1 IV as intermediary between I and V

Hundreds of chords transpire during a typical movement by Beethoven. How should one make sense of this abundance of sensory information? We begin to formulate an answer to this question by exploring how the IV harmony is deployed along the path from I to V. This uneven subdivision of the I<V trajectory highlights two of tonal music's most prominent root successions: the ascending perfect fourth and the ascending major second. Certain things tend to happen in each of these two contexts, regardless of where they transpire within a key. (Thus what we say about I<IV in this chapter will apply also to II<V, major-key VI<II, and other ascending-fourth/descending-fifth successions.) Because I<IV traverses the same distance within tonal space as music's most salient succession, V<I, it often will take on (usually aided by chromatic alteration) characteristics of that latter succession's typical evolution as V^{8-7}, wherein the diminished fifth between the third and seventh of V^7 instigates a potent forward-driving force that here will be referred to as a *surge*. Likewise, the connection between IV and V often conforms to another specific sort of internal filling-in – here referred to as a *5–6 shift* (as in F-A-C to F-A-D) – that may be encountered in other ascending-second contexts (especially I<II) as well. That process, applied to IV, may in fact generate a II harmony that is dependent upon the more foundational IV<V succession and thus will be displayed analytically in a subordinate layer. (A more foundational usage of II will be explored in chapter 2.) Such trajectories are susceptible to variable intensity. For example, a surge from I to IV in C Major may be conveyed by simply adding a chromatic B♭ to the C-E-G triad. Yet a more potent surge might be achieved – either thereafter or instead – through the further evolution to E-G-B♭-D♭, where not only B♭ and D♭ are added, but also root C is omitted.

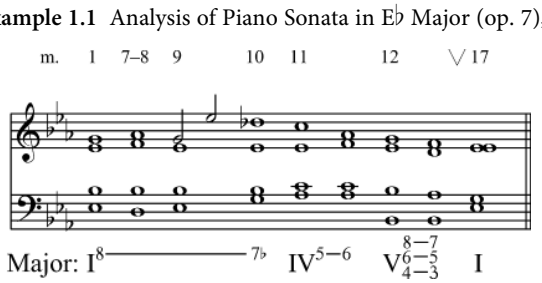
This perspective contrasts alternative analytical practices that likely are already familiar to most readers. (For example, the chord mentioned at the end of the preceding paragraph often is labeled as vii^{o7}/IV.) The presentation that transpires over the next seven chapters will introduce a fresh approach to harmonic analysis, intended as a distinct improvement upon existing options and thus worthy of being adopted as a replacement.

Realistically, though, the current conventional practice (with variants especially in the use of all-capital versus capital and small Roman numerals) is so entrenched that readers will not be able simply to ignore it. Those who engage in harmonic analysis will need to be conversant with a range of analytical protocols, among which the current conventional practice may over time become less predominant.

Op. 7/I$^{1–17}$

The model presented in **1.1** corresponds to P, the primary-theme zone within the exposition of one of Beethoven's early sonata movements, 7/I$^{1–17}$. (This location symbol, deployed throughout chapters 1 through 7, should be read as opus 7, movement 1, measures 1 through 17.) To better convey the essence of the passage, this block-chord reduction omits many of the score's chords. Note especially the F-A♭-E♭ chord at 5_2. It connects root-position and first-inversion arrangements of I's pitches without itself performing a harmonic role. Though some analysts might label it as II^7, that reading is here rejected, since it suggests that the pitch F functions as a harmonic root, above which "dissonant" seventh E♭ should resolve downward by step. Instead, E♭ is maintained as root as the tonic's E♭<G and G<B♭ thirds are traversed. (Bass F is the dissonant note, not the E♭ above it.) Nor does the model fully document the shifts of soprano and bass from one to another of a prolonged chord's members. Likewise the model scales back Beethoven's robust registral expansion, so that one might more easily assay the foundational voice leading. Finally, it omits the redundancy in the vicinity of the cadence, signaled by the hairpin symbol between measure numbers 12 (where V is introduced) and 17 (where the resolving I is definitive, unlike the situation in measure 13). The melody's G<B♭ third, traversed during measures 13 through 15, is reminiscent of that in measures 1 through 3, though this time it coordinates with the onset of V's $^6_4$ embellishment (at 15_1, reiterating that of 12_1).

Example 1.1 Analysis of Piano Sonata in E♭ Major (op. 7), mvmt. 1, mm. 1–17.



Analytical observations regarding the harmonic progression are displayed below the system in **1.1**, where only four Roman numerals are deployed for these seventeen measures of content. The premise of the perspective from which this analysis has emerged may be stated simply. Any harmony (a chord whose fundamental role within the progression is acknowledged by means of a Roman numeral label corresponding to the scale degree of its root) may sound successively in multiple states. A harmony often will be introduced in its diatonic state, without dissonant accretions. It may project stability initially by serving as the focus of embellishment, such as neighboring notes, passing notes, or suspensions. As time passes a prolonged harmony often will evolve into a more dynamic state. Various alterations – which may include added dissonances, chromatic shifts, and pitch omissions – annul any stability attained during the harmony's prior prolongation and motivate the succession to the next harmony.

By far the most common successions between adjacent roots within Beethoven's harmonic practice are the ascending perfect fourth or descending perfect fifth (here E♭<A♭ and B♭<E♭) and the ascending major second or descending minor seventh (here A♭>B♭). The foundational I–V–I progression upon which most of Beethoven's harmonic utterances depend often expands to either I–IV–V–I (explored here) or I–II–V–I (explored in chapter 2), constructions that deploy nothing but these two root successions. (Note that the ascending perfect fifth is not among the most common direct successions of tonal harmony. It typically is segmented into a fourth plus a second, a second plus a fourth, or a third plus a third.) The transformation of the E♭ and B♭ chords from their consonant states into their dynamic, forward-surging dissonant states is achieved through the addition of a minor seventh above the chordal root: chromatic D♭ in the case of I, diatonic A♭ in the case of V. (The number 7 is deployed in the analysis even if, as in measure 10, the chord's root does not sound concurrently in the bass.) The diminished fifth or augmented fourth that results targets essential pitches of the succeeding harmony. In this case an expansion of the initial tonic runs its course (measures 1 through 9) before minor seventh D♭ emerges. The sounding of a B♭-D-F-A♭ chord during measures 7 and 8 is here interpreted as a local embellishment of the tonic, with three neighboring notes emerging against a prolonged B♭. (Note the absence of a V^7 annotation at that point in **1.1**.)

Though the chords of measure 8 (bass D) and the second half of measure 10 (bass G) are similarly constructed, their roles within the progression are contrasting. Whereas the former is a local embellishment of the tonic, the

latter *is* the tonic, in an evolved state that brings the acquired stability to an end and potently targets IV. After a later statement of this theme Beethoven deploys the same sort of embellishment that here enhances the initial tonic in the context of IV (G-B♭-D♭-E♭ in measures 205–208 and 208–212), followed by a more potent embellishment of V (A♮-E♭-G♭ against a B♭ pedal point in measures 216 and 218).

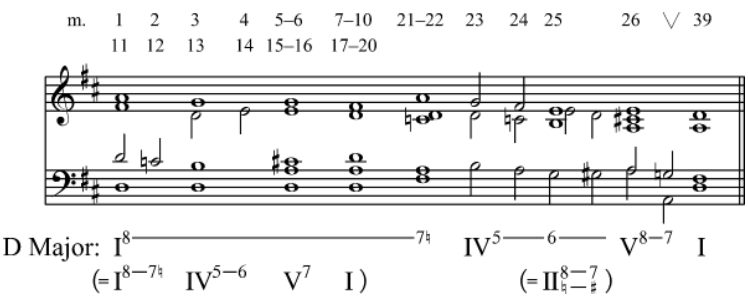
A different mechanism often facilitates the connection of roots separated by an ascending second. Pursuing a strategy perfected by Baroque composers with their ascending 5–6 sequences, one may initiate the motion upwards to the next scale degree by maintaining the initial chord's root and third while shifting the fifth up a step to a sixth, thereby introducing one of the pitches from the succeeding harmony. The root and third then follow. In **1.1** this procedure, which connects IV and V, is integrated with the $^{6}_{4}$ embellishment of V, so that the F that emerges at the end of measure 11 (the 6 of IV^{5-6}) does not persist sonically as V's root emerges in the bass but instead serves as the starting point for the downward traversal of that dominant's F>D third (with intervening passing note E♭). F is restored in the soprano as that initiative concludes. (Note the model's display of soprano A♭>G>F in that vicinity. The G posited for 12_1 sounds only in the chordal interior in Beethoven's score.) In this context the F of measure 11 serves as an anticipation – that is, as an event of voice leading rather than as the root of a supertonic harmony. Consequently the Roman numeral II is not deployed. In other contexts, further evolution of this chord before the emergence of the dominant will warrant a more elaborate Roman numeral display, to be explored presently.

Op. 28/I^{1-39}

As we turn to $28/I^{1-39}$, take a moment to explore the first phrase (through measure 10 of the score) on your own before reading further, endeavoring to discern how the principles introduced above apply in this new context.

Did you notice Beethoven's daring omission of the tonic's initial consonant state? Though one might imagine a D-F♯-A triad above measure 1's lone bass D (as proposed in **1.2**), the C♮ of measure 2, which generally would emerge *after* a consonant D in the same register, nevertheless comes as a surprise. Yet its role in propelling I towards IV conforms to conventional tonal syntax. As shorthand notation for this relationship, an arrow – as in I➔ – may be deployed, especially in textual commentary, as an alternative to $I^{7\natural}$, to indicate a surge. Several related chords all could convey such a

Example 1.2 Analysis of Piano Sonata in D Major (op. 28), mvmt. 1, mm. 1–39.



surge: D-F♯-A-C, F♯-A-C, F♯-A-C-E(♭), or D-F♯-A-C-E(♭). All of these chords are regarded as dominant-emulating: that is, though they do not actually warrant a V Roman numeral (because the harmony's root is not $\hat{5}$ in the prevailing key), their construction and resolutional behavior correspond to a dominant's.

Did you notice how IV^{5-6} transpires during measures 3 and 4? Did you notice how an embellishing chord in measure 9 helps expand the concluding tonic? (The phrase's structural dominant occurs in measures 5 and 6, not in measure 9. After the melody's initial A, supported by I➔, a descending G>E>C♯>A arpeggiation supported by IV^{5-6} and V^7 is followed by an ascending A<D<F♯ arpeggiation supported by I. The E of 9_{1-2} is a passing note between the D and F♯ of this latter arpeggiation, whereas the C♯ below is a neighboring note.)

The first phrase's melody traverses the span between the tonic harmony's fifth and third (A>G>F♯), resulting in an IAC in measure 10. That phrase is then repeated an octave higher. A surging tonic emerges at a deeper level during measures 21 and 22, coordinating with a restoration of the melody's initial A. (Though this A "belongs" in measure 22, it emerges belatedly at the downbeat of measure 23. It of course has been a presence since measure 2. Its importance is confirmed through the sounding of an A in the upper register at 28_1, prior to the again belated A of 31_1.)

Full closure is attained through a stepwise descent to the tonic root, which arrives at 39_1. The model for this latter phrase on display in **1.2** incorporates a hairpin symbol among the measure numbers to indicate that the content between measures 26 and 39, during which two attempts at a PAC fail, has been omitted. The foundational progression (displayed via the upper row of Roman numerals) is an impeccable harmonic construction: both the initial tonic and the dominant proceed from their consonant states to dynamic evolved states (I➔ and V➔), whereas a 5–6 shift transpires during the succession from IV to V. The entire first phrase and its

repetition (twenty measures of music) all transpire before this foundational succession from I to IV occurs. The IV's 5- and 6-phase chords here are connected by a passing chord, at 24_3. This construction helps explain why the IV chord initially emerges in its $^{6}_{3}$ position: three successive $^{6}_{3}$ chords sound in measures 23 through 25, proceeding in the bass to IV's root, G, whose arrival coincides with the emergence of 6-phase E.

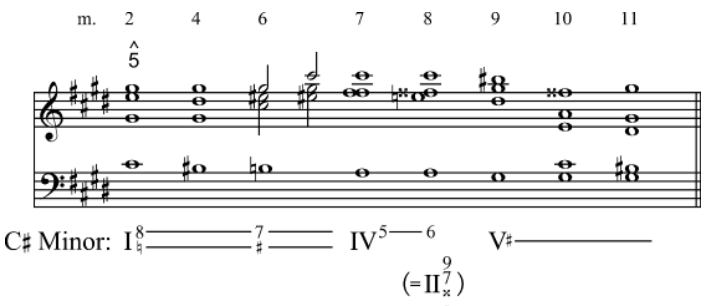
In this case IV^6 is transformed by the incorporation of chromatic G♯. (A reminder to readers who have studied harmony via a contrasting methodology: here IV^6 designates the 6 phase of IV – G-B-E – rather than the first inversion of IV – B-D-G.) Though the 6-phase pitch E may serve as no more than an anticipation of the dominant's fifth, the potential for G-B-E to come across as a chord rooted on E is great. Certainly if G♯ emerges (as it does at 25_3), the E has *asserted* itself as a local root. This interpretation is noted in a secondary row of analytical notation enclosed within parentheses beneath the principal analysis. Here II's seventh, D, together with G's transformation into G♯ create the dynamic sense of II➔ targeting V, an intensity not achieved by IV's 6-phase G-B-E (over a tonic pedal point) at 4_3.

Op. 27, no. 2/III$^{1–14}$

In minor keys, as in major keys, chromatic pitches often are called upon to guide a harmony towards its successor. Because the initial tonic harmony in 27.2/III$^{1–14}$ is of minor quality, chromatic E♯ is an essential component of its surge towards IV. Observe in the model presented in **1.3** how the opening tonic is embellished by B♯-D♯-G♯. Instead of restoring the minor tonic, Beethoven incorporates both major third E♯ and minor seventh B into that tonic's post-embellishment reiteration. These pitches generate the dynamic surge (I➔) that targets IV. (Of course, in minor keys the tonic's diatonic seventh is of minor quality, so the chromatic adjustment found there in major keys is no longer required.) It is common in the context of an embellishing chord followed by a surge for a melodic line such as C♯>B♯<C♯>B♮ to contract into C♯>B♯>B♮, wherein the leading tone's resolution pitch has been elided. Consequently upward- and downward-tending pitches sound in direct succession.

In **1.2** we observed how the 6 phase of IV may evolve in such a way as to surge as II➔, targeting V. In the context of C♯ Minor that chord would be spelled as D♯-F𝄪-A♯-C♯. In **1.3** Beethoven deploys a more potent alternative. First, recall that the diatonic $\hat{6}$ in C♯ Minor is A (deployed in measure

Example 1.3 Analysis of Piano Sonata in C♯ Minor (op. 27, no. 2), mvmt. 3, mm. 1–14.



7's subdominant), not A♯. It is common especially in C♯ Minor (though attainable in C♯ Major as well) for II to evolve into D♯-F𝄪-A-C♯ as the succession to the dominant draws near. Some analysts give this chord the nickname "French" augmented sixth. (The "augmented" designation corresponds to the prominent dissonant interval formed when the chord is presented in its second inversion, as often is the case.) In the perspective advocated here, it will be labeled instead as $II^{7}_{\times}$. Because its sound contrasts that of the surging chords already discussed, the shorthand symbol II⇛ (with outline arrow) may be deployed in an analysis to denote a *supersurge*. (When speaking, the symbol II➔ should be pronounced as "surging two," whereas the symbol II⇛ should be pronounced as "supersurging two," in which the "super" prefix acknowledges the greater concentration of dissonance.) Second, consider how a chord with seventh may be intensified through the addition of its ninth. When that occurs, it is common for the root to be omitted. Thus D♯-F𝄪-A-C♯ may further evolve into F𝄪-A-C♯-E. (In this case IV^{6} is represented by a chord in which that 6 – here D♯ – is absent.) Beethoven employs that highly evolved 6-phase chord during measure 8. The analytical notation under the system in **1.3** acknowledges the absence of root D♯ by means of a bullet symbol (•) below the Arabic numerals and accidental beside Roman numeral II. Rather than resorting to a nickname (such as "German" augmented sixth), the chord is interpreted as one of several possible variants of II⇛. In a scale-step approach to harmonic analysis it is important to indicate each harmonic root's location within tonal space, a responsibility that would be abdicated if one were to employ a symbol such as Ger^{+6}. Also, because multiple evolved states of the supertonic may occur in succession, a grid of Arabic numerals, accidentals, and the bullet symbol to the right of Roman II on occasion may be called upon to document that evolutionary process (as will be demonstrated later). The juxtaposition of symbols such as ii°, vii°/V, and Ger^{+6} in other

analytical systems would not even hint at the continuity that exists among related states of the supertonic.

The phrase's goal dominant (with raised third), attained at 9_1, is prolonged through measure 14. Most of measures 10 and 12 are devoted to the dominant's $^{6}_{4}$ embellishing chord (G♯-C♯-E, not displayed in **1.3**). A more potent embellishment sounds briefly at the ends of those measures: C♯-(E)-A-F𝄪 over a G♯ pedal point. Whereas in measure 8 those pitches helped constitute the II⇛ harmony that targets V♯, here they instead embellish an already attained dominant. Though some analysts might be inclined to provide harmonic labels for such embellishing chords, I eschew that practice. It would be misleading to propose that the C♯ and E above retained G♯ during $10_{1–3}$ in any way represent the tonic harmony: C♯ is a passing note that connects the dominant's D♯ and B♯; it is not a harmonic root. Likewise, the analysis of measures 13 and 14 as

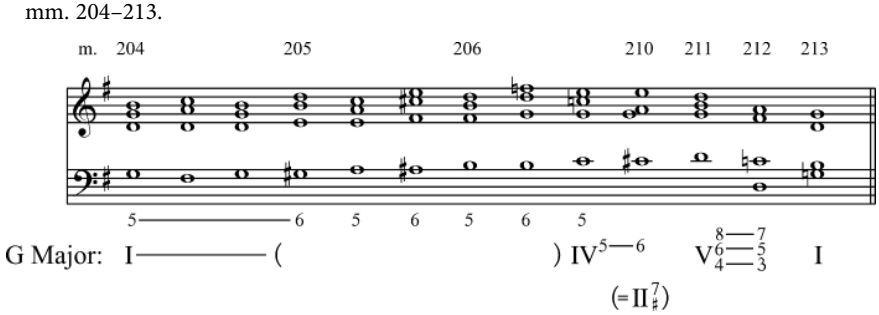
V♯ II⇛ V♯ II⇛ V♯ II⇛ V♯ II⇛ V♯

betrays a perspective that would be hard to reconcile with the slow pace of harmonic motion that has prevailed to this point. Beethoven himself guards against such a reading through his maintenance of the dominant root G♯ throughout the passage.

Op. 14, no. 2/III$^{204–213}$

The means by which the initial tonic is embellished in **1.1** recurs in **1.4**, which corresponds to 14.2/III$^{204–213}$. Yet whereas in the former the tonic soon thereafter evolves into I➔, targeting IV directly, in the latter a more gradual approach to IV is pursued. As mentioned above, the same 5–6 shift that often guides the voice leading in the connection between IV and V

Example 1.4 Analysis of Piano Sonata in G Major (op. 14, no. 2), mvmt. 3, mm. 204–213.



may be deployed multiple times to form an ascending 5–6 sequence. In this instance the 6-phase chords take on chromatic inflections so that the approaches to the diatonic A, B, and C chords all resemble the embellishment of the initial tonic G.

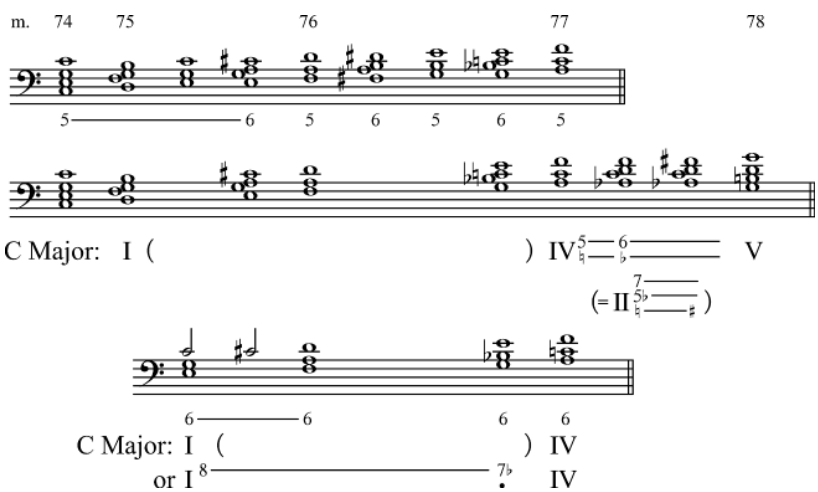
Once set in motion, such sequential progressions seem to proceed effortlessly. Generally some rupture in the voice leading is required to curtail a continuation. That rupture here occurs after measure 206, where repetitions of the sequence's final two chords (not shown in **1.4**) serve as a strong boundary marker, and after which the score's right-hand figuration takes on a new form while the left-hand chords are interspersed with rests. In the analysis this significant moment corresponds to the first Roman numeral deployed since the initial I. Whereas II or III might have been asserted, in retrospect one understands that those chords instead reside within the interior of an upward linear trajectory that terminates at IV. Open parentheses appear in the harmonic analysis to convey the transitional nature of the sequential passage: no longer I, not yet IV. Though in some contexts a chord such as B^6_5 at 206_2 might serve to reinstate the initial tonic function (thus creating a $I^{8-7\natural}$ expansion over measures 204 through 206), in this case the progression of $^5_3$ chords on G, A, B, and C seems to be the guiding principle. (That is, B^5_3 is deemed to be hierarchically more foundational than $B^6_{5\natural}$ within measure 206.) The distribution of the sequence's 5- and 6-phase chords is noted via Arabic numerals directly below the bass in **1.4**. (Each 6-phase chord incorporates a diminished fifth generated by means of chromaticism. These modest surges boost the upward trajectory's propulsion along the way.)

Once IV is attained and embellished, a conventional 5–6 shift (whose 6 phase projects a II➔ surge) leads onwards to V, which resolves to I in a PAC.

Op. 7/II$^{74–78}$

The trajectory connecting I and IV from **1.4** is presented again as **1.5a**, retaining the exact pitch content (transposed) but with alterations in chordal inversion. This model will serve as a useful reference as we explore Beethoven's more challenging conception during 7/II$^{74–78}$, displayed in **1.5b**. Note how the latter corresponds to the **1.5a** conception, with three omissions. One might elect to regard this version as a representation of the former, with the restoration of the initial tonic elided after the D-F-G-B embellishing chord, and the sequential step on an E chord (inverted) and

Example 1.5 Analysis of Piano Sonata in E♭ Major (op. 7), mvmt. 2, mm. 74–78 (a) A foundational sequential model based on **1.4**; (b) A model displaying a parallel progression between the I and IV harmonies and then continuing to V; (c) An alternative view of the passage from I to IV.



its surging predecessor omitted. Yet in this case, given that every chord after the initial I through the arrival of IV is in either $^{6}_{3}$ or $^{6}_{4}$ position and that every diatonic pitch within a C<A trajectory takes one turn as bass note, the passage begins to come across more as a *parallel progression* in which each internal chord is equally weighted. (Parallel progressions of $^{6}_{3}$ chords are encountered frequently in figured bass treatises. Beethoven would have been exposed to the notion at an early age.) A synthesis, shown in **1.5c**, further refines that conception. An alternative analytical hypothesis is proposed there as well: that in this context the chord with bass G just before the arrival of IV serves as a reinstatement of the tonic function, so that all of measures 74 through 76 constitute a broad prolongation of the tonic in its two characteristic states – first consonant and then surging – prior to the subdominant arrival.

The attainment of IV and the onset of its 5–6 shift coordinate in an interesting way in measure 77. As has been characteristic within the excerpt, here also a downbeat suspension – G (not shown in **1.5**) – delays the arrival of the subdominant root F. Yet by the time F sounds, the 5–6 shift is already under way through the addition of D, while concurrently the subdominant third A mutates to A♭. Consequently there is no point in time during which all three members of the diatonic IV harmony sound alone together. The presence of A♭, combined with the eventual emergence of F♯, results in II⇨ (rather than II➔) targeting V during IV's evolved 6 phase.