

Beethoven's Waldstein and the Generative Course

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This paper examines the first movement of a central text of German culture: Beethoven's *Waldstein* Sonata, op. 53. This analysis forms part of a general theory of musical semiotics of which various segments have already appeared as articles in several different contexts (Tarasti 1983-1989).

By **generative course**¹ I mean a semiotic model—here a slightly simplified elaboration of **A.J. Greimas's**—according to which one investigates a musical text through four levels or phases that may be said to “generate” it. These phases are

- (1) **Isotopies**: deep levels of signification that determine all subsequent levels situated closer to the surface;
- (2) **Spatial, temporal, and actorial** categories, particularly regarding procedures of **engagement/disengagement** (*embrayage/débrayage*);
- (3) **Modalities**, which as far as music is concerned can be sketched as follows: Being (*être*) = consonance, state of rest in music

Doing (*faire*) = dissonance, tension in music

¹Editor's note: To Prof. Tarasti's essay we have appended a glossary that further defines and provides background for terms appearing in boldface. —RL

Becoming (*devenir*) = transitional sections in particular (for more extensive definition see Tarasti 1986b)

Willing (*vouloir*) = the kinetic and catalyzing energy of music, its *Zielstrebigkeit* or goal-directedness

Obligation (*devoir*) = subordination to norms established by, for instance, a style or formal type

Being Able To or Ability (*pouvoir*) = technical efficacy, the power of music

Knowing (*savoir*) = informational value of music, its cognitive moment;

- (4) Musical **phemes** and **semes**: the smallest units of musical material on the levels of signifier and signified, respectively.

I have arrived at these definitions after study of several proto-semiotical theories in musicology, including that of Swiss musicologist Ernst Kurth, especially as advanced in his *Grundlagen des linearen Kontrapunktes* (1922). (I consider Kurth a pioneer of musical semiotics whose status in that discipline will someday equal Heinrich Schenker's in contemporary music theory.)

I should mention that the following analysis is not yet complete, since it stops at the threshold of the most decisive phase: creation of a modal grammar for the piece. In my view a modal grammar is made possible expressly through analysis of musical **actors**. By musical actors I mean certain motifs or themes, which in Beethoven are clearly distinguished from the musical discourse surrounding them. A basic hypothesis of the present analysis—one which made me select only the first movement of the *Waldstein*—is that a musical actor does not disappear “from the stage” even though it is not “saying” something, just as theater performers in

dialogue do not disappear when the speaker changes. On the contrary, the actors remain present throughout the discourse, but in absentia, as **destinatees** who immediately interpret and respond to the utterance of their interlocutor. What happens in music corresponds to theatrical communication: a musical theme-**actant** might disappear from the score, say at moments when its **opponent** theme occurs in another register; but it does not disappear from the listener's mind.

Although music is basically a linear art of time, it can nevertheless create the effect of superimposed, simultaneously present levels of musical action, much like the concept of "polyphonic consciousness" in the novel (Bakhtin 1973). A quick search finds examples illustrating this effect: the beginning of the Allegro movement of Haydn's piano sonata in E-flat major, Hob. XVI: 49; the chorale vs. the consequent phrase in the upper register of Chopin's Scherzo in C-sharp minor; the theme and arpeggiated-triad figure in the third movement of Schumann's C major Fantasy, where the triad seems always to cut across the melodic course, creating the impression of two superimposed levels (see mm. 34-37); and the beginning of Beethoven's *Waldstein*, where two motifs, each in a different register, 'fight' each other.

Communication often occurs between two actors in a musical composition. They alternately modalize each other, so to speak, and follow a certain **narrative program**. Sometimes the program centers on a struggle between two actors, where the 'fight' or 'battle' constitutes a musical figure or **narrative function** in the Proppian sense (Propp 1958). The manner in which musical actors function can be described in modal terms and, ultimately, with a precise grammar. One must also consider the music's spatial and temporal structures; the former perhaps described in Schenkerian terms, the latter by metric-rhythmic analysis. Yet a musical analysis that stops at this point would be like a play-review that critiques the scenery and stage positions but ignores the dramatic course of events, the identity of the actors, what they said, what they did—in other words, what really happened. My objective is to depict *was es eigentlich gewesen ist* in music—the alternation between Being and Doing,

tension and rest, dissonance and consonance in the broadest sense of these terms—and to specify that activity in a proper metalanguage.

When the object of analysis is a musical text representing sonata form, we can distinguish among the following *topoi*: (1) Thematic areas, places in which theme-actors move. Thematic areas are to a great extent determined by spatio-temporal criteria and characterized by certain modalities. Within and 'upon' these isotopies, theme-actors move with their particular modal contents. Sometimes, it is true, there can be musical thematic areas *without* any actors, when music tries to do without actorial articulation. Sometimes again, the force that catalyzes the musical motion lies in the mere juxtaposition of a theme-actor with its modalities *and* the modalities of the surrounding area. (2) Transitions between thematic areas. Transitions maintain the processive aspect of music. The motion represented by transitions can be analyzed into semiotic **aspectual** categories such as inchoativity/terminativity, perfectiveness/imperfectiveness, punctuality/durativity. The fundamental modality of transitions is *devenir* or Becoming. (3) Developments constitute areas of musical action whose modality is Doing or *faire*.

How does musical Doing differ from Becoming? Doing suggests a stronger activity than mere Becoming. The Doing sections must contain ample musical substance, such as *savoir*, other modalities and their contrasts, in short, events which produce a feeling that something is happening. One may well ask, What are the criteria for a musical event? Does not an 'event' or 'action' always require someone to whom something happens (a **patient-actor**) and someone who produces the action (the **agent-actor**)? In this view, the concept of action would be linked specifically to the actorial category. Yet sometimes a musical event can arise simply through sharp contrasts in spatial-temporal dimensions, such as deceleration/acceleration of tempo, abrupt changes of register, and the like. In some works the mere alternation between Being and Doing, along with their **indexical** connectives, creates the action, as occurs for example in the first movement of Bruckner's Ninth Symphony, Mussorgsky's *Pictures at an Exhibition*, and *Kraft* by Magnus Lindberg. Sometimes the distinctions between Being and

Doing have been deliberately obscured, as in the late symphonic style of Sibelius.

To continue our analysis, we segment the first movement of the *Waldstein* as follows:

Exposition (mm. 1-86)

1st thematic area or isotopy (mm. 1-13)

1st transition (mm. 14-34)

2nd thematic area or isotopy (mm. 34-50)

2nd transition (mm. 50-74)

codetta or closing theme (mm. 74-86)

Development (mm. 87-156)

Recapitulation (mm. 156-249)

Coda (mm. 249-302)

Next I shall examine in detail the principal sections of this sonata.

things, fills this gap; similarly, the usage of the entire range of the keyboard, in the last movement, fills this gap with arpeggiated chords.

Further concerning the inner spatiality: notice the acceleration of harmonic rhythm over the dominant in mm. 9-11. This acceleration must be one reason why August Halm, in his *Von zwei Kulturen der Music*, chose the beginning of this sonata to illustrate the phenomenon of *Steigerung*, or semiotically, 'tension' and its growth (Halm 1916: 107-17). Halm interprets this *Steigerung* using modal concepts. He distinguishes between two kinds of 'rising': (1) growth of tension through greater distance, *débrayage* or disengagement from the tonic, as exemplified by the harmonies C—G—B-flat in mm. 1-6 and by C—G—D-minor in the transition mm. 14-19; and paradoxically, (2) growth of tension through *embrayage* or engagement, harmonic motion toward the tonic. The latter can be illustrated by extended pedal tones on the dominant (typical not only of Beethoven but Bruckner as well) which Halm calls *vermehrte Ladung*, "multiplied storing" or "charge" in the sense of electrical energy (Halm 1916: 110): a great dominant construction that sounds more and more dissonant, because through prolongation and withholding of resolution it becomes more and more tensional, signifies the growth of a forward-striving, energetic force.

But when a tonic is prolonged as a kind of triumphant homecoming and expression of definitive completion (emphasizing the category of perfectiveness, to use semiotic terms) then the attainment of an inner, spiritual consonance (Being!) is involved, rather than a focus on the consonant aural quality of the tonic itself. These two cases produce 'rising' by means of an *embrayage*, particularly that of inner spatiality. As Halm puts it, the increase of a certain constant, whether it be dominant or tonic, effects a rise in tension. Precisely this type of growth in tension through *embrayage* occurs over the dominant pedal in mm. 9-11.

In contrast, the transition realizes growth of harmonic tension through *débrayage*. Halm suggests that the transition represents a "crescendo" and "decrescendo" in the harmonic action, but not in the modalities of Willing and Obligation (*vouloir* and *devoir*). If one

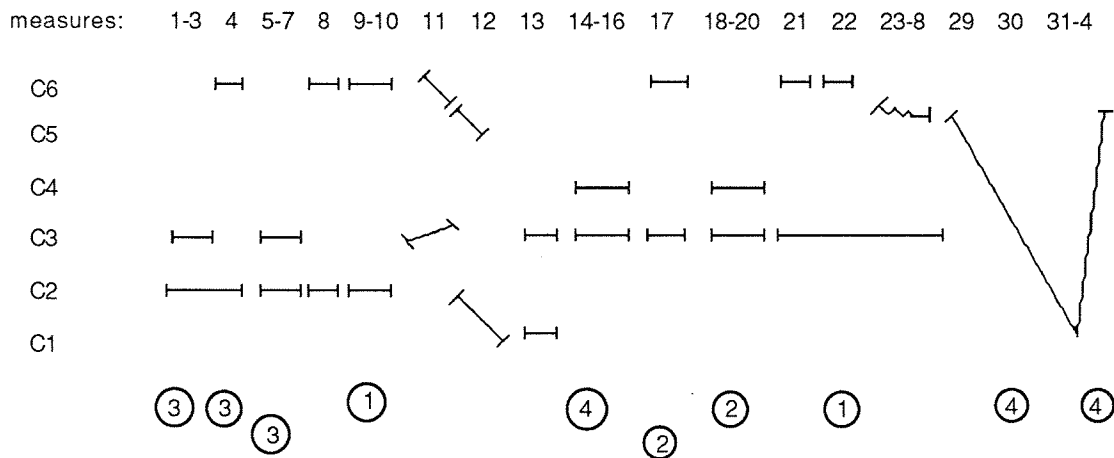
compares the first isotopy with the subsequent transition, thus accounting for the temporal paradigm of musical memory, this phenomenon of increased tension comes clearly into the foreground. Halm's concepts of *Steigerung auf Distanz* (intensification by distancing) and *Nahsteigerung* (intensification by drawing closer) correspond to our *débrayage/embrayage* of inner spatiality. This is in fact the same idea suggested by Victor Zuckerkandl (1959: 34-35), who notices that, in the ascending D minor scale, the motion from d to a is felt as an increase of tension—Halm's *Steigerung auf Distanz*, our tension through *débrayage*. But as the motion continues upward from a to d, completing the octave, we sense a decrease in tension but at the same time a 'rising,' and in the dynamic sense, a very strong rising! The latter motion exemplifies Halm's *Nahsteigerung*, our tension through *embrayage*, a tensional motion toward the tonic. Simply put, the entire process entails movement away from tonic toward the dominant, then back toward the tonic. In Zuckerkandl (ibid.) the arrows pointing in opposite directions, D4-->A4<--D5, illustrate this process.

We can measure *débrayage/embrayage* by assigning numerical values based on the circle of fifths to various points in relation to their distance from a tonic. In this way we can evaluate with some precision the degree of tension for the inner spatiality of each musical section. Motion toward the left side of the circle ('flat' keys) is indicated by minus signs, motion to the right ('sharp' keys) by plus signs. Numbers show distance from the tonic in terms of fifths in either direction, and asterisks signal parallel major or minor. The following gives *débrayage/embrayage* values for the *Waldstein's* first isotopy and subsequent transition: m. 1:0, m. 2:+2, mm. 3-4:+1, m. 5:-2, m. 6:V of -1, m. 7:-1, m. 8:*-1, mm. 9-11:+1, m. 12:*0, m. 13:=1, m. 14:0, m. 15:+2, mm. 16-17:+1, m. 18:*+2, m. 19:V of +3, mm. 20-21:*+3, m. 22:V of +5, mm. 23,28:+5 and +4, mm. 29-34:+5.

We must next examine the outer spatiality. Figure 1 shows the abrupt shifts between registers C4 and C6, especially in mm. 1-10. The piece begins with a *débrayage* of the external spatiality: the dislocation caused by centrifugal tendencies results in a detached

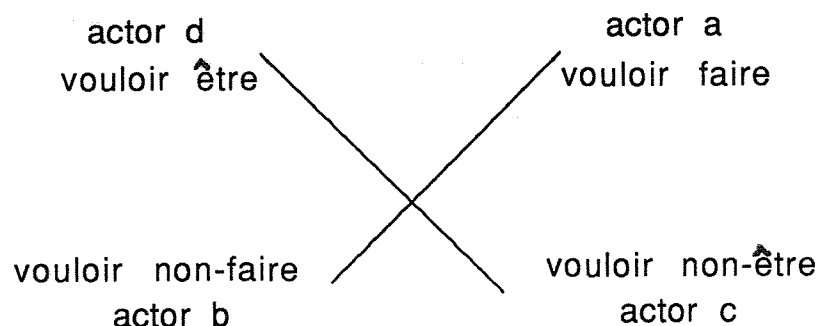
and disjunctive placement of the musical material. The category centripetal/centrifugal aptly characterizes the outer spatiality, such that centripetal motion equals *embrayage* and centrifugal movement equals *débrayage*. In this case, the shifts in outer spatiality parallel the growth/diminishment of tension in the inner spatiality.

Figure 1.



We can also determine similar numeric stress-values for the external spatiality, in order to provide a basis for comparison with the inner spatiality. The outer spatiality should be 'digitalized' with discrete units. As a criterion for the degree of centrifugal tendency one might consider only the alternation of different registers, and not the fact that two extreme registers are in use. If for example a composition employs the same registers throughout—say, the melody remains near C6 and the accompaniment at C2—its centrifugal tendencies are weak. But if extreme registral shifts take place, a centrifugal effect strikes one immediately. Numerical values can be assigned to every change of register, depending on the degree of shift. Let us assign the value of 3 to the leap from C3 to C6 in m. 4 of the *Waldstein*, signifying a leap of three octaves. The value of

Figure 2.



0 represents mm. 1-3, a case in which the register does not fluctuate radically. These values are shown in circles (bottom of Fig. 1) at points where registral changes occur.

One could measure the intensity of *débrayage* or centrifugal tendencies in a musical segment by simply adding up the values of registral shifts; the greater the number the greater the *débrayage* through centrifugal motion. This method of measurement might be refined by distinguishing between registral shifts occurring by leap or by step, since one experiences a scalewise shift as less abrupt than a direct leap to another register. One must assume also that each musical text, and sometimes a particular section, has unique outer-

spatial norms in relation to which even the slightest deviation represents a centrifugal tendency. Such a registral norm may remain completely independent of the fulcrum (tonic) of inner, tonal space. By simply measuring changes in the outer spatiality, however, it would be difficult to infer the norm of a particular musical universe. Would it be the register used most frequently? The register in which the section or isotopy in question ends? It is impossible to decide by only these facts, since temporal and actorial categories can also influence outer spatiality.

For instance, the unity created through actorial similarities (discussed at length below) between the two registral extremes mitigates the effect of abrupt spatial *débrayage* in the first four bars of the *Waldstein*. The opening passage introduces a symmetrical, four-bar actor typical of the rationality of the classic period, and simple scale motifs comprise the musical substance of this actor. On the other hand, the centrifugal tendency of m. 9 increases through the subsequent implied acceleration effected by the use of smaller time units, signifying growth of tension in the temporal domain. Likewise, at the end of the transition the temporal *débrayage* combines with the extremely heightened tension (+5 value in Fig. 1) of the inner spatiality. Thus even though the outer spatiality in mm. 23-28 remains constant, an area of great intensity arises through a centripetal movement of *embrayage*. The interaction and *embrayage/débrayage* of spatial, temporal, and actorial dimensions is also affected by the modalities,² which we shall soon discuss in connection with actoriality. But first we shall explore the temporal category.

Temporal Dimension. The outer temporality presents few obstacles to semiotic analysis and can be described to a great extent by a rhythmic study of the piece. In music generally, meter and

²Despite their essentially dynamic and continuous nature the modalities might be digitalized into discrete numerical values. The present analysis does not formulate a modal grammar, properly speaking. I have, however, constructed such a grammar for Chopin's G minor Ballade in my forthcoming book, *A Theory of Musical Semiotics*.

tempo instructions (allegro, adagio, vivace, and the like) require expression of some basic pulse. Meter and tempo combine to form temporal “cultural units” (see Eco 1979: 67). For example, met with an indication such as “tempo di minuetto” both listener and performer understand intuitively what this tempo requires, and they further relate this tempo to gestures typical of that dance. Meter and tempo together govern the basic pulse, in relation to which accelerations/decelerations are *débrayages*, shifts out of the ‘normal’ rhythm of the piece.

In his novel, *Muuttumisia (Changes)*, Finnish-Swedish author Oscar Parland provides the first movement of the *Waldstein* with an interesting verbal **interpretant** that emphasizes the “drumming” character of the persistent eighth-note motif. Also concerning the outer temporality or rhythm of the piece, Charles Rosen writes: “The pulsating energy in this work is perhaps its most remarkable innovation” (1976: 398). Yet he admits that “Description in purely rhythmic terms, however, will not do.” In the following discussion we shall try to make more precise the aspects of outer temporality mentioned by these writers, and go further to consider the inner temporality as well. (In his essay “On the Moods of a Music-Logic” Charles Seeger created a musical-analytical model, based on **musemes**, in which he divided rhythmic units into their smaller parts and examined those parts in terms of decrease/increase of tension. We must consider Seeger our precursor despite the fact that he never went beyond the taxonomic phase in his method and did not show in a concrete analysis how his musical “logic” might function in analytic practice.)

The first isotopy and transition contain similar programs of *débrayage* through rhythmic acceleration. The sixteenth-note figuration increases in the right-hand part (mm. 8-11) and at the end of the transition dominates the registers of both hands (mm. 23-30). This temporal acceleration no doubt generates much of the *Steigerung* which August Halm believed to permeate this sonata.

The outer temporality can be measured in terms of changes in rhythmic time units: “+” denotes acceleration through temporal diminutions and “-” denotes deceleration, both in relation to the

basic time unit (though the basic time unit of a piece or section may sometimes be as difficult to determine as it is to determine the norm of the outer spatiality). Degrees of change in the external temporality can be accounted for in terms of measure-units. If we assign the value of 0 to the “drumming” motif, with its eighth-note rhythm as the basic time unit of the first isotopy and transition of the *Waldstein*, we get the following description: mm. 1-2:0; m. 3:0, +1/8, meaning that on one eighth note of the bar there occurs an acceleration of the basic time unit; m. 4:0, +1/4; mm. 5-6:0; m. 7:0, +1/8; mm. 8-9: 0, +1/4; mm. 10-11:+1; m. 12:-1; m. 13:-3 (plus fermata); mm. 14-30:+1; mm. 31-34:0. (A weakness of this descriptive method is that even though a rhythmic *débrayage* might occur in only one part, the values represent the phenomenon as if it were taking place in all parts simultaneously. In mm. 10-11, for example, the value of +1 accounts only for the appearance of sixteenth notes in the upper part, while the lower part remains at the basic time unit of 0.)

How can one determine the inner temporality for this section? We should, as does Halm, account for the paradigms of musical memory and expectation as well as their influence on musical form, since the temporal strategy of a musical text emerges from the co-functioning of these two factors. By temporal strategy we mean the order in which events are introduced, how they relate to each other on the time axis, and how sections form a temporal fulcrum retained in the memory to which all subsequent intonations are compared. Boris Asafiev's analysis (1977) of Bach's C-sharp minor Fugue, *WTC I*, pays special attention to inner temporality, as do Kurth's (1922: 209-12) and Halm's analyses of the *Waldstein*.

Halm believes that the opening major chords, C-G-B-flat provide the memory with a paradigm to which are compared the C-G-D minor of the transition's beginning. Heard against the background memory of the former series of chords, the latter series represents a *Steigerung*, a growth in musical tension. It “wirkt als Steigerung, wir finden uns da nach vorwärts fahrend, getragen und schon gehoben” (Halm 1916: 109). Halm also points out that, in relation to C major, D minor belongs to the ‘lower’ side of the circle

of fifths, as relative minor of the subdominant. Yet we experience a slight friction between G major and D minor, produced by the tritone dissonance B/F. This is a livelier friction than that produced by the G major/B-flat major chords. Thus of the two chord-pairs, the G major/D minor friction generates more catalyzing energy. Finally, Halm says: "Above all what is involved is the comparison and measuring against that which has been heard earlier, and the impression brought about by [the comparison's] allowing us to experience a rising [of tension]" (ibid.).

Such comparison makes possible the analysis of music's inner temporality or, as it is called in linguistics, aspectualization: aspectual semes of inchoativity/terminativity, punctuality/durativity, perfectiveness/imperfectiveness, excessivity/insufficiency—all these categories depend on inner temporality. Furthermore, inner temporality yields and is yielded by the modalization process of music. In our discussion of modalities below, we shall return to matters of inner temporality.

Though we shall not do so here, the inner temporality could be digitalized and measured with numeric time units similar to those used in measuring the inner spatiality. Temporal comparison is always realized according to two semiotic principles: similarity or **iconicity**, and contiguity or **indexicality**. Contiguous musical elements invite stronger comparison than elements separated by temporal distance, unless similarity in the form of, say, a recurring motif effects a powerful association or 'memory bridge' between two sections. So one might digitalize the principles of similarity and contiguity according to their relative force in the memory.

Actorial Dimension. Actorial relationships remain quite clear throughout the first movement of the *Waldstein*. Kurth states that the masters of the classic style created the foundation of musical actoriality, and that symmetry of phrasing (two-, four-, eight-bars) and other formal units enacts an archetype of Western rationality (1922: 149-51). This symmetry also serves as a kind of **legisign** in the thematic-actorial structure of sonata-form pieces.

Musical actoriality presupposes certain general traits related to the concept of theme, such as sufficiently distinctive features,

relatively simple chordal accompaniment, predictable length, and so on. These features characterize musical actors—musical subjects that influence and perform within the musical discourse. Halm says:

Every logical beginning of a theme, that is, every germ capable of musical life, contains its own ideal continuation, and also a great amount of potential growth. A composer's intention, his anticipating will, his attempt to determine the nature, size, and quality of a composition are, moreover, influential here—but only to a certain extent; and [these intentions] do not have unlimited power: they influence like the climate and the country: they can favor or damage. (1916: 243-44).

Halm seems to imply that the subject (the composer) and the subject's intentions might differ entirely from the subject of the musical enunciation. The latter might appear as an autonomous actor or perhaps as several actors.

As for the actors in the *Waldstein*, we must examine not only the inner qualities that Halm emphasizes, such as symmetry and ability to grow. Relations among these actors are also of primary significance. Rosen touches on this point: "The *Waldstein* also establishes its themes in a genetic order; that is, they appear to be born one from another even more than in Haydn's technique of thematic derivation, although the method is not very different" (1976: 397). We shall first categorize the principal actors of the *Waldstein* according to Greimas's actantial model (1979: 3-6), which designates opponent-/helper-actants, and patient-/agent-actants (refer to the musical Example).

The first motif, *a*, is a truly catalyzing agent that possesses a strong inner will toward dissonance. This main theme-actor contains a doubly tensional moment. It begins on the third scale-degree, which has a tensional, leading-tone urge toward upward melodic motion. The ascent goes beyond expectations, thus following a seme of 'excessivity': the E3 proceeds not to F3 but to F-sharp 3, which

itself has a strong leading-tone quality that strives for and demands further resolution to G3.

In a rhythmic sense, actor *a* likewise contains a double-tension followed by a resolution. At first prolonged as part of the drumming accompaniment, *a* remains on E3 for a whole-note value. The faster motion of two eighth-notes on F-sharp 3 leading to G3 then compensates for this prolongation. This G3 serves as both the end of the first motif and the beginning of the next.

In a small-scale rhythmic sense the shape of actor *a* is repeated by the next motif, actor *c*: prolonged tone, two sixteenth-notes, final tone. With regard to pitch, motif *c* seeks a return to balance by twining around G3. Still, the listener does not experience motif *c* as a satisfactory resolution of the great tension of E—F-sharp—G in actor *a*.

Next, in the upper register sounds another motif, *b*, as a reminiscence of or ‘answer’ to actor *c*, though condensed into a relatively brief reply. At this stage of the piece motif *b* is clearly a patient-actor, subordinate to the main actor, with as yet no life of its own. But the combined narrative program of both the first isotopy and transition produces a *Steigerung* which transforms patient-actor *b* into a domineering agent-actor that pushes actor *c* from its throne.

Actor *b* leads the narration back to G3 (the register of the opening) in m. 13. After all the preceding events this G is ambivalent: because it forms a part of a descending arpeggiation of the parallel-minor tonic chord, the G3 of m. 13 does not necessarily project a dominant quality. The ‘contractual’ relation between the agent and patient themes nevertheless proves very strong. For when motifs *a* and *c* repeat over the chords B-flat-C7-F (mm. 6-7) the patient/agent theme *b* shifts back into the opening spatial dimension (m. 8) as a kind of reflection of its former self. Analogous to *Stimmtausch*, here one can speak of *Rollentausch* or exchange of actantial roles: the agent of the beginning turns into a patient, and the patient of the beginning in turn becomes an agent. In the next isotopy (mm. 35-49) the descending-scale motif of actor *b* will play an even more important role by providing the main action of that section. There it enjoys the **euphoria** of E major and becomes a

symmetric, self-reflexive, and narcissistic 'second' theme, all in accord with the *devoir* of sonata form.

Notice how Beethoven breaks and destabilizes rhythmic-symmetric actoriality in order to create the atmosphere of an artificial *inachevement* (incompletion) or *imperfectivité*. The opening four-bar phrase is already asymmetric in the actorial sense, because actors *a* and *b* occupy three bars and actor *c* only one. Yet with harmonies of I (mm. 1-2) and V (mm. 3-4) the inner spatiality emphasizes symmetry (2+2). The eight-bar period is incomplete, however, since the consequent phrase ends in m. 13 (where it introduces a new actor, *d*), creating asymmetrical phrasing having the global form of 4+4+5. This five-bar 'tail' expands considerably in mm. 22-34 of the transition, and it is precisely with such expansions that Beethoven and other late classicists radically enlarged sonata form: in the transition the relations are 4+4+13!

In sum, we can distinguish among four different actors: *a*, the ascending-scale motif; *b*, the descending-scale motif; *c*, the returning-note motif; and *d*, the arpeggiated-triad motif (of importance later on). Roland Barthes's observations on the economic organization of the classic literary text (1966: 206) apply to this musical text: the first movement of the *Waldstein* constitutes an economy in which all the actors are employed to fill different **actantial roles**, and no actorial substance is wasted by occurring only once. We shall in fact exempt the entire second theme from this actorial analysis. Because of its serenity of energetic Will and balanced phrasing, the second theme instigates no further development and no further action. Nor does it divide into smaller musemes resulting from musical *savoir*. Thus in the universe of the piece the second theme represents Being.

Schenkerians often neglect actoriality by overemphasizing the importance of tonal, inner-spatial dimensions. In fact, the entire **problematics** of thematicity vs. tonality can be re-interpreted semiotically as the privileging of spatiality to the exclusion of actoriality, and vice-versa. Yet musical actors and their modalizations strongly determine the form of a musical work. How can we otherwise explain the deviations—for example the unexpected,

additional development sections in the recapitulation and coda of the *Waldstein*—from ‘traditional’ sonata form, that is from an ideal type?

Our actorial analysis will proceed as follows: (1) Select the main actors of the text (four in the first movement of the *Waldstein*). (2) Indicate the modal content of each actor. (3) Search for actors that belong to other actors’ spheres of influence; that is, discover the ways actors modalize each other through their placement in various spatial-temporal fields. One can presuppose that in a classical text modal balance will prevail. For example, if a certain actor has a strong *vouloir faire* or striving for dissonance and for tension in the broadest sense, then the following actor will probably submit to or be subdued by the former actor’s Will, and therefore represent *vouloir être* or at least *vouloir non-faire*.

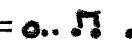

The first isotopy of the *Waldstein* introduces the four principal actors, as shown in the musical Example. With respect to Willing, the actors produce a relatively balanced situation which can be mapped onto a **semiotic square**, as shown in Figure 2.

Let us examine the modal nature of each actor. Actor *a*, with the energy and tension emitted by $\hat{3}$ and sharp $\hat{4}$, projects dissonance and *vouloir faire* (Will To Do). Its *savoir faire* (Knowing How To Do) likewise arises from the ascending tendency of the third scale degree. Taking into account Beethoven’s technique of thematic elaboration, we expect the *savoir* of this motif—its musical where-withal—to be powerful enough to cover the entire movement and to have the capacity to generate further modalities. This capacity is latent in Beethoven’s choice of a museme comprised of the most tense scale-degrees, the ascending E—F-sharp—G. Of the seven available tones of the scale (G major) which forms the ‘background’ of actor *a*, this museme uses the tones best suited to the modality of *vouloir faire*.

In order to assess *devoir* (Obligation) values we must first establish an actor’s context and actantial role. The leading-tone action of actor *a* undeniably fulfills one requirement of that motif’s *devoir*. If, however, one thinks of ‘normal’ main themes of sonatas (as in Beethoven’s Opus 2 No. 1 or Mozart’s Sonata in B-flat major

K. 570), the museme of *a* runs counter to the expected *devoir* of sonata form. And it is neither conventional nor necessary for a classical sonata to begin with the kind of extraordinary intonation that opens the *Waldstein*. Therefore we assign to actor *a* the values of *non-devoir faire*.

We must also scrutinize the modality of *pouvoir*. This modality relates to the technical realization, dynamics, idiomatic nature, potential for fulfillment, and general musical effectiveness of a passage. The first four bars of the *Waldstein* exhibit a high degree of *pouvoir*. This *pouvoir* is not caused by the museme E—F-sharp—G, but by the rhythmic drumming-motif and that motif's placement in an unusual bass register (compare the opening of Clementi's B-flat major Piano Sonata and the Allegro of the overture to the *Magic Flute*). In other words, actor *a* draws its modality of *pouvoir* directly from its spatial-temporal isotopy.

Turning to actor *c* we find a rhythmic condensation of actor *a*:
a =  *c* = . Actor *c* derives its *savoir* from and is therefore subordinate to actor *a*. The modalities of *devoir* and *pouvoir* in actor *c* also remain under the influence of actor *a*, and according to the principle of contiguity must be considered the same as in the preceding actor of the musical **syntagma**. Intervallically, however, *c* produces its own unique modal content. By returning to its point of departure, G³, actor *c* seems to project the modality of *vouloir être* (Will To Being). But since the point of departure/return is the fifth scale degree, *c* cannot represent the definitive Being of the piece. Actor *c* must instead represent *vouloir non-être* (Willing Non-Being) as depicted on our semiotic square: *c* desires not to remain on G, the temporary resting place attained by the *devoir* (signified by the leading-tone resolutions) of the preceding actor.

Actor *b* is obviously antithetic to actor *a* and seems to answer the 'question' posed by the latter. Furthermore, *b* partially derives from actor *c*: *b* contains the last three notes of *c* (B-A-G), but in a different register. Altogether this descending motif works against tension but not to the complete dissolution of energy, since actor *b* (because of its placement in a twice higher register) does not dispel the *vouloir faire* of actor *a*. Rather, *b* enacts the principle of *vouloir*

non-faire (Willing Non-Doing), the contrary of all *Steigerung*. But even though this actor's kinetic energy at first impresses one as weak, *b* soon assumes the leading role and rules over the texture in mm. 9-11.

As for its *savoir*, actor *b*, another scalar motif, derives from actor *a* (as did actor *c*), though the descending motion of *b* produces a detensional effect. Because it descends from $\hat{2}$ down to $\hat{5}$ (the goal of both *a* and *c*), *b* conveys no new information and thus remains subordinate to *a* with respect to *savoir*. One might also interpret the chromatic, chaconne-like, descent of the bass in mm. 1-11 as a transformation of *b*. This would not, however, change its derivative *savoir* content.

By ending on the dominant, *b* obeys the *devoir* principle regarding symmetrical main themes, fulfills its 'necessary' obligation, and thus receives a positive value for that modality. The high degree of *pouvoir* in actor *b* comes about directly from the sudden shift of register that produces a feeling of surprise.

Actor *d*, the arpeggiated-triad motif (mm. 12-13), completes the section and represents *vouloir être* or the Will-to-consonance. Actor *d* does not, however, provide a complete state of rest or Being (C major tonic in root position). Instead the parallel minor chord appears, indicating that the process must continue and providing the passage with the aspectual seme of imperfectiveness. At the same time, actor *d* refers to the flattened key areas and thus to a tonal field with a *non-faire* quality. Later in this universe (mm. 23-30, left hand especially) *d* moves center-stage, again to provide the aspect of terminativity/imperfectiveness. Looking ahead to the very end of the movement one notices that arpeggiated triads are rejected at the point (m. 300) where one expects an appearance of actor *d*. Instead a strong cadence occurs (mm. 300-302), reinforced with thick chords in contrary motion, to provide true closure through the aspectual seme of terminativity/perfectiveness.

Actor *d* is not rich in *savoir* (musical substance or informational value), though its *pouvoir* is strengthened by triple-unison octaves. Yet notice that Beethoven does not place the *sforzando* indication at the beginning of this motif, but at the climax of the final repeti-

tion of actor *b*. Instead, *d* receives a decrescendo marking that produces a tendency to Being.

One must recall that modalization concerns not only musical actors but larger textual units as well. The first section introduces only the main actors, yet those actors provide the section with abundant modal variety: none of the actors are redundant in the sense of repeating the same modalities. Therefore the first section does not in the least project pure Being nor pure Doing, though the small narrative program in mm. 1-3 is based largely upon the performance of the most tense actors, *a* and *b*. (Recall that *a* was in the privileged position of opening the discourse and that its *faire* value at that point was very great, but *b* soon took the lead and by the end of the first isotopy had become the dominant actor.)

We can now summarize the analytic results of the modal qualities of each actor: (1) Actor *a*: *vouloir faire*, *savoir faire*, *devoir non-faire*, and *pouvoir faire*, owing to the background of this actor and its *pouvoir* caused by rhythm and register. Parenthetically, we should point out that modalities can be mutually incompatible, as with *vouloir/savoir-faire* and *devoir faire*. The situation of *savoir devoir* would be rare, however, because an element that provides new information rarely meets the obligations of some pre-established norm. (2) Actor *b*: *vouloir non-faire*, *savoir faire* (the musical substance corresponds to the nature of its appointed task and Will, in this case, *vouloir non-faire*), *devoir faire*, *pouvoir faire*. (3) Actor *c*: *vouloir non-être*, *savoir non-être*, *pouvoir être*, (neutral articulation of Being), *devoir être*. (4) Actor *d*: *vouloir être*, *savoir non-être*, *devoir non-être*, *pouvoir être*. Notice here that the degree of information and of obedience to norm conflicts with the other modal values.

The beginning of the first transition (mm. 14-34) repeats the opening of the first isotopy, except here the bass line follows the modality of *vouloir faire* due to its higher registral placement, its ascending motion, and its move toward sharpened key areas. We soon encounter a texture derived from actor *d*. Previously the actantial role of *d* was to close the first section, and the same holds true in this passage. The arpeggiations in the left hand, and finally in both hands, provide a sense of closure that lacks the same of

perfectiveness, since in terms of inner and outer spatiality we have progressed a good distance from the beginning. With its juxtaposition of homophonic melody against arpeggiated chordal accompaniment, m. 23 almost convinces us that the secondary theme area has begun, or at least that an area of thematic significance has arrived. But when the right-hand figurations continue into m. 24 and beyond, we find our initial impression of m. 23 to be illusory, *paraître non-être* (Seeming Not Being). In the bars following m. 23 the degree of *pouvoir* reaches high levels because of the virtuosic, chromatic right-hand figuration.

The first transition contains low *savoir* levels, for it simply reintroduces the materials of actors *a*, *b*, and *d*, without further developing those materials in any particularly original or innovative way (on “innovation” see Mäkela 1989: 162). Mm. 31-34 display an interesting modal combination: a strong *vouloir faire*, since the musical substance originates from actor *a*; and on the other hand, *pouvoir non-être* in which the degree of *pouvoir* is high. The staccato arpeggiated octaves form an obstruction—a movement “against-something” in Charles Morris’s terms (1956)—as if the section were striving to prevent a Being which nevertheless must be. In other words a strong feeling of Obligation (*devoir faire*) is involved, and this feeling of Obligation in turn leads to *devoir être*—the next isotopy or, in traditional terms, the second theme.

SECOND THEMATIC AREA OR ISOTOPY (Mm. 35-49)

Spatial Dimension. With regard to inner spatiality, this section moves within E major. Consequently this area contains a high degree of *débrayage* (+4) in relation to the main isotopy of C major. As to the outer spatiality, we remain in the middle register, hands close together, without gaps in the tonal space, all of which makes this a particularly *embrayé* section.

Temporal Dimension. The outer temporality divides this section in two. Dominating the texture is a dactylic pattern that is answered in the consequent phrase by dactyls ornamented with triplets.

Actorial Dimension. As we have said, the almost totally symmetric phrase structure of this section typifies the rhythmic-symmetric

rationality characteristic of Western art music's Classic style, yet Beethoven imposes a slightly asymmetric de-actorialization. The last four-bar group does not repeat *in toto*, only three bars of it. The entire second theme temporarily brings actors *a* and *b* into a peaceful confrontation between ascending and descending scale passages. Likewise, the ornamentation in the repetition of this theme makes use exclusively of these actors. Only in the last bar of the section (m. 49) does actor *a*, in the middle line, come to the fore. Actor *a* anticipates and thus becomes an index of the next isotopy (mm. 50-73).

In its modality the entire second theme represents *vouloir être*, a languishing of energetic Will. The inner-spatial fulcrum of E major has been so strongly prepared that the listener can temporarily relax into the euphoria of that tonality even though we have not yet reached the safe harbor of definitive Being. As for *devoir*, this exceptional choice of tonal center (not V) articulates the modality of *devoir non-être*. And as for *pouvoir*, a complete sense of Being has been attained, with all its corresponding performance instructions (*dolce e molto legato, piano*) and harmonies set in a chorale-like texture.

We face a problem when measuring the inner-spatial *débrayage* of this isotopy. Should it be reckoned from the basic C tonic, or from E which has been strongly tonicized in the preceding transition? In my view the original tonic remains in the mind of the listener and thus constitutes a secondary point of reference for all inner-spatial motion within this text.

The outer spatiality follows the scheme shown in Figure 3. We notice extremely small *débrayage* values of the outer spatiality (circle, bottom of Fig. 3), since changes in register occur gradually. Even in m. 39, where the register shifts abruptly, the passing of A4 of m. 38 provides a smooth transition into the next phrase.

As for the outer temporality, the change of pulse requires a new time value (quarter-note) by which to measure *débrayage/embra- yage*: mm. 35-41:0; m. 42:+2.5 (this value is assigned to the triplet figure as lying between eighth- and sixteenth-notes), mm. 43-49:0/+2.5 (this means that the primary unit is retained while

alongside it occurs a secondary rhythmic figure in eighth-note triplets).

This section emphasizes the modality of *savoir*. With respect to the foregoing paradigms of musemes, two innovations occur: the change of basic rhythmic unit (representing the musical *être*) to quarter-note, and the change of rhythmic pattern to dactylic. The restlessness of these changes effects, if not quite a *faire*, at least a sense of *non-être*.

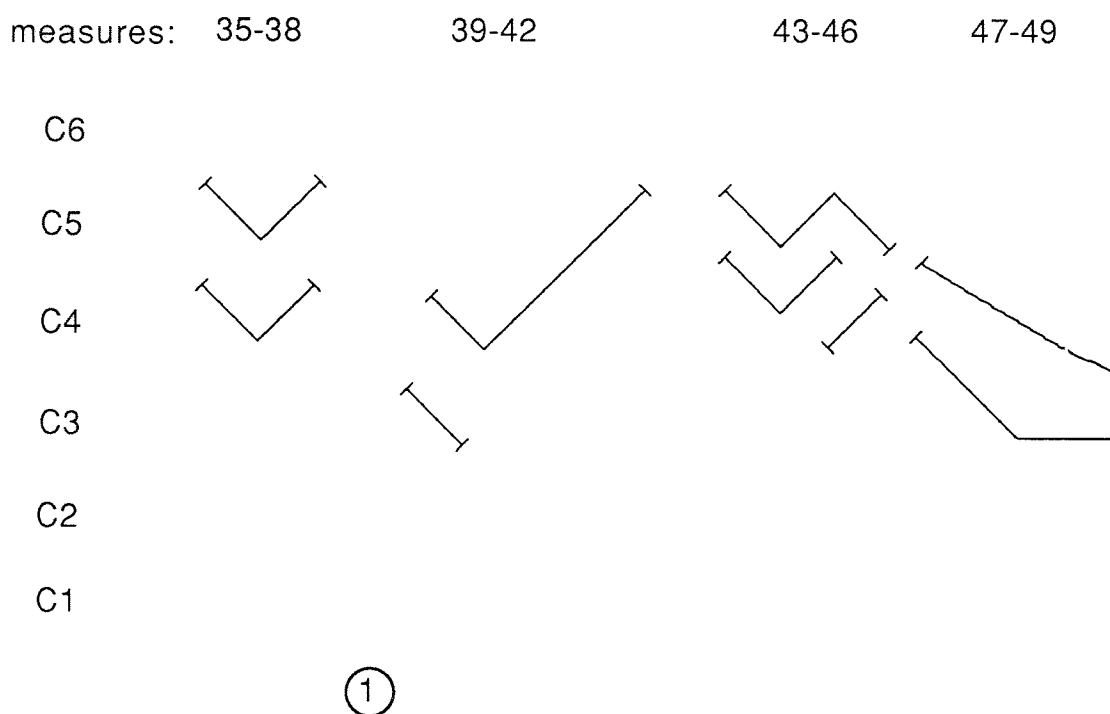
SECOND TRANSITION (Mm. 50-73)

This isotopy strengthens the view that the essence of this work—what the work tries to ‘say’—lies in the transitions, rather than in thematic areas which present musemes and musical actors. These *devenir* (Becoming) sections do not simply pre-modalize or attune the listener to the spatial, actorial, and temporal isotopies of an upcoming section. The preparation for the E major actor of the second theme, for example, was violent and labored and in no way prepared the listener for the symmetry and thematic synthesis of the ensuing section. The causal-indexical process of this music does not announce that an upcoming section will be ‘dramatic’ or, in semiotic terms, will contain abundant spatial-temporal *débrayage* and actorial juxtapositions. On the contrary, in the first movement of the *Waldstein* Beethoven presents the listener with a modal state antithetical to that of the next isotopy. (As a classic-romantic composer, Beethoven could choose from among several narrative programs to articulate transition sections: a ‘search’ for an isotopy, a gradual yielding of an isotopy, a surprisingly new or unprepared isotopy.) Elsewhere in this sonata he follows a causal-indexical, generative principle of theme-actors. Think of the *devenir* of the slow movement, which gradually evolves towards the theme-actor that begins the last movement; or, beyond this piece, think of the transition to the finale of the Fifth Symphony.

The outer spatiality of the second transition follows a clear-cut ascent from C4 to C6—thus a very great *débrayage*, though softened by the gradual realization of this ascent (see Figure 4). The climb to the upper register unfolds through an alternation of two mutually

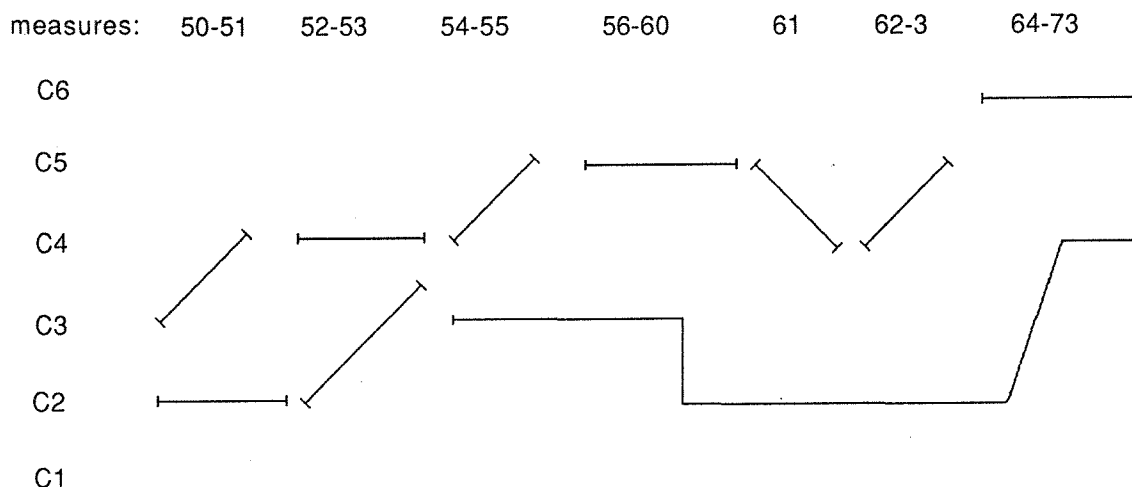
supportive lines, as in mm. 50-53 for example, where one line remains stationary as the other rises. Further, when the climactic goal has been attained momentarily at the beginning of m. 56, it is relinquished briefly in m. 61 so that a new and more dramatic climb may begin. The E6 of m. 74 which begins the next isotopy ('closing' theme) forms the musical **object**, a true point of **conjunction**, achieved in m. 56 then painstakingly sought again until m. 74. A very simple narrative program of the outer spatiality here becomes as complex as possible through the aspectual seme of durativity and through appropriate modalities.

Figure 3.



With regard to the inner spatiality, the music seems to embrace the tonic E. A subtle ear might make the following intonational analysis: when E major is so strongly emphasized in a

Figure 4.



work whose basic tonal isotopy is C major, compensation is necessary to re-establish tonal equilibrium. The slow movement's tonal focus of F will indeed provide this compensation by effectively dissolving the energy gathered in the chromatic-third related key.

If we select E as a temporary but promisingly stable focus, we get the following degrees of *débrayage* for the inner spatiality: mm. 50-58:0/+1, m. 59:0, mm. 60-61:0 (with lowered seventh), mm. 62-63:-1, mm. 64-65:V of +1, mm. 66-69:0, mm. 70-73:+1. These values show that the inner spatiality becomes less tensional as the harmonic rhythm slows toward the end of the section.

The temporal dimension of this transition is of greater interest than the outer and inner spatialities. (Again let us recall that not all dimensions of a classical text simultaneously embody a full *savoir*. Some dimensions remain relatively stable, while others propel the narration forward.) Attention goes to the acceleration of *débrayage* of the outer temporality. The triplet ornamentation, introduced in the second theme, becomes a central musical substance of this section. The basic unit of the outer temporality remains the

quarter-note until m. 58, where the basic pulse of the first theme (eighth-note) returns, now delineated by the Alberti bass. With agitated left-hand syncopations mm. 62-65 continue to stress the eighth-note pulse, and mm. 66-71 retain the eighth-note pulse while referring to the staccatos that prepared the secondary theme. The section as a whole transforms the outer temporality through an acceleration from quarter- to eighth-note as basic pulse.

The homogeneous rhythmic-metric texture of this transition needs little comment except to say that, in the paradigm of memory, the musemes therein originate from the actors introduced in the first isotopy. Does the extreme redundancy of this temporal strategy exhaust the material? Or does this section represent the *Nahsteigerung* discussed by Halm? The latter seems to bring a negative answer, since when the object of the search (E6) is attained it is almost immediately given up, and the reward seems incommensurate with the effort. Instead, this transition emphasizes *durativité*.

In the actorial dimension this section foregrounds the role of actor *d* (arpeggiated triad), which as the central actor subordinates everything else to itself. A close look finds actor *a* submerged in the right-hand then left-hand figurations of mm. 50-53, counting the pitches at half-bar units; and the upward gallop of mm. 62-65 also recalls actor *a*. This section does not, however, clearly present musical actors. It is a subject-less isotopy—a musical event, not an action.

Still, the allusions to actors *d* and *a* produce a certain modal content. The *vouloir faire* of *a*, its tensional growth, becomes quite obvious in the ascending motion of mm. 62-65. This tension is mollified by *d*, which represents the least tensional *vouloir être* of all the actors introduced at the beginning. The *devoir* content here is rather slight due to the persistence of E major. Yet the fact that the main theme used in the lower register and the second theme used in the middle creates a strong expectation, bordering on Obligation (*devoir*), that the closing theme will occur in an upper register. With regard to *savoir* this section represents *non-savoir/non-être*: *non-savoir* because almost no innovative material appears; *non-être* because the section pulls away from a state of Being while neverthe-

less remaining within such a state—the sought-for object of value is none other than the E6. Though *non-savoir* and *non-devoir* permeate this section, the *pouvoir* content is quite high. (This condition suggests that *pouvoir* alone cannot form a proper musical action but requires support from other modalities.) The use of the entire keyboard range signifies a strong value of *pouvoir faire*, indicated also by the syncopated rhythms, difficult octave leaps, and the trill.

CODETTA OR CLOSING THEME (Mm. 74-86)

The outer spatiality of this section returns the action to its initial state or topos. Thus the codetta represents an *embrayage*. This *embrayage* occurs subtly and gradually, without conflict or violence. The obligatory return to the basic spatial isotopy is masked and sweetened by the overall euphoric nature of the passage, which signifies a desirable goal. Figure 5 shows that no great *débrayage*, in the form of abrupt registral shifts, occurs in the outer spatiality.

The program of the codetta's inner spatiality must return us to the tonic C, in relation to which we get the following values: m. 74: +4, m. 75: * +3 and +4, m. 76: * +3 and +6, m. 77: * +4 and +5, mm. 78-81 = mm. 74-77, m. 82: * +4 and -1, m. 83: * +4 and +5, m. 84: 0 and -1, m. 85: 0 and +1.

A new basic time unit, the half note, governs the outer temporality in mm. 74-81. The retardation of pulse complements the closing function of this section and helps produce a durative ending, and an interesting combination results from the juxtaposition of half-notes and sixteenth-note figuration, two extreme time units conjoined for the first time in this sonata. As to the inner temporality, a look backwards prevails.

Embrayage functions in the actorial dimension of this section. Actor *b*, expressing dissolution of tension, is finally given speech. The dactylic rhythm of mm. 76-77 of course refers to the rhythm (in diminution) of the second theme, and the descending-triad arpeggiations allude to actor *d*.

The modal content of the section may be described as follows: *vouloir non-faire*; *non-savoir être*, since no new material emerges; *devoir être*, because of the necessary return to the tonic key and *embrayage* of the lower register; and *non-pouvoir être*, because of the relaxed dynamic-technical aspect of the texture, here polyphonic and 'uninstrumental,' especially in mm. 81-84.

DEVELOPMENT (Mm. 86-155)

One may consider the development section as the proper *faire* of a sonata. The development represents a kind of "heterotopos" (Greimas 1979: 172) in the musical narration. In such a topos, actors of the exposition come to something like a 'wrong' isotopy in the spatial and temporal domains. They begin to struggle with each other and in the process modalize one another and reveal their inner potentialities.

Since the transition sections of the *Waldstein* are themselves developmental, we might ask if there is enough *savoir* (innovation, new information) and *pouvoir* (Ability) left in the musical material to allow building a proper development section. The modality of *devoir* typically becomes less prominent in development sections while *vouloir* is realized without obstacles, and in the development section one often comes closest to the so-called structures of signification in music. On the other hand, the apparently fantasizing style of the development can be strictly determined with the regard to the inner spatiality (tonality). (Such is the case, for example, in Beethoven's Pastoral Symphony.)

The development section of the *Waldstein* might be taken as a syntagmatic whole, but we shall divide it into three narrative programs:

- (1) mm. 86-111: struggle between actors *c* and *b*;
- (2) mm. 112-141: heterotopos of 'wandering' in the inner tonal space, development of actor *d*, and (as an implicit sub-isotopy) dialogue between actors *a* and *b*;
- (3) mm. 142-155: preparation for the recapitulation, and sharpening of the relation between actors *a* and *b* during a *Nahsteigerung* or *embrayage* over a dominant prolongation.

With regard to the inner spatiality, tonic ambiguity at the beginning of the development makes it difficult to estimate the degree of tension in the musical action. The development begins with a modulation to F major—perhaps as a kind of temporary response to the E center of the previous sections—but does not remain in this tonality (F) long enough to disperse the tension and energeticism of E major. From C major we move quickly through its parallel minor to the dominant minor (G). Starting on F minor (m. 104), two-bar sequences develop over a stepwise descending bass and a circle-of-fifths progression (mm. 105-10) that passes solely through ‘flattened,’ detensional key areas until arriving at C major in mm. 111-12.

Detensional harmonies also predominate in the second narrative program (mm. 112-41): F minor, B-flat minor, E-flat minor, F-sharp (= G-flat) minor, B minor, C minor, D-flat major, and finally the dominant G major (m. 136). Whereas the catalyzing force of the preceding narrative program was the seventh chords (every first half of the bar in mm. 105-09), in this section the dominant ninth prevails, always with lowered ninth.

In these programs it seems futile to measure *débrayage/embra-yage* values from a specific tonic, since the tonal motion fluctuates constantly. Directed motion is instead supplied by sequence, outer spatiality, and resolution of the seventh and ninth chords. For the first time in the universe of the piece individual chords attain the status of a leading intonation, so values of centrifugal/centripetal tendencies would have to be measured vertically, not horizontally as we have been doing.

Throughout the development section the outer spatiality forms the arena of an exciting ‘fight’ centering on abrupt registral shifts. Figure 6 depicts the outer spatiality of the development’s first narrative program. One notices strong centrifugal motion of the upper line, in fact, the strongest of the entire movement. The uppermost line would thus receive a very high *débrayage* value. Its sharp profile stands out clearly against the relatively stable background of the lower part, though that part exhibits great variety with regard to inner spatiality.

The temporal dimension remains constant while the outer lines de-actorialize, lose their individuality, and become parts of the musical narrative's figuration. Here we encounter another characteristic of the classic musical text: *one* of the parameters dominates and draws attention to itself. In order to foreground a noteworthy event or action, other dimensions must remain unchanged or otherwise subdued. In the first narrative program, though the time values accelerate to sixteenths at m. 96, those sixteenths are nevertheless grouped into quarter-note pulses.

In the second narrative program (mm. 112-41) rhythmic motion slows to triplets, recalling the transition to the second theme of the exposition. The third and final narrative program of the development (mm. 142-55) is based upon sixteenth-notes and galloping, counter-dactyls. With regard to inner temporality, only this last program is of interest, since it contains an inbuilt *accelerando*. The acceleration over the dominant, however, amounts to something like a 'fraud' and produces a disappointed expectation, since the dynamic growth of the inner temporality is out of proportion to the relatively static inner spatiality (the dominant prolongation).

The outer spatiality of the second narrative program (mm. 112-41) follows an uneventful course. It contains no dramatic leaps, thus the *débrayage* values remain very low. The 'wandering' of inner spatiality emerges even more clearly—a 'wandering' rather than a 'search' because in this section one senses no disjunction from any object. Rather, this narrative program claims no object; that is, the chords aim in no compelling direction.

The outer spatiality of the second narrative program sinks gradually to the opening register of the piece. Nevertheless, the return of the main motif does not occur immediately but only after a sudden increase of outer spatiality in the succeeding program (mm. 142-54), followed by a rapid decrease. The growing distance between the two outer lines emphasizes the latter program's centrifugal nature, which arises mainly from the convulsive quality of the upper line.

On the actorial level, development sections tend always to be of interest. In the first narrative program, attention focuses on the

struggle between actors *c* and *b*. Actor *c* transforms rhythmically into a more striking shape: the 'victory' of *c* in mm. 104-11 is only temporary, though it is accompanied by the sense of perfectiveness, a feeling of achievement and completion. The second narrative program produces a highly deactorial effect, like riding in a train moving at high speed: one has little chance to notice the actors, only the constantly altering landscape. The third narrative program returns to focus on actorial functions, this time the dialogue between actors *a* and *b* in their increasingly agitated dispute.

The modal values of the development's first narrative program come from its main actors, *c* and *b*, which articulate *vouloir non-faire* and *vouloir non-être*. Temporal acceleration emphasizes the aspect of *faire*, of unrest, even though the section never reaches the level of a proper 'battle': a subdued passage such as mm. 104-11 always signifies a euphoric dissolution of tension, and the *vouloir non-faire* of that passage arises only through the sinking bass line. The *non-être* of actor *c*, an actor that seeks to escape a state of rest, does not rule the section as a whole. Though the dominant ninths give the inner spatiality a slight feeling of *vouloir faire*, a sense of stasis created by the arpeggiated triads prevails in the second narrative program. The third narrative program brings actor *a*, with its *vouloir faire*, strongly into the foreground. With its agitation of both inner and outer temporalities, and explosive *débrayage* of outer spatiality, this program surpasses *vouloir faire* and attains the force of *devoir faire*.

Savoir values remain low in the first and second narrative programs, since the latter provide little new information. In contrast, the bridge (mm. 138-41) to the third narrative program (which delays the recapitulation even though the 'correct' register has been regained) produces considerable *savoir faire*. In relation to this bridge, the preceding narrative programs come nearest to *non-savoir faire*, since they do not manifest conspicuous musical action. Again, this is because the exposition contained so much innovative development that little remains for the development proper to do.

Pouvoir dominates this development section, which exploits virtuosic scale passages, disjunct motion, arpeggiation, and sustained chord tones serving as tension-creating ‘finger’ pedals. The *devoir* value is mildly positive since the development fulfills its traditional obligations, especially with regard to modulations and dominant preparation of the recapitulation—a *Steigerung* that strongly projects the *devoir* principle.

RECAPITULATION (Mm. 156-302)

The last and most extensive syntagmatic whole of the movement restores balance to the modal field by repeating events from the exposition. It is important to remember which modalizations have taken place in the development, in order to perceive how the repetition of opening intonations influences our memory of those modalizations. Yet the recapitulation of this movement is incomplete, for Beethoven breaks the inner iconicity of the music in strategic places. These cleavages in the musical organization (*ruptures*, in the language of French literary theory) naturally capture a listener’s attention.

The first cleavage or break comes between the first thematic area and transition, where an extra development (mm. 169-73) emerges from the deceptive cadence in m. 168. In the spatial sense, this is an astonishing deviation into flattened key areas in relation to the C major ‘topos.’ As to outer temporality, motion halts at the long, *fermate* whole notes. In the actorial dimension *d* comes to the fore and receives development in this brief passage, which is perhaps meant to compensate for that actor’s relative neglect to this point. Modally, by its surprising deviation from the exposition this brief section displays great innovation and offers new information, endowing it with much *savoir*. A logical consequence of this *savoir être* value is that, running against the ‘normal’ course of events in the recapitulation and thus against *devoir*, mm. 167-73 represent *non-devoir être*. Contradictory *vouloir* values obtain in mm. 167-170 because the notes that begin mm. 167, 169, and 171 form a clearly perceptible step progression that calls to mind actor *a*, which was fundamentally a manifestation of *vouloir faire*. Still, the predominant

modality of the ascending triads in this section is *vouloir être*. In spite of the unison octaves, the *pouvoir* value is small, due to the decrescendo and *pianissimo* dynamics.

Another deviation, which however does follow the *devoir* of a sonata recapitulation, occurs by the second theme's placement in A major. With *débrayage* value of +3 as opposed to the E major value of +4 in the exposition, the second theme now creates somewhat less tension, and the A major might even be interpreted as a mode change of the relative minor. The second transition (mm. 211-35), which in the exposition produced a tensional development that tonicized E major, is here presented completely in C major, our 0 point for the inner spatiality. After the closing theme, a new and fairly extensive developmental coda begins (m. 249).

The coda displays extreme variation of the outer spatiality. As a parallel to the start of the development, the coda begins with abrupt leaps and registral shifts featuring actors *c* and *b*. There follows in mm. 259-60 a brief development of the drumming-motif (the only *musème* from the opening as yet not exploited) which accompanied *a* in the exposition.

In mm. 261-66 actor *b* broadens into syncopated quarter-notes and sounds simultaneously with actor *a*—not after it, as before. As this secondary development continues, again the goal is to attain the register of C6, where a climax occurs that reverses the positions of actors *a* and *b*: the ascending passages, representing *a*, go into the upper part; the descending motifs, representing *b*, go into the lower part. A long sequence in mm. 267-71 accomplishes this *Stimm-tausch*, which subsides to a *stretto* in mm. 272-74. Tension continues to build in mm. 275-76, with a rising chromatic line (G—G-sharp—A) finishing on the F major subdominant. The subdominant has functioned as a musical sought-for-object since the very beginning of the piece, where the E3 above tonic C strove toward F but instead went through F-sharp and on to G. Here we get the true answer, and the E at last secures its object of value. The 'diagonal' melodic motion in mm. 276-82—of high *pouvoir* value—intervenes to delay the IV-V7 progression accomplished via two sudden register shifts (mm. 282-83).

The second theme follows, now in the main key—the spatial isotopy of a true *être*. We may consider this variant of the second theme to be innovative, because the antecedent phrase takes place in the ‘false’ register of C3 and because the theme undergoes a slight rhythmic transformation when repeated. Temporal forward motion ceases in mm. 290-94, and the consequent phrase of the second theme becomes rhythmically static. A repeated ‘striving’ gesture marks this section: from G through A/A-flat to the leading tone, B. This rising gesture refers to the earlier dramatic culmination in which the chromatic ascent of m. 275 only got as far as A (m. 276): the G-sharp = A-flat gesture reaches further, and attains the leading tone.

Contributing to the sense of perfectiveness that closes the movement, the final bars (mm. 295-302) present all four leading actors in their original order of appearance.

GLOSSARY

(Unless otherwise noted, information in this glossary comes from Greimas 1979. - RL)

actant, actantial role, actor: Actants are syntactic units, in the form of binary oppositions, that precede semantic investment. Developed temporally as actantial pairs, actants become a story. Actantial roles are defined in terms of their modal content and function in a narrative. Several actors may embody a single actant, or one actor may fulfil a variety of actantial roles. Actors emerge through semes of individuation and so become points of convergence between syntax and semantics. See Robert Scholes, *Structuralism in Literature* (New Haven: Yale Univ. Press, 1974), 103-07.

agent/patient: Actantial pair comprised of doer and done-unto, in Claude Bremond, *Logique du récit* (Paris: Seuil, 1973). See **actant**.

aspectual categories: Descriptive terms for processes. We can for example understand inchoativity/durativity/terminativity as qualitative aspects of the beginning/middle/end paradigm typical of traditional (Western) narrative plots.

destinee: Receiver half of the actantial pair, Sender/Receiver (see **actant**).

engagement/disengagement (*embrayage/débrayage*): **Spatial** disengagement occurs upon moving away from any text's norm of location, its "here." **Temporal** disengagement is a proceeding into the past or future in relation to a textual "now." **Actorial** disengagement draws attention away from a central "ego" by focusing on other actors. Engagement reverses disengagement.

euphoria/dysphoria: wellness/unwellness; in Greimas, aspects of the "thymique" category, which derives from human sense-perception. Plato (*Republic*) opposed the thymic or "animalistic" to the "rational" side of human nature.

generative course: Moving from simplest to most complex, from abstract to concrete, Greimas's generative course, unlike Chomsky's generative grammar, aims to account for both semantics and syntax at every level, and ultimately for all semiotic systems.

Greimas, A.J.: Lithuanian born co-founder of the so-called "Parisian school" of semioticians. Current narratology originated in the work of Greimas, T. Todorov, G. Genette, and R. Barthes. Greimas's work, taking its point of departure from the linguistics of Saussure and Jakobson and from the narrative theory of Russian Formalist Vladimir Propp, represents the most sustained attempt to deal with semantic as well as formal structures of signifying systems. See Scholes, above, 102.

index, icon, legisign: Philosopher-logician C.S. Peirce divided signs into three broad categories. Icons resemble their object (e.g., photographs are iconic signs). Indexes derive from an existential or metonymic relation (e.g., smoke is an index of fire). Symbols are stipulated by rule or convention (e.g., words). For Peirce, a legisign serves as a "rule" for the production of subsequent signs. Tarasti discusses Peircian semiotics for music analysis, in "Semiotics as a Common Language of Musicology," *La musica come linguaggio universale*, ed. R. Pozzi (Firenze: Olschki, 1990), 133-49.

interpretant: According to Peirce, the action of signs involves three coordinates: the sign (something standing for something else) addresses somebody and creates in that person's mind another sign,

the interpretant. The object is that for which a sign stands. See C.S. Peirce, *Collected Papers* (Cambridge: Harvard Univ. Press, 1931-58), 2.228.

intonations: In Asafiev's theory, "intonazia" are phonic manifestations that correlate with the phenomenal world. Musical intonations result when sounds from life experiences, which include inner psychic experiences, are transmuted into musical elements (e.g., a phrase) and processes. See Malcolm Brown, "The Soviet Russian Concepts of 'Intonazia' and 'Musical Imagery,'" *Musical Quarterly* 60/4 (1979): 557-67.

isotopies: A set of semantic categories whose redundancy guarantees the coherence of a sign-complex and makes possible the uniform reading of any text. Tarasti has shown that musical isotopies can be formed by deep structure, thematicity, genre features, texture alone, and general text strategies (1985a: 101-04).

modalities: See Tarasti 1986b. Modalities are general human ways of evaluation; in language, for example, the subjunctive tense colors speech with wishes and beliefs. As a series of emotional states, modalities account for the way the listener unites a musical text with human values. Being and Doing combine with other, relatively subordinate modalities, as Tarasti demonstrates in the present essay.

musemes: See **phemes** and **semes**.

narrative function: In his groundbreaking work during the 1920s Vladimir Propp conceived of narrative functions as formal roles that operate apart from their particular characterizations. One of Greimas's achievements was to generalize further Propp's functions, reducing their number from thirty-one to six. Tarasti, in the present essay, suggests that a musical "fight" can constitute such a function. See Scholes, above, 52.

narrative program: Narrative segments, linked causally, that operate at relatively surface levels of a discourse. The minimal narrative program consists in a change of state effected by an actor on any other actor. See Tarasti 1984.

object, conjunction: The object is half of the actantial pair Subject/Object. Many narratives center on a basic subject/object

relationship in which a subject is separated from (disjunction) and struggles for union with (conjunction) its sought-for-object. See **actant**.

opponent: Half of the actantial pair Helper/Opponent. See **actant**.

phemes and semes: Of the generic class **musemes**, phemes are distinctive features of the signifier or acoustic substance that, when invested with meaning, become semes or features of the signified (the latter roughly equivalent to "concept").

problematics (singular): The term, in Marxist social theory (Althusser), originally meant a set of problems. "Problematics" has since developed a life of its own in critical discourse, in which it simply designates a set of research practices or fields of inquiry that may or may not be problematic in the everyday sense of the word. See Fredric Jameson, *The Prison-House of Language* (Princeton: Princeton Univ. Press, 1972), 106-08.

semiotic square: For Greimas, the "elementary structure of signification." The square represents visually the logical articulations of any semantic category. Developing the traditional logical concepts of contradictory (diagonal arrows) and contrary (horizontal arrow), the square diagrams the ways in which, starting from any given term, a complete meaning system can be derived through exhaustion of logical possibilities. See Jameson, above, 164.

syntagm/paradigm: In Saussurian linguistics, language functions along two axes. The syntagmatic or "horizontal" axis unfolds as process (thus a syntagm is a processive element), and the paradigmatic or "vertical" axis as system.

spatial, temporal, actorial categories: See **engagement/disengagement**.

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