operates on ever deeper structural levels: eventually the entire development is conditioned by its operations. At the start of the development, G β is seen as a system pitch-class motivator that throws the prevailing 3 β system into 6 β s (refer to Diagram 7.1b) while A $_$ often thwarts it. Afterwards, G β becomes a harmony in

itself as the Neapolitan of the F minor harmonic area. Eventually, G β expands to become a harmonic area in its own right (m. 175 ff.), dividing the development in half by initiating a second fifths cycle that moves back toward tonic harmony. But G β invades the tonic itself: when E β does arrive as the last harmony within the fifths cycle (first in m. 191 and then, more importantly, in m. 200) the all-pervasive G β refuses to relinquish its disruptive status by forcing the tonic triad into its parallel minor seven measures before the recapitulation! This gesture is so powerful that the 6 β system is not redressed to the tonic 3 β system until four measures into the recapitulation with the arrival of an uncontested A $_$.

Even though the G β within the development section is undoubtedly a pitch class of some considerable control, it does not play a part in the continuing folding of the PCA. Rather, we now turn to another important dyad conflict centering around a chromatically inflected D β (obviously associated with G β) against its diatonic neighbor, D $_$. The importance of the D β can be traced to the very first measure of the opening of the movement where D β is first introduced as a minor seventh above the tonic's root, suggesting a functional duality of the E β major triad both as a tonic and as a foreground dominant of A β .”]. The development's leaning in a subdominant direction is prepared by this opening gesture. The importance of D β also lies in the fact that along with D $_$

they form pcs 10 and 11 of the PCA, which now seeks conclusion to the octave over the course of the development. At the start of the second ending, where the development proper begins, B β as pc 7 is reiterated (see Diagram 7.1b for a complete depiction of the development's PCA rise). During the A β minor period, C β is introduced as pc 8, which is then displaced by C $_$, pc 9 in m. 142, where it acts as a passing tone with B β minor harmony. The D β as pc 10 now enters the picture in the next measure and remains an active PCA pitch class that is not displaced by D $_$ until six measures before the recapitulation.

Schumann finds any number of ways of sustaining the D β as pc 10 over the course of the development; in fact, one could say that this pitch class is subjected to an intensive development process that is often generated by, and concurrent with, G β as a system-shift motivator. For instance, after pc 10 of the PCA is reached in m. 143, D β is immediately absorbed into an extended C dominant ninth chord (m. 146) where D β appears as the minor ninth. During the subsequent prolongation of F minor, D β operates within both the C9 chord and the prolonging G β chord which here acts as the Neapolitan of F minor. The G β soon becomes the focus of the next harmonic area where D β now operates as its fifth degree. (The D β will again appear as fifth degree at the start of the next fifths cycle generated from G β minor in m. 175.) In m. 167 the opening

theme of the movement is restated in F minor with D β absorbed into diminished harmony before it emerges as a cadential dominant leading into G β minor. Within the fifths cycle itself, D β becomes the root of D β minor, the next fifth of the sequence after G β minor. Only once within the development is D β temporarily displaced by D $_$. As mentioned previously, the last fifth of the second cycle is E β minor, and, naturally enough, the extended dominant (each minor-mode harmonic area is prepared by its dominant ninth), B β 9, carries stress in a D $_$ (mm. 187-88). However, D $_$ cannot yet be considered structurally significant within the rising PCA since D $_$ has not yet become the leading tone of the major tonic. Also, D β returns in m. 196 as part of B β minor harmony, the last fifth in the sequence. Thus, at least on the level of the PCA, one could think of D $_$ as momentarily functioning as a dissonant upper neighbor of D β . In preparation for D $_$ assuming its eventual position as pc 11, and therefore as leading tone to the tonic, Schumann enharmonically respells the D β as a lower neighbor, C \sharp (mm. 201-02 and 206), stressing the importance of the D $_$ in the final measures of the retransition. In summary, at the point of recapitulation in m. 207, the tonic E β major is regained, and both D $_$ and G $_$ finally displace D β and G β , the working out of these dyads having been a virtual preoccupation of the entire development section.

As so often happens in Romantic sonata-form movements, Schumann's

recapitulation is a literal one; that is, all the thematic material of the exposition returns in the same order with little or no change except for the necessary harmonic adjustments needed to transpose all the material into tonic harmony. The recapitulation, then, becomes merely a repetition of past events rather than a re-thinking, or re-examination of them, a procedure more characteristic of Classical recapitulations. Perhaps the return of the tonic, and its concomitant resolution of pitch-class and system issues, at the beginning of the recapitulation, was too overwhelming, the downbeat too strong, to justify further development within the body of the recapitulation. Even Schumann's counterstatement and G β area remain intact, just as they were in the exposition; only the very end of the bridge is redirected towards the transposed second harmonic area in the tonic. As a result, of all this literalness, there is not much chance to revive and resolve dyad conflicts and pitch-class issues: one is left with the feeling that all significant compositional issues had already been addressed at the point of recapitulation, leaving nothing to be accomplished afterwards. Such is rarely the case with the music of Johannes Brahms, our next composer.