FOURTEEN

Schoenberg and Goethe: Organicism and Analysis

SEVERINE NEFF

Alle Gestalten sind ähnlich, und keine gleichet der andern;
Und so deutet das Chor auf ein geheimes Gesetz,
Auf ein heiliges Rätsel.

—Johann Wolfgang von Goethe,
Die Metamorphose der Pflanzen[1]

"I believe Goethe would be quite satisfied with me,"[2] Arnold Schoenberg wrote in his sketchbook upon discovering the set for the third movement of his Wind Quintet Op. 26. Goethe's exceptionally powerful influence on Schoenberg was crystallized in 1934 in his major unfinished theoretical work, "Der musikalische Gedanke und die Logik, Technik, und Kunst seiner Darstellung."[3] This manuscript adopts the terminology and epistemology of Goethe's comparatively neglected scientific work.[4] The importance of this work for the Second Viennese School is further illustrated by Anton Webern's remarks:

> A theme is presented. It is varied . . . all the rest is based on that one idea; it is the prime form. The most astounding things happen, but it is still always the same.
>
> Now you see what I am driving at—Goethe's *Urpflanze*: the root is actually nothing other than the stem, the leaf in turn is nothing other than the blossom; all variations of the same idea.[5]

Nothing could be more indicative of the holistic, organic model that is the basis of all Schoenberg's analytical thought, and nothing could be further from the mechanistic, logical-postivist model that is the basis of much contemporary theoretical thought on Schoenberg.

My thesis is that Schoenberg's theoretical writings must be evalu-

ated in the context of his intellectual tradition: organicism as redefined by Goethe. The first section of this study discusses how Goethe's holistic epistemology leads to particular concepts of organic function. The second section shows how Schoenberg adopted Goethe's thought in his concepts of *Monotonalität*, *Hauptmotiv*, *Grundgestalt*, and "tonal problem." A third and final section demonstrates how Schoenberg's concepts analytically apply to Schubert's *Der Wegweiser*, song no. 20 from *Winterreise*.

Goethe and the Organic Model

The concept of the organic unity of an artwork was initially articulated in Plato's *Phaedrus*: "A composition should be like a living being, with a body of its own, as it were, and neither headless nor feetless, with a middle and with members adapted to each other and to the whole."[6] Aristotle's concept of organic form gives primacy to a whole that is more than the sum of its parts. Plotinus added the criterion that an alteration of a part, whether by size, addition, or removal, involves the alteration of the whole.[7] Ancient philosophy was reclaimed in eighteenth-century Germany by Immanuel Kant. Kant's student and Goethe's friend, the poet and dramatist Friedrich Schiller, wrote: "Music in its highest refinement must be a *Gestalt*."[8]

Within this tradition Goethe was unique in that he was not only a discerner of form; he was a maker of an immense variety of forms, both literary and scientific.[9] His ideas of artistic and natural forms were strongly integrated. Goethe's "poetic mind does indeed constitute the interest of his scientific work, not because he thinks as a poet when he is supposed to be thinking as a scientist—he moves freely between both these modes of thought—but because his extensive firsthand experience in the two spheres makes him uniquely qualified to evolve a conception of form embracing both art and nature."[10]

Goethe studied botany, optics, meteorology, anatomy, osteology, biology, chemistry, physics, and geology. Except for his identification of the intermaxillary bone in the human jaw, his scientific contributions are now considered relics. Only his decision to observe natural process through transformation as opposed to classification remains interesting in a Darwinian sense.[11] The harsh criticism of Goethe's work by the scientific community focuses on a single point. Goethe did not believe in the mathematical quantification of cause and effect, the traditional mechanism for *Erklärung* or explanation in science. Instead, he valued organic, holistic thinking as the highest and primary state:

> The comprehensive [thinkers] whom vanity might call creators, are productive in the highest degree. Since they start with ideas, they express the *unity of the whole*, and it may then become nature's job to fit itself somehow into this idea.[12] (Italics added.)

This way of thinking led to a specific type of scientific analysis in which a hypothesis was *not* generated out of quantified "cause and effect" statements. In holistic thinking, cause and effect are identical: the part does not "cause" the whole; it exists as or *presents* a formal aspect of the whole: "Nature has neither core nor outer rind, being all things at once."[13]

At this point it will be helpful to refer to table 14.1a, which summarizes the main concepts of Goethe's scientific thought discussed in this essay. The left column of this table presents Goethe's general vocabulary of organicism; the right column presents his corresponding vocabulary in botany. Goethe never developed his concepts solely in the abstract. Therefore, the following discussion will focus on botany, one field in which Goethe developed his ideas quite completely. It is crucial to realize throughout this discussion that the methods applied to botany can also be applied to color, to anatomy or, most crucially, to art.

Goethe's organic hypotheses grew out of a type of thinking process called *Anschauung* or "intuitive contemplation": "a combination of mediate knowledge *about* with the immediacy of knowledge *of*."[14] The goal of *Anschauung* was the "archetype" or *Urphänomen*: an imagined synthesis of all instances of a given phenomenon. A practical example of *Anschauung* can be seen in Goethe's study of botany. For a decade Goethe collected countless species of plants, drawing their forms and taking note of their common functions. Goethe, however illogically, claimed that the *imagined* synthesis of this material produced in his mind's eye an abstract vision reflecting the potential contents and form of all plants: the hypothesis of the *Urpflanze*, the archetypal plant.[15]

The nature of the *Urpflanze* became the focus of Goethe's first encounter with Schiller. As a schooled philosopher, Schiller called Goethe's *Urpflanze* a Platonic idea or universal—"plantness" existing unchanged, beyond time, space, rest, motion, and number. As an artist, Goethe disagreed. How could an abstract entity such as the idea, by definition without specific content or form, be presented in an object that existed with content and form in space and time? How could this universal be presented in the particular? Goethe insisted instead that the *Urpflanze* was simultaneously both concept and experience: the

Table 14.1.

a. Goethe's Epistemology		*b.* Schoenberg's Adaptation of Goethe	
Anschauung ["intuitive contemplation"]	*Anschauung* ["intuitive contemplation"]	*Anschauung* ["intuitive contemplation"]	
Urphänomen ["archetype"]	*Urpflanze* ["archetypal plant"]	*Monotonalität* ["monotonality"]	
		Grundton ["fundamental"] in nature	
		Tonic in art	
Bildung/Umbildung ["formation"/"transformation"]	*Bildung/Umbildung* ["formation"/"transformation"]	*Bildung/Umbildung* ["formation"/"transformation"]	
Der innere Kern ["inner nucleus"]	*Blatt* ["Leaf form"]	*Hauptmotiv* or "tonal problem" ["basic motive"]	*Grundgestalt* ["basic configuration"]
vis centrifuga ["centrifugal force"]	Outward growth	Centrifugal force: motion from tonic	
vis centripeta ["centripetal force"]	Inward and upward growth	Centripetal force: motion to tonic	
Funktion ["function"]	Cotyledon, leaf, petal, stem	Functioning parts: statement, transition, contrast, retransition, final section, coda	
Gestalt	Individual plant *Gestalt*	Individual piece	

imagined object, containing all his past and present empirical observations, the conclusion of *Anschauung*. He said of ideas, "I can see them with my eyes."[16]

After positing the archetype or *Urphänomen*, Goethe's next step concerned how the individual object, the single manifestation of the archetype, demonstrated a network of coherence within it. For Goethe such study of the functioning parts within a whole was the study of *Bildung* (formation) and *Umbildung* (transformation). Both *Bildung* and *Umbildung* are based on the root *Bild* (picture, model, image). The understanding of formation and growth is thus a process of picturing gradations of change in the mind's eye paralleling the method of *Anschauung* itself: "What is alike in idea may manifest itself in empirical reality as alike, or similar, or even totally unalike and dissimilar: this gives rise to the ever-changing life of nature."[17] For Goethe the specific plant *Gestalt* was generated out of varied changes of the same *innere Kern* (inner nucleus): the *Blatt* (leaf form).

Goethe's drawings of individual plants (see fig. 14.1) emphasize the transformations of the leaf form into the functioning parts of the plant: cotelydon and petal.[18] According to Goethe, such transformation of the *Blatt* is achieved through two opposing forces, the centripetal and the centrifugal:

> The idea of metamorphosis deserves great reverence, but it is also a most dangerous gift from above. It leads to formlessness; it destroys knowledge, dissolves it. It is like the *vis centrifuga* and would be lost in the infinite if it had no counterweight: here I mean the drive for specific character, the stubborn persistence of things which have finally attained reality. This is a *vis centripeta* which remains basically untouched by any external factor.[19]

In the plant *Gestalt* the centrifugal force is the outward growth into diverse structures such as cotyledon or leaf. The centripetal force is manifested by the inward motion toward the single and continuous structure of stem. The balance between these two forces characterizes and molds the individual plant *Gestalt*.

For Goethe the centrifugal and centripetal forces thus shape a *hierarchy* of changing parts within the whole:

> The less perfect the creation, the more its parts are alike or similar and the more they resemble the whole. . . . The more similar the parts, the less they will be subordinated to one another. Subordination of parts indicates a more perfect creation.[20]

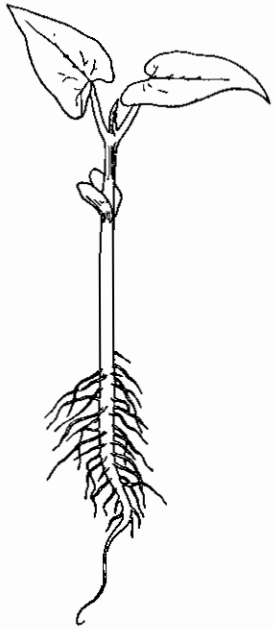


Figure 14.1 Goethe's drawing illustrating the homology of the cotyledon and leaf.

The "subordination of parts" within a hierarchical structure inevitably results in the idea of function. Parts within the whole become "forms of function which reciprocally determine each other and unite into a system of dependencies."[21] Goethe was able to consider such a functional hierarchy because, like all organic thinkers, he presupposed a network of connection between parts "joined from the outset." Such a connection was presupposed by definition because any concept of wholeness presumed an interrelatedness between parts. For the organic thinker a function is then a presupposition of relationship between part and whole that presents a hierarchy of subordinate parts within the whole. Returning to Webern's words, we can now understand the comparison of musical theme and *Blatt* as a description of functional hierarchy: "The root is actually nothing other than the stem, the leaf in turn is nothing other than the blossom; all variations of the same idea."

Schoenberg's Adoption of Goethe's Epistemology for His Analytical Method

Schoenberg, like Goethe, believed that "our finest ability [is] the ability to receive an impression of totality."[22] This impression is a matter of experience as well as intellect: "In the intellectual realm everything

is preliminary, even if it is right."[23] For Schoenberg conceptual knowledge thus existed in the experience of the object: "Therefore, whenever I theorize, it is less important whether these theories be right than whether they be useful as comparisons to clarify the object and to give the study perspective."[24]

These viewpoints determined Schoenberg's opinion that a general theory of music "should start with the subject . . . the sense of hearing."[25] However, this was impossible without a cogent theory of perception: "Unsurmountable difficulties lie in the way of analysis of the impression if the observing subject is now taken as the point of departure for inquiry."[26] As a result, he adopted an epistemological method close to Goethe's *Anschauung*. (See table 14.1b, which summarizes Schoenberg's analytical concepts.) Just as Goethe studied innumerable species of plants, Schoenberg studied innumerable pieces and the craft used to create them. His concern was never *Erklärung* but always, as pointed out in the title of his 1934 "Gedanke" manuscript, *Darstellung*—the organic *presentation* of material that enabled the whole to be comprehensible to the listener.

Schoenberg's perceptions about tonal pieces coalesced late in his career into an *Urphänomen* called *Monotonalität*:

> According to this principle, every digression from the tonic is considered to be still within the tonality, whether directly or indirectly, closely or remotedly related. In other words, there is only *one tonality* in a piece, and every segment considered as another tonality is only a region, a harmonic contrast within that tonality.[27]

Schoenberg understood *Monotonalität* as an *Urphänomen* functioning in both nature and art. The natural basis of *Monotonalität* is the *Grundton*, the fundamental of the overtone series. In the artistic realm the *Grundton* is understood to be the tonic, and the overtones, the regions of the tonic. Schoenberg himself explained that

> the primitive ear hears the *Grundton* as irreducible, but physics recognizes it to be complex. In the meantime, however, musicians discovered that it is *capable of continuation*, i.e. that *movement is latent within it*. That problems are concealed in it, problems that clash with one another, that the *Grundton* lives and seeks to propagate itself.[28]

Like Goethe's *Urpflanze*, which contains the functional potential of all possible plant forms, Schoenberg's concept of *Monotonalität* presents the functional potential of all tonal pieces. It is what Schoenberg considered a scientific model, that is, one that "must try to include all conceivable cases."[29] Schoenberg's hypothesis of *Monotonalität* is il-

lustrated in the major and minor charts of the regions; an extended version of the latter appears in table 14.2a.

The major and minor charts of the regions have a detailed inner structure built on the traditional key relationships: vertically, the circle of fifths; horizontally, relative and parallel minor relations. As David Lewin observed, the design is symmetrical: the sharp and flat regions form polar opposites around the central tonic.[30] Schoenberg's theory includes further functional classifications that determine distances from the tonic (see table 14.2b).[31] "Direct and Close" regions are those that share six or seven pitches with it. The next groupings, "Indirect but Close" and "Indirect," have tonics that are related to those of a previous grouping by the alteration of a major-minor (or minor-major) relation (M to m or m to M).[32] The "Indirect and Remote" and "Distant" regions are related to a previous grouping either through functions of the subdominant minor region (e.g., sd/SD/subT), or through fifth relations or substitution (e.g., sharp sm to m, S/T to Np).

During his determination of the hypothesis *Monotonalität*, Schoenberg also considered the problem of *Bildung* and *Umbildung*: the tonic needed to be made "capable of continuation" in time through structures analogous to Goethe's *Blatt*. The structures Schoenberg identified are the *Motiv* and the *Grundgestalt*, both difficult terms to define precisely.

Schoenberg left us only one, highly general definition for *Grundgestalt*, which is found in the "Gedanke" manuscript of 1934–36:

> "*Grundgestalten*" are those *Gestalten* that (if possible) occur repeatedly within an entire piece and to which derived *Gestalten* are traceable. (Formerly, this was called the motive, but that is a very superficial designation; for *Gestalten* and *Grundgestalten* are usually comprised of several motive forms; while the motive is *at any one time the smallest part*.)[33]

Schoenberg's student Josef Rufer interpreted such general statements as describing the first phrase of a piece establishing a characteristic sound and usually asserting the tonic.[34] In this study I adopt Rufer's interpretation.

In his extant writings Schoenberg gave several different definitions for *Motiv*. In 1917, 1934, and 1943 he defined a *Motiv* as a "unit which contains one or more features of interval and rhythm whose presence is manifested in constant use throughout a piece."[35] In the *Harmonielehre* (1911), when commenting on Brahms's Third Symphony, he distinguished between a *Motiv* and a *Hauptmotiv*, the latter being the structure that is directly analogous to Goethe's *Blatt*.[36] I take the *Hauptmotiv* to be the first interval of a work whose later multiple functional

Table 14.2.

a. Minor Chart of the Regions

np	Np	subt	subT	v	D	♯m	♯M			Fifths
subtsm	subtSM	m	M	t	T	♯sm	♯SM			
		sm	SM	sd	SD	dor	S/T	♯subt	♯subT	Relative/parallel minor
			Np							

Abbreviations

T means tonic
D means dominant
SD means subdominant
t means tonic minor
sd means subdominant minor
v means five-minor
sm means submediant minor
mm means mediant minor
SM means submediant major
M means mediant major
Np means Neapolitan
dor means Dorian
S/T means supertonic
subt means subtonic minor
subT means subtonic major

[*N.B.* All symbols in capitals refer to major keys; those in small letters to minor keys.]

Chart in G Minor

a♭	A♭	f	F	d	D	b	B		
d♭	D♭	b♭	B♭	g	G	e	E		
		e♭	E♭	c	C	a	A	f♯	F♯
			A♭						

b. Functional Classification of the Minor Chart of the Regions
[letters on the chart read G minor as tonic]

1. "Direct and Close": M (B♭) T(G) v (d) sd (c)
2. "Indirect but Close": D (D) SM (E♭) — Major/minor
3. "Indirect": m (b♭) SD (C) sm (e♭) — interchange
4. "Indirect and Remote": ♯M (B) ♯SM (E)
   ♯m (b) ♯sm (e)

Substitution
- subT (F)
- subt (f)

Related through subdominant minor
- Np (A♭)
- np (a♭)

5. "Distant":
- subTsm (D♭)
- subTSM (d♭)

♯subt (F♯) S/T (A)
♯subt (f♯) dor (a)

reinterpretations in light of *Monotonalität* can generate the composition's tonal form.

In later studies such as the "Gedanke" manuscript of 1934, Schoenberg described what I call the first chromatic version of the *Hauptmotiv* as the "tonal problem" stated either in the *Grundgestalt* itself or in a subsequent reinterpretation.[37] Adopting Goethe's terminology, Schoenberg considers the "tonal problem" as that which makes a tonic

"capable of continuation" through its inherent centrifugal motion. For an organicist such a motion to outlying regions literally creates a problem because it contradicts the unity of the tonal center. In any piece this outward motion must be turned back toward the tonal center by a corresponding centripetal force, solving the problem and thus shaping the form of the piece. In Schoenberg's words, each composition raises

> a question, puts up a problem, which in the course of the piece has to be answered, resolved, carried through. It has to be carried through many contradictory situation [*sic*]; it has to be developed by drawing consequences from what it postulates . . . and all this might lead to a conclusion, a pronunciamento.[38]

For Schoenberg the motivic transformations of the *Grundgestalt* and the "tonal problem" thus produce the functioning parts of a piece: its tonal form. The statement of a theme introduces the relationships of the *Grundgestalt* and sets up the "tonal problem." This "problem" demands expansion and continuation to regions away from the tonic, thus creating a transition. Eventually a contrast is likely to take shape, containing the most tonally distant reinterpretation of the opening material, the climax of the centrifugal force. But this inevitably leads to a retransition as the centripetal force begins to overcome the centrifugal force. The final section or coda eliminates all centrifugal tendencies of the "tonal problem," reinterpreting both the material of the *Grundgestalt* and the "tonal problem" in the tonic. Thus in a truly organic work the opening already presents the form of the whole.[39]

Interpretation of Schoenberg's Analytical Method

Though Schoenberg demonstrated the *Grundgestalt* and "tonal problem" in his classroom teaching, unfortunately he did not illustrate these concepts in a complete analysis.[40] Therefore contemporary analysts have to interpret and reconstruct his procedures from more general or incomplete comments. The following analysis of *Der Wegweiser* is an attempt to illustrate Schoenberg's analytical methods as applied to a complete piece. We shall find that the choice of chromatic pitches and regional references in this work can be profoundly illuminated by Schoenberg's ideas.

The song consists of a piano introduction and four sections corresponding to the four stanzas of the poem. A regional chart of the piece appears in table 14.3 The first and third sections are almost identical, moving to the "Indirect and Remote" region of the subtonic minor; the second, in the tonic major, leads to a piano interlude modulating back

Table 14.3. Regional Chart of *Der Wegweiser*

Piano Introduction:	mm. 1–5	tonic	
Stanza One:	mm. 5–12	tonic	
	mm. 13–16	subtonic minor	"Indirect and Remote"
	mm. 16–20	tonic	
Stanza Two:	mm. 21–26	tonic major	"Direct and Close"
	mm. 27–34	submediant minor	"Indirect"
	mm. 35–39	tonic	
Stanza Three:	mm. 40–47	tonic	
	mm. 48–52	subtonic minor	"Indirect and Remote"
	mm. 53–54	tonic	
Stanza Four:	"roving" between:		
	mm. 55–58	tonic	
	mm. 59–63	subtonic minor	"Indirect and Remote"
	mm. 63–64	subtonic minor's submediant	"Distant"
	mm. 65–83	tonic	

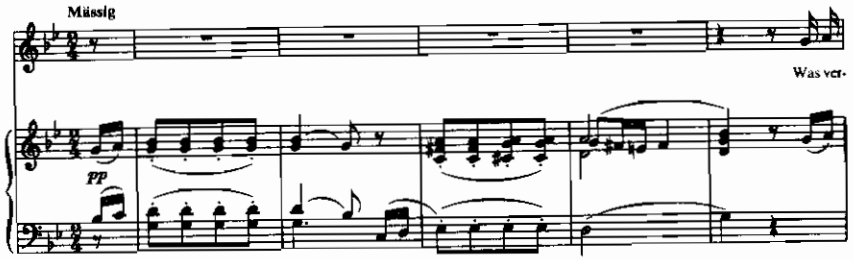
to the minor; the fourth section functions as a coda whose "roving" harmony sums up the issues of the "tonal problem" created as early as m. 3.[41] My analytical focus in following the progress of the song will be the "tonal problem" that is functionally "carried through many contradictory situations," developed, and finally dissolved through reinterpretion in the tonic.

THE "GRUNDGESTALT" AND THE "TONAL PROBLEM"

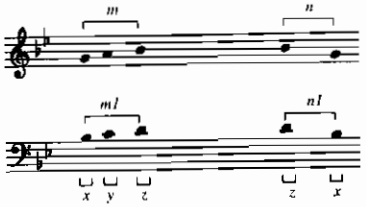
The five-measure piano introduction is divided into a two-measure diatonic antecedent and a three-measure chromatic consequent, both closing on the tonic. The diatonic antecedent functions as the *Grundgestalt* (see ex. 14.1a). It introduces the characteristic marchlike surface rhythm of four eighth notes and the equally characteristic horizontal motion of linearized ascending thirds (motives *m* and *m1*) and nonlinearized descending thirds (motives *n* and *n1*). The vertical sixths resulting from these motions may be designated motives *x*, *y*, and z—*x* and *y* being major sixths and *z*, a minor sixth.

The consequent phrase preserves most surface rhythms of the *Grundgestalt* but alters its pitch motive (see ex. 14.1b). The phrase is introduced by a C–D–E-flat bass line (mm. 2–3) that parallels the rhythm of motive *m* and as a result can be understood as a registrally disjunct extension of *m* to flat 6; this is the first *reinterpretation* of the *Grundgestalt* and the *Hauptmotiv* or motive *m*. In the meantime (see ex. 14.1c), the

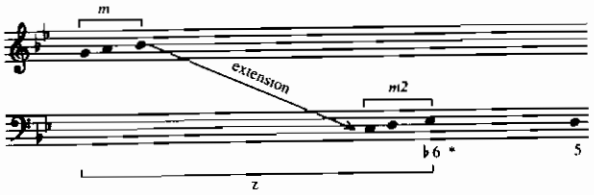
Example 14.1



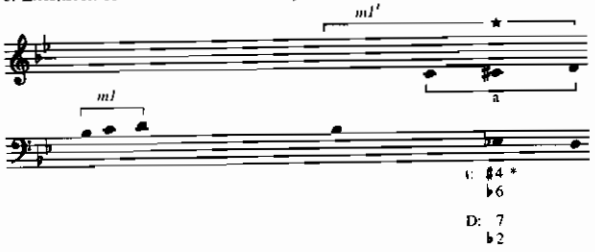
a. Pitch motives of the *Grundgestalt*



b. Extension of motive *m* to flat 6



c. Extension of motive *m1*: the "tonal problem"



*Numbers refer to scale degrees, not to figured bass notation.

tenor resumes motive *m1* across phrase groups and chromaticizes the ascent from C to D. The part of *m1* in the consequent phrase shapes the "new" motive form *a*. The C-sharp of motive *a* coincides with the bass E-flat producing an augmented sixth chord that resolves to the cadential dominant. While the C-sharp–E-flat would no doubt be considered a surface phenomenon in a Schenkerian analysis, for Schoenberg the juxtaposition of C-sharp and E-flat is the "tonal problem," the reinterpretation of the *Hauptmotiv*, the crucial first chromatic interval leading away from the tonic, the first manifestation of a centrifugal motion. The C-sharp is sharp 4 of the tonic, sharp 7 of the dominant; the E-flat is flat 6 of the tonic, flat 2 of the dominant; both are the results of motivic extension. These scale degrees and their reinterpretations will present the functional progress of the work, guiding the piece into "distant" regions beyond the subtonic minor and ultimately back to the tonic.

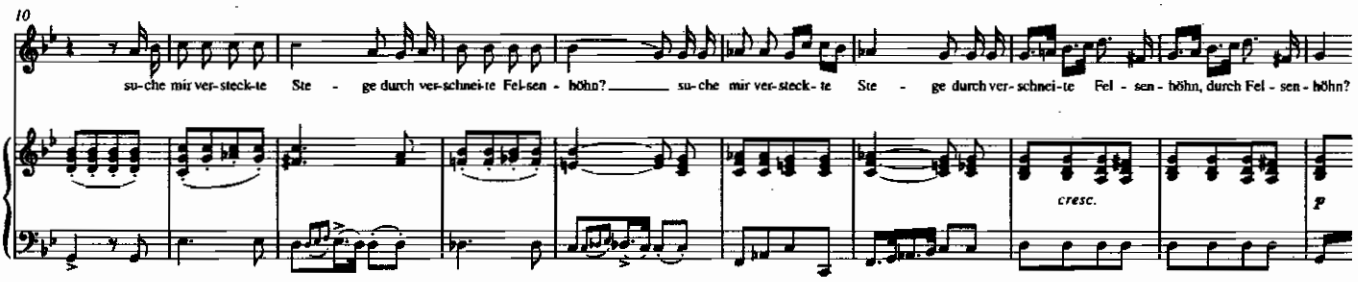
The "Tonal Problem" Reinterpreted in Motive "*a*"

The flat 6 relation of the "tonal problem" is reiterated in the bass line 1–flat 6 across mm. 1–11 and finally as a direct interval from mm. 10–11 (see ex. 14.2a). The chromatic descent from E-flat begun in m. 11 incorporates two presentations of the inversion of motive *a* [*a(I)*] and generates two minor sixths (z), G–E-flat and descending D-flat–F, whose parallelism recalls motives *x* and *y* in the *Grundgestalt*. Note that D-flat is flat 6 of the subtonic region, just as E-flat is flat 6 of the tonic. However, D-flat is also the enharmonic equivalent of sharp 4 in the tonic. To move from one region to another, Schubert thus functionally reinterpreted the pitches of the "tonal problem."

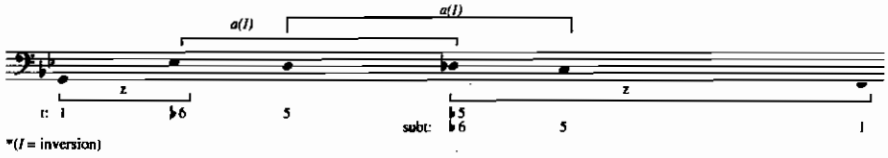
As to the alto line, its presentation of motive *a* (inverted) echoes that of the bass line. Such presentations proliferate: in mm. 11–12 the alto reads A-flat–G–F-sharp, flat 2–1–sharp 7 of the tonic minor. This is followed in mm. 13–14 by G-flat–F–E, flat 2–1–sharp 7 of the subtonic minor (see ex. 14.2b). In a functional sense they recall the dominant interpretation of the "tonal problem" in m. 3.

Beginning in m. 11, the extension of the same alto line then moves to the tonic region through another inversion of motive *a*, which functionally reinterprets the pitches of the "tonal problem." The note E-flat, the flat 7 of the subtonic minor, is reinterpreted as flat 6 of the tonic. Note that the presentation of the inversion of motive *a* in mm. 16–17 (7–flat 7–6 in the subtonic) is also the functional inversion of motive *a* at the *Hauptmotiv*, read as 7–sharp 7–8 of the dominant. Moreover, example 14.3 shows how the tenor transition to the parallel tonic major, A–B-flat–B (mm. 20–22), is another presentation of motive a recalling the triadic major/minor shift in m. 17.

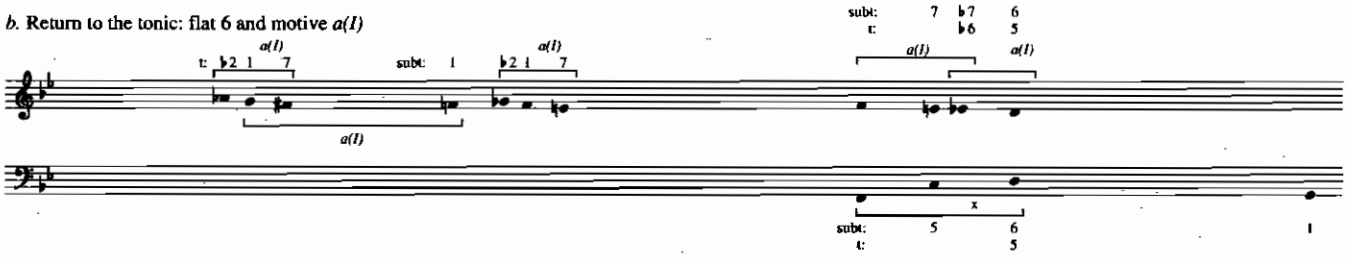
Example 14.2



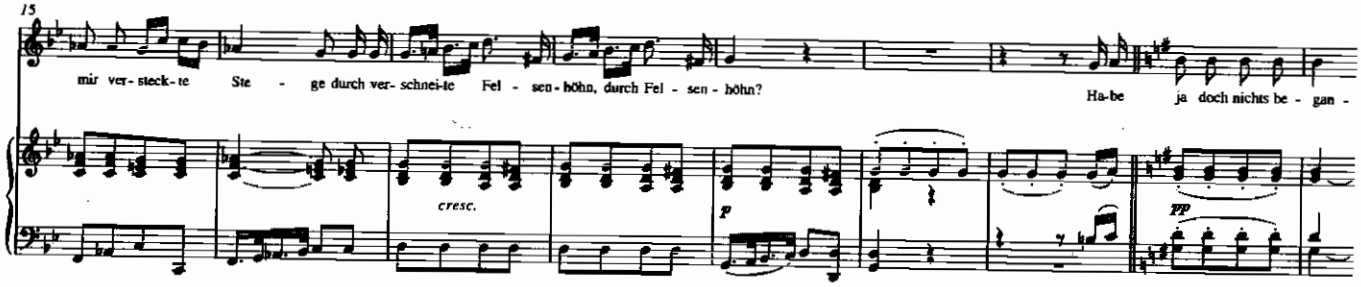
a. Move to the subtonic region: flat 6 and motive *a(I)**

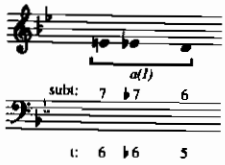


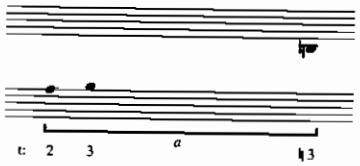
b. Return to the tonic: flat 6 and motive *a(I)*



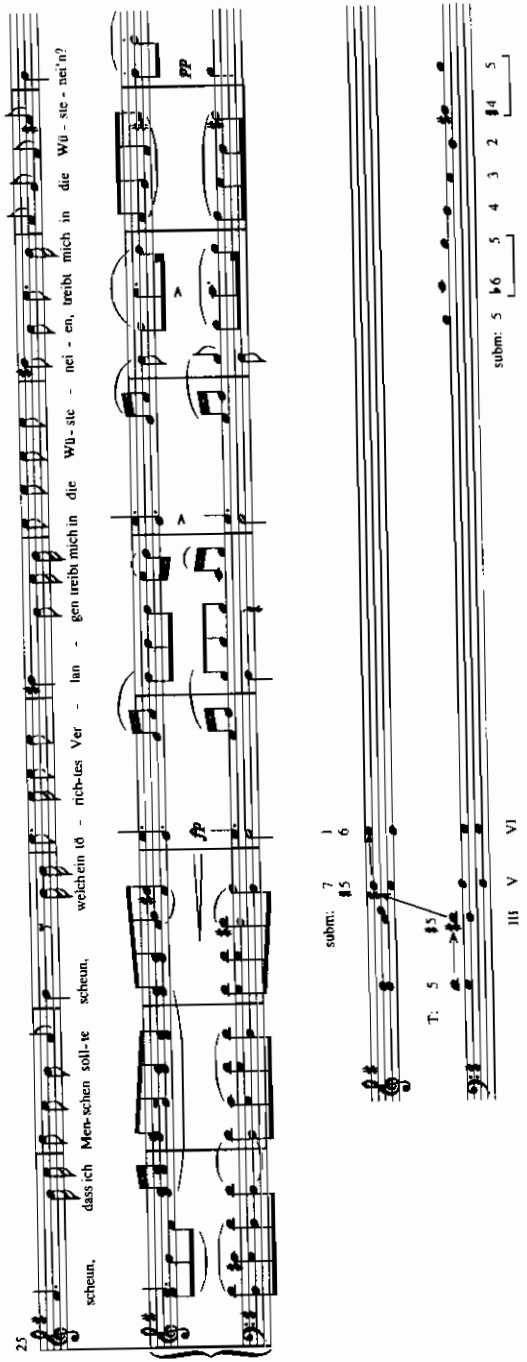
Example 14.3 Major-minor shifts



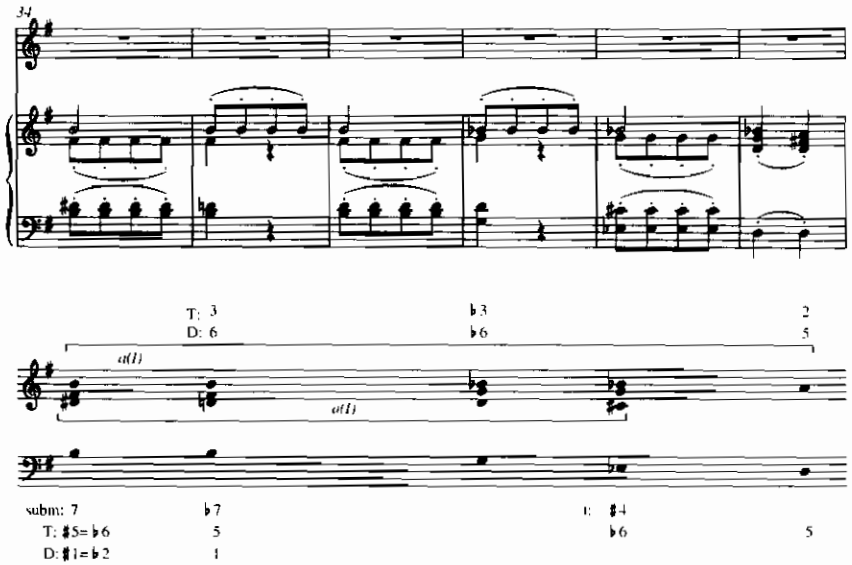




Example 14.4 "Tonal problem" in the submediant region



Example 14.5 Return to the "tonal problem"

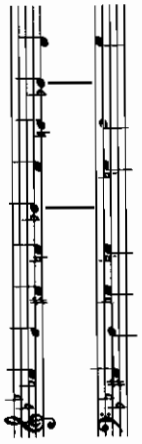


The second stanza moves from the tonic major to the "indirect but close" region of the submediant (m. 27) through the reinterpretation of motive *a* as D–D-sharp–E (5–sharp 5–6 in the tonic, 7–sharp 7–1 in the submediant minor; see ex. 14.4). The note D-sharp is the enharmonic equivalent of E-flat, flat 6 in the tonic, and the progression is in turn a deceptive cadence to flat submediant of the submediant. Moreover, the end of this stanza juxtaposes the flat 6 and sharp 4 of the submediant; C and A-sharp correspond to E-flat and C-sharp, the pitches of the "tonal problem."

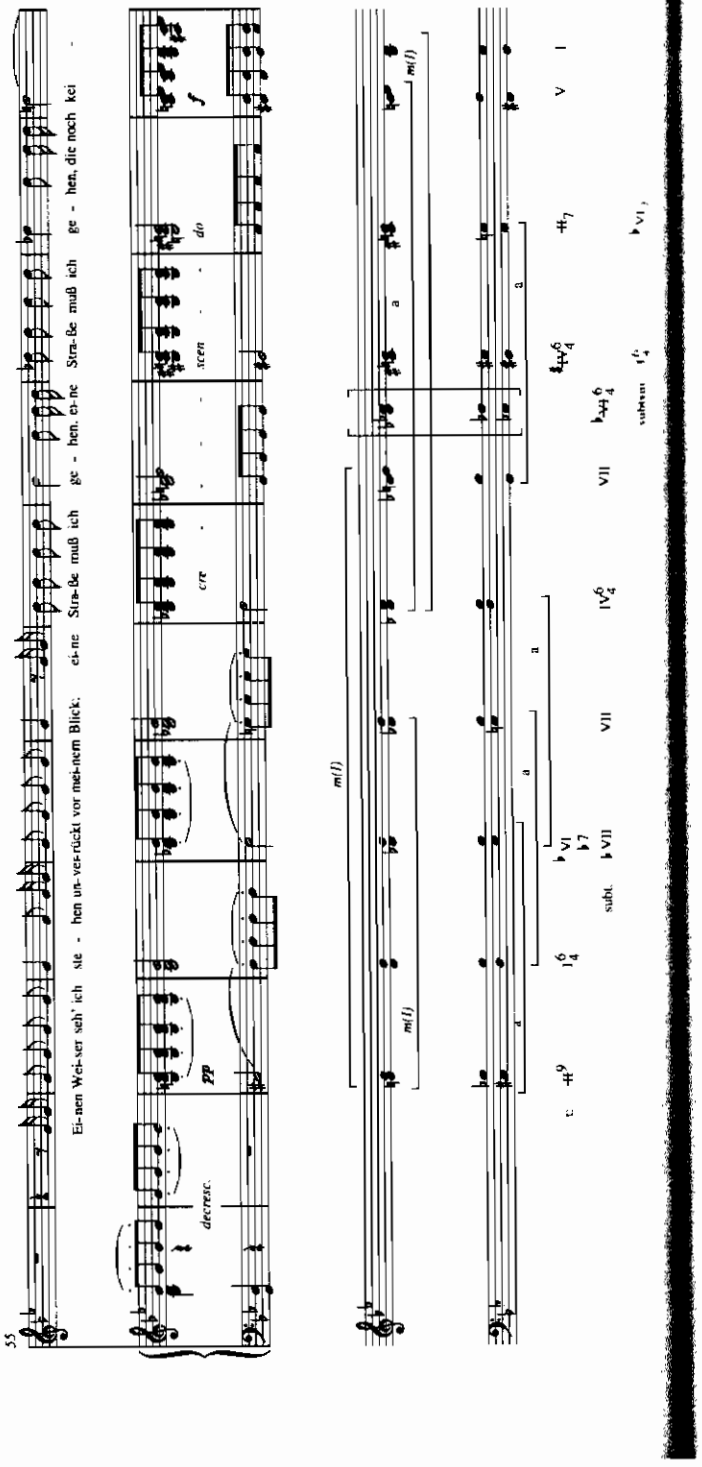
The following piano interlude moves back to the tonic minor by reversing the A–B-flat–B progression that first led to the tonic major in mm. 19–21 (see ex. 14.5). The soprano B–B-flat–A is paralleled by the tenor D-sharp–D–C-sharp, which starkly insists on the actual pitches of the "problem." The interlude ends with the same augmented sixth and dominant as the first statement of the "tonal problem," but now they form only a half cadence: the dominant is left hanging, setting the stage for a virtually exact recapitulation of the first stanza.

Example 14.6

a. The inversion between the alto in mm. 11–17 and the bass in mm. 57–62



b. Flat 6 becomes sharp 4



Flat 6 Becomes Sharp 4 in Root-Function Harmonies

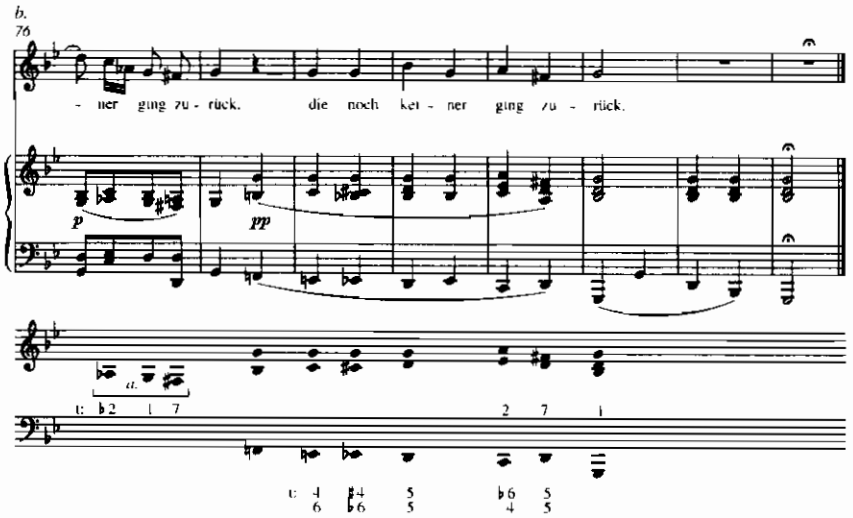
The fourth and final stanza reflects the text by introducing a chromatic succession on a rising bass, beginning on sharp 4 and going through flat 6 (C-sharp–D–E-flat) but now continuing to rise chromatically through an inversion of the alto line of mm. 11–17 (see ex. 14.6a). In this inversion, however, Schubert skipped the F-sharp of the rising chromatic line, emphasizing this change by the descent of a minor seventh before renewing his chromatic ascent with G–G-sharp–A (see ex. 14.6b). The lack of F-sharp allows mm. 60–62 to be registered most easily in the subtonic minor, mm. 57–58 in the tonic minor.

The subtonic minor region culminates on a triad built on flat 6 spelled enharmonically as C-sharp–E–G-sharp (m. 63; see ex. 14.6b), which is also interpreted on sharp 4 of the tonic! In this retransition the two functions of the "tonal problem" sharp 4 and flat 6 thus have fused harmonically—a consummate organic procedure. Furthermore, as a tonic, this chord actually resolves to its own flat submediant, which is equivalent to the dominant of the dominant,[42] thus bringing the progression back to the tonic region.

The "Tonal Problem" Dissolves

The final two chromatic progressions of the work steadily eliminate the features of the "tonal problem" by emphasizing the subdominant harmony for the first time in the piece (see exx. 14.7a and 14.7b). Here C-sharp and E-flat occur only in the context of their substitutes, C and E, which incorporate them into the diatonic framework of the rising melodic minor scale. The cadence in mm. 76–77 retains another version of the "tonal problem," A-flat–G–F-sharp (flat 2–1–sharp 7), but this too is eliminated in the final cadence where A-flat is replaced by A (see ex. 14.7b). At the same time, the thirds in the voice (B-flat–G, A–F-sharp) serve as a final reminder of the opening motives *m* and *m1* of the *Grundgestalt*, now followed not by a "tonal problem," but by the diatonic simplicity of the final tonic chords.

My analysis using Schoenberg's methods has shown how the functional manipulations of the "tonal problem," E-flat–C-sharp, have presented the moves to regions other than the tonic as well as the return to the tonic, thus shaping the song's tonal form. This form is organic: all relationships not only reflect a reinterpretation of the "tonal problem" but are hewn with respect to the motives or transformed motives and the *Hauptmotiv* introduced in the *Grundgestalt*. Both the *Grundgestalt* and the "tonal problem" encapsulate certain potentials of *Monotonalität* that are then realized and resolved in the actual song.



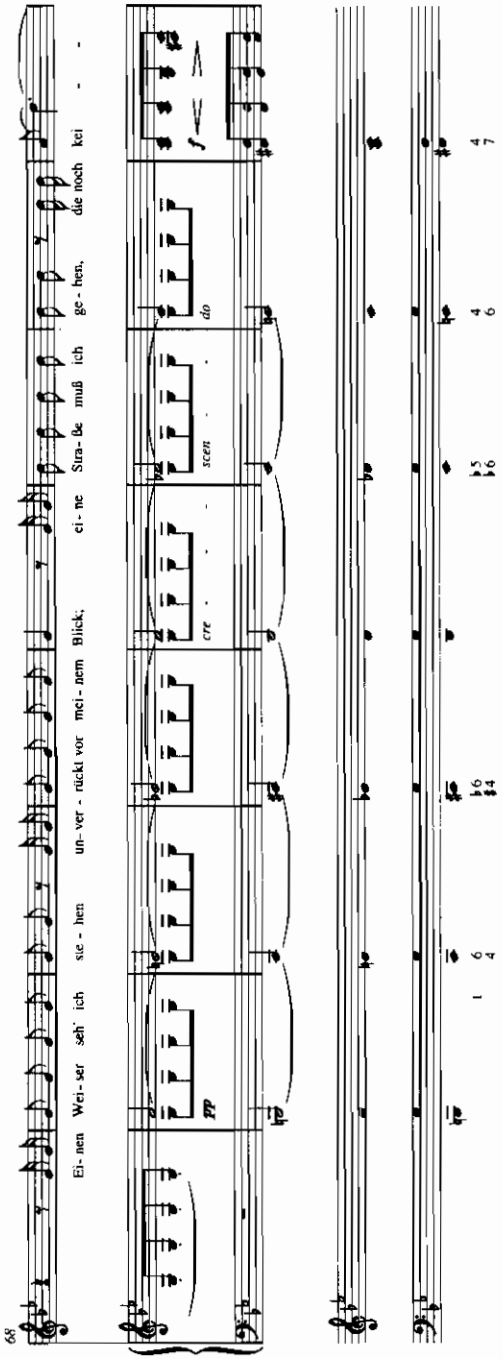
Such insights can be clarified only by the use of the analytical methods developed by Schoenberg. The true nature of his methods is becoming clear as we study his crucial "Gedanke" manuscripts, which provide the philosophical underpinning for his point of view. We now can appreciate the intellectual tradition of Goethe within which Schoenberg worked, thus demonstrating at the same time the originality of his analytical methods. The "tonal problem" is an especially suggestive and original analytical idea that can yield distinctive insights, different from those offered by that other great organic tradition of music analysis initiated by Heinrich Schenker. Schoenberg's methods of analysis remain a largely untapped resource for theorists to interpret, though Schoenberg's creative work left him little time for written analysis as such. As has been said of Goethe, Schoenberg was not only "a discerner of form, he was a maker of it."

Notes

1. "All shapes are akin and none is quite alike the other; /So to a secret law surely that chorus must point, /To a sacred enigma." In Johann Wolfgang von Goethe, *Selected Poems*, ed. Christopher Middleton (Boston, 1983), 154–55.

2. "Ich glaube, Goethe müsste ganz zufrieden mit mir sein": see Skizzenbuch V, manuscript no. 525, Arnold Schoenberg Institute, Los Angeles, which is reproduced in Leonard Stein, "The Journal and the Institute," *Journal of the Arnold Schoenberg Institute* 1, no. 1 (1976): 5, and commented on in "Letters to the Editor," *Journal of the Arnold Schoenberg Institute* 1, no. 2 (1977): 181–90.

Example 14.7 Dissolution of the "tonal problem"



3. The 1934–36 "Gedanke" manuscript appears in four loose-leaf notebooks left uncatalogued in Schoenberg's own bibliographical system and housed at the Arnold Schoenberg Institute. An edition and translation by Patricia Carpenter and Severine Neff of the work is forthcoming in *The Musical Idea and the Logic, Technique, and Art of Its Presentation: A Theoretical Manuscript by Arnold Schoenberg* (Columbia University Press).

4. It is interesting that one of the few analytical works in Schoenberg's surviving library is an application of Goethe's scientific concepts to motivic development in Beethoven: Fritz Cassirer, *Beethoven und die Gestalt* (Berlin, 1925). Unfortunately, this text is not annotated by Schoenberg. He does mention the work in a list of theoretical books that "interest him": see Arnold Schoenberg, *Letters*, ed. Erwin Stein (New York, 1964), 207.

Like Goethe, Schoenberg also wrote on nature and animals, comments curiously omitted in Josef Rufer's catalogue *The Works of Arnold Schoenberg*, trans. Dika Newlin (London, 1959): e.g., Schoenberg's manuscript no. 238, "Mathematik" (Mathematics); no. 216e, "Sprache der Tiere" (Language of Animals). Other texts like the "Vorwort" (Preface) and "Prinzipien des Aufbaus" (Principles of Construction) in the "Gedanke" manuscript emphasize the difference between art and science; but at the same time, Schoenberg's analytical vocabulary includes "Liquidation" and "Motiv," which he derived from chemistry and physics: see undated manuscript "Form," no. 180 under "Articles, Essays," in Josef Rufer's catalogue. Like Goethe, Schoenberg also investigated meteorology, keeping a diary on cloud formations and transformations, which he believed would predict the course of the First World War; for a transcription and edition, see Paul A. Pisk, "War-Clouds Diary by Arnold Schoenberg," *Journal of the Arnold Schoenberg Institute* 9, no. 1 (1937): 53–77.

Schoenberg, like Goethe, was a visual artist. In the "Gedanke" manuscript there is a large sketch of an eye, a favorite subject of Schoenberg the painter. For Goethe the eye was the most crucial organ for scientific investigation. The *Bild* (image, model) was the focal point of his studies of *Bildung* (formation) and *Umbildung* (transformation).

5. The quotation is from a 1932 letter from Webern to Schoenberg transcribed and translated in Ursula Rauchhaupt, ed., *Schoenberg, Webern, Berg: The String Quartets: A Documentary Study* (Hamburg, 1971), 31. See also Barbara Zuber, "Reihe, Gesetz, Urplanze, Nomos," in Heinz-Klaus Metzer and Riehn Rainer, eds., *Anton Webern* (Munich, 1984), 304–36; and Angelika Abel, *Die Zwölftontechnik Weberns und Goethes Methodik der Farbenlehre: Zur Kompositionstheorie und Ästhetik der Neuen Wiener Schule*, Beihefte zum Archiv für Musikwissenschaft, no. 19 (Wiesbaden, 1982).

6. Plato, *Phaedrus*, trans. W.C. Helmbold and W.G. Rabinowitz (New York, 1956), 53.

7. See G.N. Giordano Orsini, *Organic Unity in Ancient and Later Poetics* (Carbondale, Ill., 1975), 90.

8. "Die Musik in ihrer höchsten Veredlung muss Gestalt werden:" cited in Cassirer, *Beethoven und die Gestalt*, 2. For a brief history of organicism related to music, see Ruth Solie, "The Living Work," *19th-Century Music* 4, no. 2 (1980): 147–56.

9. Elizabeth M. Wilkinson, "Goethe's Conception of Form," in *Goethe: A Collection of Critical Essays*, ed. Victor Lange (Englewood Cliffs, N.J., 1968), 116.

10. Ibid., 116–17.

11. Eighteenth-century botany was heavily dependent on the mechanistic systematizations and classifications of Linnaeus. A consideration of underlying, changing patterns of natural processes offered a fresh point of view. This school of Goethe and fellow botanists-biologists such as Lorenz Oken is termed *Naturphilosophie*. The intellectual focus of *Naturphilosophie* was termed *Morphologie* by Goethe. See Charles Singer, *A History of Biology to about the Year 1900: A General Introduction to the Study of Living Things*, 3d rev. ed.(London, 1959), 215–22. For a partial English translation of the scientific works, see Johann Wolfgang von Goethe, *Scientific Studies*, ed. and trans. Douglas Miller (New York, 1988). For evaluations of Goethe's scientific work, see Sir Charles Sherrington, *Goethe on Nature and Science* (Cambridge, 1942), 23–24; and Agnes Arber, "Goethe's Botany: *The Metamorphosis of Plants* (1790) and Tobler's *Ode to Nature* (1782)," *Chronica Botanica* 10 (1946): 68. Goethe's own answer to his critics is *Venetian Epigram, No. 77* (see Goethe, *Selected Poems*, 127):

> So you dabble in botany, optics? How can you, a poet?
> Don't you feel better employed touching a sensitive heart?
> Oh, those sensitive hearts. Any charlatan knows how to touch them.
> No, let my one joy be this, Nature, to touch upon you!

12. Goethe, "Excerpt from Studies for a Physiology of Plants,'" *Scientific Studies*, 73–74. The original is in idem, *Sämtliche Werke*, vol. 24, *Schriften zur Morphologie*, ed. Dorothea Kühn (Frankfurt am Main, 1987), 351.

13. Goethe, "True Enough: To the Physicist," *Selected Poems*, 237. The manner of explication through presentation also can be shown in Schenkerian theory. For example, the existence of a diminution between the foreground and middleground levels of a piece shows no cause and effect between levels: it shows the "presentation" of the diminution. For a specific discussion of "presentation" and diminution, see Thomas Clifton, "An Application of Goethe's Concept of *Steigerung* to the Morphology of Diminution," *fournal of Music Theory* 14, no. 2 (1970): 165–89; Gary W. Don, "Goethe and Schenker," *In Theory Only* 10, no. 8 (1988): 1–14; and William Pastille, "Music and Morphology: Goethe's Influence on Schenker's Thought," in Hedi Siegel, ed., *Schenker Studies* (Cambridge, 1990), 29–44.

14. Arber, "Goethe's Botany," 85. For comments on *Anschauung*, see Goethe, "Judgment through Intuitive Perception," "Analysis and Synthesis," "The Purpose Set Forth (from *On Morphology*)," in his *Scientific Studies*, 31, 49, and 63. The originals appear in Goethe, *Sämtliche Werke*, vol. 24. For discussions of Goethe's epistemology, see Humphrey Trevelyan, "Goethe as Thinker," in William Rose, ed., *Essays on Goethe* (London, 1949); Karl Viëtor, *Goethe the Thinker* (Cambridge, Mass., 1950); also Wilkinson, "Goethe's Concept of Form," 123. For a philosophical evaluation, see Ernst Cassirer, *The Problem of Knowledge* (New Haven, 1950), 145. Cassirer saw Goethe's position as unique in Western philosophy.

15. Wilkinson, "Goethe's Concept of Form," 123. A translation and commentary on *Versuch die Metamorphose der Pflanzen zu erklären* appears in Arber, "Goethe's Botany," 90–155; for the original text, see Goethe, *Sämtliche Werke* 24:109–51.

16. Cited in Peter Salm, *The Poem as Plant: A Biological View of Goethe's "Faust"* (Cleveland, 1971), 15.

17. See Goethe, *Scientific Studies*, 65; the original appears in idem, *Sämtliche Werke* 24:392.

18. The drawings are from Singer, *History of Biology*, 391. For the reference to *Kern*, see Goethe, *Scientific Studies*, 55: "The structure in its final form is, as it were, the inner nucleus molded in various ways by the characteristics of the outer element." The original text appears in idem, *Sämtliche Werke* 24:212.

19. See Goethe, "Problems," in his *Scientific Studies*, 43; the original text is in Goethe, *Sämtliche Werke* 24:582.

20. Goethe, *Scientific Studies*, 64; the original text is in idem, *Sämtliche Werke* 24:393.

21. Arnolds Grava, *A Structural Inquiry into the Symbolic Representation of Ideas* (Paris, 1969), 27. For a philosophical discussion of organic function, see Ernst Cassirer, *Substance and Function* (New York, 1953), esp. 17.

22. Arnold Schoenberg, "Gustav Mahler," in his *Style and Idea*, ed. Leonard Stein, trans. Leo Black (New York, 1975), 449.

23. Schoenberg, "Gedanke" manuscript (see note 3 above), 156: "Auf Geistesgefiet ist alles nur Vorstufe, auch wenn es richtig."

24. Arnold Schoenberg, *Theory of Harmony*, trans. Roy E. Carter (Berkeley, 1978), 18. See idem, *Harmonielehre* (Vienna, 1911), 16.

25. Schoenberg, *Harmonielehre*, 16.

26. Ibid., 15.

27. Arnold Schoenberg, *Structural Functions of Harmony*, ed. Leonard Stein, rev. ed. (New York, 1969), 19. The original version of the chart of the regions appears in idem, "Gedanke" manuscript (see note 3 above) as an insert in the essay "Construktionelle Funktions der Harmonie" (Constructive Functions of Harmony).

28. Schoenberg, *Theory of Harmony*, 313, and idem, *Harmonielehre*, 350.

29. Schoenberg, "Prinzipien des Aufbaus" (Principles of Construction), "Gedanke" manuscript, 217.

30. David Lewin, "Inversional Balance as an Organizing Force in Schoenberg's Music and Thought," *Perspectives of New Music* 6, no. 2 (1968): 3–4.

31. Schoenberg, *Structural Functions*, 30 and 68–69. I have extended the minor chart of the regions to outlying regions.

32. The columns on my example are intended to show derivations. For a discussion of major-minor interchange, see ibid., 51.

33. Schoenberg, "Gedanke" manuscript, 42: "*Grundgestalten* sind solche Gestalten, welche (womöglich) im ganzen Stück immer wieder auftreten und auf welche abgeleitete Gestalten zurückführbar sind. [Man hat früher das Motiv so genannt; das ist aber eine sehr oberflächliche Bezeichnung; denn Gestalten und Grundgestalten sind meist aus mehreren Motivformen zusammengesetzt; das Motiv aber ist der *jeweils kleinste* Teil.]" The bracketed sentence is Schoenberg's annotation of his own text.

34. Josef Rufer, *Composition with Twelve Tones*, trans. Humphrey Searle (Westport, Conn., 1954), 32. See also idem, "Begriff und Funktion der Grundgestalt," *Bericht über den 1. Kongress der Internationalen Schönberg-Gesellschaft*, ed. Rudolf Stephan (Vienna, 1974), 173–79.

35. Arnold Schoenberg, *Models for Beginners in Composition* (New York, 1943), 15. See also "*Zusammenhang, Kontrapunkt, Instrumentation, Formenlehre*," entered in "Unfinished Theoretical Manuscript, No. 2" in Rufer, *Works of Schoenberg*, 136 and housed at the Arnold Schoenberg Institute. The manuscript reads: "[A] musical motive is a sounding, rhythmicized phenomenon that, by its (possibly varied) repetitions in the course of a piece of music, is capable of creating the impression that it is the material of the piece." ("Musikalisches Motiv ist eine tönende rhythmisierte Erscheinung, welche durch ihre [eventuell variierten] Wiederholungen im Verlaufe eines Musikstückes den Anschein zu erwecken vermag, als ob sie dessen Material sei.")

36. Schoenberg, *Theory of Harmony*, 164: "When Brahms introduces the second theme of his Third Symphony (F major [first movement]) in the key of A major, it is not because one 'can introduce' the second theme as well in the key of the mediant. It is rather the consequence of the principal motive of the bass melody (harmonic connection!) F–A-flat (third and fourth measures), whose many repetitions, derivations, and variations finally make it necessary, as a temporary high point, for the progression F–A-flat to expand to the progression F–A (F, the initial key, A, the key of the second theme). Thus, the basic motive is given by the initial key and the key of the second theme." See idem, *Harmonielehre*, 187.

Note that the term *Hauptmotiv* is synonymous with *Grundmotiv* or "basic motive," which Schoenberg most extensively described in the unpublished comment "Zur Terminologie der Formenlehre" (On the Terminology for the Theory of Form), the manuscript classified "Mus 66" by Schoenberg and housed at the Arnold Schoenberg Institute.

The idea of a motive instigating a motion and formal consequences is also generally alluded to in Schoenberg, "*Zusammenhang, Kontrapunkt, Instrumentation, Formenlehre*." Schoenberg generally described a motive as "something that gives rise to a motion. *A motion is that change in a state of rest which turns into its opposite*. Thus one can compare the motive with a driving force." (". . . etwas das zu einer Bewegung Anlass giebt. *Eine Bewegung ist jene Veränderung eines Ruhezustandes, die ihn in sein Gegenteil verkehrt*. Man kann somit das Motiv mit einer treibenden Kraft vergleichen.")

37. The "tonal problem" is discussed in Schoenberg, "Gedanke" manuscript, 15–16, 17, 35, and 89–91. See also P. Murray Dineen, "Problems of Tonality: Schoenberg and the Concept of Tonal Expression" (Ph.D. diss., Columbia University, 1988), chap. 10.

For Schoenberg's specific use of the terms "centrifugal" and "centripetal," see Arnold Schoenberg, "Prinzipien des Aufbaus," "Gedanke" manuscript, 223.

38. From an undated English manuscript left uncatalogued by Schoenberg. The comment begins: "My Subject: Beauty and Logic in Music." See Jean and Jesper Christensen, *From Schoenberg's Literary Legacy: A Catalog of Neglected Items* (Detroit, 1988), 99.

39. For a discussion of formal parts of a piece, see the following from Schoenberg, "Gedanke" manuscript: "Kontrast" (Contrast), 199; "Feste Formung" (Stable Form), 21; "Lockere Formung" (Loose Form), 27; "Gesetze der Fasslichkeit" (Laws of Comprehensibility), 55; "Die Gesetze des musikalischen Zusammenhangs" (Laws of Coherence), 65. See also idem, *Fundamentals of Musical Composition* (London, 1967), chaps. 18 and 20.

40. For documentation of Schoenberg's classroom teaching, see Gerald Strang Collection, Arnold Schoenberg Institute. For an application of an analytical methodology that takes Schoenberg's "tonal problem" into account, see Patricia Carpenter, "*Grundgestalt* as Tonal Function," *Music Theory Spectrum* 3 (1983): 15–38.

41. "Roving" harmony references many regions but does not definitively assert any one; see Schoenberg, *Structural Functions*, 3.

42. Schoenberg would call this chord a transformation on the second degree: H. The slash indicates a transformation chord.