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EVOLUTION AND UNITY IN SCHOENBERG'S

GEORGE SONGS, OP. 15

by
Jerry Mac Dean

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
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CHAPTER I

INTRODUCTION: PREMISES AND BASES

Anarchic divagator? Culminator of the thousand-year-old tradition of European polyphony? Mad abnegator? Indicator of the only valid way for the future evolution of music? These contradictory phrases and epithets, which will be put in context in the following quotations, reflect the controversy which surrounded Schoenberg during the first half of the present century. In the third edition of The Enjoyment of Music (1970), Joseph Machlis wrote:

> It is worthy of note that, like Stravinsky and Bartok, the other great innovator of our time disclaims revolutionary intent. Quite the contrary, his disciples regard him as having brought to its culmination the thousand-year-old tradition of European polyphony . . . . Schoenberg's belief in the necessity and rightness of his method sustained him and gave him the strength to carry through his revolution.[1]

Machlis correctly stated at the beginning of the quotation that Schoenberg did not consider himself a revolutionary; but, in his concluding remark about Schoenberg, Machlis mentioned Schoenberg's "revolution," clearly implying revolutionary intent and leaving

[1] Joseph Machlis, The Enjoyment of Music, (3rd ed.; New York: W. W. Norton and Company, Inc., 1970), pp. 513-14, 521.

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Schoenberg's disclaimer unheeded. Donald Grout associated revolution with Schoenberg in A History of Western Music (1960). After mentioning Schoenberg's profound influence on twentieth-century music, Grout wrote:

> The revolutionary nature of both atonality and the twelve-tone method have been much discussed, not always in good temper. Two opposing extreme views, the one erring on the side of superficiality and the other on the side of dogmatic assertion, are either that the productions of Schoenberg and his followers are a mere anarchic divagation without permanent significance; or that Schoenberg has "swallowed up the past" and shown the only possible valid way for the future evolution of music.[2]

Grout then stated arguments that he felt Schoenberg and his disciples would put forth, among them being the statement that "the 'emancipation of the dissonance' was . . . a logical evolutionary step."[3] Grout countered that the theory of evolution is irrelevant when uncritically applied to justify styles in art, and closed the discussion of Schoenberg with the following:

> To these objective considerations might be added one other of a more subjective nature; namely, that the devices introduced to compensate for lack of tonal organization tend sometimes to give the music an artificial aspect: unnatural wide leaps in the melodic line and overloaded textures or overcomplicated rhythmic constructions—in sum, despite theoretical demonstrations to the contrary, a too radical disseverence from the Western musical tradition.[4]

Both Machlis and Grout mentioned that Schoenberg did not consider his development to be revolutionary; but both of them left the

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[2]Donald Jay Grout, A History of Western Music (New York: W. W. Norton and Company, Inc., 1970), pp. 513-14.

[3]Ibid., p. 653. [4]Ibid., p. 654.

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impression that he really was a revolutionary, and that his music had little or no connection with Western musical tradition. In Music in the Twentieth Century (1966) William Austin stated the two opposing views, and then proposed an alternative.

> He believed that his emancipations fulfilled historic tendencies . . . . On the other hand, many able musicians and critics of his own time and later argue that Schoenberg's abnegations are mistakes, if not crimes or signs of madness. The two opposite views do not exhaust the possibilities. Another view attributes continuity and value to Schoenberg's development, but denies the claim that it alone represents the main stream of music history.[5]

The conflicting viewpoints mentioned by Grout and Austin are not serious issues among scholars whose primary interest is the study of twentieth-century music. Most of them share Austin's opinion that some continuity is evident in Schoenberg's development. The point to be made here is that the foregoing quotations are examples of the widespread tendency toward ambiguity in the application of terms such as "evolution," "revolution," and "continuity" to Schoenberg and his music. Machlis wrote that Schoenberg "disclaims revolutionary intent," placing in contradistinction the fact that Schoenberg's disciples considered him the culminator of "the thousand-year-old tradition of European polyphony." The connection between Schoenberg's intent and his place in the development of European polyphony is nebulous; there is not necessarily any cause and effect relationship. Grout wrote of the "revolutionary nature of both atonality and the twelve-tone method . . . ." One does not know whether he applied the

[5]William W. Austin, Music in the Twentieth Century (New York: W. W. Norton and Company, Inc., 1966), pp. 206-207.

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term "revolutionary" to relate the music to its past, to describe its effect on the future, or to suggest the intention of the composer. Austin stated that "Another view attributes continuity and value to Schoenberg's development, but denies the claim that it alone represents the main stream of music history." The significance of the term "continuity" is not clear because the term "development" is used in an ambiguous manner. In this context "development" could refer either to the process of Schoenberg's musical growth or to a style of musical composition of which Schoenberg is the main representative. Each of the three authors of these widely-read books communicated opinions about Schoenberg's relationship to Western musical tradition, but none of them clearly described either the development of Western music as influenced by Schoenberg or Schoenberg's own personal development; and none of the authors was careful to distinguish between the two developments. Vague, general statements about Schoenberg's relationship to Western musical tradition are to be expected, because statements about this subject must remain conjectural until the passage of many years provides the perspective necessary to evaluate all the musical tendencies of the twentieth century. Furthermore, if more than general statements on this topic were made, an author would need to include an extensive presentation of evidence to support his conjectures. On the contrary, the problem of continuity with regards to Schoenberg's own musical growth can be dealt with unequivocally, since the evidence lies in the music itself. Specific details about "evolution or revolution" in Schoenberg's development could be presented in very few words; and such details are necessary in order to see his stylistic changes in proper

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perspective and to understand his immense self-confidence throughout his life in the face of accusations such as those found on the first page of this study.

The failure of the above-mentioned authors to provide the necessary details concerning evolution and Schoenberg's changes of style can be attributed in part to the fact that the information is not readily available. Even though many writers have mentioned the subject, there has been no specialized investigation of stylistic evolution based on a well-defined and limited body of Schoenberg's works. Some of Schoenberg's statements suggest that such an investigation would be proper and could prove fruitful. In the essay, "Criteria for the Evaluation of Music," he revealed his preference for evolutionary change: "Has this novelty been produced through a new personality rather than through revolutionary change, through evolutionary developments rather than through frightening outbursts?"[6] In 1949 Schoenberg wrote an article, "My Evolution," in which he stressed the evolutionary nature of his "method of composing with twelve tones" and emphasized its connection with the past:

> Let us not forget that I came to this gradually, as a result of a convincing development . . . . And this organism lives as vitally on its phrases, rhythms, motifs, and melodies as ever before . . . . It is primarily a method demanding logical order and organization, of which comprehensibility should be the main result.[7]

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[6]Arnold Schoenberg, Style and Idea (New York: Philosophical Library, 1950), p. 191.

[7]Arnold Schoenberg, "My Evolution," The Musical Quarterly, XXXVIII (#6, October, 1952), p. 527.

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Earlier in the same article Schoenberg made an even more emphatic statement concerning evolution and the first of his works in which there was no tonal center:

> This first step occurred in the Two Songs, Op. 14, and thereafter in the Fifteen Songs of the Hanging Gardens [Op. 15] and in the Three Piano Pieces, Op. 11. Most critics of this new style failed to investigate how far the ancient "eternal" laws of musical esthetics were observed, spurned, or merely adjusted to changed circumstances. Such superficiality brought about accusations of anarchy and revolution, whereas, on the contrary, this music was distinctly a product of evolution, and no more revolutionary than any other development in the history of music.[8]

If Schoenberg was correct in referring to his earliest music without a tonal center as "a product of evolution," then some aspects of his previous style must have remained. He implied this in the preceding quotation when he wrote that the "laws" were observed, spurned, or adjusted. A page later Schoenberg provided more details about the observed or spurned elements:

> Coherence in classic compositions is based—broadly speaking—on the unifying qualities of such structural factors as rhythms, motifs, phrases, and the constant reference of all melodic and harmonic features to the center of gravitation—the tonic. Renouncement of the unifying power of the tonic still leaves all the other factors in operation.[9]

One of the primary goals of this study is to investigate some of the evolutionary aspects of Schoenberg's early atonal[10] style (1908); i.e. to determine to what extent certain "structural factors" were

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[8] Ibid., p. 523.

[9] Ibid., p. 524.

[10] The term "atonal" is used in this study to describe Schoenberg's works which have no tonal center indicated by a key signature, but are not serial. For further explanation, see pp. 53-56.

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altered or were retained intact during his transition from tonality to atonality.

Such insistence on continuity in his musical development by a composer who is often considered to be radical is easily understood when it is viewed as part of a larger concern: Schoenberg desired that his music possess unity, and that its unity be recognized by others. His references to logical order and organization, comprehensibility, coherence, and the unifying qualities of certain structural factors in the preceding quotations are only a few of the many instances in which he showed his concern for musical unity, and especially for unity in the absence of the "unifying power of the tonic." In writing about the three atonal opera mentioned above (Opp. 14, 15, and 11) Schoenberg made the following statement about the analysis of atonal music:

> In my Harmonielehre (1911) I maintained that the future would certainly prove that a centralizing power comparable to the gravitation exerted by the root is still operative in these pieces. In view of the fact that, for example, the laws of Bach's or Beethoven's structural procedures or of Wagner's harmony have not yet been established in a truly scientific manner, it is not surprising that no such attempt has been made with respect to "atonality."[11]

The first sentence of the foregoing quotation implies that Schoenberg was aware of the sense of inevitability imparted by the harmonic and melodic relationships in his early atonal works. Several writers have mentioned this phenomenon, but as yet all the laws governing atonal compositions still have not been established "in a truly scientific manner"; and no single "centralizing power" has

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[11]Schoenberg, "My Evolution," p. 523.

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been shown to be operative. These facts should be no deterrent for the analyst, however, if Alan Walker's sage observation is kept in mind: ". . . In listening to good music we are somehow aware of the inevitability of its thematic relationships. The problem in analysis is not to convince ourselves that unity exists, but to demonstrate its existence."[12] The other primary goal in this study is to identify and illustrate means by which Schoenberg created unity in his first atonal compositions.

Schoenberg's atonal song cycle, Fifteen Poems from "The Book of the Hanging Gardens" by Stefan George, Op. 15, is used in this study as a basis for the consideration of evolution and unity. The fifteen songs for voice and piano of Op. 15 are particularly well-suited for a consideration of evolution and unity for three main reasons: 1) compositions with texts have an important place in Schoenberg's total output through Op. 22; 2) songs for voice and piano were very significant in his development through Op. 15; and 3) Op. 15 occupies a special position in his transition to atonality. In a radio talk of 1932, "Analysis of the Four Orchestral Songs, Opus 22," Schoenberg gave as one reason for his emphasis on works with text the fact that extra-musical elements have played an important role at certain points in the history of music:

> It seemed at first impossible to find pertinent substitutes for these[procedures associated with the tonal idiom] through musical means. Unwittingly, and therefore rightly, I found help where music always finds it when it has reached a crucial point in its development . . . . No new procedure in the history of music!—at each renewal or increase of musical materials, it

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[12]Alan Walker, A Study in Musical Analysis (London: Barrie and Rockliff, 1962), p. 48.

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> is assisted by feelings, insights, occurrences, impressions and the like, mainly in the form of poetry—whether it be in the period of the first operas, of the lied, or of program music.[13]

Schoenberg gave details about how texts could serve music in a lecture of 1941, "Composition with Twelve Tones." Referring to the use of texts in his atonal works, he stated:

> A little later I discovered how to construct larger forms by following a text or a poem. The differences in size and shape of its parts and the change in character and mood were mirrored in the shape and size of the composition, in its dynamics and tempo, figuration and accentuation, instrumentation and orchestration. Thus the parts were differentiated as clearly as they had formerly been by the tonal and structural functions of harmony.[14]

His dependence on texts in his tonal and atonal compositions is illustrated by the fact that seventeen of his first twenty-two opera make some use of a text or a program.

Schoenberg's songs for voice and piano deserve mention as a separate group apart from his other compositions making use of texts because of their great number and their significance in his development. Between 1893 and early 1909 he wrote seventy-one songs for voice and piano.[15] Almost half of these are early, unpublished songs, but thirty-nine of them were published as Opp. 1, 2, 3, 6, 12, 14, and 15. All these published songs were recently made available in one volume.[16] Schoenberg composed songs for voice and piano at

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[13]Arnold Schoenberg, "Analysis of the Four Orchestral Songs, Opus 22," Perspectives on Schoenberg and Stravinsky (Princeton: Princeton University Press, 1968), p. 27.

[14]Schoenberg, Style and Idea, p. 106.

[15]The songs are listed below in Chapter II.

[16]Arnold Schoenberg, Lieder mit Klavierbegleitung, ed. Josef Rufer. Series A. part I, Vol I of Arnold Schoenberg Sämtliche Werke

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fairly regular intervals during the years 1896-1909, their spacing being such that the longest period between songs is eighteen months, except for one longer period between 1900 and 1903. The regular spacing is helpful in tracing his stylistic development through Op. 15. Schoenberg emphasized some of these songs in his writings. In Structural Functions of Harmony[17] he used portions of Op. 6, Nos. 7 and 8, as examples of extended tonality; and he mentioned Opp. 12 and 14 in connection with the transition to atonality.[18] Another factor indicates that the songs for voice and piano may have had a special function in Schoenberg's evolution to atonality. After Op. 15 he wrote only three more songs for voice and piano, the three tone-row songs of Op. 48 (1933). This sudden neglect of the genre which he had used so extensively suggests that it had served some purpose and was no longer needed. Because of their importance in Schoenberg's development and their abundance and regular appearance in his output through early 1909, the songs with voice and piano are used in this study to illustrate stylistic continuity in his evolution from tonality to atonality.

The following quotation from Schoenberg's program notes for the first performance of Op. 15 reveals the special position these fifteen songs occupy in his development:

(Mainz: B. Schott's Sohne; Wien: Universal Edition A G, 1966). This volume also contains the three tone-row songs of Op. 48, two previously unpublished songs (Gedenken and Am Strande), and four settings of German folk songs.

[17]Arnold Schoenberg, Structural Functions of Harmony, revised ed. (New York: W. W. Norton and Company, Inc., 1969), pp. 110-112.

[18]Schoenberg, "My Evolution," pp. 522-523.

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> In the George Lieder I have succeeded for the first time in approaching an ideal of expression and form that had hovered before me for some years. Hitherto I had not sufficient strength and sureness to realize that ideal. Now, however, that I have definitely started on my journey, I may confess to having broken off the bonds of a bygone aesthetic . . . .[19]

Schoenberg's statement clearly establishes Op. 15 as a major turning-point in his musical growth, but his confession "to having broken off the bonds of a bygone aesthetic" raises questions such as: If Schoenberg's development possessed continuity, would not some aspects of the bygone aesthetic remain? Did each of the songs differ from past music to the same degree? How did Schoenberg make individual songs comprehensible and create from the fifteen parts an intelligible whole without traditional means of organization? Consideration of evolution and unity in Op. 15 helps to answer these questions.

The importance of Op. 15 has been recognized by other writers, and some aspects of the songs have been discussed. Jean Wilson Zeiger[20] and Andrew Broekema, Jr.[21] described them in general terms, along with vocal works of Berg and Webern. Philip Friedheim, in his excellent study "Tonality and Structure in the Early Works of Schoenberg,"[22] dealt with structural principles and some compositional

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[19]Egon Wellesz, Arnold Schönberg, trans. W. H. Kerridge (London: J. M. Dent and Sons, Ltd., 1925), p. 26.

[20]Jean Wilson Zeiger, "Early Expressionistic Songs" (unpublished M.A. thesis, University of California at Berkeley, 1959).

[21]Andrew Broekema, Jr., "A Stylistic Analysis and Comparison of the Solo Vocal Works of Arnold Schoenberg, Alban Berg, and Anton Webern" (unpublished Ph.D. dissertation, University of Texas, 1962-63).

[22]Philip Friedheim, "Tonality and Structure in the Early Works of Schoenberg" (unpublished Ph.D. dissertation, Department of Music, New York University, 1963).

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techniques in the Op. 15 songs; and John C. Crawford[23] explored the relationship between text and music in them. In a German publication K. H. Ehrenforth[24] described Schoenberg's progress toward atonality in the tonal and tonally-extended songs and provided significant data concerning the text, form, and some recurring devices in Op. 15. Although the authors of these studies wrote at length about certain aspects of Op. 15, there are still several techniques and procedures which demand further investigation. One of these is a technique which Schoenberg considered very important: developing variation.

Schoenberg refers to developing variation at least six separate times in his writings. The following quotations explain Schoenberg's use of the term and the significance of the term for the present study. In the essay "New Music, Outmoded Music, Style and Idea," Schoenberg treats the development of early classical style in the mid-eighteenth century. After criticizing Handel's contrapuntal technique, Schoenberg mentions developing variation in connection with Bach and the classicists:

> In contrast, even Bach's transitional and subordinate sections are always full of character, inventiveness, imagination, and expression. Though his subordinate voices never degenerate into inferiority, he is able to write fluent and well balanced melodies of more beauty, richness, and expressiveness than can be found in the music of all those Keysers, Telemanns, and Philipp Emanuel Bachs who called him outmoded. They, of course, were not capable of seeing that he was also the first to

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[23] John C. Crawford, "The Relationship of Text and Music in the Vocal Works of Schoenberg, 1908-1924" (unpublished Ph.D. dissertation, Department of Music, Harvard, 1963).

[24] K. H. Ehrenforth, Ausdruck und Form: Schönberg's Durchbruch zur Atonalität in den Op. 15, Vol. 18 of Abhandlung zur Kunst-, Musik- und Literaturwissenschaft (Bonn: H. Bouvier und Co. Verlag, 1963).

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> introduce just that technique so necessary for the progress of their New Music: the technique of "developing variation," which made possible the style of the great Viennese Classicists.[25]

Schoenberg gave evidence of his respect for, and knowledge of, the music of the Viennese classicists at several different times. In the following quotation, from "Introduction to My Four Quartets," Schoenberg readily admits Beethoven's influence on him and sets forth some of the components of developing variation.

> It may perhaps interest an analyst to learn that I received and took advantage of the tremendous amount of advice suggested to me by a model I had chosen for this task [the String Quartet, Op. 7]: the first movement of the Eroica symphony . . . . I learned, from the Eroica, solutions to my problems: How to avoid monotony and emptiness, how to create variety out of unity, how to create new forms out of basic material, how much can be achieved by slight modifications if not by developing variation out of rather insignificant little formulations.[26]

In his essay, "Folkloristic Symphonies," Schoenberg compares virtuoso variations with sets of variations making use of developing variation. He reveals that the term can be applied to a large body of music, not solely to variation technique; and that it refers to a basic way of deriving musical material.

> In [virtuoso] variations there is seldom any other development than velocity and no other change than the figuration of the instrumental style . . . . In the artistically superior compositions of this kind the "motive of the variation," as I called it, is derived through "developing variations" of basic features of the theme and its motive. Thus, in fact, the same compositorial procedure can be observed here as anywhere else in our established Western music, producing the thematic material for forms of all sizes: the melodies, main and subordinate

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[25] Schoenberg, Style and Idea, p. 43.

[26] Schoenberg, "Introduction to My Four Quartets," program notes for performances by the Julliard String Quartet at Times Hall, New York, January-February, 1950.

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themes, transitions, codettas, elaborations, etc., with all the necessary contrasts.[27]

Finally, in his essay, "Criteria for the Evaluation of Music," he uses as one of his main criteria the presence or absence of exact repetition, at pitch or transposed. In the first paragraph of the following quotation he compares Brahms and Wagner in the light of developing variation; in the second paragraph he bemoans the decline of the technique; and in the third he states that he and others created a "new technique." Schoenberg implies, by his criticism of composers of his time who did not make use of developing variation, that the "new technique" was actually a revival of developing variation.

> While preceding composers and even his contemporary, Johannes Brahms, repeated phrases, motives and other structural ingredients of themes only in varied forms, if possible in the form of what I call developing variation, Wagner, in order to make his themes suitable for memorability, had to use sequences and semi-sequences, that is, unvaried or slightly varied repetitions differing in nothing essential from first appearances, except that they are exactly transposed to other degrees.
>
> Why there is a lesser merit in such procedure than in variation is obvious, because variation requires a new and special effort. But the damage of this inferior method of construction to the art of composing was considerable. With very few exceptions, all followers and even opponents of Wagner became addicts of this more primitive technique: Bruckner, Hugo Wolf, Richard Strauss, and even Debussy and Puccini.
>
> A new technique had to be created, and in this development Max Reger, Gustav Mahler, and also I myself played a role. But the destructive consequences did not cease because of that. And unfortunately many of today's composers, instead of connecting ideas through developing variation, thus showing consequences derived from the basic idea and remaining within the boundaries of human thinking and its demands of logic, produce compositions which become longer and broader only by numerous unvaried repetitions of a few phrases.[28]

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[27] Schoenberg, Style and Idea, pp. 201-202.

[28] Ibid., pp. 185-187.

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According to the preceding excerpts from Schoenberg's writings, music employing developing variation should have the following characteristics:

1) variety stemming from an overall unity;

2) basic material transformed into new material;

3) significant formulations achieved by slight modifications of "rather insignificant formulations";

4) developing variation of basic features of the theme and its motive in order to produce the thematic material for the form, whatever its size; and

5) repetition of phrases, motives, and other structural ingredients of themes only in varied forms.

These are precisely the characteristics one observes in the songs of Op. 15. The term "developing variation," then, is used in the present study to denote a method of deriving musical material in which the opening measures provide a basis for a large part of the remainder of the composition, and in which exact repetition of extensive passages is generally avoided. A tendency toward avoidance of exact repetition is pointed out below (pp. 28-36) in connection with Schoenberg's early, unpublished songs; and by the year 1899 Schoenberg had achieved remarkable skill in varying and interrelating musical events, as is shown below (pp. 151-161) in an analysis of Op. 2, #2. Schoenberg had confidence that unity would accrue from the employment of developing variation, and he employed it in his earlier songs as well as in Op. 15; therefore, an investigation of developing variation is an appropriate basis for the study of evolution and unity in Op. 15.

Summary

The quotations on the first three pages of this study exhibit two unfortunate traits in their references to "revolution" or

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"evolution" in the process of Schoenberg's musical growth: ambiguity and lack of specific information. The likelihood of the appearance of these traits in future writings about Schoenberg would be lessened if a specialized study of stylistic evolution based on a well-defined and limited body of Schoenberg's works were made readily available. Several passages in Schoenberg's writings suggest that such a study could be fruitful and that his transition to atonality was, in fact, evolutionary. One goal of this study is to investigate some of the evolutionary aspects of Schoenberg's early atonal style. Another aspect of Schoenberg's first atonal compositions which has not been fully explored is that of unity. Schoenberg showed his concern for musical unity in almost all his writings, and he implied the presence of unity in his first atonal pieces by mentioning a "centralizing power" at work in them. The other goal in this study is to investigate some of the unifying factors in Schoenberg's early atonal works.

The atonal Op. 15, which contains fifteen songs for voice and piano, is appropriate for this study because of Schoenberg's admitted reliance on texts, the significance and abundance of songs for voice and piano in Schoenberg's creative output through Op. 15, and the special position occupied by Op. 15 in Schoenberg's transition to atonality. The atonal songs will be approached through a consideration of developing variation, a technique that was a part of Schoenberg's style before, during, and after the time of Op. 15.

In short, the premises of this study are that Schoenberg's development from tonality to atonality was evolutionary, and that unity was achieved in Schoenberg's first atonal compositions. The

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ramifications of these premises will be explored on the bases of Schoenberg's Op. 15 and the technique of developing variation.[29]

Procedures

At the beginning of Chapter III terminology necessary for the analysis of atonal music is presented. A nomenclature based on themes and motives is devised for the description of repeated melodic segments of ordered pitches, and the terms associated with set theory as applied to music are defined; then, thematic and motivic phenomena and certain aspects of pitch sets are illustrated in the songs of Op. 15 and Am Strande. In Chapter IV a tonal song, an early Op. 15 song, and a late Op. 15 song are compared; and unity in Op. 15 as a whole is mentioned. Since the consideration of the atonal songs in Chapters III and IV is limited to subjects directly related to the premises of this study, these chapters contain little information about stylistic developments in Schoenberg's songs before 1908. However, some knowledge of the earlier songs is necessary in order to put the atonal songs in proper perspective. The following grouping and discussion of Schoenberg's songs for voice and piano in terms of stylistic changes presents pertinent facts about the earlier songs and deals with some aspects of ordering and compositional techniques in the atonal songs.

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[29]The consideration of developing variation in this study leads to an analysis of processes of transformation, and therefore to the discovery of an important change in Schoenberg's use of pitch material in Op. 15.

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CHAPTER II

CHRONOLOGICAL ORDERING AND STYLISTIC EVOLUTION

This chapter is concerned primarily with stylistic evolution in the songs[1] and secondarily with dates of composition of them. Both these topics have been dealt with in conjunction with all of Schoenberg's early works by Philip Friedheim[2], and neither of them is directly related to the main goals of this study. However, the information presented here should be useful to the reader. Only in this chapter will emphasis be placed on chronology; following chapters will emphasize specific procedures and devices. Reference to a song as an example of a procedure or device will be more meaningful to the reader if he has at least a general idea of the song's date of composition and, therefore, of some of its stylistic characteristics. In the first of the two main sections of this chapter problems of chronological ordering are discussed, and a complete list of songs is presented. The second section consists of a discussion of some of Schoenberg's stylistic traits and a justification for the categories established in the first section.

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[1]Henceforth "songs" will mean "Schoenberg's songs for voice and piano" unless otherwise qualified.

[2]Philip Friedheim, "Tonality and Structure in the Early Works of Schoenberg" (unpublished Ph.D. dissertation, New York University, 1963).

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Chronological Ordering

There are several problems connected with ordering in Schoenberg's early songs. Many of them are not published, and several of the original manuscripts are not dated. Even some of the published and dated songs are problematic, because the dates given seem to contradict stylistic evidence. These songs (discussed in the second section of this chapter) seem to have been slightly revised or prepared for publication on the date given, but composed earlier. The fact that the order of Opus numbers in Opp. 1, 2, and 3 does not necessarily reflect the order of composition may add to the puzzlement of both chronologist and reader. An attempt at placing the problematic songs in order of composition was made by comparing their characteristics with features of specific dated songs and with characteristics shared by a large number of later songs. The comparisons are mentioned in the second section of this chapter. Stylistic criteria are not always reliable guides for determining exact dates of composition, however. The problems mentioned above make exact dating impossible at this time.

Fortunately, exact chronological ordering is not essential to the primary concern here: stylistic evolution. Only grouping of songs according to time spans of several years' duration is necessary. That larger grouping is provided by Schoenberg himself; and, although a composer's evaluation of his own development cannot always be accepted without question, stylistic evidence supports Schoenberg's contentions. Schoenberg's statements defining his periods follow, after which the periods will be presented in the form of a list. The earliest group must be the early, unpublished

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songs, which Schoenberg ignored in all descriptions of his own compositions that this writer has seen. He gave dates for his first period when he wrote: "The climax of my first period is definitely reached in the Kammersymphonie, Op. 9."[3] (1906) and "Extended tonality is also characteristic of my first period (1896-1906) . . . ."[4] He provided a dividing point in this unwieldy period when he wrote: "Climaxing this period [of fascination with Mahler and Strauss] were 'Transfigured Night," Op. 4, and 'Pelleas and Melisande,' Op. 5."[5] The completion date of Pelleas (February, 1903) divides the long "first period" into two shorter ones, which could be called "Tonality" and "Extended Tonality." The following quotation from Schoenberg dates the beginning of his second period:

> My Two Ballads, Op. 12, [1907] were the immediate predecessors of the Second String Quartet, Op. 10 [1908] which marks the transition to my second period . . . . The first step occurred in the Two Songs, Op 14 [1908] . . . .[6]

The third period (serialism) begins around 1923. Schoenberg's compositions between 1923 and his death in 1951 should not be forced into one "period," but his later stylistic changes are not pertinent here. Only three serial songs for voice and piano (Op. 48,

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[3]Schoenberg, "My Evolution," The Musical Quarterly, XXXVIII (#6, October, 1952), p. 521.

[4]Arnold Schoenberg, Structural Functions of Harmony, Rev. ed., trans. Leonard Stein (New York: W. W. Norton and Company, Inc., 1969), p. 194.

[5]Arnold Schoenberg, "Introduction to My Four Quartets," program notes for performances by the Julliard String Quartet at Times Hall, New York, January-February, 1950.

[6]Schoenberg, "My Evolution." p. 522-523.

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1933) appeared after 1909, and consideration of Schoenberg's development between 1909 and 1933 is outside the scope of this study. The left-hand column of the following list presents the periods according to Schoenberg, with songs they encompass; and the right-hand column contains the grouping which will be used in the more detailed list which follows this general one.

Before 1896—Early, Unpublished Songs (See detailed list.)	I. Unpublished Tonal Songs and Fragments: Undated (c. 1893-1896)
	II. Unpublished Tonal Songs: Dated (1893-1897)
1896-1903—Tonality Opp. 1, 2, and 3	III. Tonal Songs Synchronous with Op. 1 (1897-1898)
	IV. Tonal Songs Synchronous with Op. 2 (1899-1900)
1903-1907—Extended Tonality Opp. 6, 12, and 14 and Gedenken	V. Early Tonally-extended Songs (1903-1904)
	VI. Late Tonally-extended Songs (1905)
	VII. Transitional Songs (1907-1908)
1908-1923—Atonality Op. 15 and Am Strande	VIII. Atonal Songs (1908-1909)
1923-1951—Serialism Op. 48	IX. Tone-row Songs (1933)

The following list contains all of Schoenberg's known songs for voice and piano. The ordering, which is by date of composition as nearly as can be determined at this time, may be incorrect in a few cases, due to the problems mentioned above. Twenty-two of the early songs were not available for inspection, though all but one

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are listed in Rufer's catalog of Schoenberg's works.[7] They are identified in the following list by asterisks. These songs are not available for study at this time because they are part of Schoenberg's private library, now in possession of his heirs, a collection which will be open to scholars after it is suitably and permanently housed. The one other song not seen by this writer is "Schilflied," a song composed in 1893 or 1895.[8]

A few of Schoenberg's early unpublished songs and fragments are available for study. Five song fragments, six complete songs, and one song which is probably not complete are in the Schoenberg-Nachod Collection[9] at North Texas State University in Denton. These fragments and songs are included at the beginning of the list, along with their numbers in the collection. No effort has been made to order the fragments chronologically. None of these fragments and songs is catalogued by Rufer.

Six incomplete songs are included in Rufer's catalog; they are not listed below.

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[7]Joseph Rufer, The Works of Arnold Schoenberg, trans. Dika Newlin (London: Faber and Faber Ltd., 1962), pp. 98-99.

[8]Willi Reich, in his book Arnold Schoenberg (Wien-Frankfurt-Zurich: Verlag Fritz Molden, 1968), p. 15, states that the song, composed in 1893, was awarded a prize by Alexander von Zemlinsky's society "Polyhymnia." H. H. Stuckenschmidt, in his biography Arnold Schoenberg, trans. Edith Temple Roberts and Humphrey Searle (London: John Calder, 1959), p. 18, also mentions the prize, but gives the date "about 1895."

[9]For an article describing this important collection see Dika Newlin, "The Schoenberg-Nachod Collection: A Preliminary Report," The Musical Quarterly, LIV (#1, Jan., 1968), pp. 31-46.

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I. Unpublished Tonal Songs and Fragments:

Undated (c. 1893-1896)

Duftreich ist die Erde, fragment of 24 measures (Schoenberg-Nachod Collection Piece 139, Item 80).

Gute Nacht, fragment of 5 measures, text by Ludwig Pfau (Schoenberg-Nachod Collection Piece 143, Item 91).

Das Ungluck und das Missgeschick, fragment of 22 measures (Schoenberg-Nachod Collection Piece 143, Item 92).

Das gefärbte Osterei, fragment of 4 measures, text by Martin Greif (Schoenberg-Nachod Collection Piece 144, Item 94).

Vorfruhling, fragment of 8 measures, text by (Paul) Heyse (Schoenberg-Nachod Collection Piece 146, Item 96).

Das zerbrochene Krüglein, text by Martin Greif (Schoenberg-Nachod Collection Piece 144, Item 93).

Mein Schatz ist wie ein Schneck (Schoenberg-Nachod Collection Piece 140, Item 85).

Nur das tut mir so bitter weh (Schoenberg-Nachod Collection Piece 141, Item 86).

Warum bist du aufgewacht (Schoenberg-Nachod Collection Piece 143, Item 90).

Das gestern eine Wespe Dich (Schoenberg-Nachod Collection Piece 142, Item 88).

Juble, schöne junge Rose, probably incomplete (Schoenberg-Nachod Collection Piece 142, Item 89).

Ich grüne wie die Weide grünt, text by Wilhelm Wackernagel (Schoenberg-Nachod Collection Piece 141, Item 87).

*Eleven Erste Lieder, apparently written before 1896, the last incomplete.

*Lied der Schnitterin

*Wanderlied

*Ecloge

*Waldesnacht

*Mannesbangen

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II. Unpublished Tonal Songs: Dated (1893-1897)

In hellen Träumen, Schoenberg's first song, composed summer 1893.[10]

Schilflied, 1893 or 1895.[11]

Mädchenlied and Sehnsucht, MS dated "9. Marz 1896"[12]

*Mädchenfrühling and *Nicht Doch!, written together, the first dated "15/9.97."

III. Tonal Songs Synchronous

with Op. 1 (1897-1898)

Op. 3, #4, Hochzeitslied, MS undated, but probably composed in 1897 or 1898.

Op. 3, #6, Freihold, completed MS dated "20./11.900," but probably written in 1898.

Op. 1, two songs, Dank and Abschied, MS undated, but probably composed in 1898.

Op. 3, #1, Wie Georg von Frundsberg von sich selber sang, completed MS dated "18. März 1903," but probably written in 1898.

IV. Tonal Songs Synchronous

with Op. 2 (1899-1900)

*Song, text by Hofmannsthal "less to be sung than to be declaimed...," MS dated "2./4.99."

Op. 3, #3, Warnung, MS dated "7./5.99."

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[10]Only the first page (12⅔ measures) of this song is available. The page is reproduced in Arnold Schoenberg zum 60. Geburtstag (Wien, 1934), fac. p. 32.

[11]See footnote 8 above.

[12]These two songs are not included in Rufer's catalogue. A photostat of the MS is in the Library and Museum of the Performing Arts, the New York Public Library at Lincoln Center, 111 Amsterdam Avenue, New York, N. Y. , 10023.

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Op. 2, #1, Erwartung, MS dated "9./8.99."

Op. 2, #2, Schenk mir deinen goldenen Kamm, MS undated, but probably composed in 1899.

Op. 2, #3, Erhebung, MS dated "16./XI.99."

Op. 2, #4, Waldsonne, MS undated, but probably composed in 1899.

*Gruss in die Ferne, MS dated "19.August 1900."

V. Early Tonally-extended Songs (1903-1904)

*Deinem Blick mich zu bequemen, MS dated "3. Jänner 1903."

Op. 3, #5, Geubtes Herz, MS dated "2./9.1903."

Op. 3, #2, Die Aufgeregten, MS dated "9./11.1903."

Op. 6, #1, Traumleben, MS dated "18./12.1903."

Op. 6, #4, Verlassen, MS dated "19./12.1903."

Op. 6, #5, Ghasel, MS dated "23./1.1904."

VI. Late Tonally-extended Songs (1905)

Op. 6, #2, Alles, MS dated "6./9.1905."

Op. 6, #8, Der Wanderer, MS dated "15./10.1905."

Op. 6, #6, Am Wegrand, MS undated, but Wellesz[13] gives Oct. 18, 1905.

Op. 6, #7, Lockung, MS undated, but Wellesz[14] gives Oct. 26, 1905.

Op. 6, #3, Mädchenlied, MS undated, but Wellesz[15] gives Oct. 28, 1905.

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[13]Egon Wellesz, Arnold Schoenberg, trans. W. H. Kerridge (London: J. M. Dent and Sons, Ltd., 1925), p. 22.

[14]Ibid.

[15]Ibid.

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VII. Transitional Songs (1907-1908)

Op. 12, #2, Der verlorene Haufen, MS has "15./3.1907" as beginning date, with "April 1907" at the end.

Op. 12, #1, Jane Grey, MS dated "28./4.1907."

Op. 14, #2, In diesen Wintertagen, MS dated "2./II.1908."

Gedenken, no date available, but probably composed in 1908.[16]

Op. 14, #1, Ich darf nicht dankend, MS undated; although Wellesz[17] gives Dec. 17, 1907, as the beginning date, it appears to have been written after Op. 14, #2.

VIII. Atonal Songs (1908-1909)

Op. 15, Das Buch der hängenden Gärten, 15 songs; MS not dated, but sketches of #13 dated "27./9.1908" and of #15 "28./2.1909."

A. Early Op. 15 songs: Nos. 3, 4, 5, and 10.

B. Middle Op. 15 songs: Nos. 1, 2, 6, 8, and 12.

C. Late Op. 15 songs: Nos. 7, 9, 11, 13, 14, and 15.

Am Strande, MS dated "8./2.1909."[18]

IX. Tone-row Songs (1933)

Op. 48, #1, Sommermüd

Op. 48, #2, Tot

Op. 48, #3, Mädchenlied

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[16]This song (not listed by Rufer) is published for the first time in the first volume of Schoenberg's Sämtliche Werke.

[17]Wellesz, Arnold Schoenberg, p. 25.

[18]This song is published for the first time in Schoenberg's Sämtliche Werke. The problem of its date of composition is discussed below.

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Stylistic Evolution in the Songs

The following summary of selected characteristics of Schoenberg's songs is organized according to the categories used in the preceding list. The word "selected" is appropriate here because changes in all aspects of the songs are not discussed below. A complete presentation of the developments in rhythm, harmony, dynamics, text-setting, etc., would be outside the scope of this summary. Only those traits pointing to evolutionary development, linear emphasis, or procedures in the atonal songs are emphasized. Since one of the purposes of this stylistic study is to justify and explain the ordering of some of the songs, there will be frequent references (by Opus and number only) to songs in the preceding list. The reader may want to consult the list occasionally for full titles and exact dates of songs.

No attempt is made below to describe every song. Instead, characteristics of groups of songs are presented. However, each of the unpublished songs is described briefly.

I. Unpublished Tonal Songs and Fragments: Undated (c. 1893-1896)

The only songs (fragments will not be discussed here) of this category which are available are the songs of the Schoenberg-Nachod Collection at North Texas State University in Denton. Although they cannot be put in proper perspective until the other early songs in Schoenberg's private library are available for study, or until more biographical information about Schoenberg's early years comes to light, they do provide important information

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about his early style. The manuscripts are not dated, but the songs are clearly very early. Dika Newlin is referring to the Schoenberg-Nachod Collection when she writes "...the first creative efforts of the self-taught teen-age composer...."[19] Exactly how early the songs are and in what order they were composed cannot be established at this time, but a comparison of traits of these songs with general traits of Schoenberg's later songs is intriguing and informative. The study of his development from tonality to atonality is a study of gradually increasing complexity of almost all musical elements and procedures. If one makes a chart comparing each of the undated songs with three aspects of Schoenberg's later style—harmony, texture, and form—the result is an ordering of the songs according to increasing complexity. The chart (p. 29) is included here because it is a concise way to present information about structure and content. The songs will be discussed below in the order in which they appear in the chart.

Das zerbrochene Krüglein (24 mm., $\frac{2}{4}$, "a" minor, poem by Martin Greif) is different in many ways from the other songs in the Schoenberg-Nachod Collection. It is unlike any other published or unpublished Schoenberg song this writer has seen. Characteristics that indicate an early (c. 1891-1894) date of composition are:

1. Both this song and the four-measure fragment "Das gefärbte Osterei" (written on the same double sheet) are written in pencil; all the other MSS seen by this writer are in ink.

2. The accompaniment consists of a strong, isolated bass line with chordal off-beats. The fragment mentioned above is

[19] Newlin, "The Schoenberg-Nachod Collection," p. 32.

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Characteristics of Some of Schoenberg's

Early Unpublished Songs

Stylistic traits of Schoenberg's later songs:	tonally ambiguous beginning; chromatic	contrapuntal, with developing variation	fairly complex form; little exact repetition
1. Das zerbrochene Krüglein:	begins on tonic; very chromatic	mostly homophonic, but motivic	through-composed; little exact repetition
2. Mein Schatz:	begins with 2 mm. of tonic; simple harmony	mostly homophonic	strophic; intro. repeated at end
3. Nur das tut:	begins on tonic; simple harmony	mostly homophonic, but motivic	strophic effect, but intro. and 2nd stanza changed some
4. Warum bist du:	begins on tonic; long chromatic line	mostly homophonic, but subtle use of theme	strophic, but written out; intro. altered at end
5. Das gestern:	begins on subdominant; slightly more chromatic	mostly homophonic; subtle ending	not strophic, but intro. in middle and end
6. Juble, schone: (probably incomplete)	tonally ambiguous beginning; chromatic	contrapuntal	through-composed; no exact repetition
7. Ich grüne:	begins on ii$^{\circ 7}$; distant modulations	constant arpeggiation gives effect of counterpoint	ABA form; intro. occurs 4 times

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especially simplistic, with its chordal "♭ ♭♭ ♭" accompaniment.

3. The vocal line has very little rhythmic variety.

4. The 32nd notes in mm. 3-4 (see Ex. 4 below) seem rather forced; and 32nd notes are not used anywhere else in the song. Their appearance at the words "Es ging im Scherben." ("It broke to pieces.") seems naive, considering Schoenberg's later aversion to such pictorialism.

5. Descending stems are drawn on the left side of the note-heads, a peculiarity shared with one other song—In hellen Traumen, 1893!

The following facts might suggest a later origin:

1. There is no introduction. All the other early unpublished songs have one, but some later songs do not.

2. The song is quite chromatic. There are many secondary dominants, including a short modulation to b♭ minor (as in another "a" minor song Ich grüne wie die Weide grünt). The first chord is tonic, but it is not re-established until the end.

3. The poet and poem title are given, unlike the other early songs.

The words "Sehr gut" are written in another hand after the last measure, indicating that Schoenberg sought another's opinion of his work. Dika Newlin asks if the teacher might not be Alexander Zemlinsky. This would not date the song, however, since Schoenberg knew Zemlinsky before 1895 and was still seeking his criticism in 1897. Ex. 1 presents the beginning of the song.

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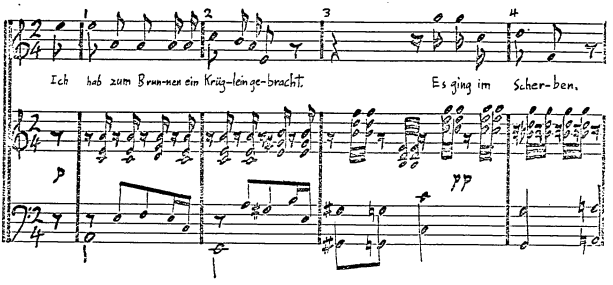
Ex. 1—Das zerbrochene Krüglein, unpublished, mm. 1-4.



There was some difficulty at first in determining whether Das zerbrochene Krüglein was an early experiment or a later reject. A glance at the chart above shows that the song has chromaticism and little repetition, as in later songs. However, the notational error it has in common with In hellen Traumen (1893) indicates an early origin.

Mein Schatz ist wie ein Schneck (25 mm., repeated with first and second endings, $\frac{2}{4}$, D major, marked "Frisch, nicht zu rasch") is probably a Viennese folk text, according to Dr. Otto Graf of the University of Michigan, since "Schneck" (snail) is feminine in North German. The tune is so simple and straightforward that it might be taken from a folk song, and the accompaniment consists of a strong bass line with chords in offbeat sixteenth notes in the right hand.

Nur das tut mir so bitter weh (24 mm., $\frac{4}{4}$, g minor) is basically strophic, but a few chords which are stated vertically in the

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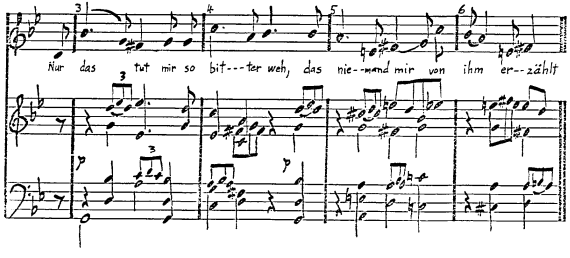
first stanza are arpeggiated in the second. The same change is evident in the introduction, when it recurs (separated from the stanzas by fermatas) between stanzas and at the end. Considering the almost constant motion of divisions or subdivisions of the beat in the other songs in the Schoenberg-Nachod Collection, one might conjecture that the beginning composer wrote the first part of the song, looked over it and felt a need for more rhythmic motion, then made some changes as he wrote the second part. Examples 2 and 3 illustrate this change. Also, one can see a few melodic fragments in the accompaniment and the triplet motive which pervades the song.

Ex. 2—Nur das tut mir so bitter weh, unpublished, mm. 3-6.



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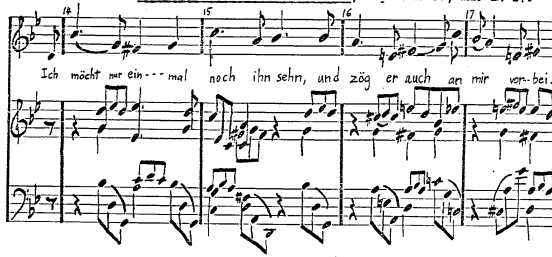
Ex. 3—Nur das tut mir so bitter weh, unpublished, mm. 14–17.



Warum bist du aufgewacht (32 mm., $\frac{4}{4}$, E major, marked "langsam") is strophic, although the second stanza is written out, probably because the last line of text is shorter than the last line of the first stanza, necessitating a different distribution of words under the same line of melody. The "subtle use of theme" and "intro. altered at end" are mentioned in the chart above to indicate what seems to be a forward step in Schoenberg's development. Instead of the exact repetition of the introduction at the end, as in the first two songs listed in the chart, the end of this song is slightly varied. The two-measure theme which appears in the introduction and again when the voice enters (see Ex. 6, mm. 3–4 below) is stated at the end by the piano, in the left hand, rather than by the right hand; and the accompaniment is slightly altered. In the final three measures the theme is stated at a different pitch level. The long, conjunct, monodirectional line (chromatic for the last five notes) in mm. 7–10 from "a" down to $A^{\#}$ in the bass foreshadows an extensive use of similar lines in the later songs.

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Das gestern eine Wespe Dich (43 mm., $\frac{2}{4}$, A major) is the first song on the above chart that is not strophic. The poem consists of three stanzas. The following graph shows the form.

mm.:	1	5	13	22	26	34	38
text:		stanza I	stanza II		stanza III	repeat last 2 verses	
music:	intro.		change of texture	intro.	same as mm. 5-12	from m. 17, but new voice line	intro. with 2 mm. added

The added two measures contain an embellished version of the first two measures of the vocal line, with the harmony being the same also. This creates a plagal final cadence, although it is preceded by an authentic one.

Juble, schone junge Rose (18 mm., $\frac{4}{4}$, G major, marked "sehr rasch") is written on a double sheet with Das gestern eine Wespe Dich; therefore, one must assume that the two songs were composed about the same time. In fact, they both have sections of the same kind of continuous 16th-note triplet figures. Juble is more contrapuntal, since there is an independent melody in the top of the piano accompaniment. The song is also more chromatic; and the G major tonic is not established until the last measure, although it is hinted at several times by tonic six-four and dominant chords. Several facts indicate that the song is unfinished: it is much shorter than any of the other songs; only one stanza of text is used; no large segments return as in the songs probably composed around the same time; the arpeggiated triplet figure continues

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through the very last beat, clear off the end of the staff; and the last word of the text is not written in.

Ich grüne wie die Weide grünt (50 mm., $\frac{4}{4}$, "a" minor, marked "nicht zu langsam," poem by Wilhelm Wackernagel) was often sung for the Schoenberg family in the 1890's by Hans Nachod, and Schoenberg himself was fond of the song.[20] Two immediately obvious facts suggest that this song deserves more attention than a hastily-done and soon-forgotten beginner's exercise. First, the rather large page on which the song is written has been taped together in the middle, having been folded and unfolded so many times that it tore at the crease. Second, there are two corrections done in pencil, the original having been written in ink. One (not shown here) merely avoids parallel octaves between outer voices in the piano part. The other (Ex. 4 below) is more extensive; it creates more rhythmic motion and inserts a short iv^7 between VI and V. Ex. 4 shows the introduction as amended, followed by the original m. 3. The half-note f in the original, notated in pencil, but slightly darker than the other pencil notation, seems to have been the first change; it is marked out in favor of the final version.

[20] Rudolf and Eva Steiner, "Arnold Schoenberg: an Unknown Correspondence," Saturday Review (March 27, 1965), pp. 47, 66.

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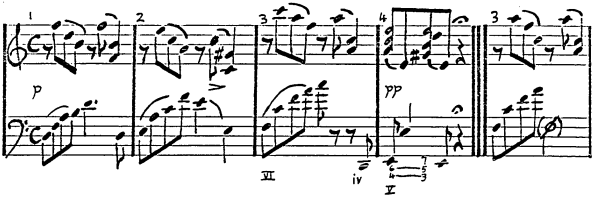
Ex. 4—Ich grüne wie die Weide grünt, unpublished, final version of piano introduction, followed by m. 3, original version.



This song is more daring harmonically than the other Schoenberg-Nachod Collection songs mentioned above. The chromatic middle section of the ABA form moves far from the "a" minor tonic, establishing b♭ minor in mm. 30-31.

One finds little in any one of these early songs to forecast Schoenberg's later stylistic developments. However, taken as a group, they predict rapid changes for the future. Comparison with In hellen Traumen (1893) and the two unpublished songs of 1896 (more details below) suggests that the Schoenberg-Nachod Collection songs were composed between 1893 and 1896. Schoenberg was only about twenty years old at the time, and some of his activities were playing classical chamber music, learning about musical structure from Meyers Konversations Lexicon, and working in a bank. It seems significant that the fledgling, largely self-taught composer could progress as far as the preceding discussion and chart suggest in a period of four years.

There are at least two traits of Schoenberg's later style observable in these early songs—jagged contours and fairly wide

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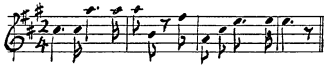
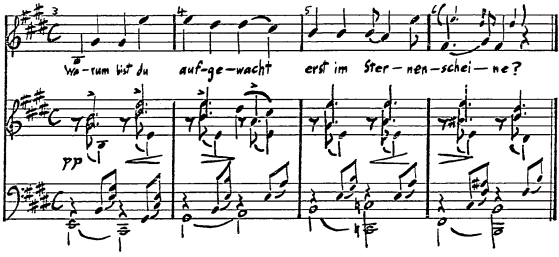
range in the vocal lines. In Ich grüne wie die Weide grünt a range of a perfect twelfth (d^1-a^2) is required of the singer. This seems to be a temporary limit Schoenberg set for himself; the range of a perfect twelfth was not exceeded in any song through Op. 3. Although most of the vocal lines in the early, unpublished songs are not extremely disjunct, there are several examples of consecutive leaps of a sixth or more. Ex. 5 shows one of these instances.

Ex. 5—Das gestern eine Wespe dich, unpublished, vocal line, mm. 34-37.



Another instance is shown in Ex. 6. In m. 6 the small notes indicate notes that Schoenberg wrote and then scratched out, preferring a leap of a seventh down on the word "starlights."

Ex. 6—Warum bist du aufgewacht, unpublished, mm. 3-6.



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II. Unpublished Tonal Songs: Dated (1893-1897)

On a separate title page (a sheet of staff paper) for the two songs Mädchenlied and Sehnsucht the following appears written in large letters:

Fraulein Clara Orienter

zum 9. März 1896

Zwei Lieder

für eine Gesangstimme mit Begleitung

des Pianoforte

von

Arnold Schönberg

Mädchenlied (27 mm., $\frac{2}{4}$, d minor, marked "nicht zu langsam," poem by E. Geibel) has much in common with the other early unpublished songs: the two-measure introduction, which begins with the progression $\frac{V+}{VI}$ - VI, is repeated in the middle and at the end, the last occurrence being altered rhythmically so as to end on tonic; the phrasing is still symmetrical, each of the two sections being an eight-measure period with a two-measure cadential extension; the harmony is quite simple, even though the page looks complex at first glance because of secondary dominants and diminished sevenths; and the song is basically strophic. Sehnsucht (41 mm., $\frac{2}{4}$, A major, marked "Lebhaft," poem by Zedlitz) also shares characteristics with the early songs: the two-measure introduction, which consists of the harmonic sequence $\frac{V}{vi}$ - vi - $\frac{V7}{V}$ - V^7, is repeated in the middle and at the end; the first four measures of the first two stanzas

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are the same, suggesting a strophic setting; and the arpeggiated homophony of mm. 1-20 is much like the texture in Das gestern eine Wespe Dich and Ich grüne wie die Weide grünt.

The foregoing suggests that the two dated songs were composed about the same time as some of the undated ones, but each of the two songs has features which point to a somewhat later origin:

Mädchenlied

1. In mm. 3-5 there is a long, monodirectional, mostly conjunct bass line which covers almost two octaves and creates a wedge figure with the piano, right hand, a device used in later songs.

2. Measures 3-14 are repeated for the second stanza, but for the third stanza Schoenberg reveals considerable contrapuntal mastery. In mm. 15-20 the vocal line takes the bass line used in mm. 3-8 (with an octave transposition during the long line mentioned above) and the bass line has the vocal line of mm. 3-8. There are a few small changes in rhythm and harmony.

Sehnsucht

1. The song is quite chromatic, and the tonic is not established until the end! It is strongly implied by the V^7 which concludes the introduction in mm. 2 and 12, but it is followed by tonic with a raised fifth, which functions as $\frac{V+}{IV}$.

2. For the third stanza there is a very effective "Langsamer" section with a contrasting thin texture and less rhythmic motion (mm. 21-36). In mm. 28-36 a dramatic wedge figure is formed when the voice has a rising step-progression to a^2 and the climax of the song, while the bass line moves down mostly by half step from c# to E.

3. The progression $\frac{V}{V}$ - I (or i) is a common cadence in Schoenberg's music beginning c. 1899. A surprisingly early instance of it occurs in mm. 20-22. The second stanza ends unexpectedly on a G# major chord. Since the relative minor (f#) is established rather strongly in mm. 22-25, the G# chord can be interpreted in retrospect as $\frac{V}{V}$.

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4. Many of Schoenberg's later works stress the submediant; it is emphasized throughout this song.

III. Tonal Songs Synchronous with Op. 1 (1897-1898)

At first glance the two songs of Op. 1 look much different from any of the unpublished songs. They are longer than any other song Schoenberg wrote, and their manner is dramatic and exaggerated, with piano accompaniments that look, in places, like reductions of orchestral scores. The style may have been influenced by Schoenberg's undertaking for the summer, 1897, when he made the piano score for Zemlinsky's opera Sarema. According to Friedheim the piano style "may be traced directly to the keyboard reductions of Richard Kleinmichel and Karl Tausig found in the original Wagnerian vocal scores."[21] The main influence may be explained by this quotation from Schoenberg:

> While this work [the early quartet in D major] was strongly under the influence of Brahms and Dvorak, an almost sudden turn toward a more "progressive" manner of composing occurred: Mahler and Strauss had appeared on the musical scene and so fascinating was their advent that every musician was immediately forced to take sides, pro or contra. Being then only twenty-three years of age, I was to catch fire easily, and I began composing symphonic poems of one uninterrupted movement, the size of the models given by Mahler and Strauss.[22]

The style of Op. 1 is almost certainly the result of the new influence; and the time of composition, based on Schoenberg's

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[21] Friedheim, "Tonality and Structure," p. 79.

[22] Schoenberg, "Introduction to My Four Quartets," quoted in Friedheim, "Tonality and Structure," p. 60.

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reference to his being twenty-three years old, is late 1897 or 1898. A close look reveals many similarities to the unpublished songs, however. The Op. 1 songs have beginning material (even a piano introduction in Op. 1, #1) which returns with slight alteration in the middle and at the end; sections of four to eight measures that reappear unchanged; sections of off-the-beat chords, motivic accompaniment, and arpeggiated homophony. All these elements are present in some of the earlier songs. For the purposes of this study the most important difference is that the Op. 1 songs are more polyphonic than the earlier songs. In the first twenty or thirty measures of each song of Op. 1 there is a primarily polyphonic texture which is useful for comparison with other songs: the rhythmic motion of the piano is about the same as that in the voice, and the bass line (still in octaves, as in several of the earlier songs) and the line formed by the top note of the right-hand chords form counterpoint with each other and with the voice.

Problems concerning dates of composition are encountered with Op. 3, Nos. 1, 4, and 6. They are grouped here with Op. 1 for stylistic reasons, even though Friedheim gives 1899 as their probable date of composition. The present writer ordered them with some misgiving, but several facts (given below) seem to support the ordering. Wellesz[23] states that Op. 3, #4 (undated) is earlier in style than Op. 2 (1899) and stylistic evidence supports his statement. Op. 3, #4 is listed above before Op. 1 because it is so simple in style, form and harmony, and because several instances of

[23]Wellesz, Arnold Schoenberg, p. 63.

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exact repetition are to be found; however, it is certainly more masterfully done than the early, unpublished songs. The fact that the "semi-polyphonic texture" of the openings of the Op. 1 songs is present throughout places it after the sudden influence of Mahler and Strauss. Wellesz[24] places Op. 3, #6 also earlier than Op. 2 (1899), and states that Op. 3, #6 was first performed in December, 1900.[25] A last-minute revision and/or recopying for the performance probably accounts for the "20./11.900" date on the manuscript. Its symmetrical phrases and use of the four-measure introduction for the first vocal phrase and at other places links Op. 3, #6 to the unpublished songs, but its power and dramatic effectiveness place it around the time of Op. 1. The final problematic date of composition in this category is that of Op. 3, #1. Its date ("18. März 1903") must be another instance of last-minute revision or recopying. Wellesz[26] gives a pre-Op. 2 origin also for this song. Its opening ten measures are very much like the opening of Op. 1, #1. Other characteristics which suggest Op. 1 are the extended harmonic sequences and the sudden increase in rhythmic complexity in m. 10 after a much less complex beginning. Op. 3, #1 is listed above after Op. 1 because of its considerable use of developing variation, and because the more manageable piano part seems to be the beginning of a trend toward a piano style more appropriate for the Lied than that of Op. 1, a trend continued in Op. 3, #3 and Op. 2.

One last reason for listing Op. 3, Nos. 4 and 6 before Op. 3, #1 is the final cadence. Every song listed in this chronology

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[24] Ibid. [25] Ibid., p. 13. [26] Ibid., p. 63.

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before Op. 3, #1 has an unaltered, root-position V-I cadence. Op. 3, #1, and all the songs listed after it do not end with a straightforward V-I. Considering the importance of the authentic cadence in traditional tonality and the important impression it leaves with the listener, it seems likely that Schoenberg would take great care with his cadences. Since he probably was already aware of the direction in which he was heading, it seems unlikely that he would return to the plain V-I once he had broken away from it.

IV. Tonal Songs Synchronous with Op. 2 (1899-1900)

The songs under this heading present no problem as far as ordering is concerned. All of them are dated except Op. 2, Nos. 2 and 4, which probably were composed also in 1899. The songs are stylistically quite similar. Waldsonne, Op. 2, #4, seems lighter in nature than the others, possibly due to the text; but one can assume that it was composed at about the same time as the others. This assumption is supported by the fact that #4 quotes a passage from #2 (or vice versa)—compare #2, mm. 29-30 with #4, mm. 19-20.

This group of songs exhibits a considerable advance in technique over the earlier songs, due in part to the ABA forms with clearly-contrasting B sections of Op. 3, #3, and Op. 2, Nos. 1 and 4; the imaginative variation of Op. 2, Nos. 2 and 3; and skillful handling of the more chromatic idiom. With its variety of texture and contrast of mood, Op. 2 deserves a larger place in the repertiore of concert artists.

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V. Early Tonally-extended Songs (1903-1904)

The three-year time gap between the songs of group IV and those of this group is the result of Schoenberg's finishing the short score of the Gurrelieder (Feb., 1900 to May, 1901) and of his stay in Berlin (Dec., 1901 to July, 1903), where he composed the symphonic poem Pelleas und Melisande. During the years 1900-1903 his style evolved to what can be called "extended tonality," a term used by Schoenberg in Structural Functions[27] to describe music which contains remote altered chords and harmonic successions. After showing examples of this in music from Bach through the early twentieth century, he states that extended tonality is characteristic of his first period (he gives the dates 1896-1906) and gives examples from Op. 6, Nos. 7 and 8.

In the early tonally-extended songs Schoenberg's complicated melodic manipulation reflects his desire for coherence in the absence of traditional harmony. Unity is sometimes due mainly to motives, and other times to themes; often, rhythmic motives and melodic contours are important. Even though these songs have obviously contrasting segments which help create sectional forms, there is usually some element from the opening section present in the contrasting segments. For instance, the "C" section of Verlassen, Op. 6, #4, contains the theme in the piano part seven times!

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[27]Schoenberg, Structural Functions of Harmony, pp. 76-113.

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VI. Late Tonally-extended Songs (1905)

As in group V above, the songs of group VI are easy to place according to date of composition. All are dated by Schoenberg himself or by Egon Wellesz, pupil, friend, and biographer. Furthermore, stylistic evidence supports the dates. One possible source of confusion is the fact that, in all of Schoenberg's songs, the number within an opus does not necessarily reflect the order in which the songs were composed; e.g. Op. 6, #5, the last of the early tonally-extended songs, was written twenty months before Op. 6, #2, the first of the late tonally-extended songs.

During most of the twenty months between these two groups of songs Schoenberg was composing his String Quartet in d minor, Op. 7, his first nonprogrammatic work since the D major quartet of 1897. Building on the linear techniques developed in the early tonally-extended songs, he realized "his polyphonic ideal of imparting thematic meaning to all parts"[28] and continued to expand his technique of developing variation. This technique, which is already evident in the alteration of introductory material in the early unpublished songs, was used skillfully as early as Op. 1.[29] From that time (c. 1898) to 1905 it became an increasingly important aspect of Schoenberg's style, and it plays a large part in the songs from 1905 to 1909. Many examples involving developing variation will be presented in Chapter III below.

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[28] Friedheim, "Tonality and Structure," p. 300.

[29] Transformations of the principal theme throughout Op. 1, #2 are pointed out in Friedheim, "Tonality and Structure," pp. 84-87.

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Developing variation grew in importance as traditional harmonic function became less important as a cohesive force. Although most of the vertical structures in the late tonally-extended songs can be analyzed as tertian, many long sections have very little traditional harmonic function which is overt enough to be heard as such. The primary tonic in these songs is seldom strongly emphasized except at the beginning and end, and occasionally only at the end.

VII. Transitional Songs (1907-1908)

These songs cannot really be called tonal, since overt tonal function is nonexistent for most or (in the case of Op. 14, #1) all of each one; but all of them have a key signature. One must grant the signature at least some reason for being and refrain from using the term "atonal." The following quotations, showing the importance Schoenberg attributed to Opp. 12 and 14, suggest the word "transitional" to be appropriate.

> My Two Ballads, Op. 12, were the immediate predecessors of the Second String Quartet, Op. 10, which marks the transition to my second period.[30]

> This first step occurred in the Two Songs, Op. 14, and thereafter in the Fifteen Songs of the Hanging Gardens and in the Three Piano Pieces, Op. 11.[31]

Although there is some question about dates concerning Opp. 12 and 14, stylistic evidence is fairly strong in favor of the ordering used above. It is almost certain that Ich darf nicht dankend, Op. 14, #1, was written last. The b minor tonic is never

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[30]Schoenberg, "My Evolution," p. 522. [31]Ibid., p. 523.

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strongly established; and the b minor triad at the end is quite unexpected. With its vague tonal references and complex thematic and motivic relationships, it is similar to some of the songs of Op. 15.

The song Gedenken, which was unpublished until it was included in the song volume of Schoenberg 's Complete Works in 1966, is not dated; some of its peculiarities make it enigmatic for the chronologist. The most immediately puzzling fact is that the original MS was torn in half and then taped back together, but several features of the song itself are somewhat baffling. At the beginning the song has no key signature, but the sometimes homophonic, largely monorhythmic first half gravitates to B♭ in m. 4, m. 8, and again in m. 12, where one finds an embellished V^7–I cadence and the addition of a key signature of two flats. After a five-measure segment with a reiterated, octave-leaping inverted pedal, the opening theme returns in m. 19 accompanied by a chordal texture containing two pairs of parallel fifths. The song ends with a "V-Fr. 6th-I" cadence in B♭, obscured by several non-chord tones. One might conjecture that Schoenberg experimented with atonality, was not ready to make the break, resignedly added the key signature and finished setting the text, disliked the final product enough to tear it into two pieces, only to repair it later. At any rate, Gedenken is not atonal. Even though the preceding list proposes 1908 as a possible year of composition, the frequent affirmation of the tonic suggests 1906 or 1907 as other possibilities.

The four songs of Opp. 12 and 14 are extremely important in Schoenberg's development. He realized and stated that they formed a

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"transition" and "first step"[32] into his second period, atonality. Since the atonal songs are the primary concern of this study, it seems appropriate in this summary of stylistic evolution to investigate three aspects of Opp. 12 and 14 which are also important in the atonal songs—vocal range, contour of the vocal line, and imitation.

As stated above, the range of a perfect twelfth (d^1-a^2) was established in the early unpublished song Ich grüne wie die Weide grünt, but not exceeded in any song through Op. 3. A larger compass is required of the singer in the tonally-extended songs. The range of a minor thirteenth is used in Op. 6, Nos. 1, 5, and 6. Op. 12, #2, probably the earliest of the transitional songs, has a range of only a half step less than two octaves, $A^{\flat}$-g^1, the widest of any of the songs for voice and piano. The other songs of Opp. 12 and 14 also have wide ranges; Op. 12, #1 and Op. 14, #1 have a total compass of a major sixth, and Op. 14, #2 has a range of a minor sixth. The recently published song Gedenken has a range of only a minor tenth (d^1-f^2), adding another odd feature to those mentioned above. This is a smaller range than that of any of the songs in Opp. 6, 12, and 14. Lieder with ranges of a thirteenth or fourteenth appeared infrequently before Schoenberg's time. Some reasons for this expanded range may have been that he was consciously breaking with traditional solo song procedure; that some singers of that time were responding positively to the new demands composers were making of them; or that Schoenberg, aware that almost anything was possible for exceptional singers (especially those with absolute

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[32] Ibid., pp. 522-523.

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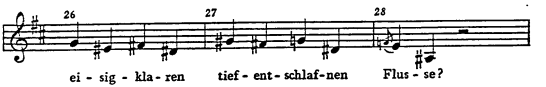
pitch), dropped most of his self-imposed restrictions for vocal writing and concentrated his full attention on new compositional techniques and new relationships between text and music.

The vocally challenging lines in Opp. 6, 12, and 14 support the last reason suggested above. The singer's task seems especially difficult when one considers that much of this music does not provide the crutch of strong tonal function and its attendant melodic conventions. Angularity in Schoenberg's vocal lines was an evolutionary process. Some fairly large consecutive leaps were pointed out above in connection with the early unpublished songs. Leaps of sevenths, occasional ninths, and some rather angular phrases occur in Opp. 1, 2, and 3. The tendency is intensified in Opp. 6, 12, and 14, where angularity becomes the norm. Jagged lines are not ubiquitous, however; there are several long segments and one whole song (Ghasel, Op. 6, #5) in which motion in the voice line is so conjunct as to produce a slowly undulating, almost hypnotic effect. Ex. 7 gives such a segment. In this example and in many of the conjunct segments the rhythmic regularity adds to the mesmerizing effect.

Ex. 7—Ich darf nicht dankend, Op. 14, #1, mm. 26–28, vocal line only.



This phenomenon is even more obvious in Op. 15. It may be the result of Schoenberg's conviction, expressed in writing at several different times, that a vocal line should evoke the general mood of

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its text rather than highlight the meaning of particular words. Examples 8 and 9 (both on p. 51) contrast a disjunct excerpt from Op. 6, #8 with a conjunct one from Op. 12, #2. Two rather large leaps can be seen in Ex. 8, m. 13 and Ex. 9, m. 49. Those who are acquainted with even a small amount of Schoenberg's tonally-extended and atonal music probably will not be surprised at the large leaps and disjunct lines in these songs. What is less often recognized, however, is the extent to which imitation, so often associated with the canonic pieces in Pierrot Lunaire (Nos. 17 and 18), was used in Opp. 12 and 14.

Schoenberg did not begin using imitation suddenly in Opp. 12 and 14, of course. As early as Op. 3, #5 one can find several instances of imitation of short fragments; it appears in two other early tonally-extended songs—Op. 6, #4 (mm. 13-15) and Op. 6, #5 (mm. 2-11, 27-29)—and in the late tonally-extended song Op. 6, #8 (mm. 6-8, 53-54). Imitation became much more important in Opp. 12 and 14, where it is used in predominantly atonal contexts. Schoenberg was certainly aware of the difference between imitation in tonal counterpoint and that in which tonal function was not a controlling factor, as the following quotation shows.

> However, the meaning of composing in imitative style here [in twelve-tone music] is not the same as it is in counterpoint. It is only one of the ways of adding a coherent accompaniment, or subordinate voices, to the main theme, whose character it thus helps to express more intensively.[33]

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[33] Arnold Schoenberg, "Composition with Twelve Tones," Style and Idea, ed. Dika Newlin (New York: Philosophical Library, 1951), p. 130.

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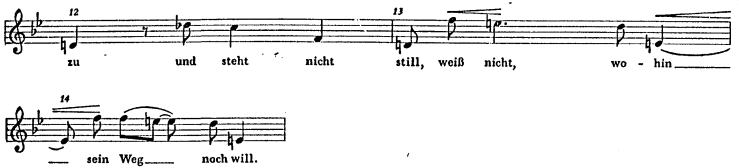
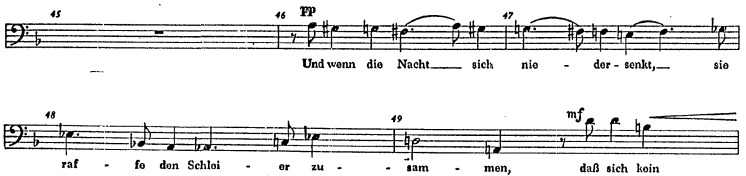
Ex. 8--Der Wanderer, Op. 6, #8, mm. 12-14, vocal line only.

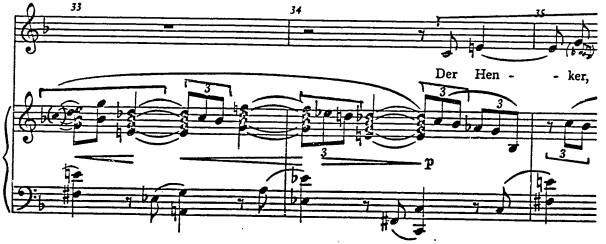


Ex. 9--Der verlorene Haufen, Op. 12, #2, mm. 45-49, vocal line only.



Schoenberg's use of the word "coherent" above helps to make a point here: Schoenberg used imitation in the absence of functional tonality as means for gaining coherence. That may explain why imitation was employed frequently in the transitional songs, where functional tonality has little potency as an organizing agent. A few examples will illustrate the large variety of imitative procedures employed by Schoenberg. The polyphonic texture of Ex. 9, from Op. 12, #1, is reminiscent of one of the Baroque chorale preludes in which the accompaniment, based on a motive from the chorale tune, is joined after a few measures by the cantus firmus (in this case, the vocal line).

Ex. 9—Jane Grey, Op. 12, #1, mm. 33-35.



In Ex. 10 a short imitated melodic segment, stated with repeated eighths in the left hand and quarters in the right hand and vocal line, helps to tonicize B with leading tones to the dominant and tonic (arrows).

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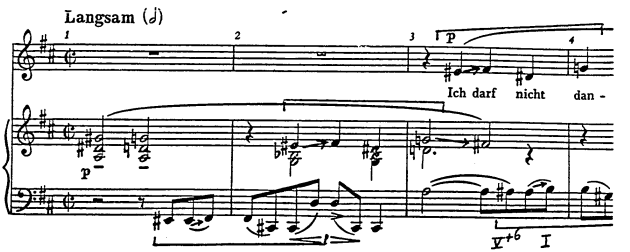
Ex. 10—Ich darf nicht dankend, Op. 14, #1, mm. 1-4.



A melodic segment from the vocal line of Op. 14, #2 is accompanied by two statements of the segment in shorter note values in Ex. 11 (p. 54). Later in the same song (Ex. 12, p. 54) a segment stated in long note values (right hand) is imitated in shorter durations by the voice. This excerpt also resembles the Baroque chorale procedure described above. The motive (brackets labeled "M") seems to grow out of the piano, left hand, mm. 49-50, and its contour appears in the imitated segment of the upper voices (brackets over vocal line). The fact that the first three notes of the imitative segments in Ex. 11 are identical to the motive used in Ex. 12 is one small indication of the complex thematic-motivic relationships which pervade Op. 14, #2. Some examples of imitation in atonal songs will be given below.

VIII. Early Atonal Songs (1908-1909)

Although Schoenberg did not like the term "atonal" because it literally means "without tone," it is a useful word to describe

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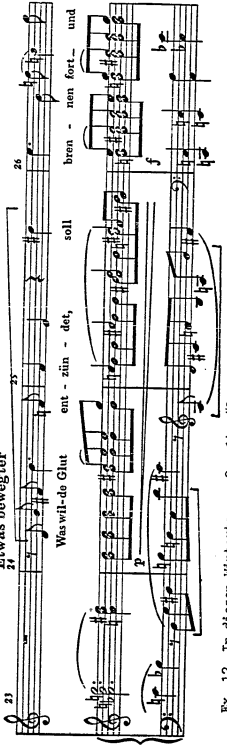
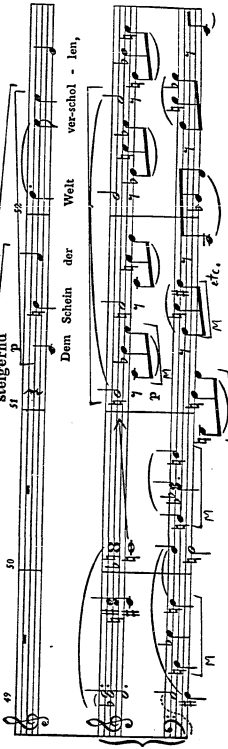
Ex. 11—In diesen Wintertagen, Op. 14, #2, mm. 23–26.



Ex. 12—In diesen Wintertagen, Op. 14, #2, mm. 49–52.



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compositions which renounce a tonal center but are not serial. This phenomenon has recently been called "referential" or "contextual" atonality because each event can be described only in terms of its context, rather than in terms of an all-encompassing compositional presupposition such as tonality or dodecaphonic serialism. The terms "tonal" and "atonal" are fairly precise and exclusive when used to describe two large groups of works; but when one attempts to establish an exact point before which all the songs are tonal and after which all the songs are atonal, difficulties arise. Schoenberg's stylistic change during the years 1907-1908 was rapid, but it was not abrupt. Gradual development, which characterized the progress from tonality to extended tonality, is present also in the change from transitional songs (still presumably "tonal" in some way) to atonal ones.

The similarity of tonal references in Op. 14, #1 to some tonal references in the Op. 15 songs has already been mentioned above; and the unobtrusive establishment of B major (the parallel major to the b minor implied by the two sharps in the key signature) in m. 3 of that song was illustrated above in Ex. 10 (arrows). The excerpt in Ex. 10 is not an isolated example; there are many instances in the tonally-extended and transitional songs in which tonics are established primarily by linear tonicization[34] rather than by the

[34]"Linear tonicization" is the establishment of a tonic by means of such linear (non-chordal, or horizontal) means as upper or lower leading tones, movement by fifth, surrounding, repetition, duration, and metric or registral placement. All these means occur within the context of tonal harmony, of course, but the term "linear tonicization" implies that overt tonal function is not present.

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centuries-old logic of a hierarchical progression of chords. The problem arises when one finds linear tonicization used similarly in Op. 15, which is supposedly atonal. There are even a few isolated examples in the early Op. 15 songs of chord progressions involving movement by fifth which strongly imply V-I (see #3, mm. 1, 4, 7, 11, 22-23; #4, m. 3; #5, mm. 17-18; #10, mm. 31-32). A lengthy discussion of tonicization in a nontertian context is not warranted here, but the question is obvious: should some of the Op. 15 songs be called tonal, or should some of the transitional songs be called atonal? A solution is provided by a precedent. In Schoenberg's String Quartet in f# Minor, Op. 10 (completed in 1908) the first three movements have key signatures, but the last one does not; and the last movement has often been quoted as his first atonal composition (even though some of the Op. 15 songs may have been composed earlier). However, according to Schoenberg himself, in all four movements "the key is presented distinctly at all the main dividing-points of the formal organization."[35] Similarly, it seems appropriate to refer to all the songs of Op. 15 as atonal, since none of them have key signatures. Another justification for the atonal label lies in Schoenberg's use of the final cadence, which was mentioned above in connection with a point before which all the final cadences were straightforward and authentic, and after which none of them were. In the songs with key signatures, the tonic is always present at the end, except in Op. 14, #1 (probably the last of Schoenberg's songs to have a key signature), where the final b minor triad

[35]Schoenberg, "My Evolution," pp. 522-523.

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is totally unexpected at first hearing. In the songs with no key signatures Schoenberg seems deliberately to avoid strongly emphasizing a note at the end of a song if it is stressed during the song. A case in point is Op. 15, #3; PC 0 is tonicized linearly several times, but the song ends with a second-inversion $D^{\flat}$ major triad.

The division of the Op. 15 songs into three groups (above, p. 26) can be accomplished by comparing them with dated compositions written immediately before and immediately after them. The four Op. 15 songs which have several aspects in common with the transitional songs are called "early," and the six Op. 15 songs possessing elements in common with the piano pieces, Op. 11, Nos. 1 and 2 (February and March, 1909) are called "late." The following similarities are evident:

Characteristics Shared by Opp. 12 and 14 and the Early Op. 15 Songs (Nos. 3, 4, 5, and 10)

1. Long chordal passages,
2. Implication of regular meter by repeated rhythmic patterns,
3. Frequent tonal references,
4. Relatively conjunct melodic lines in both voice and piano, and
5. Relatively long melodic segments appearing at the beginnings and repeated with little or no change near the ends of compositions.

Characteristics Shared by Op. 11, Nos. 1 and 2 and the Late Op. 15 Songs (Nos. 7, 9, 11, 13, 14, and 15)

1. Few long chordal passages, but rather contrapuntal passages interspersed with sections having a static quality;

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2. Metric ambiguity, with the meter signature functioning more as a convenient notational framework than as a compositional factor;

3. Few tonal references;

4. Extreme registral contrast and fragmentation of melodic lines in the piano parts, combined with exploitation of the low and high ranges of the piano; and

5. Very little exact repetition of long melodic segments.

The remaining Op. 15 songs, Nos. 1, 2, 6, 8, and 12, have elements in common with both groups; therefore they are referred to as "middle" Op. 15 songs. All the songs of Op. 15 seem to have been written within a period of eight to twelve months from early 1908 to late 1908 or early 1909. There is some question about the date of Op. 15, #15. In a program note Schoenberg wrote that 1908 was the year in which Op. 15 was composed,[36] and Wellesz states that the last of the Op. 15 songs appeared in autumn, 1908.[37] However, the MS is dated "28./2.1909." The later date of the MS could be the result of a final copy or revision. It is also possible that Wellesz was mistaken, that Schoenberg was merely naming the year in which most of the Op. 15 songs were written, and that some of them were actually composed in early 1909. The latter hypothesis is supported by a comparison of some of the late Op. 15 songs with Am Strande, a comparison to be made below.

The original MS of Am Strande is dated "8./2.1909," but the undated fair copy bears under its title a handwritten note by Schoenberg (added at some time after the copy was made) stating that the song was composed before Op. 15, at the same time as Op. 14,

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[36] Wellesz, Arnold Schoenberg, p. 26. [37] Ibid., p. 25.

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but was not published because of the text. To the lower left of the fair copy's title (also added later) is the notation "Op. 14 Nr. 3," but the "Nr. 3" has been marked out.[38] If the handwritten note on the fair copy is correct, Am Strande might have been written (or possibly started) in early 1908.

A closer look at the song yields information which strongly supports the date of the original MS. Some of its characteristics are rhythmic complexity, sudden and extreme contrasts in register and duration, fragmented, angular piano figurations, exploitation of the very low (down to $C0^{\#}$) and very high (up to $f^{\#4}$) ranges of the piano, and passages containing frequent repetition of a short motive. Most of these characteristics are shared by some of the late Op. 15 songs. The rapid, dramatic, wide-ranging arabesques found in the late Op. 15 songs and in Am Strande are much like those found in mm. 28 and 51-52 of the first of the Three Piano Pieces, Op. 11 (19./3.1909); and the Klavierflageolett used in Am Strande is found also in Op. 11, #1, but not before. These facts point to the "8./2.1909" date and leave one wondering about the contradictory handwritten notes on the fair copy.

Range and contour need but little further explication here. The trends mentioned in connection with the transitional songs were continued in Op. 15. Singers were still called upon to exhibit a wide range—Op. 15, #1 requires the compass of a minor fourteenth

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[38] A detailed presentation of this seemingly contradictory data is in Reinhold Brinkmann, Arnold Schönberg: Drei Klavierstücke Op. 11, Beihefte zum Archiv für Musikwissenschaft, Band VII (Wiesbaden: Franz Steiner Verlag GMBH, 1969), p. 3.

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and five of the songs have a range of a major of minor thirteenth. The Op. 15 songs were probably meant to be sung in concert as a group; the singer who assumes the task must have a range of over two octaves, $a^{\flat}$ to a^{2}. The trend toward large leaps is certainly evident, but there is even more disparity between jagged vocal lines in some songs and conjunct, rhythmically regular passages in others.

Imitation is used copiously and imaginatively in the songs of Op. 15. There are some instances in which the imitation is easily heard, because exact rhythm and pitch are retained; but in some instances only contour is imitated. In Ex. 13 the fairly complex counterpoint consists of rapid filigrees in the right hand which contrast strongly with the relative immobility of the voice and left hand. The rapid-note sequence continues in the left hand, mm. 15-16 (not shown here), ranging from the a^{3} in m. 13 down to DD in m. 16. The bass line in mm. 13-14, consisting of a four-note segment which is repeated in sequence up an augmented second, is imitated almost exactly by the voice in m. 13. In m. 14 the voice begins in rhythmically altered unison with the bass line, but breaks the pattern with a leap down to d^{1} instead of $e^{\#1}$. The vocal line in mm. 14-15 consists of two overlapping statements of the contour of the previously imitated segment.

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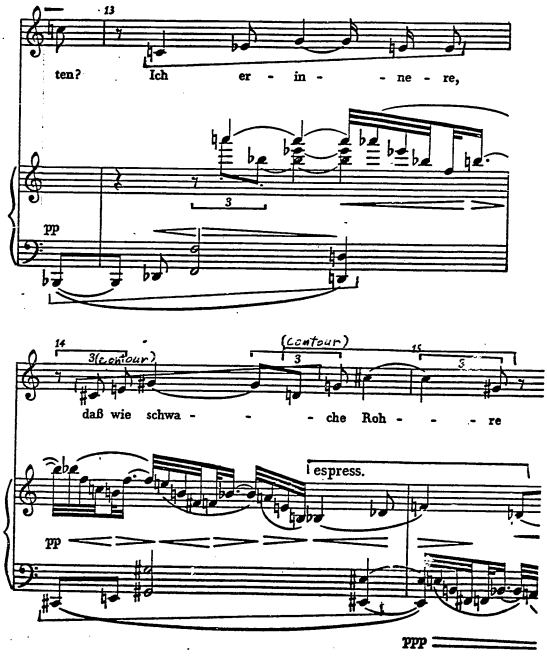
Ex. 13—Op. 15, #11, mm. 13-15.



Ex. 13 (above) exhibits several features which are characteristic of many Op. 15 songs: extreme contrast in register and rhythmic motion, rhythmic complexity, precise use of dynamics (the marking "pppp" follows in m. 16), variation of melodic segments by alteration of rhythm and contour, and imitation. Other fairly obvious imitative

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passages can be found in Op. 15, Nos. 2 (mm. 8–10, piano only), 4 (mm. 6–9, voice and right hand), 5 (mm. 10–12, voice and right hand), 12 (mm. 10–12, 13–14, voice and right hand), and 13 (mm. 4–5, piano only).

Op. 15 and Am Strande are under the heading "early" atonal songs because Schoenberg's atonal music includes a variety of styles. These songs still have a great deal in common with music of the nineteenth century: melodic elements that return in a recognizable form; repeated rhythmic patterns, with occasional sections of metrical regularity; instances of "V–I" implication; and return of some form of the opening material at ends of compositions. There was a change soon, however. In the following quotation Schoenberg infers that he realized how closely these characteristics were connected with the old style.

> Intoxicated by the enthusiasm of having freed music of the shackles of tonality, I had thought to find further liberty of expression. In fact, I myself and my pupils Anton von Webern and Alban Berg, and even Alois Hába believed that now music could renounce motivic features and remain coherent and comprehensible nevertheless.[39]

Judging from this quotation and from the events in Schoenberg's stylistic evolution during 1909, one might surmise that he and his students were excitedly experimenting with ways to write music that could remain comprehensible while differing as much as possible from their earlier styles. However, all the Op. 15 songs retain repetitions of rhythmic and melodic fragments, as do Am Strande and the first two of the Three Piano Pieces, Op. 11. These compositions

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[39]Schoenberg, "My Evolution," p. 525.

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were probably written at the same time as some of the later Op. 15 songs. The next steps toward the "freedom of expression" mentioned in the quotation above were taken in the Five Pieces for Orchestra, Op. 16. In the summer of 1909 Schoenberg succeeded in eliminating most of the nineteenth-century leftovers in Op. 11, #3, Op. 16, #5, and the monodrama Erwartung.[40] Schoenberg was unable or unwilling to continue in this style, however. In the three short movements for orchestra (1910) and the Six Piano Pieces, Op. 19 (1911), the pieces were drastically reduced in size and unifying repeated elements were reintroduced. In the opera Die gluckliche Hand, Op. 18 (1910-1913), Herzgewächse, Op. 20 (1911), Pierrot Lunaire, Op. 21 (1912), and the Four Songs with Orchestra, Op. 22 (1913-15) compositions became longer and organizing elements such as canon, recapitulation of beginning material at the end, and motives can be found. Interesting as they are, these atonal compositions are outside the scope of this study. Only Schoenberg's stylistic developments through early 1909 will be dealt with here.

IX. Tone-row Songs (1933)

The large time gap between the three songs of Op. 48 (1933) and the atonal songs was discussed above on p. 20. Since Schoenberg's development between 1909 and 1933 cannot be dealt with in this study, Op. 48 is not discussed in the following chapters.

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[40] A concise and lucid survey of the atonal works during the years 1909-1912 is in Friedheim, "Tonality and Structure," pp. 532-538.

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Conclusions

When one compares Schoenberg's music of the years 1908 and 1909 to the tonal music being written by many other composers at that time the differences are striking. The contrast has prompted some musicians to call Schoenberg's atonal music "revolutionary." The term may be appropriate if it is used to compare Schoenberg's music to that of some other composers or to the development of Western music in the years 1908 and 1909, but it has no validity in a comparison between his atonal songs and his earlier development. Even though only a few aspects of Schoenberg's music were emphasized in the preceding summary, the resulting impression is that of evolution rather than revolution. One of the reasons for dividing the songs into nine groups, even though such exact chronological placement is not imperative for consideration of developing variation in Schoenberg's atonal songs, is that such a division facilitates the detection of differences and similarities between groups of songs which are separated by only a few months. The tonal songs synchronous with Op. 1 (1897-1898) seem to differ considerably from the early unpublished songs (1893-1896), because the songs of the later group are longer, more chromatic, and more contrapuntal. However, a close comparison reveals these traits shared by the two groups: beginning material which returns (sometimes with slight alteration) in the middle and at the end; sections which reappear unaltered; and sections of motivic accompaniment, off-the-beat chordal homophony, and arpeggiated homophony. The tonal songs synchronous with Op. 2 (1899-1900) show more extensive use of developing

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variation and more effective piano accompaniments; but the arpeggiated homophony and triplet figures of Op. 2, #4, and the prominent bass line doubled in octaves in much of Op. 2, #2 recall similar procedures in the early unpublished songs and Op. 1. The largest time gap between groups of songs occurs between the songs synchronous with Op. 2 (1899-1900) and the early tonally-extended songs (1903-1904), and the greatest change of style occurs here, also. The most obvious aspect to use as illustration of stylistic change is the harmonic idiom, but harmony is not the point here. The significant fact for the purposes of this study is that, as harmonic function exerted less and less organizing and unifying force, melodic function exerted more. In these songs, and even more in the late tonally-extended songs, thematic and motivic significance was imparted to almost all parts in the primarily contrapuntal texture. This was accomplished in part by further progress in the art of developing variation--progress which was continuous from as far back as the slight alterations of melodic material in the early unpublished songs. Three other traits of the atonal songs are shown above to have evolved from as early as 1903: wide total range of the vocal line, jagged contour and large leaps, and imitation.

The summary of stylistic evolution in this chapter reveals more attention to detail in the unpublished songs and in the transitional and atonal songs than in the songs written between 1898 and 1906. The unpublished songs are emphasized for two reasons. First, they are not well-known, and the early efforts of a composer of Schoenberg's stature are of general interest among musicians; second, the contrasts of style and structure even in this small group of

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songs show Schoenberg's ties with the past and forecast rapid changes for the future. The transitional songs are emphasized because they are extremely important as a link between the tonally-extended songs and those which are the main concern of this study, the atonal songs.

This chapter deals with several uncertainties about dates of composition of songs and with the evolution of Schoenberg's style. The discussion consists largely of summary statements, although a few details about specific songs and about contour and imitative techniques are presented. Procedures and devices are isolated in short examples, and not related to the total melodic structures of the songs in which they occurred. In the following discussion the emphasis, far from being on isolated phenomena, is on relationships which are related to overall organization. In the songs of Schoenberg, these relationships can be described in terms of developing variation.

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CHAPTER III

DEVELOPING VARIATION IN SCHOENBERG'S ATONAL SONGS

The present chapter is an investigation of certain aspects of developing variation in the fifteen atonal songs of Schoenberg's George Lieder, Op. 15, and in the song Am Strande. Based on Schoenberg's references to developing variation,[1] one can list the following general characteristics of music in which the technique is employed:

1. Variety stems from an overall unity,
2. The opening material is the basis for much of the remainder of a composition, and
3. Musical material is repeated only in varied forms.

From these characteristics it is obvious that a thorough study of developing variation would entail a rigorous examination of all musical elements; but here the element of pitch is emphasized, with some consideration given to rhythm and contour in connection with varied restatements of pitch patterns. First, terms are defined, and then themes in the atonal songs are described and illustrated. Finally, sets and several types of motives are investigated via consideration of the significance of the opening material in some of the songs.

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[1]See above, pp. 12-14.

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Terminology

The variety of developmental techniques and complexity of thematic and harmonic relationships in the atonal songs make the task of the analyst a complicated one. Even before analysis can begin, terms used to describe tonal music must be evaluated carefully before being applied to music in which tonality has little or no function; some terms must be precisely defined or qualified, and some must be eliminated. Terms to be used in this study are defined below, and their origins are explained.

Terms denoting melodic statements of ordered pitches

Melodic segments which are restated in recognizable forms are important in the atonal songs, and the restatements are varied in many different ways. Any study dealing with unifying elements must employ an apparatus for identifying and describing such segments. The terms should take into consideration what actually happens in the songs, but the system should not make use of so many terms as to be cumbersome; and coherence should be taken into consideration, since it was one of Schoenberg's main concerns in his atonal music. Based on these criteria, four requirements for a suitable apparatus can be posited:

1. It should provide names for linear segments which are repeated often enough (or which reappear obtrusively enough) to be significant in the total melodic organization.
2. The terms should be interrelated, yet mutually exclusive.
3. The apparatus should be closely related to the method of deriving musical material mentioned at the beginning of this

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chapter: developing variation. In other words the apparatus must allow for variation in the restatements of segments.

4. In order that the apparatus be as practical and meaningful as possible, it should take musical coherence into consideration. Therefore, the terms allowing for varied restatements should be hierarchical, with the order determined by the number of elements of the original retained in the restatements.

Schoenberg employed the terms "theme" and "motive" in his statements about developing variation and in references to his atonal and serial music, so it seems appropriate to use them here. These terms fulfill the first two requirements listed above, but not the last two; i.e. they are not related to developing variation in terms of a hierarchical system. In order to fulfill the last two requirements one must determine the musical elements which might be retained in varied restatements. An assertion by one of Schoenberg's students about Schoenberg's variation of motives is helpful in this regard. Adolph Weiss, who studied with Schoenberg in the 1920's, wrote the following in 1932:

> Coordination in organic forms is assured through mitosis, or the continued subdivision of the original germ-cell (cytula). In music this germ-cell is, for Schoenberg, a single motive. The forms of variation which the motive undergoes might be called musical mitosis. Even in his analysis of classical works Schoenberg refers all musical occurrences in a composition to a single motive. Methods of varying a motive are: (1) changing the intervals or notes and holding the rhythm; (2) changing the rhythm and using the same tones or intervals; (3) simultaneous combination of both these methods; (4) inversion; (5) elongation; (6) contraction; (7) elision (of one or more notes); (8) interpolation (of one or more notes); (9) the crab-form (motus cancrizans, repeating the motive backwards).[2]

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[2] Adolph Weiss, "The Lyceum of Schoenberg," Modern Music, IX (March/April, 1932), p. 101.

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The first three methods of varying a motive are pertinent for the present discussion. The methods listed by Weiss as Nos. 4-9 are certainly applicable to Schoenberg's music, but they are specific devices, while Nos. 1-3 deal with changes in the basic material. In his statement of the first three methods Weiss stresses elements of the original motive which are retained. In the first, the rhythm is retained; in the second, the exact pitches are retained; and in the third only the contour is retained. If one applies the modifiers "rhythm," "pitch," and "contour" to the word "motive," the resulting terms are suitable for describing Schoenberg's treatment of motives in his atonal songs. In addition to the term "motive," then, the following terms will be employed: rhythm motive, pitch motive,[3] and contour motive. The use of these terms will be illustrated below, but first the notion of themes in the atonal songs must be considered.

Unlike some of Schoenberg's later atonal music, which has been called "athematic," most of his atonal songs are thematic; and he used themes much as he did in his tonal songs. However, the popular conception of a theme being about four measures long (or longer, as in Classical and Romantic music) does not prevail here, as suggested by these words from Schoenberg:

> By not using this device [tonal harmony] in the new direction that my music had taken, I was compelled, in the first place, to renounce not only the construction of larger forms, but to avoid the employment of larger melodies . . . .[4]

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[3]In this study the terms "motive" and "pitch motive" imply retention of exact pitches. Exact transposition of melodic segments does not occur often enough to warrant a separate term, such as "interval motive."

[4]Schoenberg, "Analysis of the Four Orchestral Songs, Op. 22," p. 27.

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In some of the atonal songs a melodic segment of three or four beats is relatively long, and some segments of that length can be called themes. Schoenberg's transformation of longer melodic segments, which is one aspect of his use of developing variation, results in instances in which the same modifiers applied above to the word "motive" can be applied to "theme." This results in the terms "rhythm theme," "pitch theme," and "contour theme." The last two are fairly common, but the term "rhythm theme" is not often applicable. Occasionally it is useful when the rhythm of a theme stated at the outset by the voice is used for several other lines of text.

The terms which were derived in the preceding discussion to fulfill the third requirement listed above also fulfill the fourth: they form a hierarchy based on unifying potential. The following list contains the terms in order of decreasing unifying potential; each term is accompanied by a statement which explains its position in the list.[5]

Theme—A theme possesses the most unifying potential because it is longer than the other segments, and it retains all of its original characteristics upon repetition. (Rhythm themes, pitch themes, and contour themes are not taken into consideration here.)

Motive—A motive possesses the next most unifying potential because it retains all of its original characteristics upon repetition.

Pitch motive—A pitch motive retains both pitch and contour, and thus possesses more unifying potential than the following segments, which retain only one element each.

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[5]The hierarchical aspect of the list will not always apply, because the function and potential of any segment is dependent on many variables, such as register, dynamics, density, timbre, octave transposition of one or more pitches, and frequency of occurrence.

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Rhythm motive—A rhythm motive retains only one element of the original segment, rhythm; but that element is retained intact.

Contour motive—A contour motive retains the general shape of the original segment, but nothing is retained intact; therefore, it possesses the least unifying potential.

Terms denoting vertical and horizontal sets of unordered pitches

The terms "theme" and "motive" can be used in descriptions of atonal music because they do not depend upon tonal conventions for their significance. On the contrary, many other terms associated with tonal music are dependent for their meanings on the concept of tertian harmony based upon the diatonic scale; as a result, these terms have little or no relevance in descriptions of atonal music. If one attempts to write about atonal music without new or revised nomenclature, he is immediately aware that it is very difficult to communicate meaningful information. The full extent of the problem is evident when one considers the complex system of assumptions and implications associated with the analysis of tonal music. A hypothetical statement about a progression in a Bach vocal chorale will serve as illustration. "The D major chord (V^6 of vi), in close position with the root in the soprano, resolved conventionally; a passing seventh accompanied the resolution." A great deal of information is conveyed in those few words; in fact, assuming conventional doubling, one could be fairly certain about every pitch in the progression (Ex. 1). The term "D major chord" limits the number of distinct pitches to three. The symbol "V^6" puts $F^{\#}$ or $f^{\#}$ in the bass; and "V^6 of vi" indicates that a g minor chord is the secondary tonic, since D major is the secondary dominant, and that $B^{\flat}$ major is the

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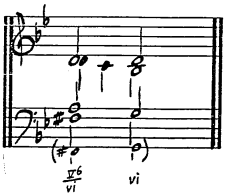
tonic, since g minor is "vi." Even the exact pitches of the first chord are implied, with the exception of the bass note, which could be $F^{\#}$ or $f^{\#}$: either d^1 or d^2 would be possible for the soprano (root of the D major chord), but it is almost sure to be d^1, since the chord is in close position (the tenor would not be likely to have an a^1, and it could not have $f^{\#1}$ because an accidental would not be doubled); the tenor would have to be on "a," so as not to double the bass note; and the alto would be on d^1 with the soprano, in order to provide the passing seventh. The pitches of the passing seventh must be d^1 and c^1, as dictated by the diatonic scale in the key of $B^{\flat}$ major. The specified "conventional resolution" leaves no choice as to the pitches of the second chord (Ex. 1).

Ex. 1—Hypothetical progression.



Most descriptive statements about tonal music are not as distinctly defined as the foregoing, to be sure; but information about tonal function and pitch content, assuming octave equivalence, is commonly conveyed with relatively few words and symbols. In atonal music, however, no hierarchical system of pitch relationships can be assumed. Any attempt to approach atonal music deductively, i.e. by comparison with broad general principles such as those associated with diatonic harmony, may result in confusing and misleading data. In order to

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make positive and meaningful analytical statements concerning the actual pitches used in atonal music, one should proceed inductively; i.e. one should assume that all combinations of pitches are possible, and make comparisons and establish relationships among groups of pitches based only on internal evidence. In approximately the last twelve years there has arisen in theoretical writings a terminology which is precise yet all-inclusive enough to be used in an inductive procedure. The new terminology can be applied to tonal music, but it has been associated primarily with atonal and serial music. The chart on p. 75 compares the new terminology with the old and contains only those terms which are relevant to the remainder of this study. The following is an explanation of the terms in the order in which they appear on the chart. After the explanation, an example will be given to illustrate the use of the terms.

A single exact pitch is symbolized in this study by its letter name and an octave register symbol based on the system in which "middle C on the piano" is called c^1.

The term "pitch-class" (henceforth: PC) designates any one of the twelve pitches of the traditional equally-tempered scale, with octave equivalence assumed, i.e. stated in any octave. Therefore, the term "PC" cannot refer only to one specific pitch. In accordance with a convention established by several different writers, PC's will be represented at all times by the integers 0, 1, 2, . . . , 11, with C as "0," $C^{\#}$ as "1," etc.:

C	$C^{\#}$	D	$D^{\#}$	E	F	$F^{\#}$	G	$G^{\#}$	A	$A^{\#}$	B
0	1	2	3	4	5	6	7	8	9	10	11

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COMPARISON OF TRADITIONAL AND NEWLY-DEVELOPED TERMS

Pitch Phenomena	Terms Traditionally Applied to Tonal Music	New Terms Applicable Both to Tonal and Atonal Music
1. single exact pitch	letter names and octave register symbols	same
2. single pitch, assuming octave equivalence	large-case letter name; no additional symbol	pitch-class (PC)
3. relationship between a pair of pitches	interval	same
4. relationship between a pair of pitch-classes, assuming interval complementarity, mod. 12	interval, with additional information, such as "M6 and its complement, m3"	interval-class (IC)
5. vertical structure consisting of three or more distinct pitches	triad (or quatrad, quintad, etc.); 7th chord (9th chord, etc.); trichord; or simply chord	same, where applicable
6. any group of actual pitches stated vertically or horizontally in any order	no specific term—controlled by and described in terms of conventions of tonal harmony	set (implying "pitch set")
7. theoretical model consisting of any set of pitch-classes	no term	pitch-class, interval-class set (PC/IC set)

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This convention makes the symbolization of PC sets (defined below) much simpler than if they were based on letter names.

The term "interval" needs no further explanation, but "interval-class" (henceforth: IC) requires clarification. An IC is the relationship between any two PC's, assuming interval complementarity, mod. 12; i.e. expressed in terms of the smaller of the two numbers made available by the application of interval complementarity. For example, the relationship between PC's 4 and 5 is not "either a minor second or a major seventh, depending upon how it is notated"; rather, it is always IC 1. Obviously the concept of IC is not directly related to actual pitches, but it is very helpful in describing the IC content of groups of PC's, as will be shown below. Conventionally, IC's are symbolized by the first six positive integers, as in the following list.[6]

m2 and M7 = IC 1

M2 and m7 = IC 2

m3 and M6 = IC 3

M3 and m6 = IC 4

P4 and P5 = IC 5

Tritone = IC 6

The only question in regard to #5 on p. 75 is in connection with the use of terms designating tertian structures (seventh chord, ninth chord, etc.) in atonal songs. In some of the early group of Op. 15 songs there are chords spelled as root

[6]The intervals in the left-hand column include any octave disposition of the intervals.

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position tertian structures in contexts involving tonal implications. If a discussion of any of those passages were to arise, the terms could be applied legitimately. One remains free to use any terminology which is helpful.

The term "set" is used in abstract algebra to denote a collection or class of elements, the basic properties of the elements being two: 1) they are alike in some way; and 2) they are different in some way, i.e. they are distinguishable from each other. The terms "set" and "pitch set" are used in this study only to describe groups of actual pitches in the music under discussion; in other words, they are "compositional sets." The pitches are usually considered to be unordered unless otherwise stated.

A PC/IC set is a theoretical model consisting of any set of PC's of two to ten members,[7] each PC set being associated with its unique IC content (IC set). The PC/IC set is a valuable tool with which to reduce the large number of possible pitch sets to a manageable and conceivable figure. In his article of 1964, "A Theory of Set-Complexes for music,"[8] Allen Forte provided a table of the 197 unique PC/IC sets. This table can be found below in the Appendix. Forte divided the PC/IC sets into groups according to cardinality and numbered them, beginning with "1" in each group. Each time a PC/IC set in Forte's list is referred to in this study the number signifying its cardinality will appear first, followed by its order number in its group. Thus, the label 4-24 will represent the

[7]Sets of none, one, eleven, or twelve PC's are eliminated because they can be stated in only one "order."

[8]Allen Forte, "A Theory of Set-Complexes for Music," Journal of Music Theory, VIII (#2, 1964), pp. 145-148.

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twenty-fourth PC/IC set listed in Forte's group of PC/IC sets containing four PC's. A PC/IC set can be identified by its Forte number (such as 4-24), by a recitation of its IC's, by its pitch prototype (PC set), or by its interval vector (IC set); each format has its uses. The use of PC/IC sets will be illustrated below with a musical example, but first the terms "pitch prototype"[9] and "interval vector" must be defined.

A comprehensive definition of "pitch prototype" was provided by Steven Gilbert in a recent article:

> In brief the [pitch prototype] for any given set of pitch-class integers is obtained, first by arranging its elements in ascending order, and then through any or all of the following operations: (a) cyclic permutation, (b) inversion, (c) transposition. The end result is such that: (a) the first element is the integer zero; (b) the interval from first to last element is as small as possible; (c) the smallest intervals between consecutive elements are concentrated toward the beginning.[10]

It is possible to notate pitch prototypes on a staff, but confusion might result if one mistook them for actual pitches. They are usually inscribed with PC integers, e.g. "PC set (0, 1, 4, 6)." In this study pitch prototypes are always enclosed in parentheses. A pitch prototype is simply an example of the PC/IC set; its function is to promote pitch-interval imagery in the reader.

An interval vector[11] is a formalized representation of the IC content of a PC set. As was shown above, there are only six IC's.

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[9] This term is used by Richmond Browne, University of Michigan. Synonymous terms are "normal order" and "normal form."

[10] Steven Gilbert, "The 'Twelve-tone System' of Carl Ruggles: A study of the Evocations for Piano," Journal of Music Theory, XIV (#1, 1970), footnote 9, p. 90.

[11] The term "vector" is used because of certain similarities

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The six integers which appear in every interval vector fill categories which correspond to the six IC's, in order of smallest (IC 1) to largest (IC 6). The IC content of a PC set is expressed by determining the number of occurrences of each IC and placing the numbers in their respective categories. If some IC's are not contained in the PC set, their categories are represented by zeros. For instance, the PC set that corresponds to the first four notes of a wholetone scale, PC set (0, 2, 4, 6), contains no minor seconds, three major seconds, no minor thirds, two major thirds, no perfect fourths, and one tritone; therefore, its IC content is expressed by the interval vector [030201]. In this study interval vectors will always be enclosed in square brackets.

An example involving actual pitches will help to illustrate the value and application of the terminology. In Schoenberg's atonal songs one finds passages in which sets recur in a variety of contexts. Since the recurrences are not necessarily made obvious by such compositional decisions as rhythmic or registral similarity, the analyst must be aware of the IC content of any horizontal or vertical pitch set. A horizontal set is circled in the bass line of Ex. 2 (ignore the boxes in Ex. 2 for the moment). Consideration of certain aspects of the set will illustrate the steps involved in formulating a PC/IC set. In order to relate this "compositional" set to others, it must be seen as a "version" of some PC/IC set. The first step is to consider the pitch set in terms of PC's (arrows at bottom of Ex. 2).

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between interval vectors and vector spaces, a concept of abstract algebra. For instance, the definition of equality and the operations of vector addition and scalar multiplication apply to both.

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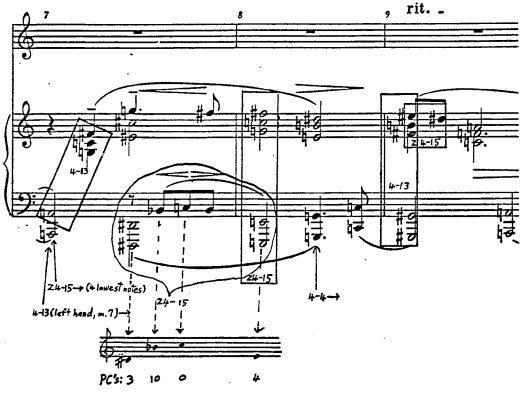
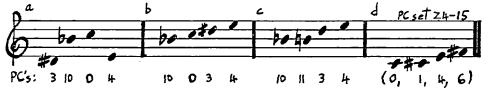
Ex. 2—Op. 15, #10, mm. 7-9.



Ex. 3—Operations on a segment from Ex. 2.



The pitch prototype can be obtained by arranging the PC's (Ex. 3a) with the smallest possible distance between the outer two PC's (Ex. 3b), arranging the IC's in reverse order so that the smallest will be on the bottom (Ex. 3c), and transposing so that the first PC

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will be zero (Ex. 3d). The resulting formulation is PC set Z4-15 (0, 1, 4, 6).[12] The IC content (to be stated in the form of an interval vector) can be obtained by computing all the IC's between pairs of PC's or by reference to Forte's list. Assuming that Forte's list is not available, the following computation can be made:

(0, 1, 4, 6)

PC pairs		IC
0-1	=	1
0-4	=	4
0-6	=	6
1-4	=	3
1-6	=	5
4-6	=	2

[1 1 1 1 1 1]

It is found that the interval vector for PC set Z4-15 (0, 1, 4, 6) is [111111].[13] Interval vectors are useful tools for comparison with vectors of other PC/IC sets in the same song, in other of the songs in Op. 15, or in compositions of other composers. In reference to the vectors of other PC sets in the same song, one finds in Ex. 2 that the four lowest notes in the bass line, mm. 7-8—A, D♯, E, G—are another statement of Z4-15 (0, 1, 4, 6); and that the first chord in m. 8 and the pitches in the right hand, m. 9, first beat,

[12]There are twenty-three cases of varying cardinality in which two PC sets are intervallically identical, but have different pitch prototypes. PC set 4-15 is the only such case in the group of twenty-eight four-PC sets. This is conventionally called the "Z" relationship. Forte lists only one normal order for each vector. In this study both forms of such PC sets will be labeled "Z."

[13]Carlton Gamer discussed this important all-interval "difference set" in "Some Combinatorial Resources of Equal-Tempered Systems," Journal of Music Theory, XI (#1, 1967), pp. 51-54.

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are statements of PC set Z4-15 (0, 1, 3, 7), the Z-related PC set with the same IC content as Z4-15 (0, 1, 4, 6). One also finds that PC/IC set 4-13 (0, 1, 3, 6) [112011] is present as the first chords of mm. 7 and 9, and as the four notes in the left hand, m. 7. Comparison of the two vectors [111111] and [112011] shows the cardinality of IC's 1, 2, 5, and 6 to be the same in each one, indicating that the vectors are maximally similar, i.e. as nearly alike as possible without being equal.[14] Another horizontal segment possessing a vector of maximum similarity to those just mentioned is the last four notes shown in the left hand, Ex. 2—G, c, $G^{\#}$, A, which is PC/IC set 4-4 (0, 1, 2, 5) [211110]. Finally, one might consider the pitches which are brought to the attention of the listener in m. 7: the g^2 and $f^{\#2}$ are emphasized by register, a stress mark, and dynamic markings; and the $B^{\flat}$ - c-$B^{\flat}$ are emphasized by relatively small durations and dynamic markings. These pitches form another statement of Z4-15—pitches $f^{\#2}$, g^2, $B^{\flat}$, c = PC's 6, 7, 10, 1 = Z4-15 (0, 1, 4, 6) [111111]. Two questions are prompted by this brief calculation and comparison of interval vectors:

1. Schoenberg's tonal music was based on the diatonic scale, which can be expressed as PC/IC set 7-35 (0, 1, 3, 5, 6, 8, 10) [254361]. The vector of the "diatonic set" shows that it is an all-interval set (each IC occurs at least once) and that the diatonic scale is a "deep scale" (each IC occurs with unique multiplicity, allowing maximum hierarchization through transposition, due to precise control of pitch intersection between transpositions).[15] PC/IC set Z4-15 is an all-interval set, but it is non-hierarchical, as can be seen by its vector [111111]. Did Schoenberg aim at, and achieve, non-hierarchy

[14] Forte, "A Theory of Set-Complexes for Music," pp. 149-150.

[15] Gamer, "Some Combinatorial Resources of Equal-Tempered Scales," pp. 39-45.

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among IC's in passages of his atonal pieces, while preserving the all-interval aspect of his tonal music? [15a]

2. Did Schoenberg employ pitch sets of similar IC content on a regular basis before his serial works?

While more comparisons involving Ex. 2 could be made, they are not appropriate at this point. The intent here is merely to illustrate the use and possible value of the terms defined above.

Themes

The term "first theme," as commonly used in descriptions of traditional sonata form, can be defined broadly as a relatively long, in some way "memorable" melodic segment which is stated in the opening bars of a movement and is restated at least one time during the last half of the movement in its original form, at its original pitch. Schoenberg was well aware of this. One of the first tasks he set for himself as a young composer eighteen years of age was to learn about the construction of sonata form.[16] This early awareness of traditional structure is reflected in the large sonata designs of the String Quartet, Op. 7 (1905) and the Kammersymphonie, Op. 9 (1906), and also in the themes of the early and middle songs of Op. 15. The definition given above for "first theme" could be applied to the term "theme" as used in these songs with the following comments and qualifications:

1. The themes stated in the opening measures of the songs are restated near the end in almost their original form, but there is always some small change. In each case the pitch and rhythm are close enough to the original to warrant the term "theme" rather than "pitch theme" or "contour theme."

[15a] Richard Teitelbaum, "Intervallic Relations in Atonal Music," Journal of Music Theory, IX (#1, Spring, 1965), deals with this question.

[16] See fn. 5, p. 20.

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2. The accompaniments to the themes often are drastically altered in the restatements.

3. Material which follows the first appearance of a theme is often restated before the second appearance of the theme.

Four more facts should be kept in mind as one considers Schoenberg's use of themes in the atonal songs. First, themes generally are restated at the original pitch; second, they usually contain much of the important motivic material for the remainder of the song; third, they usually occur only twice, once at the beginning and once near the end; and fourth, each song normally has only one theme. Some themes are described and illustrated below. The early, middle, and late Op. 15 songs are considered as separate groups here, because Schoenberg handled themes differently in each group. After the discussion of themes, contour themes and pitch themes are treated briefly. PC/IC sets are mentioned when they function as delimiting devices in connection with themes.

In the early Op. 15 songs (Nos. 3, 4, 5, and 10) themes are restated with little or no alteration in rhythm and pitch; the restatements are different from preceding material in some way, so that the restatement is clearly audible; and at least the beginnings of the original statements are presented with the same PC's by both piano and voice at the first entrance of the voice. The use of the theme in Op. 15, #10 is more nearly like the use of themes in the tonal songs than in any other atonal song. The theme forms the first three and a half measures (the longest theme in Op. 15) of the piano introduction (the longest in any song except #15); and the first three measures of it are repeated exactly, except for rhythmic displacement in the bass line, to accompany the first three measures

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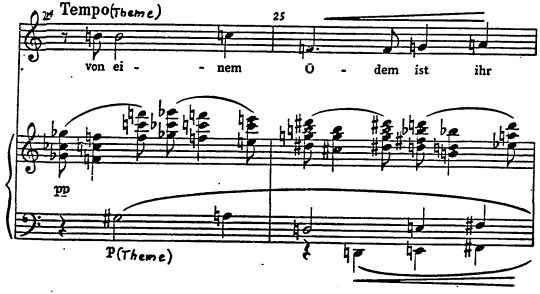
of the vocal line. The voice doubles the piano for the first four notes of the theme. The use of the introduction to accompany the first few bars of the vocal line is a device used by many composers, including Schubert and Brahms. Schoenberg used the device in Op. 1, #1, Op. 3, #6, and three songs of Op. 6—Nos. 4, 6, and 8. When he used it in Op. 15, #10 he may have borrowed it from his style of 1905 in an effort to affirm his connection with the past. In the restatement of the theme in mm. 24-27 it appears as the bass line at the original pitch, accompanied by a parallel statement a minor tenth higher in the vocal line. The first two measures of the restatement are shown in Ex. 4.

Ex. 4—Op. 15, #10, mm. 24-25.



It is more typical of Op. 15 for restatements of themes to be altered slightly, and Op. 15, #5 provides an example of this. When the theme is originally stated in mm. 1-2 it serves as the first complete phrase. The restatement also forms a phrase in mm. 13-15, where it is

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off by rests before and after it, emphasizing its appearance. The pitches and rhythms are slightly altered, but the first and last pitches are the same in each case. The themes in the other two early Op. 15 songs are handled similarly. In song #3 the theme is formed in mm. 1-2 by two statements in the piano of the very important motive, the voice doubling in unison during m. 1. Although the motive pervades the piano part, it does not appear again in the vocal line, except in the form of a pitch motive in greatly augmented note values (mm. 16-18). The theme is restated in mm. 22-23 by the piano alone. Schoenberg seems to have placed considerable value in the early Op. 15 songs on beginning with a unison statement in voice and piano. The fourth song begins with the entire theme stated in unison by voice and piano. It is dramatically restated in mm. 18-20 in augmentation, up an octave in the vocal line, and doubled in octaves by the piano, right hand.

The four facts to be kept in mind (listed above on p. 84) still apply to the use of themes in the middle Op. 15 songs, but there are significant changes in comparison to the early Op. 15 songs. In Op. 15, Nos. 1, 2, 6, 8, and 12 themes are restated with considerable rhythmic change; the restatements (especially in Nos. 2, 6, and 12) are not as clearly delimited; and the original appearances of the themes are not in both the piano and vocal line, but in either one or the other. The themes in Nos. 1, 2, and 6 are typical. In #1 the theme is never stated by the voice. It appears first in mm. 1-2 and reappears in augmented note values in the bass line, mm. 19-21. In Op. 15, #2, the theme appears in the voice in mm. 1-2 and 9-12 (extended by repetition of the middle portion), but never

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in the piano; and also in #6 the piano never states the theme, but only the voice (mm. 1-2, 11-12). In Op. 15, Nos. 8, and 12, the themes appear thrice, rather than twice. Example 5 (p. 88), showing the first five measures of song #8, contains the theme in the vocal line, mm. 1-2, and in the bass line, mm. 4-5, with the rhythm slightly altered. The third appearance of the theme, not shown here, is in mm. 12-14. The augmented triad outlined at the beginning of the theme is indicative of the nature of the whole excerpt and of the whole song. Unlike Ex. 2 (above, p. 80), which was shown to contain many sets with interval vectors showing a variety of IC's, Ex. 5 is dominated by one IC. This dominance is the result of the appearance of three sets which can be described as an augmented triad (PC/IC set 3-12 (0, 4, 8) [000300]), and the two ways a pitch can be added to an augmented triad: 1) the pitch can be a half step away from one of its members (PC/IC set 4-19 (0, 1, 4, 8) [101310]), and 2) the pitch can be a whole step away from one of its members (PC/IC set 4-24 (0, 2, 4, 8) [020301]). The peculiar quality of the augmented triad, complete symmetry within the twelve-tone gamut, makes possible the general statements concerning the sets which can be formulated from it. Relationships like these were undoubtedly understood (however informally) by many composers with regard to many groups of sets. The dominance of IC 4 in the interval vectors of these PC sets suggests that any passage containing a large percentage of the PC sets might contain more of IC 4 than of any other one IC. The sets which are circled and labeled in Ex. 5 illustrate to what extent PC sets 3-12, 4-19, and 4-24 are present. After one more consideration of a PC/IC set, a conjecture can be made as to the reason for the

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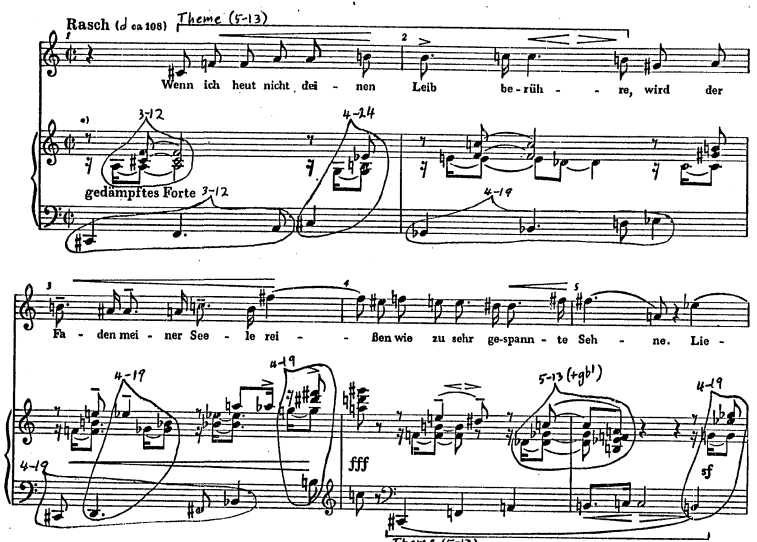
Ex. 5—Op. 15, #8, mm. 1-5.

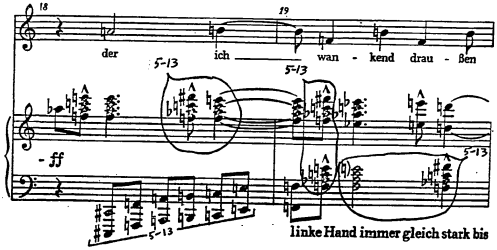


appearance of the theme three times in this song. PC/IC sets 4-19 and 4-24 are subsets[17] of PC/IC set 5-13 (0, 1, 2, 4, 8) [22131], a fact perhaps most easily observable by a comparison of normal orders:

PC set 4-19—(0, 1, 4, 8)
PC set 5-13—(0, 1, 2, 4, 8)
PC set 4-24—(0, 2, 4, 8)

Thus, each time PC set 5-13 occurs, all the IC's contained in 4-19 and 4-24 will have occurred, to say nothing of 3-12. The theme is a statement of PC set 5-13. Including the three statements of the theme, PC set 5-13 is stated linearly ten times at the same PC level in the twenty-two measures of the song. Three of the linear statements are bracketed and labeled in Examples 5 and 6. In addition, PC set 5-13 is stated vertically three times in mm. 18-19 of Ex. 6.

Ex. 6—Op. 15, #8, mm. 18-19.



[17]The term "subset" in this study will always imply "proper subset." Thus, a subset A of a PC set S is a PC set all of the IC's

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So many linear statements of 5-13 at the same PC level, three of them as the theme, might seem to be unity to the point of monotony. This could well be so at a moderate tempo, but at the tempo "Rasch ($\dot{d}$ ca 108)" (the only truly fast tempo in Op. 15) there is no possibility of boredom. The song takes less than half a minute to perform. The speed and the syncopated rhythms throughout make the song very difficult for the performer, and these same factors create problems for the listener. In fact the song in performance tends to sound more like a jumble of notes than an organized composition, except for the easily-recognizable ascending statements of PC/IC set 5-13 in steady rhythm (eighths or quarters), and usually beginning on PC 1. One can surmise that Schoenberg, recognizing the problems inherent in a rapid, atonal, syncopated composition, used the monodurational, fixed-pitch set to create coherence for the benefit of both performer and listener. In the only middle Op. 15 song not yet discussed, #12, the theme also plays an important role in the unity of the song, but for a different reason than in #8. The theme of #12 contains a motive (neighbor-tone shape) that is present in thirteen of the twenty-eight measures of the song. The first statement of the theme is shown in Ex. 7.

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of which are contained in S, it being known that S contains at least one IC which is not in A.

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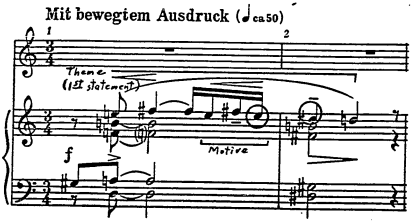
Ex. 7—Op. 15, #12, mm. 1-2.



The second statement of the theme at a different pitch level, a procedure which occurs in only one other Op. 15 song, (#11), results from repetition of mm. 1-2 up a minor second in mm. 9-10 (see Ex. 9 below). Repetition of opening material up a minor second occurs in several of Schoenberg's tonally-extended songs, where it effectively cancels out the gravitation that may have developed around the original tonic. Schoenberg's use of this device in the atonal Op. 15, #12 can be seen as a stylistic retrogression of the same sort as the repetition of mm. 1-3 to accompany the entrance of the voice in song #10. However, the device has special significance in this song. A glance at the circled pitches in Examples 7 and 9 shows that the theme and its second statement up a half step have PC's 4 and 3 in common. Pitch invariance in itself is a significant connection between the two statements, but the relationship seems even more significant when it is seen as part of a larger system of connecting segments by two common PC's. The last two PC's of the first statement (PC's 3 and 2) and the last two PC's of the second statement (PC's 4 and 3) are stated as the ends of two bracketed five-note segments which are concurrent with the second statement (see the notes in boxes, Ex. 9). The second

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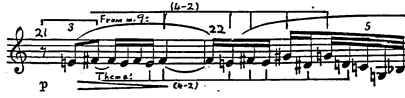
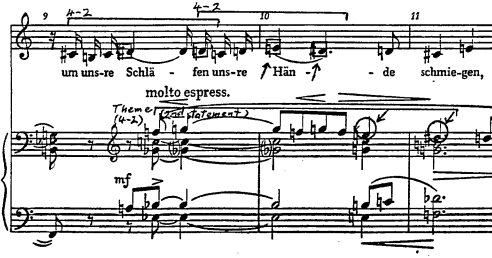
of these five-note segments has still further significance in regard to the final statement of the theme. When the theme is repeated an octave lower than the original(Ex. 8) one finds a very curious formulation.

Ex. 8—Op. 15, #12, mm. 21-22, piano only.



The first five notes (m. 21) are enough like the first five notes of the first statement of the theme to establish the connection between the two segments, but the remaining two notes (PC's 3 and 2) are part of a puzzling pitch pattern which can be explained by reference to PC set 4-2 and to mm. 9-10 (Ex. 9).

Ex. 9—Op. 15, #12, mm. 9-10.



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The pitches of the first and second statements of the theme (Examples 7 and 9) can be expressed as PC set 4-2 (0, 1, 2, 4). The overlapping five-note segments in the vocal line of Ex. 9, which can be described as inversions of the last five notes of the theme with the last two notes of the inversions reversed, are also statements of PC set 4-2. Schoenberg connects the ends of the second five-note segment and the second statement of the theme by using PC's 4 and 3 as their last two notes (arrows in Ex. 9). He connects their beginnings by using PC's 4 and 6 as their first two notes (Ex. 8)!

Themes are used in the late Op. 15 songs in a much different way than in the early and middle ones. In three of the late Op. 15 songs (Nos. 7, 9, and 14) and Am Strande (probably composed at about the same time) there are no themes. The theme of Op. 15, #15, the last song of the cycle, is a special case, to be considered in Chapter IV; but the themes of Nos. 11 and 13 are of interest here. The theme of #13 is much like those of the middle Op. 15 songs. It occurs in the voice, mm. 1-2, and is restated with considerable variation of pitch and rhythm in mm. 10-11. It never appears in the piano part. Op. 15, #11 is highly unusual as far as themes are concerned; it is the only Op. 15 song with two themes—one in the piano and one in the vocal line. The first theme to be heard is in the bass line, m. 1 (see p.133, Ex. 40). When it returns near the end(mm. 20-21) one interval is changed, and it begins a major second higher than the original statement, the only theme in Op. 15 besides the theme of song #12 to be restated at a different level. The other theme of song #11 is unique among themes of Op. 15 in that it does not appear at the beginning of the song. When the voice enters for the first time

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it is with a statement of the theme (below, Ex. 11a). It is restated as the last vocal phrase (mm. 21-23) in doubled note values, a procedure noted earlier in connection with Op. 15, Nos. 1 and 4.

The changes in the nature of the themes from the early to the middle Op. 15 songs, and from the middle to the late, indicate a trend away from exact restatement of material and from obtrusive original appearances and restatements of themes. In the early Op. 15 songs themes are easily recognizable, because both rhythm and pitch are varied only slightly upon restatement. First appearances of themes are made to stand out by simultaneous presentation at the outset by piano and voice; and restatements are accentuated by their being set off with rests, dynamics, or tempo markings, and by their being in the vocal line. In the cases of songs Nos. 4 and 10, restatements are by piano and voice together. Three of the middle Op. 15 songs (Nos. 2, 6, and 12) contain themes which are considerably varied when they return; but the returns are close enough to the originals to be called themes. Themes in the middle Op. 15 songs are not stated and restated as obtrusively as those of the early group: none of the themes occur in the piano and voice parts simultaneously, two of them appear only in the piano part (Nos. 1 and 12), and two of the restatements by the voice are preceded by nonthematic notes at the beginning of the phrase (Nos. 2 and 6). Among the songs that seem to have been written later there are four (Nos. 7, 9, 14, and Am Strande) which contain no themes. The trend toward de-thematization of basic material which is implicit in the changes just mentioned is indicative of a more general tendency to be discussed below.

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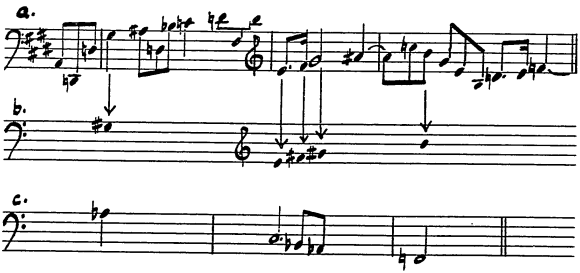
Pitch themes are not as common in the Op. 15 songs as are themes, but the concept of "pitch theme" is very helpful in describing some of Schoenberg's developmental passages. Before illustrating pitch themes in some Op. 15 songs it is pertinent to mention one described by Schoenberg in his essay "Composition with Twelve Tones"[18] and later in his article "My Evolution."[19] After he had completed his Kammersymphonie, Op. 9, he worried so much about the apparent lack of relationship between the two main themes that he almost undertook a revision, but finally decided to let it stand. Twenty years later he discovered that the principal notes of the first theme (according to Schoenberg), if inverted, formed the first phrase of the second (Ex. 10).

Ex. 10—a. First theme of Kammersymphonie, Op. 9.
b. Pitches derived from a.
c. Inversion of b., stated as first phrase of second theme of Op. 9.



[18] Schoenberg, Style and Idea, pp. 111-113.

[19] Schoenberg, "My Evolution," pp. 521-522.

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Schoenberg certainly was not aware of this connection when he wrote the themes; he described it as "a gift from the Supreme Commander." That Schoenberg was concerned about the apparent lack of relationship is an indication of his desire to apply at all times his technique of developing variation, which can "create new forms out of basic material";[20] and that he considered such a remote relationship significant helps to justify the consideration of remote relationships in his later music. Pitch themes of three different types and functions can be found in Op. 15, Nos. 11, 7, and 2. In #11 the pitch theme is a four-note fragment (in long durations) which is stated several times throughout the song. The first statement is in the right hand, m. 1. Example 13, p. 61 above, shows mm. 13-15, where six statements of the segment occur, with two of them (voice, mm. 14-15) being contour themes and the others pitch themes (bracketed). Two of the pitch themes are at the original PC level (PC's 10, 1, 2, and 5), as is usual for Schoenberg's pitch themes in the atonal songs; but the other two are stated at different levels, possibly to provide variety in the imitative passage. The pitch theme is inverted in m. 19, near the end of the song. Besides these ordered statements of the segment, the IC's of the theme appear in the vocal line five times in various orders as PC/IC set 4-17 (0, 3, 4, 7). The first example of this is in the opening measure of the vocal line (Ex. 11a). All the notes within the brace except b♭ are part of PC/IC set 4-17. Three other instances of this are circled and labeled "4-17" in Ex. 11b and Ex. 11c.

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[20]Schoenberg, "Introduction to my Four Quartets," quoted in Friedheim, "Tonality and Structure," p. 298.

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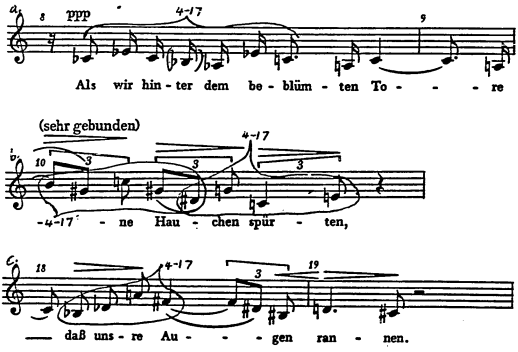
Ex. 11—a. Op. 15, #11, m. 8, vocal line only;
b. Ibid., m. 10.
c. Ibid., mm. 18-19.



The appearance of the pitch theme of Op. 11, with its distinctive contour, at the beginning, middle, and end is one of the strongest unifying factors in the song. The pitch theme in song #7 is entirely different. It appears only twice, its shape is not so memorable, and the rhythm and phrasing of the second occurrence are altered so radically that the pitch relationship to the original might not be perceived by most listeners, especially since the two statements are related by retrograde inversion. The piano part of #7 is written entirely on the treble staff, and the pitch theme and its restatement are in the top line of the piano part in mm. 1-4, 13-19. The first appearance is shown in Ex. 12 (p. 98). It consists of a retrograde-inversion cambiata shape (a), a four-note chromatic descent (b), and a repetition of (b). The restatement is shown in Ex. 13 (p. 99); it is a statement of the original in retrograde inversion: four-note

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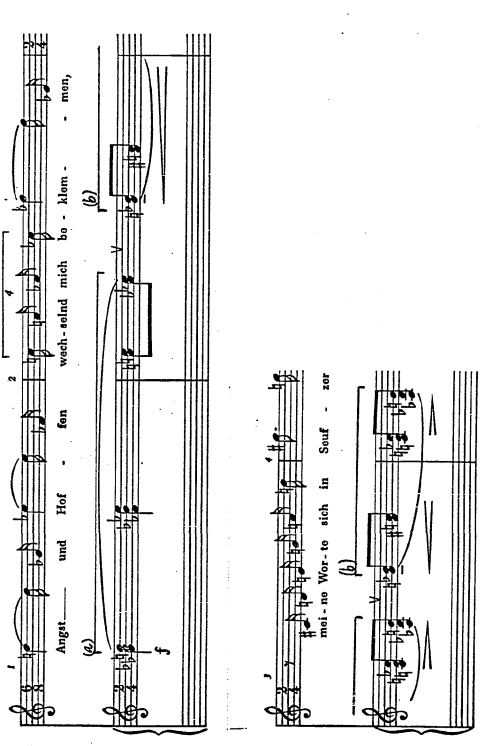
Ex. 12—Op. 15, #7, mm. 1–4.



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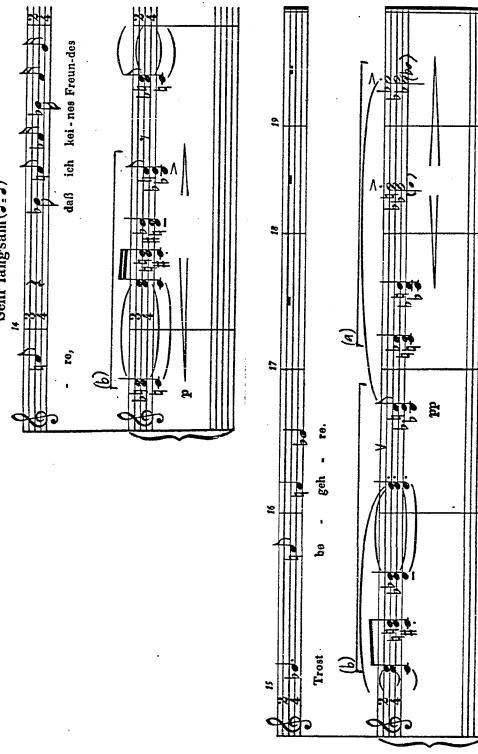
Ex. 13—Op. 15, #1, mm. 14–19.



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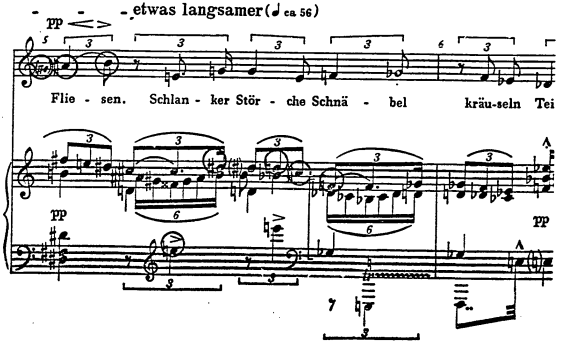
chromatic descent (b), repetition of (b), and the traditional cambiata shape, if d^2 and $e^{\flat 2}$ are transposed down an octave (a). The restatement is arranged so that the same pitches are used in both statements of the pitch theme, and the first two chords are repeated in the same order at the end. The pitch theme of Op. 15, #2 is of interest here as an example of a remote relationship between two seemingly unrelated passages. The original appears in m. 5 (circled pitches in Ex. 14), the first part being in the vocal line and the last in the piano part.

Ex. 14—Op. 15, #2, mm. 5-6.



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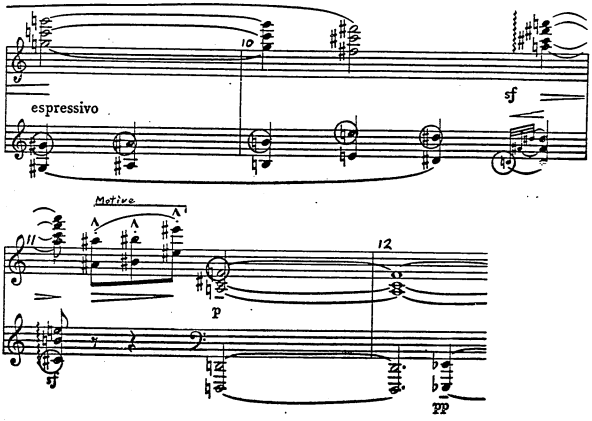
The restatement, in the piano part only, is circled in Ex. 15, mm. 9-11.

Ex. 15—Op. 15, #2, mm. 9-12, piano only.



The term "contour theme" is useful when the contour (but not the pitches or rhythm) of a relatively long melodic segment is used as the basis for one or more other melodic segments. Contour themes function significantly in Op. 15, Nos. 3, 6, and 14. Songs 3 and 14 are analyzed in detail in Chapter IV; therefore only #6 is discussed here. Song #6 contains a linear procedure which is present in several of Schoenberg's tonal songs: the presentation of basically the same melodic material simultaneously in two separate parts, but with rhythmic divergence. This occurs many times with short melodic fragments, and occasionally with longer ones. Some instances

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involving longer segments are in Op. 6, #7, mm. 16-19 (voice and piano); Op. 6, #6, mm. 3-5 (voice and piano, right hand); and Op. 2, #2, mm. 1-4 (voice and bass line). In Op. 15, #6, mm. 3-7, there is a complex contrapuntal passage involving this procedure which can be partially explained with the terms "contour theme" and "pitch theme." In Ex. 16 (p. 103) the vocal line A (mm. 3-5) will be considered the "original" for purposes of comparison. Compared to A, segment B (right hand, mm. 3-5) is a pitch theme; the pitches are basically the same, but the rhythm is different. Segment C (left hand, mm. 5-7) is another pitch theme compared to A; the circled pitches of C are the same as those of A, except that the last three notes are up a major second. Segment D (voice, mm. 5-7) is a contour theme, compared to A, because its pitches are too dissimilar to be called a pitch theme. Segment E (voice, mm. 6-7) is enclosed in a horizontal bracket in order to point out that, in comparison to it, segment F (horizontal bracket, left hand, mm. 6-7) acts as a pitch theme. The pitches indicated by arrows in F are the same as those of E, with the exception of the two which are indicated by arrows enclosed in parentheses. Finally, a pitch theme for segment B is presented by two parts simultaneously (pitches enclosed in squares, right and left hands, mm. 5-6). This passage is further complicated by two short fragments in mm. 6-7, right hand. Fragment G anticipates four notes of the vocal line (arrows and braces) and fragment H states the last four notes of segment C and the note following it up a major sixth and in shorter durations (arrows and braces). Surely this passage must be the ultimate in complex developmental variation, but still

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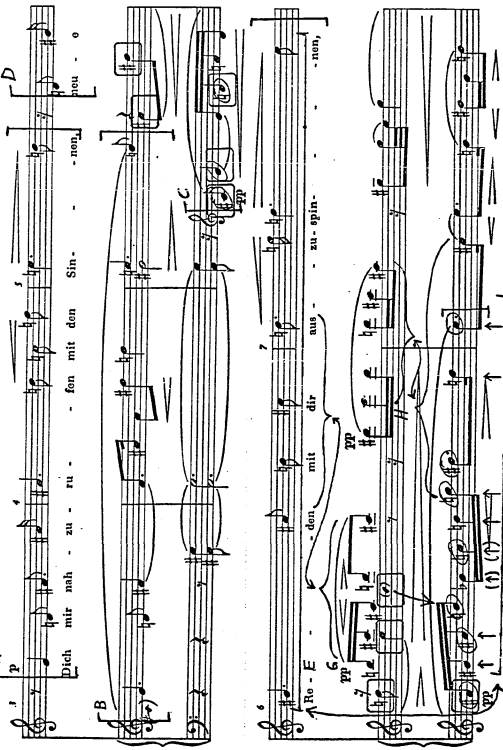
Ex. 16—Op. 15, ♯6, mm. 3–7.



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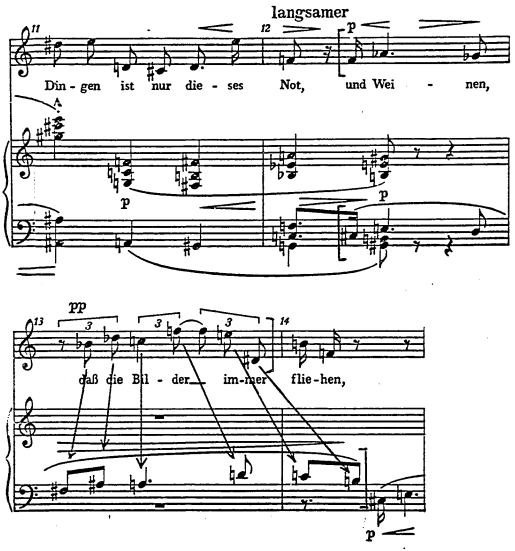
another ingenious (though less complicated) passage appears in mm. 12-14 (Ex. 17).

Ex. 17—Op. 15, #6, mm. 11-14.



Compared to segment A of Ex. 16, the bass line bracketed in mm. 12-14 of Ex. 17 is a contour theme. Compared to this bass line, the bracketed vocal line in mm. 12-13 of Ex. 17 is a pitch theme, but stated up a tenth!

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Developing Variation and Opening Material

Schoenberg stated several times in his writings that developing variation involved derivation of the musical material of a composition from its "basic idea," its "germ," its "basic material," or from "basic features of the theme and its motive." This aspect of developing variation is present in the atonal songs, where a large part of the material of each song can be related to its opening measures. In each of the songs melodic statements of ordered pitches are restated in exact or varied forms which can be described as motives, pitch motives, rhythm motives, or contour motives. All of these forms also may involve variation of register, dynamics, timbre, or phrasing. The opening material of each of the atonal songs also contains groups of PC's and IC's[21] which appear together at other points in the song without occurring always in the same order. Since these PC and IC sets often appear frequently enough to be factors in the overall organization of the songs, they are considered here to be a further extension of Schoenberg's art of developing variation. The remainder of this chapter deals with the content and diffusion of the opening measures of seven atonal songs.

In all the early Op. 15 songs (Nos. 3, 4, 5, and 10) and two of the middle Op. 15 songs (Nos. 8 and 12) the pitch phenomena with by far the most unifying potential are themes and motives; and rhythm motives, contour motives and recurring PC and IC sets have some unifying function. In contrast to the songs just mentioned, all the

[21]PC sets and IC sets are mentioned separately here because sometimes sets of PC's return and other times sets of IC's recur at a number of different PC levels.

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other Op. 15 songs and Am Strande share two important characteristics: 1) they contain pitch motives, and 2) PC and IC sets are more significant in them as organizational factors. The previous discussion of themes emphasized the connection between the first group of songs just mentioned and Schoenberg's earlier style, and pointed out the de-thematization of melodic material in the late Op. 15 songs. The succeeding treatment of seven of the second group of songs just mentioned stresses Schoenberg's movement toward a later style. The songs will be dealt with below in this order: Op. 15, Nos. 1, 2, and 6 (middle Op. 15 songs); Op. 15, Nos. 9, 13, and 11[22] (late Op. 15 songs); and Am Strande.

Op. 15, #1

Op. 15, #1 begins with a rhythmically amorphous, eight-measure segment which is of the utmost significance for the remainder of the song. Philip Friedheim pointed out that the construction of the segment is based on the intervals present in its first three notes (minor second, minor third, and major third), and that the material for the entire song can be related to these intervals or to formations which seem to grow out of them.[23] Friedheim's analysis was primarily in terms of three-note groups. The present discussion will be in terms of four-note PC/IC sets as related to a theme and three pitch motives.

The segment mentioned above is shown as mm. 1-8 in Ex. 18 (p. 107). For easy reference to PC/IC sets contained in the

[22] Op. 15, Nos. 14 and 15 are considered separately in Chapter IV, and the opening measures of #7 are mentioned above.

[23] Friedheim, "Tonality and Structure," pp. 421-430.

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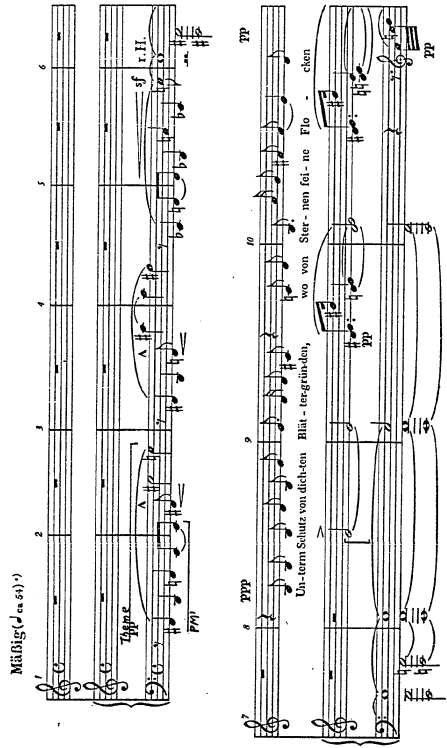
Ex. 18--Op. 15, #1, mm. 1-10



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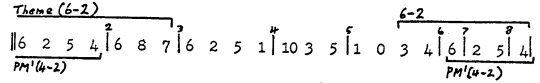
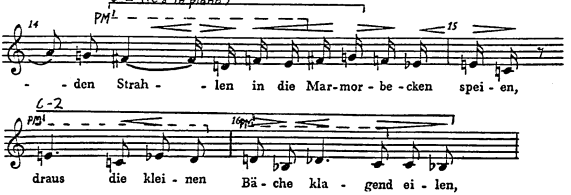
twenty-two notes of this segment, the notes are represented below by PC's. The vertical lines represent the barlines of the original score (Ex. 19).

Ex. 19—Op. 15, #1, mm. 1-8; PC representation of the first twenty-two notes of the piano part.



The notes in mm. 1-2 act as a theme when they return in the left hand, mm. 19-21, and the first four notes function as a pitch motive (referred to hereafter as PM^1) which returns three times. The first recurrence of PM^1 is at the original PC level in the vocal line, m. 14, and two more statements follow closely in mm. 15-16 (broken lines in Ex. 20).

Ex. 20—Op. 15, #1, mm. 14-16, vocal line only.



The PC's in mm. 1-2 of Ex. 19 have significance apart from their use as a theme and a pitch motive. In order to arrange them as a pitch prototype for a PC/IC set one can state them in scale form (2 4 5 6 7 8) and then, by arranging them so that the smallest IC's

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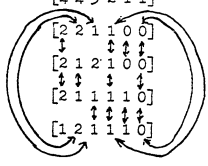
are on the bottom and the lowest PC is PC 0, arrive at PC/IC set 6-2 (0, 1, 2, 3, 4, 6) [443211]. This PC/IC set is present each time PM^1 occurs. At the beginning of the segment symbolized in Ex. 19 PM^1 (the first four PC's) is followed by PC's 8 and 7 to form PC/IC set 6-2. At the end of Ex. 19 PC/IC set 6-2 is stated at a different PC level when PM^1 (the last four PC's) is preceded by PC's 3 and 4 (brackets in Ex. 19). Above in Ex. 20, m. 14, PC/IC set 6-2 is present at the original PC level, with the inclusion of PC8, which is present in the piano part; and it is stated at a different PC level in mm. 15-16 (brackets in Ex. 20). PC/IC set 6-2 also can be considered the source set[24] for several subsets which function importantly in the song. The following comparison shows that the PC patterns of the subsets are present in the pitch prototype of PC/IC set 6-2, and that the IC content of each of the subsets is maximally similar to that of two other subsets. The pitch prototypes of subsets 4-4 and 4-11 have been transposed to facilitate comparison.

PC/IC sets	pitch prototypes	interval vectors
6-2	(0, 1, 2, 3, 4, 6)	[4 4 3 2 1 1]
4-2	(0, 1, 2, 4)	[2 2 1 1 0 0]
4-3	(0, 1, 3, 4)	[2 1 2 1 0 0]
4-4	(1, 2, 3, 6)	[2 1 1 1 1 0]
4-11	(1, 2, 4, 6)	[1 2 1 1 1 0]



[24] In this study the term "source set" refers to a PC/IC set which contains a number of smaller sets (subsets) that function significantly in the same song in which the source set appears.

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Another PC/IC set pertinent to the present discussion is first to be found in m. 3: PC's 6, 2, 5, 1, can be rearranged as PC's 1, 2, 5, 6, and transposed to form PC/IC set 4-7 (0, 1, 4, 5). A comparison of interval vectors shows this PC/IC set to be maximally similar to PC/IC set 4-4:

```
4-7 [2 0 1 2 1 0]
      |   |   | |
4-4 [2 1 1 1 1 0]
```

One more PC/IC set that is important in the songs is present as PC's 10, 3, 5, 0 in mm. 4-5 of Ex. 9: PC/IC set 4-23 (0, 2, 5, 7) [021030]. The interval vector of this PC/IC set shows a radical difference from the PC/IC sets mentioned above. All of the previously-mentioned PC/IC sets except for 4-11 have at least two IC 1's, and none of them contain more than one IC 5; but PC/IC set 4-23 contains no IC 1's and three IC 5's. The appearance of PC/IC set 4-23 as a prominent pitch motive in mm. 10-11, 13, 17-18 provides appropriate contrast to the IC 1's and maximal similarity relations of the other PC/IC sets.

In summary, PC/IC sets 4-2, 4-3, 4-4, 4-11, 4-17, and 4-23 are present in Op. 15, #1, mm. 1-8. Most of the pitches in the remainder of the song can be accounted for by reference to these PC/IC sets. Some of their appearances are pointed out by means of circling and labeling in Examples 18-22. This discussion of Op. 15, #1, concludes with a consideration of PC/IC sets that are related to another pitch motive (hereafter: PM^3). Ex. 21 shows mm. 11-12, where most of the vocal line consists of overlapping statements of PC/IC sets 4-3 and 4-2. The piano part consists of PM^2 (PC/IC set 4-23); PC/IC set 3-4 stated with PC's 11, 0, 4; and alternation between PC's 2 and

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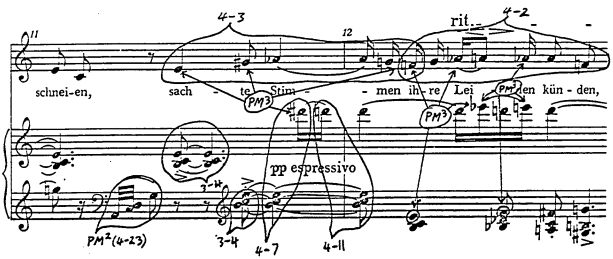
3. (The short wedge shape in the left hand, m. 12, will not be dealt with here). The alternation between PC's 2 and 3, which began in m. 9 (see above, Ex. 18), produces alternation between PC sets 4-7 and 4-11 (circled in Ex. 21).

Ex. 21—Op. 15, #1, mm. 11-12.



When this passage returns in an altered form in m. 17 (Ex. 22), the left hand reiterates PM^2 as a simultaneity. PC/IC set 3-4 appears in the right hand at the beginning of the measure, but there is no alternation of PC's 2 and 3 as in m. 12; instead, PC 3 is combined with PC/IC set 3-4 to form PC/IC set 4-7, PC 2 being present as part of PM^2. The climactic four-note segment (PM^3) in the vocal line of m. 17, which is doubled at the same PC level but in a different rhythm by the top notes of the right hand, seems to be new material. However, its contour is present in each of the segments circled in the vocal line of Ex. 21; and its PC's are stated three times by the piano and voice in temporal proximity (arrows in Ex. 21).

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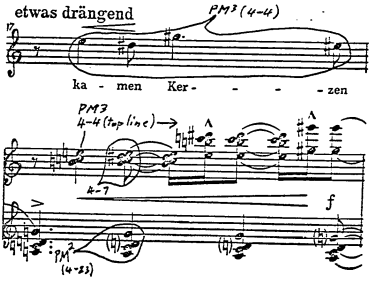
Ex. 22—Op. 15, #1, m. 17.



The last chord of the song is a statement of PC/IC set 3-5, which does not appear frequently in Op. 15, #1, but is important in Op. 15, #2, in both linear and vertical statements.

Op. 15, #2

The theme of Op. 15, #1, a source set which appears in mm. 1-2, is stated by the piano. In Op. 15, #2, the theme is a source set also, but it is stated in mm. 1-2 by the voice. This source set contains PC/IC sets 3-4, 3-5, 3-9, 4-11, 4-19, and 4-24, all of which play important roles in the song. In Ex. 23 (p. 113) the source set is present as the theme (voice, mm. 1-2), and it appears in the last part of m. 4, piano part. In m. 6 (Ex. 24) three pitches in the vocal line act as invariants for two statements of the source set 6-34 with different PC's. This ingenious formation is accomplished by movement of parallel thirds in contrary motion (arrows in Ex. 24).

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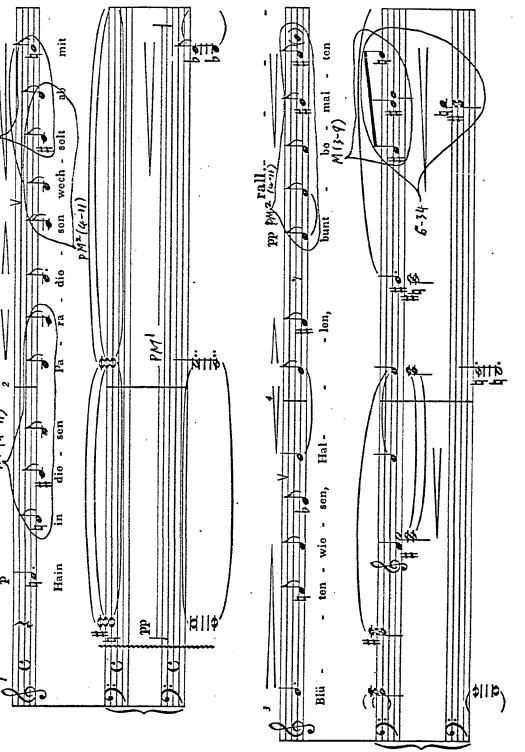
Ex. 23—Op. 15, #2, mm. 1-4.



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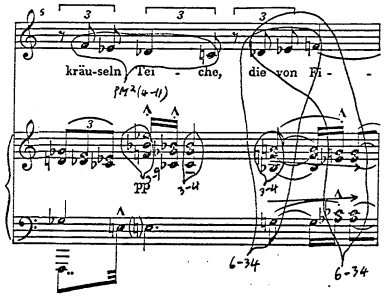
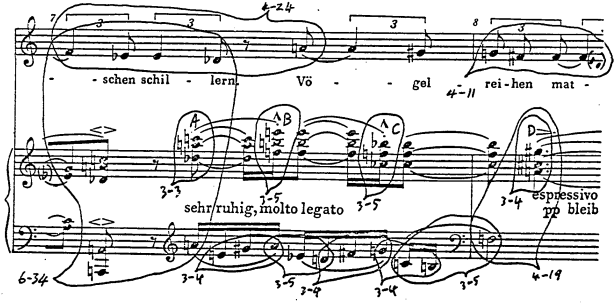
Ex. 24—Op. 15, #2, m. 6.



At the beginning of m. 7 PC/IC set 6-34 is present once again, containing still other PC's, but involving the same three pitches of the vocal line (circled at the beginning of Ex. 25)!

Ex. 25—Op. 15, #2, mm. 7-8.



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The source set returns twice more when part of m. 4 returns in m. 9 and when the theme returns in the vocal line, mm. 9-12.

The first two measures of the song contain a motive (M) and two pitch motives (PM^1 and PM^2). The motive occurs twice as PC/IC set 3-5, both times as the last three notes of the theme. It occurs four more times as PC/IC set 3-9. The first instance of this can be seen in Ex. 23, at the end of m. 4; and another instance is labeled above on p. 101, Ex. 15, m. 11. The motive is stated as PC/IC set 3-9 once more as the last three notes of the song (not shown here). The first pitch motive (PM^1) is stated in the piano, mm. 1-2 (Ex. 23). PC/IC set 4-19 is stated in m. 1 as a root position minor-major seventh chord; and it becomes PC/IC set 4-24 when the bass moves up from PC 2 to PC 3. PM^1 returns with the same PC's but in a slightly different spacing at the end of the song (see p. 101, Ex. 15, mm. 11-12.) PM^2 is PC/IC set 4-11 (0, 1, 3, 5) stated in the order of its pitch prototype, or of the inversion, retrograde, or retrograde inversion of its pitch prototype. The segment appears eight times in the vocal line of this fourteen-measure song. Two occurrences of PM^2 are labeled in m. 1-2 (Ex. 23); they return at the same PC level with the return of the theme in mm. 9-12. Two of the statements of PM^2 at different PC levels are to be seen in m. 4 (Ex. 23) and in m. 6 (Ex. 24).

Op. 15, #2 affords two examples of "chordal counterpoint." In Ex. 24, right hand, there are three chords containing three PC's each. As vertical structures these chords can be formulated as PC/IC set 3-9, followed by two occurrences of PC/IC set 3-4. If the bottom notes, middle notes, and top notes of the chords are considered to be three separate linear segments, the outer two segments can be

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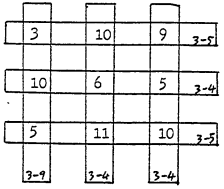
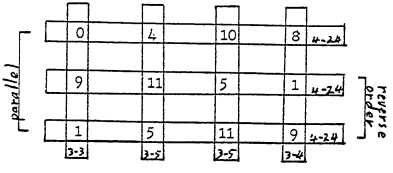
seen as simultaneous (but not exactly parallel) occurrences of PC/IC set 3-5; and the inner segment is PC/IC set 3-4. Example 26, a formulation of the three chords in terms of PC's, illustrates the sets:

Ex. 26—Op. 15, #2, m. 6; PC representation of three chords, right hand.



The chords labeled A, B, C, D in Ex. 25, right hand, furnish a similar instance. They can be described as two outer parts moving in parallel major sevenths and a non-parallel inner part. Vertically, the four chords form the following PC/IC sets: 3-3, 3-5, 3-5, and 3-4. Horizontally, the outer two parts are simultaneous, parallel statements of PC/IC set 4-24; and the inner part is a simultaneous, non-parallel statement of 4-24 containing the same PC's as the bottom part, but in reverse order. Example 27, a representation of the chords with PC's, illustrates the relationships just mentioned.

Ex. 27—Op. 15, #2, mm. 7-8; PC representation of four chords, right hand.



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Simultaneous with the chords symbolized above, the left hand has interlocking statements of PC/IC sets 3-4 and 3-5 (circled in Ex. 25). Furthermore, the three PC/IC sets of cardinality four, which were mentioned above as having important roles in the song, occur in the same passage. They are circled in Ex. 25: 4-24, vocal line, m. 7; 4-11, vocal line, m. 8; and 4-19, piano, m. 8.

In short, the vocal line in mm. 1-2 of Op. 15, #2, states the theme, which also acts as a source set for six important subsets: PC/IC sets 3-4, 3-5, 3-8, 4-11, 4-19, and 4-24. The source set itself appears at several points throughout the song, and some of the subsets provide the PC's used for a motive, two pitch motives, and two instances of "chordal counterpoint."

Op. 15, #6

The amazing complex of pitch themes and contour themes in mm. 3-7, 12-13 of this song is described and illustrated above on pp. 102-104. The song is mentioned here in order to present its opening as another example of chordal counterpoint and to point out a reference to tonality. The first two measures are shown in Ex. 28, p. 118. The three chords which accompany the theme at the beginning of the piano part are statements of PC/IC sets 4-18 (0, 1, 4, 7) [102111] and Z4-15 (0, 1, 4, 6) [111111], sets which are maximally similar. Example 29, a representation of the chords as PC's, shows that linear segments A and C are parallel statements of PC/IC set 3-3 (0, 1, 4).

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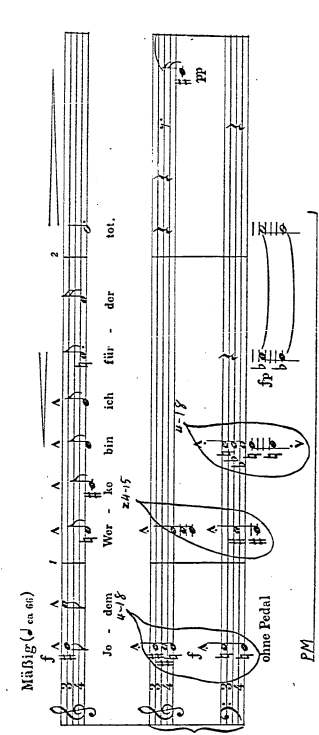
Ex. 28—Op. 15, #6, mm. 1–2.



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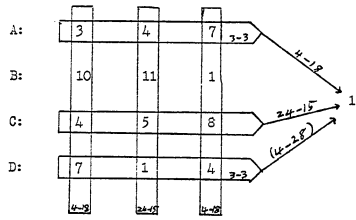
Ex. 29—Op. 15, #6, m. 1; PC representation.



A comparison of pitch prototypes of PC/IC set 3-3 and the two vertically-stated sets shows that 3-3 is a subset of both 4-18 and Z4-15:

PC/IC sets	pitch prototypes
3-3	(0, 1, 4)
	| | |
Z4-15	(0, 1, 4, 6)
	| | |
4-18	(0, 1, 4, 7)

The foregoing comparison also shows that the first three PC's of each of the pitch prototypes are the same, and that the remaining PC's of Z4-15 and 4-18 are separated by IC 1. Therefore, if the actual pitches represented by the first three PC's of these sets were separated by IC 1, then the same PC could be added to both of them in order to form PC/IC sets Z4-15 and 4-18. The arrows in Ex. 29 illustrate that Schoenberg accomplished the linear statements of Z4-15 and 4-18 by following linear segments A and C (statements of PC/IC set 3-3 separated by IC 1) with PC 10 at the end of m. 1. The chords just described act as a pitch motive when they return arpeggiated and followed by PC 10 in mm. 16-17 (Ex. 30, p. 120).

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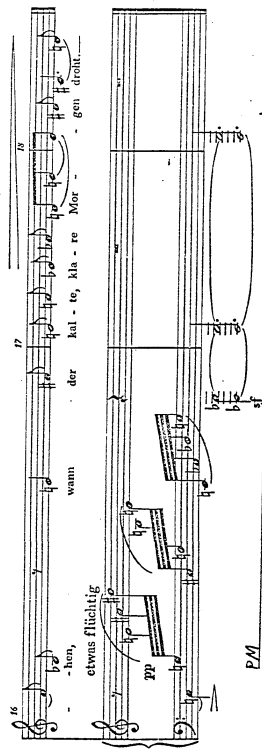
Ex. 30--Op. 15, $\frac{4}{16}$, mm. 16-18.



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A striking reference to tonal procedures can be found in Op. 15, #6. In seven separate melodic segments PC 2 is surrounded by PC's that are "diatonic" in the key of D major or minor. Instances of this can be seen in Ex. 28 (vocal line, mm. 1-2); above on p. 103, Ex. 16, mm. 3 (right hand), 5 (left hand), and 6-7 (voice); and above on p. 104, Ex. 17, mm. 12 and 14 (left hand). In addition, the voice states d^1 as the last note of the song, where it is preceded by its upper and lower leading tones (Ex. 30, m. 18). The bass line of mm. 1-2 (repeated in m. 16) can be related to this tonal reference. Its symbolization as linear segment D in Ex. 29 points out that the four notes can be formulated as PC/IC set 4-28 (0, 3, 6, 9), commonly called a diminished seventh chord. Schoenberg spelled it as vii^{o7} in D major or minor.

Op. 15, #9

Example 31 (p. 122) contains mm. 1-8 of Op. 15, #9. The three main unifying factors in this song are present in mm. 1-4: a pitch theme, a motive, and a pitch motive. The pitch theme is in the right hand, and it is labeled PT^a and PT^b. PT^a is stated by the voice in altered rhythm in mm. 7-8; and PT^b, not shown here, follows in mm. 9-11 in a version expanded by repetition of pitches. PT^a returns an octave higher in the vocal line, mm. 17-20, where it also is expanded by pitch repetition. The motive (labeled M), which is the most important unifying element in the song, is first stated in m. 3 (labeled in Ex. 31); but it occurs at the beginning of m. 5 in the form which is most common throughout the song. Besides these statements, it is present in mm. 11-13, 14-16, 21-22, and 23 (the

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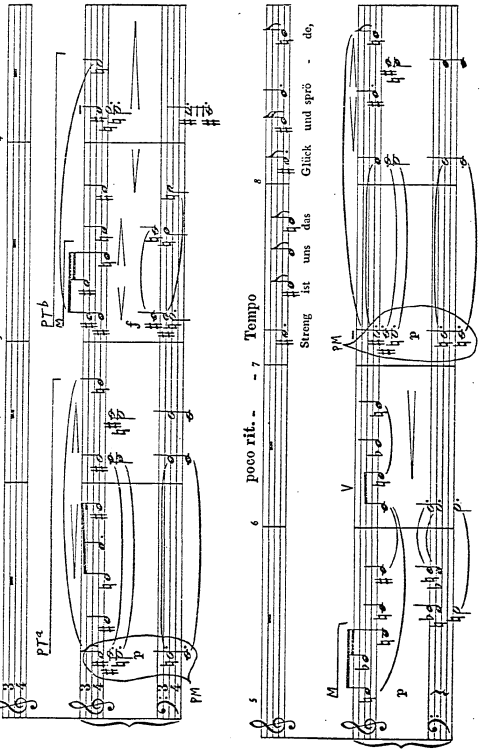
Ex. 31—Op. 15, #9, mm. 1–8.



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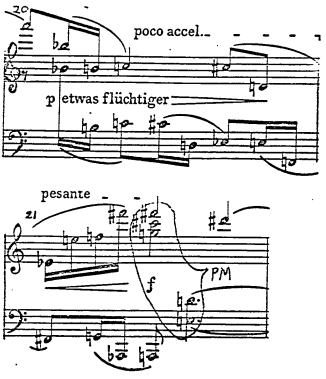
last measure of the song). In mm. 11-12, 20-21, the motive appears in a kind of rhythmically free canon forming lines of ascending IC 1's, but with major seventh leaps. An instance of this is shown in Ex. 32.

Ex. 32—Op. 15, #9, mm. 20-21.



The pitch motive (labeled PM) is a single chord, a vertical statement of PC/IC set 5-12, which returns each time at the same PC level. It is the first chord of the song, and it returns four times. Three of the returns of PM are shown in Ex. 31 (m. 7), Ex. 32 (m. 21), and below in Ex. 33 (m. 17). In Examples 32 and 33 the juxtaposition of PM and M produces a marked contrast in rhythmic motion, a trait to be mentioned below in connection with other late Op. 15 songs. The only measure of this twenty-three-measure song which does not contain either PT, M, or PM, is m. 6, which functions as an anacrusis to the first return of PM (Ex. 31, m. 6-7).

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Two aspects of Schoenberg's use of sets in Op. 15, #9, are different from his use of sets in the early and middle Op. 15 songs. First, many linear and vertical pitch sets are grouped in patterns of five, whereas few of the early songs contain frequently-recurring sets of more than four PC's each. Second, this song seems to show a tendency in the direction of symmetry of PC patterns. PC/IC sets 5-12 and 5-8 exhibit symmetry in filling in IC 6, as is shown below by means of spacing in their pitch prototypes:

5-12 (0, 1, 3, 5, 6)
5-8 (0, 2, 3, 4, 6)

PC/IC set 5-12 is used as PM in the song. The symmetry of the pitch prototype is observable in the pitch set (Ex. 31, mm. 1, 7), in which the upper four pitches can be described as two perfect fourths a tritone apart. This symmetry is even more obvious in m. 13 (not shown here), when the top four pitches are stated an octave lower, but without the lower pitch. The symmetry of the other PC/IC set just mentioned also is reflected in the music. Example 33 illustrates a deceptively simple passage made possible by the arrangement of the pitch prototype of PC/IC set 5-8 into two parts: a tritone and a three-note chromatic segment. In Ex. 33 three tritones move down by major second, while three statements of M in retrograde inversion move up in sequence by major third. The result is three successive occurrences of IC set 5-8 at different PC levels.

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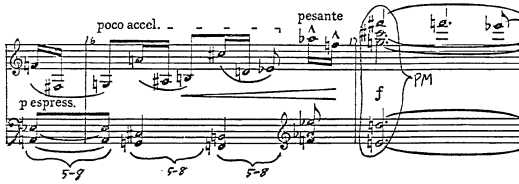
Ex. 33—Op. 15, #9, mm. 15-17, piano only.



Op. 15, #13

In the song discussed immediately above, Op. 15, #9, the tempo marking is "Langsam (♩ ca 52)" and there is striking contrast of rhythmic motion between chords of long duration and passages of sixteenth notes. The contrast is even greater in Op. 15, #13, where the tempo marking is "Sehr langsam (♩ = 38)" and chords of long duration are juxtaposed with passages of thirty-second notes. The chords, the thirty-second note passage, and almost all other components of the piano part can be related to the opening pitch motive. The beginning of the song is given in Ex. 34. The pitch motive (hereafter: PM) consists of two chords and PC 5. The change to the second chord of PM actually does not occur until the first beat of m. 3, but the second chord is written in at the end of Ex. 34.

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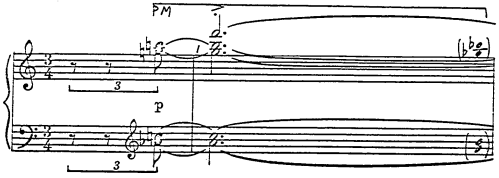
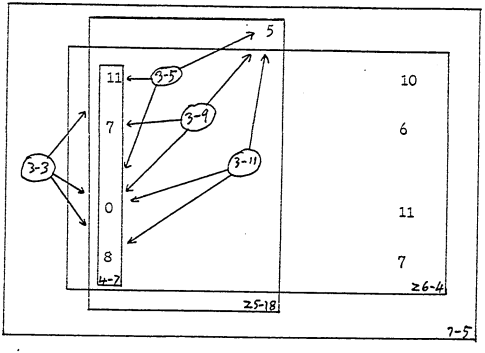
Ex. 34—Op. 15, #13, m. 1, piano only.



In order to facilitate description of smaller PC patterns, the pitch motive is given with PC's in Ex. 35.

Ex. 35—Op. 15, #13; PC representation of the pitch motive.



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It can be seen in the foregoing example that the entire PM can be formulated as PC/IC set 7-5, that the two pairs of parallel major thirds can be seen as Z6-4 (0, 1, 2, 4, 5, 6), that the first chord and PC 5 are Z5-18 (0, 1, 4, 5, 7), and that the first chord is 4-7. In addition, four three-PC subsets of Z5-18 that function separately in the song are pointed out. PC/IC set 7-5 is stated at the same PC level in each of its occurrences as PM: mm. 6-7, 7-8, 11-12, and 13 (the final measure). PC/IC sets Z5-18 and Z6-4 do not function significantly apart from PM, but they appear in a variety of spacings and registers in the recurrences of PM. The roles of the other PC/IC sets pointed out in Ex. 35, apart from statements of PM, are as follows: 4-7 appears melodically several times in m. 5; 3-3 is used in m. 5 to form 4-7; 3-5 appears as a superimposed tritone and perfect fourth in mm. 8-9, 11, 12; 3-9 is used as two superimposed perfect fourths in mm. 9, 12-13; and 3-11, which is stated as major and minor triads in various inversions, appears as melodic segments in mm. 4-5 and as vertical structures in mm. 6, 8.

The manner in which Schoenberg employs PC/IC set 3-11 (major or minor triad) in this song is indicative of his progress toward his later atonal style. When major and minor triads appear in the early Op. 15 songs they often are accompanied by "quasi-V-I" progressions, melodic segments which are diatonic in content, or various linear tonal implications; but in Op. 15, #13, there are no overt tonal implications in the piano part, and PC/IC set 3-11 seems to be used merely as one of the many pitch sets available in the atonal idiom. Some of the linear statements of PC/IC set 3-11 are bracketed in Ex. 36. This imitative passage also affords several examples of the

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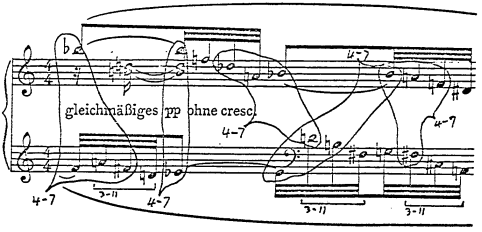
formation of PC/IC set 4-7 in the following manner: one hand states 3-3, while the other contains the pitch needed to form 4-7 from 3-3.

Ex. 36—Op. 15, #13, m. 5, piano only.



The vocal line of Op. 15, #13, produces the effect of strong unity and stability due to five main factors: the theme, two contour motives (CM^1 and CM^2), a rhythm motive, and emphasis on d^1 at the ends of four of the seven vocal phrases. The theme is shown in Ex. 37a. In mm. 8-9 there is a segment which is a contour theme in relation to the original (Ex. 37b). Immediately following the contour theme, the theme returns at the original pitch level, but with changes in rhythm and pitch (Ex. 37c). The return of the theme is followed by the last vocal phrase (Ex. 37d), which seems to be a combination of the beginning and end of the original theme.

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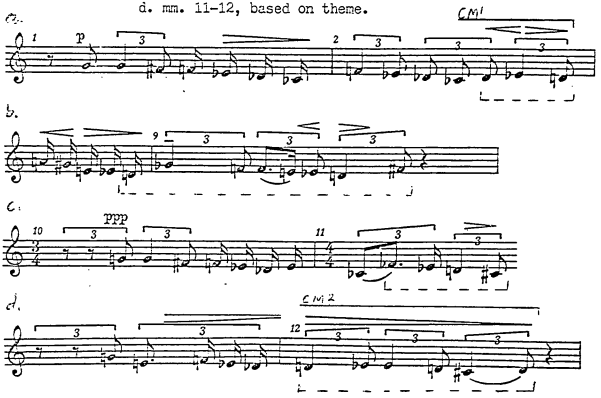
Ex. 37—Op. 15, #13; excerpts from vocal line:
a. mm. 1-2, theme
b. mm. 8-9, contour theme.
c. mm. 10-11, return of theme.
d. mm. 11-12, based on theme.



The first six measures of the vocal line contains five occurrences of an asymmetrical arch shape "⌒" which is referred to here as contour motive #1 (hereafter: CM^1). The first occurrence of CM^1 is in the last four notes of the theme (above, Ex. 37a). Two more appearances of CM^1 are in m. 3 and the first beat of m. 4 (Ex. 38a); its statement at the end of m. 4 is more expansive (Ex. 38b); and the last occurrence of CM^1 in mm. 5-6 rises to the highest point in the vocal line, d^2 (Ex. 38c).

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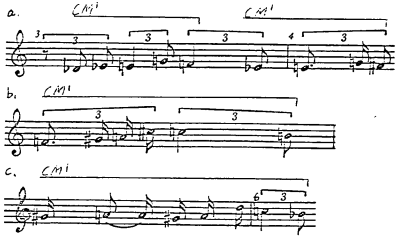
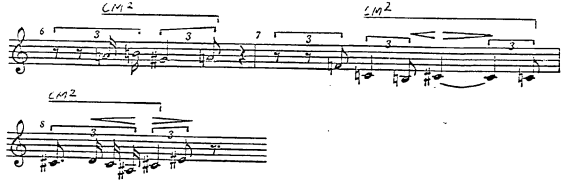
Ex. 38--Op. 15, #13; excerpts from vocal line:
a. mm. 3-4, two appearances of CM^1
b. m. 4, CM^1
c. mm. 5-6, final appearance of CM^1.



Contour motive #2 (labeled CM^2) is a surrounding shape. It appears in m. 12 (Ex. 37d), and three other easily-recognizable surrounding shapes are in mm. 6-8 (broken brackets in Ex. 39).

Ex. 39--Op. 15, #13, mm. 6-8, vocal line only.



The rhythm motive is the rhythm $\overset{3}{\overbrace{\text{♩ ♪}}}$. It occurs eighteen times during the twelve measures of the vocal line, including appearances at the end of each of the seven vocal phrases; and it occurs three times in the last measure of the vocal line.

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The emphasis on d^1 is pointed out with broken brackets at the ends of the four segments shown above in Ex. 37. The pitch is emphasized in such a way as to suggest reference to D major or minor: Ex. 37a shows d^1 to be the last pitch of the first vocal phrase, where it is preceded by pitches a half-step below and above it; in Ex. 37b, d^1 is twice approached by chromatic descent and followed by $g^{\flat 1}$ or $f^{\#1}$; d^1 is approached chromatically and followed by its lower leading tone at the end of Ex. 37c; and in the last measure d^1 is surrounded with upper and lower half steps, with d^1 being the final pitch in the vocal line (Ex. 37d). The approach to the final d^1 here is very similar to the end of the vocal line in Op. 15, #6 (p.120 above, Ex. 30). The seeming reference to tonal melodic procedures in the vocal line of song #13 is not supported by similar references in the piano part.

In summary, the most potent unifying factor in the piano part of Op. 15, #13 is a pitch motive (PM), which appears at the beginning, in mm. 6-9, 11-12, and at the end, each time at the same PC level. The first five pitches of PM can be described as PC/IC set Z5-18 (0, 1, 4, 5, 7), which functions as a source set for five subsets that are important in the song: PC/IC sets 4-7, 3-3, 3-5, 3-9, and 3-11. The effect of unity and stability in the vocal line is produced for the most part by five factors: 1) a theme, which is stated in mm. 1-2 and furnishes the basis for the last three vocal phrases, mm. 8-12; 2) an asymmetrical arch shape (CM^1), which appears five times in mm. 2-6; 3) a surrounding shape (CM^2), which is easily perceived four times in mm. 6-12, but is present in some less obvious form at least once in each phrase; 4) a rhythm motive, which appears

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eighteen times in the twelve-measure vocal line; and 5) emphasis on d^1 at the ends of four of the seven vocal phrases, including the first and last phrases.

Op. 15, #11

Three characteristics which are progressively more important in the songs discussed above are:

1. Static, almost motionless passages contrasted with faster rhythmic motion near the middles of songs;
2. Economy of material, with the opening measures providing the basis for much of the remainder of the song; and
3. The use of chords which return with the same PC's as pitch motives.

These characteristics are also prominent in Op. 15, #11, and the first two characteristics listed are more pronounced in this song than in any of those discussed above.

The piano part of Op. 15, #11 exhibits extremely economic use of pitch material. It consists of only six distinct elements, the IC content of which can be related to six PC/IC sets. The six elements are a theme, a pitch theme, a motive, and three pitch motives. Five of them appear in mm. 1-7 (Ex. 40, p. 133). The pitch theme, which is a melodic segment also occurring in other Op. 15 songs, appears in the right hand, m. 1, against the theme in the left hand. The pitch theme is used in an imitative passage involving the vocal line in mm. 12-15 (bracketed on p. 61, Ex. 13), and it appears inverted in mm. 19-20. The theme appears only once again in mm. 20-21, beginning a major second higher and with one note altered; but its easily recognizable shape and rhythm make it a potent unifying factor.

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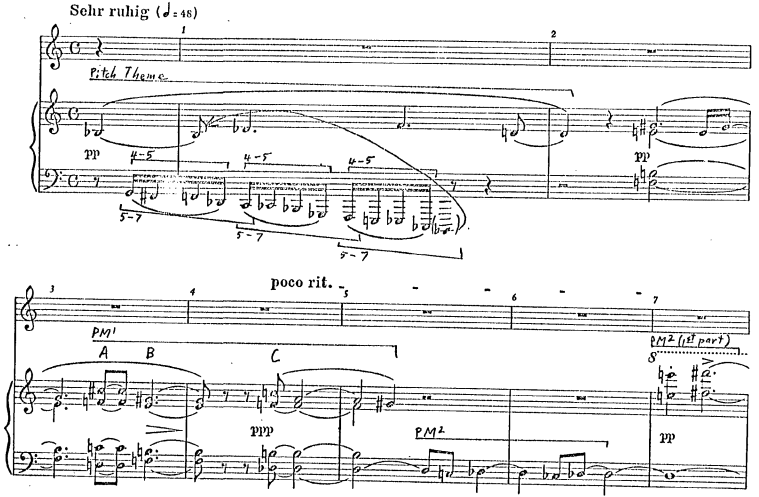
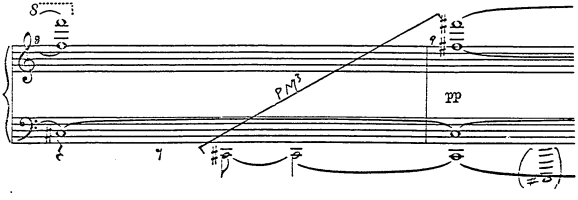
Ex. 40--Op. 15, #11, mm. 1-7.



The chords labeled A, B, and C in Ex. 40 act as the first pitch motive (hereafter: PM^1). They return two times, once near the middle of the song and again near the end; each time at the same PC level, but varied in register and rhythm.

In order to understand the significance of the second pitch motive (hereafter: PM^2) one must be aware of the importance of PC's 1 and 6 in Op. 15, #11. In m. 7 (Ex. 40) PC 6 is preceded by PC 4 in an extremely high register, while PC 1 is sounding below. Example 41 shows that PC's 1 and 6 are carried over into m. 8. In m. 8 PC 1 is stated an octave lower, as is PC 6 in m. 9; and PC 1 appears still another octave lower in m. 10 (shown in parentheses). This is a rather puzzling passage, since the tempo of the song is "Sehr ruhig ($\frac{1}{2}$ = 48)," and the tied notes do not sound for long on the piano, especially at "pp." Perhaps the striking of $C^{\#}$ and $CC^{\#}$ are intended to activate the strings of the notes being held above in the manner of a "Klavierflageolott."

Ex. 41—Op. 15, #11, mm. 8-9, piano only.



In m. 16 PC 6 is preceded by PC 5 in a high register (Ex. 42).

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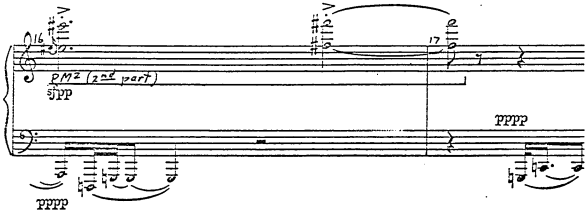
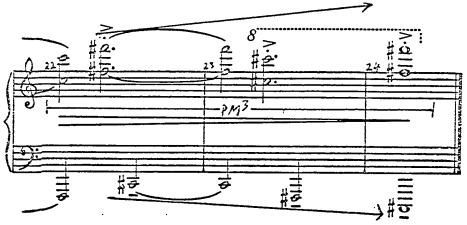
Ex. 42—Op. 15, #11, mm. 16-17, piano only.



At the end of the song PC's 1 and 6 appear together in a wedge shape (indicated by arrows in Ex. 43) which concludes with the high PC 6 and low PC 1 first sounded in mm. 7 and 10.

Ex. 43—Op. 15, #11, mm. 22-24, piano only.



Given the importance of PC's 1 and 6 in this song, one can attribute significance to any PC pattern involving them. The PC's in the right hand, m. 7 (Ex. 40) and the right hand, m. 16 (Ex. 42) catch one's attention because they are isolated by register from the material which precedes each of them. Considered as an entity, the PC's in mm. 7 and 16 can be described as PC 6 with the notes a step and a

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half-step below it. This pattern is labeled PM^2 because of its audibility and because it appears at another PC level in mm. 5-6 (Ex. 40). The pattern in mm. 5-6 is difficult to explain other than as an emphasis on PC 1 by repetition, but it seems more significant in the overall organization of the song when one sees it as an occurrence of PM^2: PC 1 with the notes a step and a half-step below it. The association of PC's 1 and 6 in mm. 7-10, 21-24 is referred to here as PM^3.

Following is a list of PC/IC sets apppearing frequently in the piano part of Op. 15, #11. The pitch prototypes of the first four are arranged so as to point out subsets. The pitch prototype of 4-4 is transposed up IC 1 for easy comparison. A comparison of pitch prototypes shows that 4-4 and 4-5 are subsets of 5-4, and that 4-5 is a subset of 5-7. The arrows connecting interval vectors symbolize the maximal similarity relation. Such interrelationships of PC/IC sets as are illustrated here suggest careful control of IC content.

PC/IC sets	pitch prototypes	interval vectors
4-4	(1, 2, 3, 6)	[2 1 1 1 1 0]
5-4	(0, 1, 2, 3, 6)	[3 2 2 1 1 1]
4-5	(0, 1, 2, 6)	[2 1 0 1 1 1]
5-7	(0, 1, 2, 6, 7)	[3 1 0 1 3 2]
4-17	(0, 3, 4, 7)	[1 0 2 2 1 0]
4-18	(0, 1, 4, 7)	[1 0 2 1 1 1]

The PC/IC sets used in PM^1, from m. 2 through the first two beats of m. 5 in Ex. 40, are indicated in the following PC version of PM^1.

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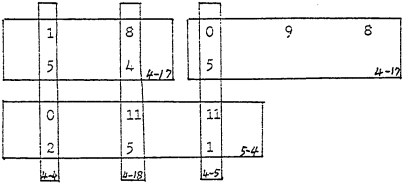
Ex. 44—Op. 15, #11, mm. 2-5; PC representation of PM^1.



As Ex. 44 shows, the three chords are vertical statements of PC/IC sets 4-4, 4-18, and 4-5; the right-hand part consists of two statements 4-17 (maximally similar to 4-18); and the left-hand part contains 5-4 (a source set for 4-4 and 4-5, which are maximally similar). PC's 9 and 8 follow the three chords in the two recurrences of PM^1. In m. 11 they are supplied by the vocal line, and in mm. 19-20 they appear again in the right hand in an inverted statement of the pitch theme (not shown here).

PC/IC sets 5-4 and 4-18 do not appear frequently apart from PM^1, but 4-17 is used as the pitch theme and in five unordered statements in the vocal line (see above, p. 97 , Ex. 11). At the reappearance of the theme in the bass, mm. 20-21, one altered note and the addition of an extra note at the end produce two instances of 4-4. The first statement of the theme (Ex. 40, m. 1) consists of three consecutive occurrences of a segment which is an inversion of the pitch prototype of PC/IC set 4-5 (0, 1, 2, 6); and it is also important to note that the theme can be considered as overlapping occurrences of PC/IC set 5-7. In order to facilitate a comparison made below, the "missing" PC at the end of the theme is considered here to be provided by the first note of the song. PC/IC set 5-7 appears in a different ordering as a thirty-secon' note motive in

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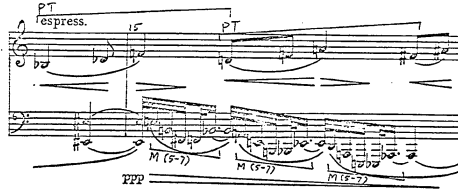
mm. 13-15, producing great contrast in rhythmic motion and the effect of metric regularity. In comparison to mm. 13-15, the previous and succeeding measures are static and without regular metric accents. Measures 13-14 of the passage under discussion can be seen above on p.61 , Ex. 13. In Ex. 45 two statements of the pitch theme and three occurrences of the motive are shown.

Ex. 45--Op. 15, #11, mm. 14-15, piano only.



The similarities between the theme (Ex. 40, m. 1) and the series of motives in m. 15 are striking. Each consists of melodic sequences in descending perfect fifths, with the sequences being formed by overlapping occurrences of PC/IC set 5-7. Furthermore, in each case adjacent appearances of the PC/IC set are connected by PC intersection at three points. The theme is symbolized with PC's and divided into three segments in Ex. 46a, and PC intersection between adjacent segments is indicated with arrows in Ex. 46b.

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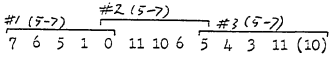
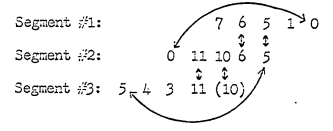
Ex. 46—Op. 15, #11, m. 1, left hand:
a. PC representation of theme.
b. illustration of PC intersection between adjacent segments of theme.

a.

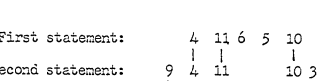


b.



Example 47 shows the three occurrences of the motive in the left hand, Ex. 45, represented with PC's, superimposed, and spaced so as to illustrate the PC intersection.

Ex. 47—Op. 15, #11, m. 15, left hand; illustration of PC intersection in adjacent statements of a motive.



The foregoing discussion showed that the piano part of Op. 15, #11, consists of six distinct elements: a theme, a pitch theme, a motive (mm. 13-15 only), and three pitch motives. PM^1 is three chords that recur twice at the original PC level, and PM^3 consists of PC's 1 and 6 in various combinations. PM^2 also involves PC's 1 and 6. The previous discussion also showed that the six main PC/IC sets in the piano part are related by a complex of subsets and maximally

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similar pairs, and that all of the sets and five of the six elements just mentioned appear in the piano part, mm. 1-7. The only element not appearing in the opening measures is the motive used in mm. 13-15, but even this motive seems to be derived directly from the theme in m. 1.

Am Strande

Am Strande is the culmination, as far as the atonal songs are concerned, of five trends which are observable in the middle and late Op. 15 songs:

1. Presentation of much important material in a short space of time;
2. Fragmentation (de-thematization) of musical material;
3. Use of short pitch motives which return at the same PC level as organizational factors;
4. Repetition of musical material with only slight change over a span of one or more measures, producing simultaneously the effects of stability and change; and
5. Derivation of musical material by subtle variation and combination of earlier material.

The song can be divided into four main sections as follows:

1) mm. 1-7—presentation and repetition of basic material;
2) mm. 8-11—presentation of secondary material which is related to basic material by similarity of IC content and emphasis on certain pitches;
3) mm. 12-14—dramatic approach to climax, based on basic material; and climax, drawn from secondary material;
4) mm. 15-21—combination of basic and secondary material.

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The present discussion will deal with some aspects of sections 1, 2, and 4.

The basic material consists of four pitch motives, which are presented in the first measure of the song (Ex. 48, p. 142). PM^1, the first three notes of the piece, is used in mm. 5-7, 12-13, 15-16, 20-21. The first seven notes form PM^2, which is stated three times in quick succession in m. 5 and then appears in mm. 12-13 as the approach to the "fff" climax. PM^3 is a single chord (m. 1), which is used in mm. 6-8, 12-13, 15-16, and 20-21. The left hand, m. 1, contains PM^4, which appears intact only in mm. 1-2, 18-19. Each of the pitch motives returns at its original PC level. The repetition of the end of PM^4 while PM^3 is being held in mm. 1-2 (also m. 3, but not shown here) is an example of the effect described above as trend #4.

The PC/IC sets employed in the pitch motives appear in other contexts as well; and four PC/IC sets containing three PC's each, which appear frequently throughout the vocal line and in the piano part in statements of secondary material, are subsets of the pitch motive sets. PM^3 is a version of PC/IC set 4-8, and PM^4 is a version of Z4-15 (0, 1, 4, 6). The following comparison of pitch prototypes shows that PC/IC sets 3-3, 3-4, 3-5, and 3-9 are available in 4-8 and Z4-15. The IC's in the pitch prototype of PC/IC set 3-8 appear here in reversed order to make the comparison clear.

3-4	(0,	1,	5)		3-3	(0,	1,	4)
	|	|	|			|	|	|
4-8	(0,	1,	5,	6)	Z4-15	(0,	1,	4,	6)
	|	|		|			|	|
3-5	(0,	1,		6)	3-8	(0,		4,	6)

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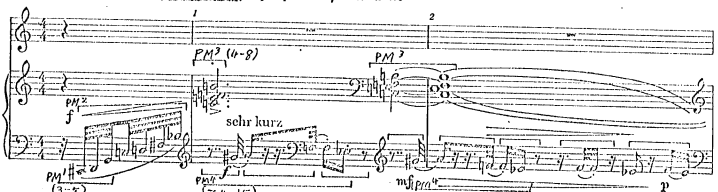
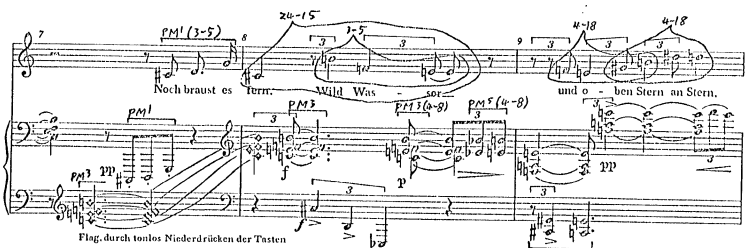
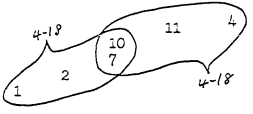
Ex. 48--Am Strande, Op. posth., mm. 1-2.



Ex. 49--Am Strande, Op. posth., mm. 7-9.



Example 49 (p. 142) shows the change from section 1 (basic material) to section 2 (secondary material). PM^3 is used in m. 7 as a Klavierflageolott (activated by PM^1). When PM^3 is sounded in the last half of m. 8, two of its pitches, e^1 and b^1, are involved in a short neighbor-tone shape (labeled PM^5). These parallel fifths appear immediately in the bass and become a pitch motive which returns in mm. 18, 20 (Ex. 50). The stemming of PM^3 and the juxtaposition of PM^3 and PM^5 in the right hand, m. 8, are clear references to the fact that both pitch motives are versions of PC/IC set 4-8. The vocal line in Ex. 49 begins with PM^1 (a version of PC/IC set 3-5) and continues with another version of PC/IC set 3-5. The two occurrences of 3-5 are arranged so that PC/IC set Z4-15 (0, 1, 4, 6) occurs between them. The vocal line, m. 9, can be seen as two occurrences of PC/IC set 3-3. However, the symmetrical pattern can also be considered as two overlapping versions of PC/IC set 4-18, intersecting at PC's 8 and 11 (circled in Ex. 49). A similar instance is in the bass line, mm. 15-16, where two versions of 4-18 overlap in the same manner:



Example 50 (p. 144) contains section 4, which combines basic material and secondary material with great subtlety. The most obvious references to secondary material are 1) mm. 16-17, right hand, bass clef portion (see Ex. 49, m. 9, vocal line); 2) the vocal line, mm. 17-20, which is an expansion and variation of the vocal line, mm. 12-13; 3) m. 18, right hand, first two beats, taken from the vocal line, m. 11; 4) the statements of PC/IC set 3-8, left hand, mm. 17-18, taken

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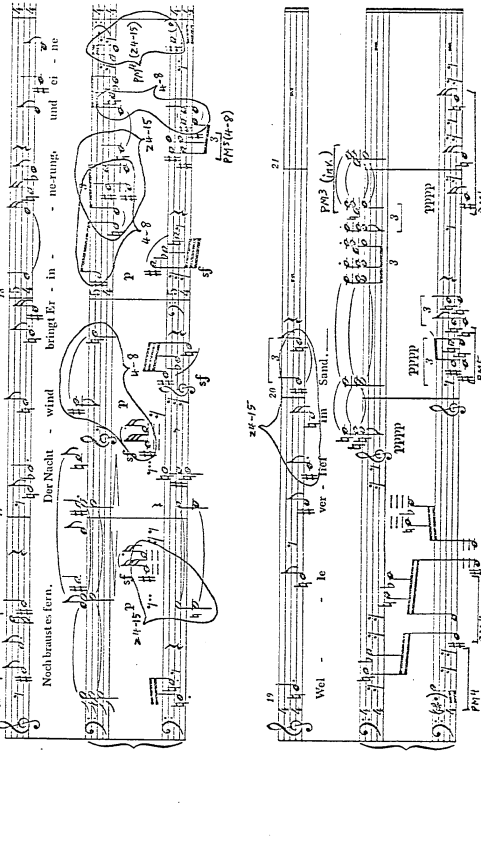
Ex. 50—Am Strande, Op. posth., mm. 16-21.



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from m. 10, left hand; and 5) m. 18, PM^5 (see Ex. 49, mm. 8-9). Basic material appears in the vocal line, m. 16, a statement of PM^1 up a perfect fifth compared to m. 7. PC's 8 and 9 from PM^1 immediately are taken up by the piano, left hand, their rhythm being a reference to PM^4 (see Ex. 48, m. 1). These PC's play an important role in mm. 16-19. In m. 16 (Ex. 50) PC's 8 and 9 are accompanied by PC's 0 and 2 in the left hand, producing PC/IC set Z4-15 (0, 1, 4, 6). In m. 17 PC's 8 and 9 appear with PC's 1 and 2 of the right hand, the change from PC 0 to PC 1 producing PC/IC set 4-8, rather than the Z4-15 of m. 16. In m. 18, right hand, the relationship is made quite clear by a statement of 4-8 followed by PC 0, which produces Z4-15 once again. At the same time, PC's 8 and 9 are associated with PC's 1 and 2 in the left hand, which is a recurrence of PM^5 (see Ex. 49, mm. 8-9). Finally, at the end of m. 18, PC's 8 and 9 are given their original function, as a part of PM^4 (see Ex. 48, mm. 1-2); and PM^4 is stated three times in m. 19, left hand. This passage strongly suggests purposeful and skillful manipulation of pitch sets. The remainder of the song combines motives from both basic and secondary material. At the end of m. 19, right hand, there is a recurrence of a chord (PC/IC set 3-4) which was first stated in m. 9, right hand (Ex. 49). As it is held, PM^5 returns in the bass. At the end of m. 20, right hand, the outer pitches of the chord are retained, but PC's 11 and 0 are substituted for PC9. This creates a statement of PM^3 in inverted form. The symmetry of PC/IC set 4-8 allows this inverted form of PM^3 to contain the same PC's as the original statement (Ex. 48, m. 1). The song ends as it began, with PM^1.

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Conclusions

The technique of developing variation is shown in this chapter to pervade almost every aspect of Schoenberg's atonal songs. Many methods are to be found whereby he derives later musical material from passages stated earlier in the work. The methods range from the almost exact repetition of linear segments to the recurrence of only the PC's or IC's of previously-used pitch sets. One extremely significant fact emerges from the investigation of the various aspects of developing variation: even within the relatively short time during which Op. 15 and Am Strande were composed (eight months to a year), a gradual movement toward Schoenberg's mature atonal style can be traced. A discussion of this gradual stylistic change best can be understood in light of Schoenberg's reference to some of his atonal works. He seems to be referring to the works immediately after Op. 15 when he writes:

> Intoxicated by the enthusiasm of having freed music of the shackles of tonality, I had thought to find further liberty of expression. In fact, I myself and my pupils Anton von Webern and Alban Berg, and even Alois Hába believed that now music could renounce motivic features and remain coherent and comprehensible nevertheless.[25]

This quotation suggests that, after the first steps into atonality, Schoenberg and his pupils were experimenting excitedly with ways to write music that could remain comprehensible while differing as much as possible from their earlier styles. The following summary of stylistic changes noted in this chapter reveals to what extent the experimentation just mentioned is evident in Op. 15 and Am Strande.

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[25] Schoenberg, "My Evolution," pp. 524-525.

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The discussion of themes reveals that thematic material is handled differently in each of the three groups of Op. 15 songs. In the early Op. 15 songs (Nos. 3, 4, 5, and 10) themes are presented at the outset by both piano and voice, and restatements of themes are clearly marked by phrasing, dynamics, or some other compositional factor. The middle Op. 15 songs (Nos. 1, 2, 6, 8, and 12) also have themes, but they all are not presented by both voice and piano; and the restatements of themes show more variation in rhythm and pitch and are less clearly marked. Three of the late Op. 15 songs (Nos. 7, 9, and 14) and Am Strande possess no themes. This trend toward de-thematization of musical material is accompanied by a similar trend in connection with motives. Three of the early Op. 15 songs (Nos. 3, 5, and 10) and three of the middle Op. 15 songs (Nos. 2, 8, and 12) contain motives, but only one late Op. 15 song (#9) has a motive. Themes and motives probably fall into the category of what Schoenberg calls "motivic features" in the preceding quotation. The evidence indicates that Schoenberg already was eliminating these features in late 1908 or early 1909, when the late Op. 15 songs were written.

Knowing Schoenberg's great concern for unity and coherence in his atonal music, one naturally raises the question of what unifying factors are present in the absence of the unifying potential of themes and motives. The results of the foregoing investigation of opening material indicate that two of the unifying factors are pitch motives and control of IC content. Pitch motives in the atonal songs consist of a single chord, two or more chords, or short melodic statements of ordered pitches. These pitch phenomena return altered in rhythm; and, in most cases, they return with the original PC's.

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Schoenberg's control of IC content is discussed above by reference to PC/IC sets that return in a variety of contexts and by reference to subsets and the maximal similarity relation. It is shown that the openings of Op. 15, Nos. 1, 2, 11, and 13, and Am Strande contain the pitch material for large portions of these songs. In Op. 15, #2 the IC's of the theme, which is stated in mm. 1-2 of the vocal line, are used in other contexts; and they function as a source set for subsets which furnish IC's for a motive, two pitch motives, and two instances of "chordal counterpoint." In Op. 15, Nos. 11 and 13, pitch motives at the beginnings of the songs contain five subsets that function significantly apart from the pitch motives throughout the remainder of the songs. The maximal similarity relations among groups of PC/IC sets is evidence on which to venture a positive answer to a question asked earlier in this chapter: Did Schoenberg employ pitch sets of similar IC content on a regular basis before his serial works?

Schoenberg's careful manipulation of pitch resources, apart from the recurrent rhythms and contours associated with ordered pitch phenomena, is in itself a presage of Schoenberg's systematic control of pitch resources in his tone-row works. Several instances of interpenetration of PC/IC sets in both the vertical and the horizontal planes indicate that Schoenberg's concept of "the two-or-more-dimensional space in which musical ideas are presented as a unit" (Style and Idea, p. 109) was formulated as early as 1908, although this concept is normally associated with Schoenberg's serial style.

Two instances of linear emphasis of PC 2 are pointed out, one in Op. 15, #6, and the other in Op. 15, #13. Since both instances involve procedures associated with tonal melodic conventions, they might

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be called examples of "linear tonicization." In each case the linear emphasis of PC 2 is not supported by tonal harmonic procedures. None of the late Op. 15 songs exhibit tonal harmonic implications, even though some of them make use of major and minor triads. These triads (in Op. 15, #13 and other songs) seem to be used merely as two of the many PC combinations available in the atonal idiom, rather than as structures associated with tonal procedures, as in some passages of the early Op. 15 songs.

Another trait of the late Op. 15 songs and Am Strande is the alternation of passages of rapid or moderate rhythmic movement with sections characterized by a static quality. The static sections are created either by 1) frequent repetition of one chord or melodic fragment (Op. 15, #9, mm. 17-18, 21-22; Op. 15, #13, mm. 12-13; Am Strande, mm. 2-3, 4-5), or by 2) little or no rhythmic motion in the piano part, resulting from long rests (Op. 15, #11, mm. 11-12, 18) or notes or chords of very long duration (Op. 15, #9, mm. 7-8, 13; Op. 15, #11, mm. 7-10, 21-24; Op. 15, #13, mm. 1-2, 5-6, 10-11). Even in these passages, developing variation is in effect; some musical element in the vocal line or piano part changes throughout each passage, so that an effect of complete lack of "forward motion" is never produced.

In short, Schoenberg's evolution from the style of his transitional songs to that of the first two of the Three Piano Pieces, Op. 11 (see above, pp. 62-63) can be seen clearly in the fifteen songs of Op. 15. The trend that is evident in this gradual stylistic change is mentioned in the quotation from Schoenberg given earlier (p. 146); and the trend reaches its culmination in Op. 11, #3 and Op. 16, #5.

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In these pieces very few of the characteristics associated with Schoenberg's tonal idiom remain. Schoenberg's progress toward the style of these pieces is evident from the information found in the following list, which is a presentation of the findings of this chapter. The left-hand column gives traits of the early Op. 15 songs, and the right-hand column presents traits possessed by the seven songs discussed above.

Early Op. 15 Songs	Some Middle and Late Op. 15 Songs
1. Unity created in large part by exact restatement (after intervening material) of ordered melodic segments (themes and motives).	1. Unity created in large part by restatement (immediate or after intervening material) of 1) only the PC's of ordered linear segments or chords (pitch motives), or 2) only the PC's or IC's of unordered pitch sets or subsets of pitch sets.
2. PC/IC set 3-11 (major or minor traids) often associated with tonal implication.	2. PC/IC set 3-11 used merely as one of many possible pitch combinations.
3. Frequent appearance of harmonic and melodic tonal implication.	3. Occasional reference to melodic tonal conventions.
4. Relative continuity of rhythmic motion.	4. Great contrast of rhythmic motion in adjacent passages.

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CHAPTER IV

DIVERSITY AND UNITY IN SCHOENBERG'S OP. 15

At the end of the previous chapter some differences were noted between the early Op. 15 songs and some of the middle and late Op. 15 songs; and it was pointed out that the change was gradual, there being some songs that contain characteristics of both groups. The Op. 15 songs which seem earliest in style are Nos. 3 and 10, and those which seem latest are Nos. 11, 13, and 14. In order to make the differences easily seen, Op. 15, Nos. 3 and 14 are discussed and compared below. After the comparison some of the unifying elements of the song cycle as a whole are mentioned.

A comparison of these songs is most fruitful if it is made with the style of Schoenberg's earlier songs in mind. An analysis of one of the transitional songs would serve to show the close relationship between the early Op. 15 songs and those which immediately preceded them; however, the differences would be too slight to warrant the drawing of many conclusions. Therefore, a tonal song is discussed below.

Schenk mir deinen goldenen Kamm,
Op. 2, #2 (1899)

In the foregoing chapter it is shown that the openings of several of Schoenberg's atonal songs contain some form of the material important in the remainder of the songs. In several instances later material is shown to be related to opening material when the

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relationship is not evident at first glance. In order that this aspect of Schoenberg's technique of developing variation be seen in its proper perspective, it is necessary that one recognize developing variation as a component of Schoenberg's earlier style. A consideration of ordered linear segments in Schoenberg's Op. 2, #2, probably written in 1899, is helpful in this regard.

The first six measures of Op. 2, #2 contain three motives (henceforth: M^1, M^2, or M^3), a theme, a contour theme, two contour motives (henceforth: CM^1 and CM^2), and a long, monodirectional, stepwise line. At least one of these linear segments is present in every measure of the song, and no other important musical elements are introduced during the song. The opening seven measures are given in Ex. 1 (p. 153). M^1 and M^2, the most important organizing elements in the song, are first presented in the right hand, top line, mm. 1-3. M^1 is the beginning of the theme, and M^2 is a neighbor-tone shape, only the contour of which is given in mm. 2-3. M^2 pervades mm. 14-24, 34-38 with the rhythm ♪ ♩ ♪. M^3 appears only in the vocal line, the first appearance being as the cadence of the second vocal phrase, mm. 5-6; it is used cadentially in the vocal line three more times, in mm. 13-14 and in mm. 15-17.

The notes of the theme (labeled "T") are in parentheses in the right hand, mm. 1-3. It returns intact in mm. 8-10, but transposed up a minor second; and it returns with altered pitch and rhythm in the closing measures (mm. 39-44).

The contour theme (labeled "CT") as used throughout the song consists of a short, chromatic segment (PC/IC sets 4-1, 4-2, or 3-1), the last note of which is the first note of PC/IC set 4-23 (0, 2, 5, 7).

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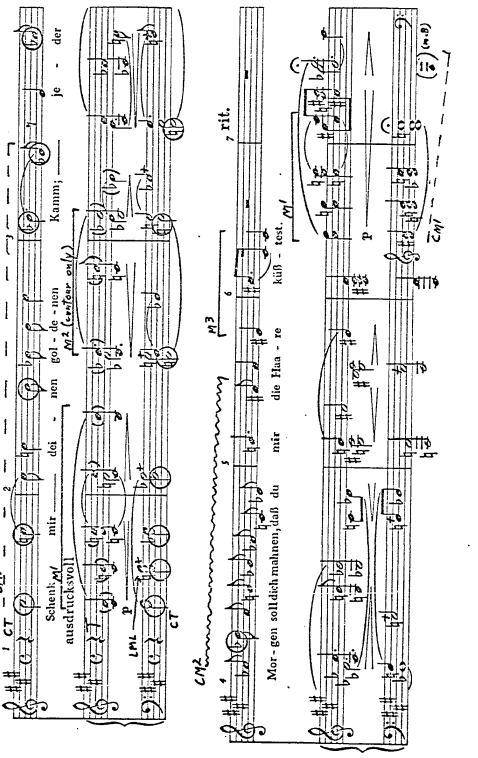
Ex. 1--Op. 2, #2, mm. 1-7.



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This PC/IC set is stated in this song in alternating perfect fourths and perfect fifths, except for two statements of the contour theme involving consecutive ascending perfect fourths in mm. 26-27, 29-30 (see below, Ex. 4). Two versions of the contour theme are stated simultaneously, but in different rhythms, in the bass and vocal lines (circled notes in Ex. 1, mm. 1-4). When the opening measures are stated up a minor second in mm. 8-10, the contour theme appears again in the bass line, but the vocal line does not state it until two measures later, in mm. 10-13. The bass line contains the contour theme in the closing measures.

The first contour motive (CM^1) consists of the first four notes of the contour theme. Throughout the song the relationship between the last two notes of CM^1 is usually a descending IC 5, but occasionally it is an ascending IC 5. Some of the occurrences of CM^1 will be mentioned below in connection with Ex. 4.

The second contour motive (CM^2) first appears in the vocal line, mm. 4-5 (wavy line in Ex. 1) between the contour theme and M^3. It reappears in mm. 18-19, 24-25, 36-37. Two of the reappearances are shown in Examples 2 and 3.

The notes of the long, monodirectional, stepwise line (labeled "LML") are marked with "+'s" in Ex. 1. This line seems to have a function in establishing the tonic; it leads directly to the dominant note in m. 5, which functions as the root of the V^7 chord in an authentic cadence. Similar lines appear three other times throughout the song, each one ending on a pitch that helps to establish or imply the tonic.

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A graphic representation of the linear segments just mentioned is provided on p. 156. The graph is intended merely to locate the segments and to facilitate comparison of score and analysis. The three lines of each of the three systems of the graph, top to bottom, represent the middle of each staff, so that the short lines representing segments can indicate approximate range and general direction. The large "E's" symbolize "events"; they are included in order to point out recurring passages. Four excerpts from the song are discussed below.

In Ex. 2 three occurrences of the motive are bracketed and CM^2 is indicated by the wavy line. For reasons given below, PC's 6 and 5 in the bass line are considered to complete the statement of CM^2 (compare with the vocal line, Ex. 1, mm. 4-5). The beginning of a long, monodirectional line is shown in the left hand, mm. 19-20. It continues stepwise down a major tenth from PC 5.

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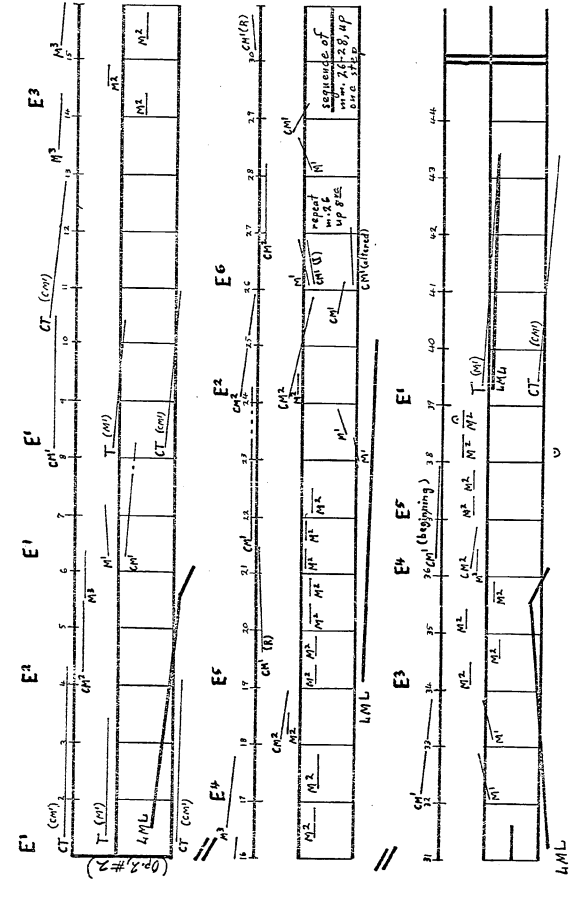

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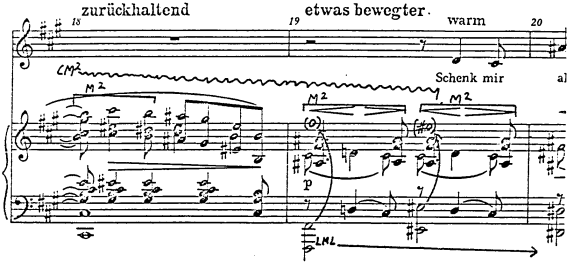
Ex. 2—Op. 2, #2, mm. 18-20.



The stepwise bass line, the beginning of which was shown in Ex. 2, is concluded in Ex. 3. The line ends on the dominant note, which functions as the root of V^7. The tonic chord in first inversion follows in m. 26 (not shown here). Above in Ex. 2 PC's 6 and 5, each being a half-note in duration, are considered to complete CM^2 by octave displacement from the bass line. In Ex. 3 these same PC's complete CM^2 in the voice and right hand, lending support to the octave displacement contention.

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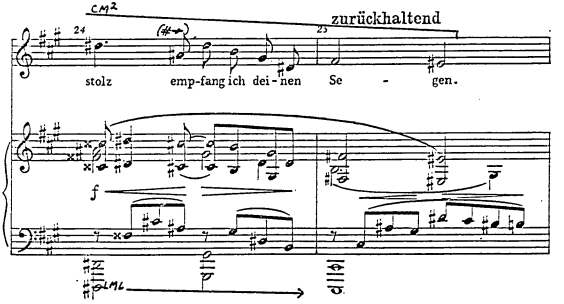
Ex. 3—Op. 2, #2, mm. 24-25.



Example 4 is from event #6, an eight-measure passage which contains many references to opening material. The segment which is most easily heard is M^1, in the right hand, mm. 29-30. In the same measures, right hand, the lowest tones are occurrences of CM^1, inverted (indicated by arrows). A statement of the contour theme can be seen in Ex. 4. The beginning of it is provided by the occurrence of CM^1 (inverted) in the right hand, m. 29. The repetition of m. 29 up an octave makes available the perfect fourths that form the last part of the contour theme (circled notes in the right hand, mm. 29-30). The left hand in Ex. 4 contains two reordered occurrences of CM^1. The original statement of CM^1 in mm. 1-3 (Ex. 1) consists of PC's 1, 0, 11, 10, and 3. They can be reordered as 10, 11, 0, 1, 3 and transposed to PC/IC set 5-2 (0, 1, 2, 3, 5). The two segments in the left hand, Ex. 4, also are linear versions of PC/IC set 5-2. The arrows to the staff below Ex. 4 show that the PC's in the music are 8, 7, 6, 9, 11; they can be reordered as 6, 7, 8, 9, 11 and transposed to PC/IC

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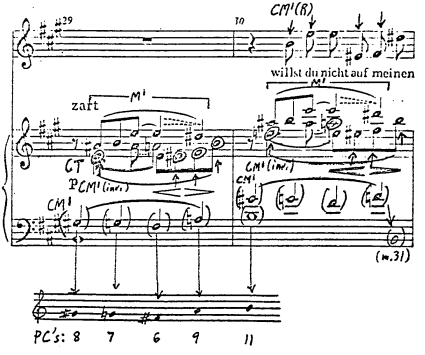
set 5-2 (0, 1, 2, 3, 5). This recurrence of an unordered pitch set suggests that Schoenberg may have been thinking in terms of sets of PC's or IC's apart from repeated melodic segments long before his atonal works were written. Finally, in m. 30 the first two notes of the vocal line are doubled an octave higher by the beginning of M^1 in the right hand; and PC's 5 and 6 of the vocal line are doubled an octave higher by part of the right hand's statement of CM^1 (inv). As far as the vocal line is concerned, the result is the PC's of CM^1 in retrograde (shown by the arrows in the vocal line).

Ex. 4—Op. 2, #2, mm. 29-30.



The last six measures of the song are given in Ex. 5 (p. 160). A strong sense of return is created by the recurrence in mm. 39-40 of the opening of the piano part (see above, Ex. 1). The top line of the right hand, mm. 39-43 is a version of the theme (parentheses in Ex. 5); it could be called a contour theme in relation to the theme

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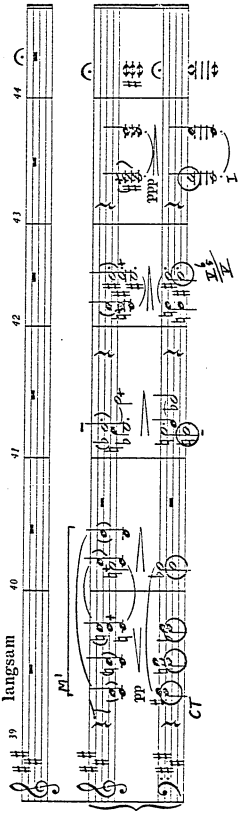
Ex. 5--Op. 2, #2, mm. 39-44.



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as stated in mm. 1-3. The contour theme from the bass line, mm. 1-3 is stated by the bass line in mm. 39-43, with the consecutive IC 5's slightly altered so as to end on the $F^{\#}$ tonic. The notes of the long, monodirectional line are marked in Ex. 5 by "+'s." A similar line in mm. 1-5 leads to PC 1, as this one does, but PC 1 in m. 5 was part of a V^7 chord that resolved to I in m. 6. In m. 43 PC 1 is part of I, the V^7 having been omitted in the $\frac{V^6_5}{V}$ - I cadence.

In summarizing the findings concerning Schoenberg's Op. 2, #2, one can say that all of the important elements of the song are contained in some form in mm. 1-6, and that Schoenberg's procedure throughout the song can be described as developing variation of these elements. In some cases elements return with very little variation in IC's and rhythm (a theme and three motives), but often there is so much alteration of PC's, IC's, and rhythm that only contour remains (a contour theme and two contour motives). In addition to the melodic segments just mentioned, Schoenberg used four long, monodirectional, stepwise lines, each of which ends on a pitch that is functional in establishing or implying the tonic. Similar lines appear in some of Schoenberg's tonally-extended and transitional songs, as well as in most of his atonal songs (without tonal implication).

Op. 15, #3

Op. 15, #3 is one of the early Op. 15 songs. Compared to some of the middle and late Op. 15 songs discussed in the previous chapter, it contains a large variety of musical textures; and it is relatively long (twenty-six measures). Even with its variety of musical material, most passages can be related to the first measure

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(Ex. 6). The theme consists of two consecutive statements of the top line, right hand, m. 1. Since the piano part in m. 2 is an exact repetition of m. 1, the theme occurs in mm. 1-2; and it returns near the end in mm. 22-23. The restatement of the theme is easy to recognize because it is accompanied by an almost exact repetition of the material in the right hand, mm. 1-2.

The motive first appears as the top line of the piano, m. 1; i.e. as the first half of the theme. The motive, probably the strongest unifying force in the song, appears in twelve of the twenty-six measures of the song.

Example 6 also contains six sets which can be formulated as the following PC/IC sets which are important in the remainder of the song: 3-8, 3-9 (can be stated as two consecutive perfect fourths), 3-11 (major or minor triad), 3-12 (augmented triad), 4-19 (augmented triad with a pitch a half step away from one of its members), and 4-24 (an augmented triad with a pitch a whole step away from one of its members). These sets are circled in Ex. 6.

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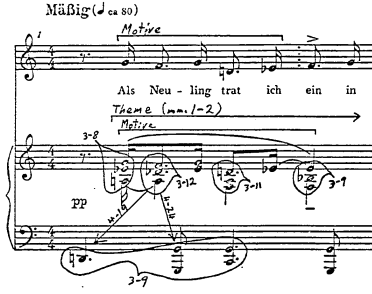
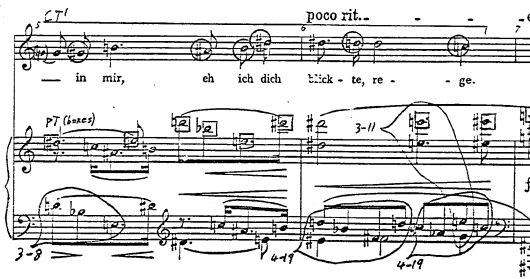
Ex. 6—Op. 15, #3, m. 1.



This song also contains two contour themes (henceforth: CT^1 and CT^2). CT^1 appears in mm. 4-6, 11-13, 18-19, and 24-26. These appearances will be shown in the following examples. Certain notes are circled in each appearance in order to point out that these PC's occur in most of the statements of CT^1. The vocal line of Ex. 7 contains the first statement.

Ex. 7—Op. 15, #3, mm. 5-7.



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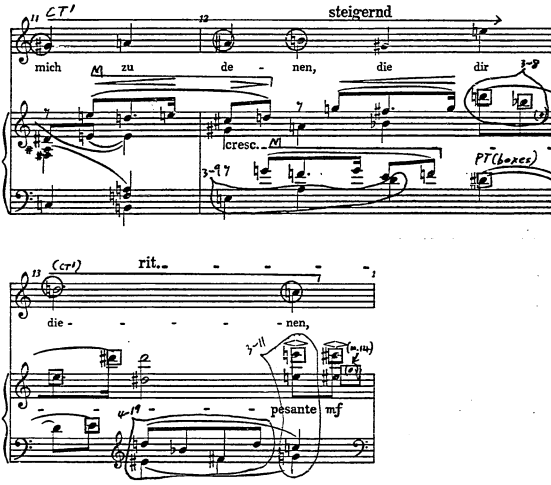
The second appearance of CT^1, in the vocal line of Ex. 8, has several pitches (circled) in common with the statement in the previous example.

Ex. 8—Op. 15, #3, mm. 11-13.



The climax is signaled in m. 19 (Ex. 9) by the dynamic marking "ff" (followed by a crescendo), the occurrence of the highest pitch of the vocal line and the highest and lowest pitches of the piano part, and the appearance of the wedge shape created by an ascending chromatic line against descending parallel quartal chords (PC/IC set 3-9). CT^1 appears in the right hand, from the last beat of m. 18 through the $c^{\#4}$ in m. 19. The circled notes point out the PC's that this statement

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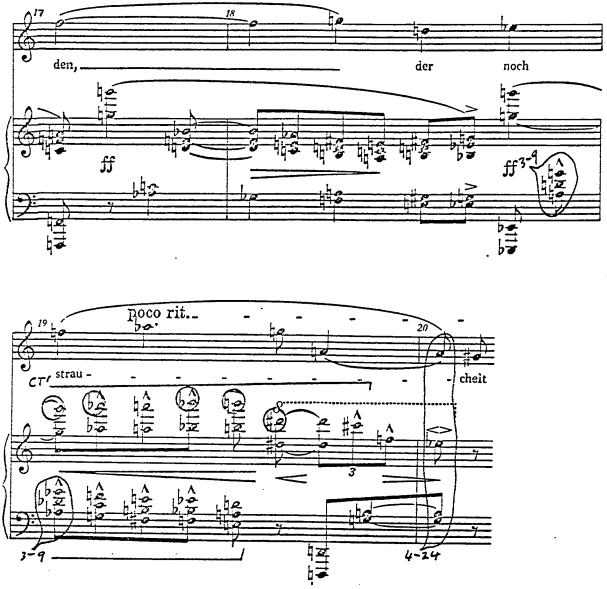
of CT^1 has in common with the first statement.

Ex. 9—Op. 15, #3, mm. 17-20.



The last occurrence of CT^1 is in the final measures of the song, top line, where only the outline of the segment is present; the circled notes are the PC's which have been present in most of the earlier occurrences.

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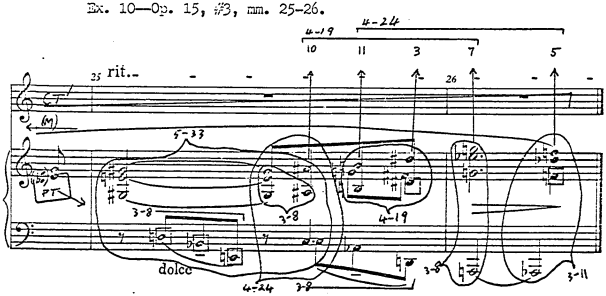
Ex. 10—Op. 15, #3, mm. 25-26.



CT^2, which is not shown here, appears two times in the vocal line, mm. 8-10, 19-22. In each case the first three pitches are g^2, a^1, and $g\#^1$; and the last pitch is b^1.

The last linear segment to be mentioned here is a pitch theme which is present during three of the occurrences of CM^1. The pitch theme first appears in mm. 5-7, right hand. The notes in boxes, Ex. 7, show that the PC's of the pitch theme are 3, 4, 2, 10, 4, 3, 4, 5, 7. The notes in boxes in Ex. 8, piano part, from the last beat of m. 12 through m. 13, are the same PC's that are boxed in Ex. 7. The final appearance of the pitch theme is shown by the boxed notes in Ex. 10. This appearance is far from obvious, but the segments consisting of a descending major third and tritone in the left hand, m. 25, are clear references to the pitch theme (see Ex. 7, m. 5 and Ex. 8, mm. 12-13).

Some of the recurrences of the PC/IC sets mentioned above are circled and labeled in Examples 6-10. In Ex. 7 the descending major third-tritone segment involves PC/IC set 3-8; and, when the segment appears in altered form in the left hand, m. 6, two consecutive

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versions of PC/IC set 4-19 are created. The relationships just described are evident also in Ex. 8, but with a thinner texture and less repetition of segments; and a linear version of PC/IC set 3-9 is in the left hand, m. 12, accompanied by several statements of the motive. PC/IC set 3-11 appears at the end of Examples 7 and 8 in the form of C major triads. The stepwise approach to PC's 0, 4, and 7 in these measures (6 and 13) suggests a quasi-tonal emphasis on PC 0. Measures 17-18 of Ex. 9 contain several parallel major, minor, and augmented triads, as well as parallel major thirds. This parallelism, which occurs on a smaller scale in m. 10, is a natural outgrowth of the neighbor-tone shape in parallel major thirds in the first measure of the song. PC/IC set 3-9, which appeared as a linear segment in Ex. 8, is used in Ex. 9 in a series of parallel quartal chords. At the very end of Ex. 9, a version of PC/IC set 4-24 is formed by the voice and piano. In Ex. 10, the PC's present in the first three beats of m. 25 can be arranged and transposed to form PC/IC set 5-33 (0, 2, 4, 6, 8), i.e. the first five notes of a whole-tone scale; the same IC's are present in the first two beats of m. 1, right hand (Ex. 6). The pitch sets circled in Ex. 10 illustrate that PC/IC set 3-8 pervades the example; and also that PC/IC set 4-24 is present on the third beat of m. 25, 4-19 on the fourth, and 3-11 on the last beat of the song. Finally, the arrows above Ex. 10 show that versions of PC/IC sets 4-19 and 4-24 are stated melodically in the last five notes of the top line.

The foregoing discussion of Schoenberg's Op. 15, #3 shows the strongest unifying factors to be the motive and the theme. CT^1 is also important, however, since it appears twice in the vocal line,

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once in the right hand at the climax of the song, and finally as the top line in the concluding piano phrase. Another contour theme and a pitch theme are mentioned.

Op. 15, #3 is unified also by three recurring PC/IC sets which, because of their association with tonal music or their symmetrical structure, are easily recognizable: 3-9 (quartal), 3-11 (major or minor triad), and 3-12 (augmented triad, often used in versions of PC/IC sets 4-19 and 4-24). These PC/IC sets and several others appear in the last two measures (Ex. 10), where the same PC/IC sets that are first stated in m. 1 (Ex. 6) can be found.

Op. 15, #3 and the song discussed above, Op. 2, #2, have many characteristics in common. Some of them are:

1. Both songs contain references to tonal procedures.
2. Both songs begin with a theme, with a motive being derived from the first part of the theme; and in both songs the theme and motive(s) are the strongest unifying elements.
3. Both songs exhibit Schoenberg's technique of developing variation.
4. The intervals emphasized in the vocal lines of both songs are the same: primarily seconds and thirds, with occasional leaps of fifths, sixths, or sevenths.
5. In both songs the rhythm is straightforward and uncomplicated, and the meter signature is functional, i.e. the rhythmic patterns clearly conform to the metric scheme.
6. An overall continuity of rhythmic movement is evident in both songs; no great contrasts of rhythmic motion are present.
7. In both songs some melodic segments are varied in pitch and rhythm, so that only the contour of the originals remain.
8. Near the ends of both songs opening material returns at the original pitch.

Three of the differences between Op. 15, #3 and Op. 2, #2 are:

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1. Op. 15, #3 is atonal (with several references to tonal procedures), and Op. 2, #2 is tonal.

2. At three points in Op. 15, #3 the piano part contains short (two-beat) rests, during which the vocal line continues; whereas the piano part of Op. 2, #2 contains no such rests.

3. In Op. 15, #3 there is more emphasis on recurrence of PC's or IC's apart from exact restatements of linear segments; e.g. some PC's of CT^1 recur in each of its appearances, the PC's of the pitch theme return in varying rhythms, and the IC's of some pitch sets return in various guises.

Op. 15, #14

Op. 15, #14, which is only eleven measures long, is the shortest song in Op. 15; and it is one of the most tightly organized with regard to recurring PC and IC patterns. Most of the following discussion of the song is concerned with these patterns, but first a contour theme, a pitch motive, a rhythm motive, and a contour motive are mentioned. The complete song is given in Ex. 11, pp. 170-171; therefore, only measure numbers are referred to below, it being understood that the measures are contained in Ex. 11.

The contour theme (labeled "CT") is by far the strongest unifying element in Op. 15, #14. It appears in m. 1, and is repeated almost exactly in mm. 3 and 6. Three shortened and altered occurrences are in mm. 7-8, and the song ends with a version much like that in m. 1.

The last appearance of the contour theme (m. 11) is arranged so that the last two PC's heard are those with which the vocal line begins: PC's 3 and 2. These two PC's appear together so often during this short song that they can be considered a pitch motive (labeled "PM"). In the vocal line the pitch motive is labeled in mm. 2, 4, 5, and 8. It is labeled in the piano part in mm. 4, 5, 6,

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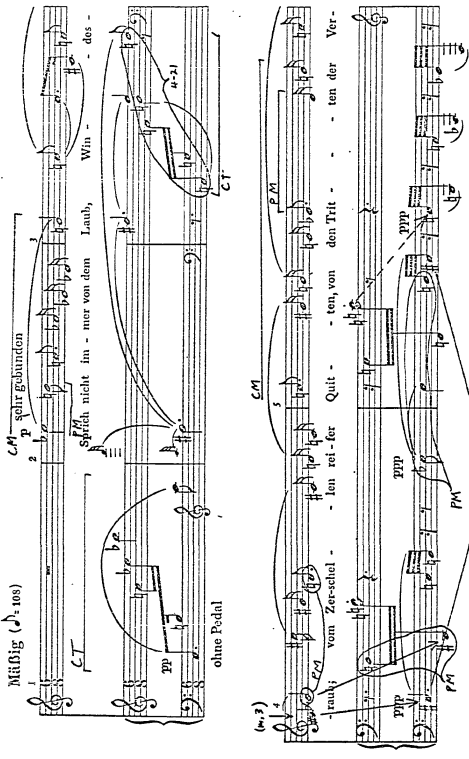
Ex. 11--Op. 15, #VI, mm. 1-11 (continued on next page).



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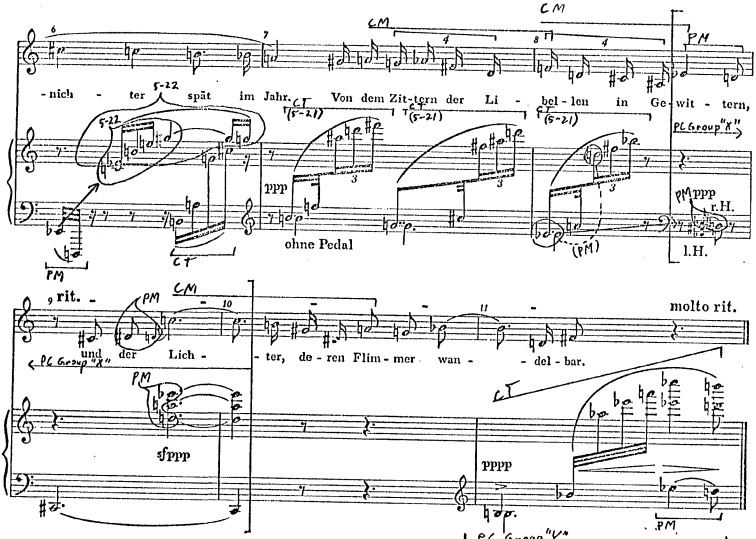
Ex. 11 (continued)---Op. 15, #11, mm. 1-11.



8, 9, and 11. The emphasis on PC's 3 and 2 in this song is similar to the emphasis on PC's 1 and 6 in Op. 15, #11.

The four-note rhythm motive comes from the first four notes of the song: . It is especially important in the vocal line, where it occurs five times, mm. 2, 4, 5, and 10. In the piano part it can be found in mm. 1, 3, 4, and 5.

The contour motive (labeled CM), which occurs six times in the vocal line, is derived from the beginning of the vocal line; its shape is . Occurrences of the contour motive are labeled in the vocal line, mm. 2-3, 5, 7, 8, and 10. This contour motive, which can be described as an asymmetrical bowl shape, is an inversion of the first contour motive described in the preceding chapter in connection with the vocal line of Op. 15, #13.

The most remarkable fact about the vocal line of Op. 15, #14 is that, in conjunction with the numerous appearances of the contour motive, there are many overlapping statements of pairs of pitch sets with identical IC content. A consideration of mm. 1-5 of the vocal line will illustrate this. Example 12 contains the first vocal phrase (m. 2 through m. 4, first note) symbolized with PC's. The following relationships are pointed out by the brackets:

1. The first five notes, a segment which begins and ends with PC 3, consist of two overlapping statements of PC/IC set 3-5, the two statements each having two PC's in common.

2. Notes five through nine consist of two overlapping versions of PC/IC set 3-8, the two versions each having two PC's in common.

3. The last five notes can be described as two overlapping versions of PC/IC set 4-24, the two versions each having the augmented triad a^1, $c\#^1$, f^1 in common.

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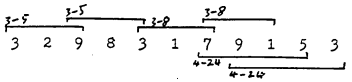
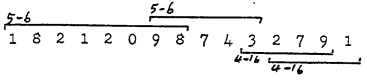
Ex. 12—Op. 15, #14; PC representation of vocal line, m. 2 through the first note of m. 4.



Example 13 contains a PC representation of the vocal line from m. 4, second note, through m. 6, first note. The brackets in Ex. 13 show that two versions of PC/IC set 5-6 overlap at the beginning of the segment, and that two versions of PC/IC set 4-16 overlap at the end.

Ex. 13—Op. 15, #14; PC representation of vocal line, m. 4, second note, through m. 6, first note.



In the previous chapter symmetry was mentioned in connection with some PC/IC sets in Op. 15, #9 and Am Strande. In the piano part of Op. 15, #14 Schoenberg seems to have experimented with pitch patterns which are symmetrically deployed in the score and with pitch sets which can be formulated as PC/IC sets with symmetrical pitch prototypes. (A "symmetrical" pitch prototype is one whose PC's can be arranged so as to produce the same IC order when inverted.)

The contour theme in m. 1, plus PC 6 in m. 2, can be formulated as PC/IC set Z6-13 (0, 1, 2, 3, 6, 9). The symmetry of this PC/IC set is evident if one places the last PC of its pitch prototype first and spaces the resulting formation to indicate gaps in the chromatic scale: (9, 0, 1, 2, 3, 6). The contour theme as found in m. 1 never returns with the same PC's. Op. 15, #14 is unique among

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the Op. 15 songs in this respect, since the other songs of Op. 15 contain restatements of opening material with the original PC's. However, the relationship between the statements of the contour theme in the first and last measures of song #14 is a close one. As far as PC's are concerned, m. 11 contains all the PC's of m. 1 except for PC 0. With regard to IC's, a comparison of pitch prototypes is helpful. The PC's of m. 1 can be formulated as PC/IC set 5-4, and those of m. 11 as PC/IC set 6-5. The following comparison shows that m. 11 contains all the IC's of m. 1, since 5-4 is a subset of 6-5. (The IC's of any subset are present in its source set.)

5-4 (0, 1, 2, 3, 6)
| | | | |
6-5 (0, 1, 2, 3, 6, 7)

In the statement of the contour theme in m. 3, all the pitches are a major third lower than in m. 1 except for the first, PC 9, which is a minor third lower. This slight alteration connects the two statements by giving them one PC in common, PC 9, which ends m. 1 and begins m. 3. This linkage of the two statements of the contour theme by their first and last notes is a kind of symmetry in itself, but a more obvious symmetrical pattern is formed by the notes which are struck in m. 3. The circle in m. 3 contains PC's 5, 7, 9, and 11, a wholetone fragment which can be seen as the symmetrical filling-in of a tritone. (The notes in the vocal line from m. 3 to the first note of m. 4 furnish the PC's necessary for a complete wholetone scale.)

The formation in the piano part at the beginning of m. 4 produces a symmetrical design in the score because of the manner in which

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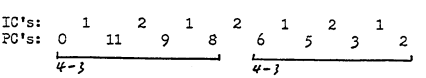
it is notated, and its PC's also can be arranged symmetrically. The following rearrangement of the PC's produces a chromatic segment with a PC that forms IC 4 when placed at either end of it.

Ex. 14—Op. 15, #14; PC representation of the pitches in the piano part, m. 4.

When the formation of m. 4 is repeated at the beginning of m. 5, all the pitches are up a whole step except the highest pitch, c^1, which is up only a half step. This alteration may be designed to connect the formation at the beginning of m. 5 with the succeeding pitch pattern (see the broken line in the score). However, Schoenberg may have written the c^1 instead of the $c^{\#1}$ in order to emphasize the connection between the pattern in m. 4 and the one at the beginning of m. 5: without the $c^{\#1}$, each pattern contains only one PC 1, the PC which begins the first pattern and ends the second (arrows in the score).

An obviously symmetrical pattern is produced in the piano, left hand, last half of m. 5 through the first two notes of m. 6. Here, two adjacent occurrences of PC/IC set 4-3 form a symmetrical scale throughout a complete octave, as illustrated in Ex. 15.

Ex. 15—Op. 15, #14; PC representation of the piano part, last half of m. 5 through the first two notes of m. 6.



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In m. 6, right hand, top line, there appears a linear segment which can be formulated as PC/IC set 6-20. The symmetry of its pitch prototype is obvious: (0, 1, 4, 5, 8, 9). This pattern has been noted in connection with combinatorial serial procedures.

The version of the contour theme which appears in sequence three times in mm. 7-8 can be seen as a version of PC/IC set 5-21, which has the following symmetrical pitch prototype: (0, 1, 4, 7, 8). Further symmetry results from the fact that the three statements of the contour theme in mm. 7-8 are in sequence at the interval of a descending major third, producing parallel augmented triads; the augmented triad partitions the total gamut of twelve tones symmetrically into three equal parts. The close, but not immediately obvious, connection between the IC content of the reiterated segment in mm. 7-8 and the segment in m. 6, right hand, can be illustrated by: 1) pointing out that the m. 6 segment can be seen as two overlapping occurrences of PC/IC set 5-22 (circled in the score), and 2) comparing the interval vectors of PC/IC sets 5-21 and 5-22. The following comparison shows them to be maximally similar:

5-21 (0, 1, 4, 7, 8) [2 0 2 3 2 1]
5-22 (0, 1, 4, 5, 8) [2 0 2 4 2 0]

A final and less obvious symmetrical relationship can be illustrated by a comparison of the voice and piano parts, last half of m. 8 through m. 9 (henceforth: PC group X), with the contour theme as stated in the final measure of the piano part (henceforth: PC group Y). PC group X can be formulated as PC/IC set 6-5 (0, 1, 2, 3, 6, 7); the actual PC's can be arranged as in Ex. 16a. PC group Y

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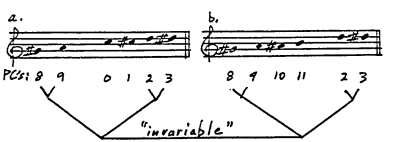
also can be formulated as PC/IC set 6-5. The actual PC's of PC group Y are given in Ex. 16b. Symmetry results from the fact that the four PC's which PC groups X and Y have in common (8, 9, 2, and 3) form a version of the symmetrical PC/IC set 4-9 (0, 1, 6, 7). The special stress which Schoenberg places on the "variable" inner two notes of each group and the "invariable" outer four notes imparts significance to the phenomenon just described, whereas otherwise one might be inclined to attribute the rather subtle relationships to mere coincidence. PC's 0 and 1 of Ex. 16a are stressed in m. 9: PC 1 is the lowest and longest note in the piano part, m. 9, and PC 0 is the highest and longest note of the vocal line, m. 9. PC's 10 and 11 of Ex. 16b are stressed by their being the first two notes in the piano part in m. 11. There can be no doubt about the importance of the "invariable" PC's of PC groups X and Y: they are the last four PC's of the piano part and the first four PC's of the vocal line, m. 2!

Ex. 16—Op. 15, #14:
a. PC's of "PC group X" (piano and voice, last half of m. 8 through m. 9).
b. PC's of "PC group Y" (piano, m. 11).



Op. 15, #14 seems to be based on radically different structural principles than those of Op. 15, #3. In Op. 15, #3 each small unit, or "event" of one to three measures in length occurs at least twice, except for the climax, mm. 19-20. The total structure seems

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to be the result of recurrence of events in varied forms. Conversely, in Op. 15, #14 there are four events in the piano part which do not recur: 1) the long $f^{\#2}$ in m. 2; 2) the formation in m. 4, which returns immediately in m. 5, but not thereafter; 3) the descending bass line in mm. 5-6; and 4) the last part of m. 8 through m. 10. (All the measures not just mentioned contain some form of the contour theme.) Rather than being an integral part of the structure due to recurrence, these four non-recurring events are integrated into the total organization contextually, i.e. by association with their immediate surroundings:

1. The $f^{\#2}$ in m. 2 is approached by a^2, the last note of the contour theme; and the connection between the two notes is emphasized by the grace notes a^2 and a^3. The $f^{\#2}$ is connected with the second statement of the contour theme in m. 3 by ties, which indicate that it should be held until it moves to the last note in m. 3.

2. The beginning of the formation in m. 4 is associated with PC's 3 and 1: these PC's appear in the vocal line at the end of m. 2 and at the end of m. 3 and beginning of m. 4, and they appear immediately in the piano formation (see arrows at the beginning of m. 4).

3. The descending symmetrical scale in the last half of m. 5 is associated with the pattern in the first half of m. 5 by PC 0 (indicated by arrow) and by the fact that the scale seems to be a continuation of a chromatic line begun by the d and $c^{\#}$ from the first half of the measure. The end of the scale (first two notes, m. 6) is linked with the beginning of the ascending segment in the right hand by 1) PC 3 (arrow at the beginning of m. 6), and 2) the formation of PC/IC set 4-3 by the last note of the scale and the first three notes of the ascending segment. (This last phenomenon is significant because the scale pattern itself consists of two adjacent versions of PC/IC set 4-3).

4. The four pitches in the second half of m. 8 are linked to the contour theme in the first part of m. 8 by PC 3 (arrow in m. 8); and the end of the vocal phrase in m. 8 joins the four pitches in the left hand, second half of m. 8, in a statement of the pitch motive, PC's 3 and 2. The piano part in m. 9 contains three of the same PC's stated at the end of m. 8. Finally, it

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already has been pointed out that "PC group X" intersects the piano part, m. 11, at four PC's.

In addition to the "contextual" associations just mentioned, each of the non-recurring events is related in some way to the opening material of the song. The pattern in the piano, m. 4, contains two leaps of a descending major seventh (from d to $D^{\#}$ and b to c); the song begins with an ascending major seventh, involving two of the same pitches: c and b. The descending line in the second half of m. 5 begins with the first three PC's of the song: 0, 11, and 9. The PC's found in the piano part, last half of m. 8 through m. 10, are the same as those contained in the first measure of the vocal line. Furthermore, the PC's of the piano and voice in m. 9 (PC's 9, 0, 1, 2, and 3) can be formulated as PC/IC set 5-4, and the PC's of m. 1 (PC's 9, 10, 11, 0, and 3) also can be formulated as PC/IC set 5-4.

Op. 15, #14 is not unique among the Op. 15 songs in containing passages which are not overtly related to any other passage, but which are connected with opening material in subtle ways. Other such passages are in the following Op. 15 songs: #2 (mm. 5-7), #6 (mm. 8-10), #7 (mm. 9-12), #11 (mm. 14-15), and #13 (mm. 5, 8-9). However, Op. 15, #14 contains a larger percentage of these passages than any of the songs just mentioned.

One might ask whether the song exhibits disunity, due to the variety of textures it contains. The foregoing discussion shows that Schoenberg was careful to insure unity. Even though the song does not make use of exact restatements of musical material, it does contain recurrences of contours and a rhythm pattern in both the voice and piano parts, the appearance of the contour theme in six of the eleven

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measures being the strongest single unifying factor; and the statements of the pitch motive (PC's 3 and 2) at numerous points, including the beginning of the vocal line and the last two notes of the song, is an important organizational element. The song also exhibits a kind of "contextual" unity. It is shown in the previous discussion that segments in the vocal line are associated with overlapping pairs of segments with the same IC content. In the piano part events are linked with their immediate surroundings by 1) the appearance of the same PC(s) at the end of an event and the beginning of the next, 2) the arrangement of the end of an event in such a way that the succeeding event could be considered a continuation of it, 3) the appearance of most of the PC's of an event in an adjacent event, or 4) the immediate repetition of an event at a different pitch level. The overlapping IC patterns mentioned above, the four instances of symmetrical arrangements of pitches in the score (mm. 2, 4-5, 5-6, 7-8), and the appearance of many pitch sets which can be formulated as symmetrical PC/IC sets suggest that Schoenberg experimented extensively with PC and IC patterns apart from restatements of ordered pitches in Op. 15, #14.

Above on p. 168 is a list of eight characteristics which are shared by Schoenberg's Op. 2, #2 and Op. 15, #3. Comparison of Op. 15, #14 with the list illustrates the disparity between the third and fourteenth songs of Op. 15: only two of the characteristics are the same. Some of the differences between the two songs are:

1. Song #14 contains none of the rather overt tonal gestures found in #3.

2. Rather than the theme and motive that are present in #3, the strongest unifying elements in #14 are a contour theme and a

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pitch motive.

3. The vocal line of #14 contains a much larger percentage of large intervals than the vocal line of #3, and the piano part of #14 is much more disjunct than that of #3.

4. Rather than containing uncomplicated rhythmic patterns which clearly conform to the meter signature, song #14 exhibits rather complex rhythmic configurations which often extend across barlines, making the meter signature difficult to perceive.

5. Song #14 contains passages which show great contrast of rhythmic movement in relation to their surroundings, as opposed to the relative continuity of rhythmic motion in #3.

6. In song #3 the opening material returns near the end at the original exact pitch, but in #14 only the IC's and most of the PC's of the beginning measures appear at the end.

7. Song #14, only eleven measures long, is much shorter than the twenty-six-measure song #3.

8. Recurrence of PC's and IC's apart from exact restatements of material is even more important in #14 than in #3, although this phenomenon is present in #3.

In the preceding list eight characteristics of Op. 15, #3 were contrasted with opposing characteristics of Op. 15, #14. The traits associated with the third song can be associated in general with all the early Op. 15 songs, but especially with #10; and the traits associated with #14 are true generally of all the late Op. 15 songs, but especially of Nos. 9, 11, and 13. The remaining Op. 15 songs possess some of both sets of characteristics in varying degrees.

Unity in Op. 15 as a Whole

The foregoing discussion, which is concerned in part with unity in three individual songs, shows that there are pronounced differences among some of the fifteen songs in the song cycle Op. 15. There are several factors in the cycle which create unity in spite

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of the obvious diversity of styles. One factor is certain PC patterns which appear throughout the cycle, in the early, middle, and late Op. 15 songs. A detailed listing of those patterns is outside the scope and purpose of this study. However, three factors merit brief consideration here. They seem to have been specifically designed by Schoenberg to unify the song cycle: 1) ordering of the songs, 2) connection of ends and beginnings of songs with reiterated PC's, and 3) certain relationships between song #1 and the theme of song #15.

Ordering of the Op. 15 songs

Schoenberg seems not to have set George's fifteen poems to music straight through from first to last. It seems likely that Schoenberg, aware that his style of early 1908 might be changed considerably by the time the song cycle was completed, composed the songs in a different order than they would appear in the score so that the cycle would be an integrated whole, rather than a work whose first and last components would show great diversity. In the list of the Op. 15 songs above on p. 26 the songs are divided into early, middle, and late Op. 15 songs according to stylistic evidence. If the ordering into three groups is correct, then the first two songs of Op. 15 were composed after four of the other songs, and some of the early and middle songs are interspersed with some of the late ones. Op. 15, #15, which is a combination of late and earlier styles, is discussed below.

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PC reiteration at the ends and beginnings of songs

Schoenberg provided continuity from song to song in Op. 15 by letting one or more PC's at the end of each song be present at the beginning of the next song, the single exception being between songs #7 and #8, where no such connection occurs.[1] In the following Op. 15 songs the connecting PC's are strongly emphasized:

#2—The last PC sounded (PC 5) is stressed in the vocal line of #3, mm. 1-3.

#6—The last pitch sounded is d^1 in the vocal line; d^2 is present on the first beat of #7 in the vocal line, doubled by the piano.

#8—An isolated PC 4 is struck "ff" at the end, and PC 4 is the lowest note of the first chord in #9.

#9—PC 8 is sounded by itself as the final note; it is the top note in the first chord of #10.

#10—PC 10, sounded in octaves at the end, appears isolated at the beginning of #11.

#14—PC 2, sounded quietly in three octaves at the end, is the top note in the first chord of #15.

The theme of Op. 15, #15

Op. 15, #15 is something of an enigma as to its place within the early, middle, or late group of Op. 15 songs, because it possesses characteristics of both the late and the early groups. The first five measures (Ex. 17, p. 184) contain a theme, the first five notes of which are a version of PC/IC set 4-17. At the beginning of the late Op. 15 song #11 the same PC/IC set occurs, with the

[1]Milton Babbitt mentioned this connective device in the second of his "Three Essays on Schoenberg," Perspectives on Schoenberg and Stravinsky (Princeton: Princeton University Press, 1968), p. 52.

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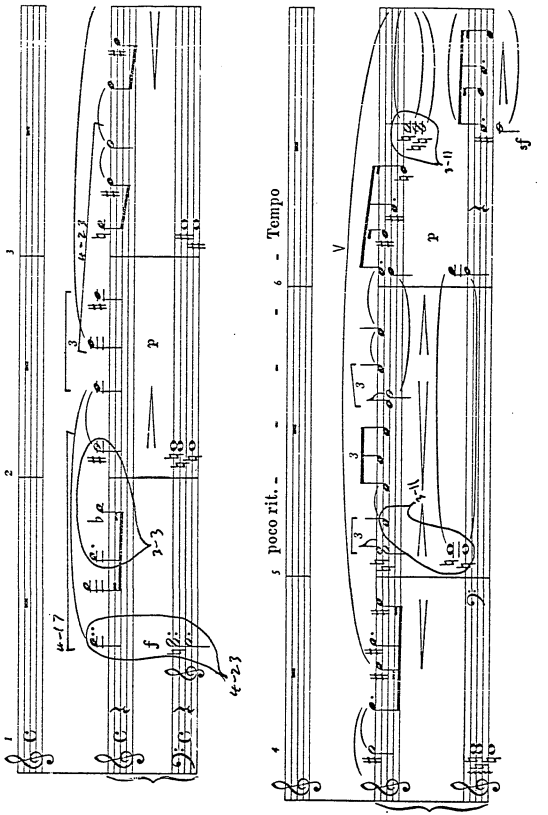
Ex. 17—Op. 15, #15, mm. 1–6.



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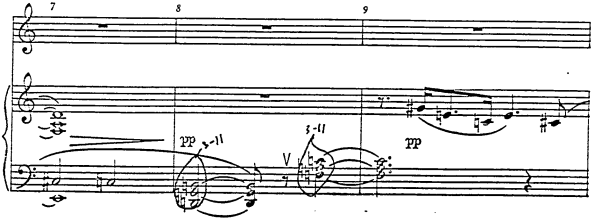
same PC's (Ex. 40, p. 133). This figuration acts as a pitch theme in song #11, and as a pitch motive (as well as a contour motive) in #15. Another trait which Op. 15, #15 has in common with song #11 is the presence of chords several beats in length (at a slow tempo) with no rhythmic movement, a trait not found in the early Op. 1 songs. Such chords can be seen in Ex. 18.

Ex. 18—Op. 15, #15, mm. 7-9.



Another trait of the late Op. 15 songs is rhythmic motion in the vocal lines, accompanied by a single note or chord in the piano part. This combination occurs at the beginnings of the vocal lines in the late Op. 15 songs, Nos. 9, 11, 13, and 14, but in none of the early Op. 15 songs. Example 19 shows that it is present at the beginning of the vocal line in song #15.

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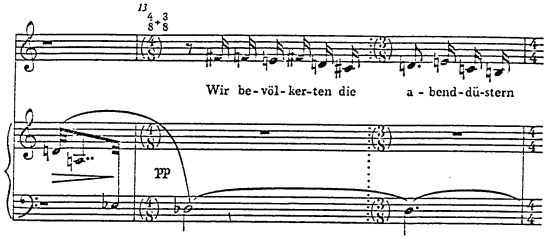
Ex. 19—Op. 15, #15, mm. 12-13.



Other aspects of Op. 15, #15 which suggest a late origin are:

1. A series of consecutive major and minor sevenths (m. 22), such as appear in Op. 15, #14 (mm. 1, 3, 6, 11) and Am Strande (m. 8);

2. Series of rapid-note patterns composed largely of thirds or fourths (mm. 23-25, 27-28), such as appear in the late Op. 15 songs, Nos. 7 (mm. 9-11), 11 (mm. 13-15), 13 (mm. 4-5), 14 (mm. 7-8), and Am Strande (mm. 4, 17-18); and

3. Great contrast of rhythmic motion within the song: primarily quarter and half notes in mm. 1-12, 31-51, as opposed to sixteenth and thirty-second notes in mm. 19-20, 23-25, 27-28.

Op. 15, #15 also shares several characteristics with the early and middle Op. 15 songs. Song #15 is by far the longest song in Op. 15 (fifty-one measures). Besides #15, the four longest songs (as far as number of measures are concerned) are the early Nos. 3, 4 (twenty-six measures each), and 10 (thirty-two measures), and the middle #12 (twenty-eight measures). The shortest two songs are late Op. 15 songs: #13 (thirteen measures) and #14 (eleven measures). The length of song #15, then, seems to suggest an earlier origin.

Another aspect which implies membership in the early or middle group of songs is the emphasis in the fifteenth song on PC/IC

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set 4-23, one version of which is a series of perfect fourths. Schoenberg made much use of chords built of stacked perfect fourths even before the atonal songs, in the transitional songs of Opp. 12 and 14. Passages in which such chords are especially prominent can be seen in Op. 12, #1 (mm. 77-81), Op. 12, #2 (mm. 6-9), and Op. 14, #1 (mm. 24-26). These "quartal" sonorities also were a part of Schoenberg's style in the early and middle Op. 15 songs. Chords and linear segments involving perfect fourths can be seen in Op. 15, #3, mm. 1-3, 11-12, 14, 19, and 23; and various arrangements of PC/IC set 4-23 are prominent in songs #1 (mm. 11, 13, 17-18) and #10 (mm. 29-30). In Op. 15, #15 PC/IC set 4-23 is present as the first chord of the song, and as a linear segment in the top line, mm. 2-3 (see Ex. 17); it also appears seven times in linear statements, mm. 19, 23-24, 27, 30-31.

Perhaps the most obvious two ways in which Op. 15, #15 is similar to the early Op. 15 songs have to do with PC/IC set 3-11 and with a theme. Versions of PC/IC set 3-11 (major or minor triad) appear frequently in the early Op. 15 songs, and in song #15 they occur in mm. 5-6 (Ex. 17), m. 8 (Ex. 18), m. 31 (immediately before a reference to opening material), and mm. 40-41 (return of mm. 6-8 in a lower register). These appearances of PC/IC set 3-11 in song #15 are not accompanied by suggestions of tonal procedure, as are some of the occurrences of this PC/IC set in the early Op. 15 songs; and they are conspicuous in that they appear only in the measures just mentioned. They seem to be included in the last song of Op. 15 as reference to the style of the early Op. 15 songs. The following discussion of the theme supports this contention.

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The theme of Op. 15, #15 (mm. 1-5) returns almost intact at the very end of the song, but transposed down two octaves and stated "fff" with accents. The theme contains four references to the first song of Op. 15. First, PC/IC set 4-23, stated in song #15 as the first chord and as a linear segment in mm. 2-3, is extremely important in song #1, where it is used as a pitch motive in mm. 10-11, 13, 17-18. Some of the appearances of this pitch motive are labeled "PM" above on p. 111, Ex. 21, and on p. 112, Ex. 22. A comparison with PC/IC set 4-23 as used in these examples and the version in Op. 15, #15, m. 1 shows that three of their four PC's are the same: 9, 2, and 5. Second, the IC's of PC/IC set 3-3 appear in the same order in mm. 1-2 of the theme of the last song (circled in Ex. 17) and in the first three notes of the first song (see p. 107, Ex. 18). Third, $g^{\#2}$ and $e^{\#2}$ appear in the vocal line at the climax of song #1 (p. 112, Ex. 22), and the piano, right hand, repeats these pitches in alternation (doubled at the octave above) for three full measures (mm. 18-20). Following that, the last note of the theme (left hand) is altered from the expected g to $e^{\#}$, creating a statement of $g^{\#}$-$e^{\#}$ in mm. 20-21; and the pitches $G^{\#}$ and $E^{\#}$ complete the bass line of the song (mm. 21-23). In the theme of Op. 15, #15, the pitches $g^{\#2}$ and $e^{\#2}$ are stated twice in alternation, m. 4 (Ex. 17). Finally, PC's 0, 4, and 5, which appear in m. 5 of the theme of song #15, form an important chord in the piano part of the first song. This chord can be seen above on p. 107, Ex. 18 (m. 10), p. 111, Ex. 21 (left and right hands), and p. 112, Ex. 22 (right hand).

The isolated major and minor triads and the references to the first song are strong indications that most of the traits of

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song #15 which seem early actually are specific references to stylistic elements of the early or middle Op. 15 songs. The characteristics of the fifteenth song which are shared with the late Op. 15 songs probably are valid indications of its late origin. Op. 15, #15 seems to be a fitting summary; its diverse elements are in keeping with the stylistic diversity of Op. 15 in general.

Conclusions

The comparison of Schoenberg's Op. 2, #2 (probably composed in 1899) and Op. 15, #3 (an early Op. 15 song probably composed in early 1908) at the beginning of this chapter shows that the songs have several traits in common. They have similar rhythmic organization and motion, their vocal lines have similar interval content, and they make use of exact restatements of melodic segments (themes and motives). Furthermore, developing variation in both songs produces some of the same results: opening measures which furnish material for a large part of each song, and numerous subtle relationships between passages in each song due to recurrence of motives, shapes, or IC patterns in various contexts. The complex combination of contour theme, pitch theme, motive, and frequently-used PC/IC sets at the end of Op. 15, #3 (p. 166, Ex. 10) is comparable to the astonishing combination of melodic segments in mm. 26-30 of Op. 2, #2 (p. 159, Ex. 4). The bass line in this excerpt from Op. 2, #2 is an early instance of recurrence of an unordered IC pattern. Such a large number of similarities between songs separated in dates of composition by nine years indicates a process of gradual stylistic change. Schoenberg's development from the tonality of Op. 2, #2 to the atonality of the early Op. 15 songs

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involved the elimination of an all-pervading tonal hierarchy, to be sure; but, at the same time, many aspects of his earlier style remained unchanged or only slightly altered.

The comparison of the early and late Op. 15 songs, Nos. 3 and 14, substantiates the facts contained in the chart at the end of Chapter III (p. 149). In addition, it is found that the fourteenth song contains a further step in the direction of Schoenberg's style of the summer, 1909 (Op. 11, #3 and Op. 16, #5). At this time Schoenberg wrote music in which very few passages reappear in easily-recognizable forms. In song #14 there are four "events" which do not recur, except for one which is repeated immediately at a different pitch level. Even in these nonrecurring passages Schoenberg was mindful of musical coherence. A kind of "contextual" continuity is maintained, whereby each event is linked in some way with its surroundings; and each of the nonrecurring passages is related to the opening material by PC content, IC content, or similarity of intervals used. Op. 15, #3 has elements in common with song #14: unity created by recurring PC's, IC's, and contours without reference to a strong tonal center, and opening material which is related to most of the remainder of the song. In other words, Schoenberg applied his technique of developing variation in both songs. However, the differences between the two songs seem more evident than the similarities.

The foregoing treatment of unity in Op. 15 as a whole points out three steps which Schoenberg took to create unity within the song cycle. First, the songs are arranged so that neither the early nor the late Op. 15 style is present at the opening of the cycle, which begins with two middle Op. 15 songs; and the early and middle Op. 15

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songs are interspersed with some of the late ones. Second, one or more PC's act as connectives between the songs, except in one case. Third, the last song of the cycle contains stylistic elements of the early, middle and late songs, with the theme containing four references to the first song. These three devices seem to be purposeful acts on the part of Schoenberg to create a unified whole from a collection of fifteen songs containing pronounced stylistic diversity.

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CHAPTER V

CONCLUSIONS

Evolution

The quotations from Schoenberg above on pp. 5-6 reveal his preference for gradual and logical change in the historical development of music, as opposed to sudden and radical stylistic shifts; i.e. Schoenberg viewed the greatest achievements in the Western musical tradition as part of an evolutionary process rather than a revolutionary one. The quotations also reveal his confidence that his own musical achievements were produced by evolutionary means. Comparisons of the atonal songs with some of the earlier songs prove Schoenberg's confidence to have been well-placed, as far as his evolution to atonality is concerned. The investigation of stylistic evolution in Chapter II of this study shows that three traits usually associated with Schoenberg's atonal works are present in his tonally-extended and transitional songs of 1903-1908, as well as in Op. 15: wide total range of vocal lines, jagged contour and large leaps, and imitation. The comparison of Op. 2, #2 and Op. 15, #3 in Chapter IV points out that some of the traits shared by the tonal songs and the atonal early Op. 15 songs are: exact restatements of linear segments (themes and motives); variation of pitch and rhythm of some melodic segments, so that only contour remains; similarity of interval content in vocal lines; straightforward rhythms, which are arranged in patterns

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conforming in general to the meter signature; overall continuity of rhythmic motion; and return of opening material with the original PC's near the ends of compositions. The traits just mentioned, which are some of the "structural factors" left in operation after Schoenberg's "renouncement of the unifying power of the tonic," are clear evidence that Schoenberg's relinquishing of the tonal hierarchy was not characterized by a stylistic upheaval, but was merely one of the steps in his evolutionary development.

Another similarity is evident between Schoenberg's songs which were written during the years 1898–1908 and the atonal songs: all of them are the results of Schoenberg's technique of developing variation. In Op. 2, #2 some of the results of developing variation are that every event in the song is related to the basic material (mm. 1–6), and that contours of melodic segments recur apart from exact restatements of PC's or IC's. The atonal songs show these same results of developing variation, but with a significant addition: the opening material of each song contains groups of PC's and IC's which appear together at other points in the song without occurring always in the same order. At the beginning of Chapter III terminology is presented with which to describe unordered restatements of sets of PC's and IC's, as well as to describe recurrences of melodic segments in exact or varied forms.

Employment of the terminology in the remainder of Chapter III reveals pronounced differences in Schoenberg's employment of pitch phenomena in the early Op. 15 songs as opposed to the late Op. 15 songs and Am Strande. The late group makes much more use than the early group of restatements of 1) only the PC's of ordered linear segments

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or chords (pitch motives), and 2) only the PC's or IC's of unordered pitch sets; while the early group contains noticeably more restatements (after intervening material) of ordered melodic segments. Another difference concerns PC/IC set 3-11 (major or minor triad), which often is associated with linear tonal gestures and "V-I" implications in the early Op. 15 songs. This PC/IC set is found much less often in the later atonal songs; when it occurs, it is not accompanied by references to tonal procedures. The following list contains other traits (not directly related to pitch phenomena) of the late Op. 15 songs which are not present in the earlier songs:

1. Numerous, relatively long passages containing disjunct motion in both the piano and vocal parts;
2. Complex rhythmic configurations which often extend across barlines, making the meter signature difficult to perceive in places;
3. Relatively long passages in the piano parts which are characterized by little or no rhythmic motion, juxtaposed with sections containing rapid rhythmic movement; and
4. Fragmentation (de-thematization) of musical material.

Finally, Op. 15, #14 is shown in Chapter IV to be based on radically different structural principles than the early Op. 15 songs. In the early Op. 15 songs (and in the songs from 1903 to 1908) the formal structure seems to be the result of recurrence of events in varied forms. Conversely, there are four events in the piano part of the eleven-measure song #14 which do not recur, but are integrated into the total structure by "contextual" associations and by subtle connections with the opening material.

In short, the investigation of some of the evolutionary aspects of Schoenberg's early atonal style indicates that the stylistic

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evolution which is evident in Schoenberg's transition to atonality continues and can be traced clearly in Op. 15. The early Op. 15 songs, Nos. 3, 4, 5, and 10, have much in common with Schoenberg's tonal, tonally-extended, and transitional songs; Nos. 3 and 10 are closest to his earlier style. The middle Op. 15 songs, Nos. 1, 2, 6, 8, and 12, are combinations of early and late traits. The late Op. 15 songs are Nos. 7, 9, 11, 13, 14, and 15; Nos. 11, 13, and 14 seem to have been composed last. The content of the fifteenth song suggests that Schoenberg, aware of the stylistic diversity in Op. 15, planned it as a compendium for the cycle. (Besides possessing traits of both the early and the late Op. 15 songs, Op. 15, #15 contains in its theme four references to the first song of Op. 15.) The disparity of style among the Op. 15 songs probably is a result of a trend described by Schoenberg (above, p. 146). In late 1908 and early 1909 he was moving in the direction of a brief period during which his creative output was radically different from any of his music before 1908. Movement in the direction of this period is clearly shown in the preceding comparison of early and late Op. 15 songs, where it is pointed out that many traits which were carried over from Schoenberg's tonal style to the early Op. 15 songs are no longer present in the late Op. 15 songs.

It is illustrated in Chapter I of this study that three authors of widely-read textbooks made ambiguous statements in connection with the question of "evolution" or "revolution" and Schoenberg's music; and it is pointed out that a specialized investigation of stylistic evolution based on a discreet body of Schoenberg's works might help to prevent such statements in future writings about

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Schoenberg. A short summary of the findings mentioned in the present chapter could be included in any discussion of Schoenberg's style. If the following points were made, there would be little chance of ambiguity concerning Schoenberg's transition to atonality:

1. Schoenberg's stylistic development should be considered apart from any discussion of his place in the history of Western music; the former topic can be considered factually, but the latter discussion must be conjectural at this early date.

2. Schoenberg's first atonal works had much in common with his works of 1899-1908.

3. There is more than one "atonal style." Schoenberg's fifteen atonal songs, Op. 15, show great stylistic diversity.

4. Schoenberg's development from his comparatively traditional early atonal pieces to his "radical" atonal works of 1909 was gradual, i.e. it was an evolutionary process.

Unity

Schoenberg's references to logical order and organization, comprehensibility, coherence, and unifying qualities of certain structural factors in the quotations above on pp. 5-6 are some of the many instances in which he showed his concern for musical unity. The exploration of developing variation in the atonal songs shows that this concern is reflected in the music. Through the use of a heirarchical nomenclature in Chapters III and IV it is shown that Schoenberg's atonal songs possess unity, and that the means of producing it are much different in some songs than in others. The hierarchy is based on the number of musical elements which are restated. The modifiers "pitch," "rhythm," and "contour" are used to denote recurring elements of ordered melodic segments; PC/IC sets are employed to describe recurring PC's and IC's of unordered pitch phenomena. One can identify

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a trend which can be described as increasing emphasis on the fifth characteristic associated with developing variation above on p. 15: repetition of musical material only in varied forms. The consideration of the early unpublished songs (above, pp. 28-36) shows that a trend away from exact restatement is already evident in Schoenberg's songs from c. 1894-1895. The trend continues in Schoneberg's tonal, tonally-extended, and transitional songs, but exact restatements of ordered linear segments are present in all of the early Op. 15 songs and in some of the middle and late Op. 15 songs. A change is evident in the later songs, of which four (Op. 15, Nos. 7, 9, 14, and Am Strande) contain no exact restatements of relatively long linear segments (themes); furthermore, only one (Op. 15, #9) contains exact restatement of short linear segments (motives). In the absence of the unifying potential of exact restatement in the later songs, Schoenberg insured musical unity by several different means. Two of the primary means are 1) the use of recurring pitches (or PC's) of ordered segments or chords (pitch motives), and 2) control of PC and IC content in connection with unordered pitch phenomena. Schoenberg's control of PC and IC content is illustrated by reference to:

1. PC/IC sets which return in a variety of contexts, and which usually are present in some form in the opening measures;
2. Pitch sets at the beginnings of songs which function as source sets for several frequently-used subsets;
3. Instances in which the vertical and horizontal content of chordal passages is related, although the chords are not merely transpositions of each other;
4. Many examples of maximal similarity relations among groups of PC/IC sets;
5. Occurrences of overlapping pairs of linear segments with the same IC content; and

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6. Examples of subtle PC and IC interrelationships, especially in regard to Op. 15, #14 and Am Strande. These examples strongly suggest purposeful and skillful manipulation of unordered pitch sets.

Schoenberg's careful control of pitch resources, apart from the recurrent rhythms and contours associated with ordered pitch phenomena, seems to be an early attempt at the kind of unity which is produced in his later works by the tone row.

The preceding presentation of the findings of this study clearly illustrates the close relationship between the topics of evolution and unity in connection with Schoenberg's Op. 15. The discussion of unity reveals some of the techniques with which Schoenberg created coherent atonal works; each atonal song could be used as an illustration of his concern with musical unity. The topic of evolution becomes a major consideration when one finds that no two songs are organized in exactly the same way, and when this discovery leads to an investigation of the evolutionary process which is evident in the fifteen songs of Op. 15. The close relationship between evolution and unity is evident from the fact that some of the contrasting compositional techniques which can be cited as evidence of evolution from the early to the late Op. 15 styles are the very same techniques with which Schoenberg was experimenting in an effort to insure musical unity.

Throughout his life Schoenberg was concerned with musical evolution and unity. This fact is evident from his stress on these two topics in his article "My Evolution," written when he was seventy-three years of age. The quotations from this article which are given above on pp. 5-7 demonstrate his special concern that his stylistic

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changes in the years 1907-1909 be considered a logical and natural sequence of events. Schoenberg contended emphatically that the changes were evolutionary, and that unity was maintained in the first compositions in which he "renounced the unifying power of the tonic." Examination of the music shows that he was right on both counts.

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APPENDIX

FORTE'S TABLE OF PC/IC SETS

The following two pages contain Allen Forte's table[1] of the 197 unordered sets of two to ten PC's. The significance of the table for this study is explained above on pp. 77-78.

[1]Allen Forte, "A Theory of Set-Complexes for Music," Journal of Music Theory, VIII (#2, 1964), pp. 145-148.

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DISTINCT 2-NOTE SETS

Set Number	Normal Order	Interval Vector	Number of Pitch-Sets
1	01	[100000]	12
2	02	[010000]	12
3	03	[001000]	12
4	04	[000100]	12
5	05	[000010]	12
6	06	[000001]	6
			66

DISTINCT 10-NOTE SETS

Set Number	Normal Order	Interval Vector	Number of Pitch-Sets
1	0123456789	[988884]	12
2	0123456T10	[898884]	12
3	0123456910	[889884]	12
4	0123458910	[888984]	12
5	0123457910	[888894]	12
6	0123467910	[888885]	6
			78

3.02

DISTINCT 3-NOTE SETS

Set Number	Normal Order	Interval Vector	Number of Pitch-Sets
1	012	[210000]	12
2	013	[111000]	24
3	014	[101100]	24
4	015	[100110]	24
5	016	[100011]	24
6	024	[020100]	12
7	025	[010110]	24
8	026	[010101]	24
9	027	[010020]	12
10	036	[002001]	12
11	037	[001110]	24
12	048	[000300]	4
			220

3.03

DISTINCT 9-NOTE SETS

Set Number	Normal Order	Interval Vector	Number of Pitch-Sets
1	012345678	[876663]	12
2	012345679	[777663]	24
3	012345689	[767763]	24
4	012345789	[766773]	24
5	012346789	[766674]	24
6	012356810	[686763]	12
7	012457910	[676773]	24
8	012468910	[676764]	24
9	012567810	[676683]	12
10	012567910	[676674]	12
11	012356810	[667773]	24
12	012456810	[666963]	4
			220

DISTINCT 4-NOTE SETS

Set Number	Normal Order	Interval Vector	Number of Pitch-Sets
1	0123	[321000]	12
2	0124	[221100]	24
3	0134	[212100]	12
4	0125	[211110]	24
5	0126	[210111]	24
6	0127	[210021]	12
7	0145	[201210]	12
8	0156	[200121]	12
9	0167	[200022]	6
10	0235	[122010]	12
11	0135	[121110]	12
12	0236	[112101]	24
13	0136	[112011]	24
14	0146 0237	[111120]	24
Z15	0137	[111111]	48
16	0157	[110121]	24
17	0347	[102210]	12
18	0147	[102111]	24
19	0148	[101310]	24
20	0158	[101220]	24
21	0246	[030201]	12
22	0247	[021120]	24
23	0257	[021030]	12
24	0248	[020301]	12
25	0268	[020202]	6
26	0358	[012120]	12
27	0258	[012111]	24
28	0369	[004002]	3
			495

DISTINCT 8-NOTE SETS

Set Number	Normal Order	Interval Vector	Number of Pitch-Sets
1	01234567	[765442]	12
2	02345678	[665542]	24
3	01234568	[656542]	12
4	01345678	[655552]	24
5	01245678	[654553]	24
6	01235678	[654463]	12
7	01234689	[645652]	12
8	01234789	[644563]	12
9	01235789	[644464]	6
10	012345710	[566452]	12
11	02456789	[565552]	12
12	012346910	[556843]	24
13	02356789	[556453]	24
14	01245679	[555562]	24
Z15	01356789	[555553]	48
16	01246789	[554563]	24
17	012356910	[546652]	12
18	01346789	[546553]	24
19	01345789	[545752]	24
20	01245789	[545662]	24
21	012346810	[474643]	12
22	012357910	[465562]	24
23	012357810	[465472]	12
24	012456810	[464743]	12
25	012467810	[464644]	6
26	012457910	[456562]	12
27	012467910	[456553]	24
28	013467910	[448444]	3
			495

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DISTINCT 5-NOTE SETS

Set Number	Normal Order	Interval Vector	Number of Pitch-Sets
1	01234	[432100]	12
2	01235	[332110]	24
3	01245	[322210]	24
4	01236	[322111]	24
5	01237	[321121]	24
6	01256	[311221]	24
7	01267	[310132]	24
8	02346	[232201]	12
9	01246	[231211]	24
10	01346	[223111]	24
11	02347	[222220]	24
Z12	01356	[222121]	36
13	01248	[221311]	24
14	01257	[221131]	24
15	01268	[220222]	12
16	01347	[213211]	24
Z17	01348	[212320]	24
Z18	01457	[212221]	48
19	01367	[212122]	24
20	01378	[211231]	24
21	01478	[202321]	24
22	01458	[202420]	12
23	02357	[132130]	24
24	01357	[131221]	24
25	02358	[123121]	24
26	02458	[122311]	24
27	01358	[122230]	24
28	02368	[122212]	24
29	01368	[122131]	24
30	01468	[121321]	24
31	01358	[114112]	24
32	01469	[113221]	24
33	02468	[040402]	12
34	02469	[032221]	12
35	02479	[032140]	12
			792

DISTINCT 7-NOTE SETS

Set Number	Normal Order	Interval Vector	Number of Pitch-Sets
1	0123456	[654321]	12
2	0234567	[554331]	24
3	0245678	[544431]	24
4	0134567	[544332]	24
5	0124567	[543342]	24
6	0145678	[533442]	24
7	0125678	[532353]	24
8	0234568	[454442]	12
9	0245678	[453432]	24
10	0234569	[445332]	24
11	0134568	[444441]	24
Z12	0123568	[444342]	36
13	0234678	[443532]	24
14	0124678	[443352]	24
15	0135678	[442443]	12
16	0134569	[435432]	24
Z17	0134578	[434541]	24
Z18	0124578	[434442]	48
19	0123689	[434343]	24
20	0125679	[433452]	24
21	0145789	[424641]	24
22	0125689	[424542]	12
23	0245679	[354351]	24
24	0246789	[353442]	24
25	0235679	[345342]	24
26	0134578	[344532]	24
27	01257910	[344451]	24
28	0135679	[344433]	24
29	0235789	[344352]	24
30	0135789	[343542]	24
31	0235689	[336333]	24
32	0134689	[335442]	24
33	01246810	[262623]	12
34	01346810	[254442]	12
35	01356810	[254361]	12
			792

DISTINCT 6-NOTE SETS

Set Number	Normal Order	Interval Vector	Number of Pitch-Sets
1	012345	[543210]	12
2	012346	[443211]	24
Z3	012356	[433221]	48
Z4	012456	[432321]	24
5	012367	[422232]	24
Z6	012567	[421242]	24
7	012678	[420243]	6
8	023457	[343230]	12
9	012357	[342231]	24
Z10	013457	[333321]	48
Z11	012457	[333231]	48
Z12	013567	[332232]	48
Z13	013467	[324222]	24
14	013458	[323430]	24
15	012458	[323421]	24
16	014568	[322431]	24
Z17	012478	[322332]	48
18	012578	[322242]	24
Z19	013478	[313431]	48
20	014589	[303630]	4
21	023468	[242412]	24
22	012468	[241422]	24
Z23	023568	[234222]	24
Z24	013468	[233331]	48
Z25	012568	[233241]	48
Z26	013578	[232341]	24
27	013459	[225222]	24
Z28	013569	[224322]	24
Z29	013689	[224232]	36
30	013678	[224223]	12
31	013589	[223431]	24
32	024579	[143250]	12
33	023578	[143241]	24
34	013579	[142422]	24
35	0246810	[060603]	2
			924

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