

7 The musical language of *Wozzeck*

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The phrase ‘musical language’, though in everyday use, begs many questions and carries a multitude of assumptions. There is naturally a rich and varied literature which attempts to give the topic its due and to work out its detailed implications from a number of perspectives. In this brief chapter, however, the phrase is used in its everyday sense, as a convenient shorthand for the investigation of technical matters in a musical work inasmuch as they relate to what is broadly familiar, embodying an assumption that such ramification of a specific work in a shared context both supports and to some extent reveals a kind of latent musical ‘understanding’. In the present context such discussion must also reckon with the fact that *Wozzeck* is an opera, even if the question of genre is far from one-dimensional in this of all such works. The subtitle of Janet Schmalfeldt’s impressive monograph on *Wozzeck* – ‘harmonic language and dramatic design’ – explicitly conjoins the notion of musical language with the idea that operatic music serves a dramatic purpose.¹ Both her book and an earlier study by George Perle seek to relate specific musical configurations to characters, situations and symbols in the drama.² As the format of Perle’s article acknowledges, this approach owes much to an exegetic line of writing about opera that developed in the post-Wagnerian period. Indeed, the examples of Berg’s own guides to Schoenberg’s *Gurrelieder* and *Pelleas und Melisande* serve to remind us that during his lifetime such writing frequently spilled over into discussions of non-operatic works.

Writing about the drama of an opera through the music places the drama in a peculiar situation. By rendering it at arms length, giving it a phantom existence that speaks only by virtue of the music’s agency, writing in this way endows the drama with the status of something virtual rather than real, and at the same time gives the music the status of something real rather than virtual. It is as if to say that the music serves the drama by *consuming* it – which is indeed a forthright answer to the age-old operatic dilemma of the relative priorities of words and music. In the case of an opera that is composed to a existing free-standing dramatic text, as with Büchner’s *Woyzeck* and Berg’s *Wozzeck*, such an assessment of the

relationship of music to drama represents the most extreme (*apophrades*) of the literary critic Harold Bloom's 'revisionary ratios' – six pragmatic categorisations through which in a famous study of how poets cope with their influences he charts 'the creative mind's desperate insistence on priority'.³ Appropriating Bloom in this fashion, albeit without associating *apophrades* with the final stages of an artist's career as he does, we might say that to write about *Wozzeck* in this way is to assert that Berg confidently displays his own mastery by overpowering Büchner's text to the point where – as is nowadays surely the common perception – *Woyzeck* the play is unthinkable without *Wozzeck* the opera.⁴

Nonetheless, history can record the play's independent existence. Büchner was only ever a young man – he died in 1837 in his twenty-fourth year – and as well as literature his brilliant and restless mind encompassed radical political activism and the professional medical expertise that had been a family vocation for many generations. The case of Johann Christian Woyzeck would have been known to him through the latter route: in 1821, Woyzeck had killed his partner because she was unfaithful, but pleaded insanity. Medical reports eventually contradicted this and he was executed in 1824. Büchner's play was drafted as a collection of fragmentary scenes shortly before his death and deciphered with enormous difficulty by Karl Emil Franzos for publication in 1879.⁵ (Thus there remained two areas of uncertainty in establishing the text of the play: the choice and ordering of scenes, and the detailed reading of the words themselves.) More than thirty years were to elapse before the play's first production in Munich in 1913, by which time – it was Büchner's centenary year – his work had become known in literary circles and was arousing considerable interest. Berg saw the play in Vienna on 5 May 1914 and, moved almost beyond words, resolved immediately to set it to music.⁶

Working from a reprint of Paul Landau's 1909 edition of the play – which without altering the details of Franzos's reading embodied new conjectures about the choice and ordering of the scenes – Berg simply adapted what he saw on the page to form his libretto. Some scenes were omitted, but the order of those that remain is Landau's. Berg made some adjustments of detail in order to retain material from the deleted scenes, but overall, as George Perle succinctly observes, 'the libretto of *Wozzeck* almost literally reproduces the Franzos–Landau text'.⁷

As is well known, Berg's treatment arranges the material into a regular scheme, his three acts each having five scenes. Arguably, this orderly aspect compromises Büchner's creation: viewed through the agency of the opera – or of a scholarly description of the fragments – the play, in its virtual form, is a kind of dramatic mobile, its very formlessness an essential char-

acteristic. But like Berg when fashioning his libretto, stage productions are constrained to render the play as an undeviating chronological entity. This often works poorly in the theatre, but not in Berg. Music gives Berg the capacity for continual cross-references that counterpoint the chronological trajectory of the narrative, indeed throwing it into relief and making a dramatic virtue of its 'inevitability'.

At the same time, this counterpoint was not sufficient for him: in his 1929 lecture on the opera, he made the extraordinary claim that

although [the final scene] ... clearly moves to cadence on to the closing chord, it almost appears as if it carries on. And it does carry on! In fact, the opening bar of the opera could link up with this final bar and in so doing close the whole circle.⁸

This idea has often been restated without objection, yet it is surely questionable. We can locate here the source of two claims about the drama and the music of the opera. In terms of the wider resonances of the stage action, the implication of Berg's statement is that the tragedy of *Wozzeck* and Marie could repeat itself in the next generation (and the next, and the next, and so on);⁹ it thus amounts to a claim of mythic status for a drama which is actually based on historical fact. Arguably, Büchner's play does not need this particular mythic quality to be a fine and resonant piece of theatre: it achieves this by teasing out a web of possible explanations for Johann Woyzeck's mental state, and by locating the agency of many of those explanations with members of society more respectable and upstanding than the poor soldier himself, none of whom can match his capacity for questioning the nature of the human condition.

Berg's opera, because it subsumes Büchner's play, possesses all of these qualities too, but by explicitly assigning the drama's mythic quality outside time – rather than within the mirror of Woyzeck's society – Berg also aligned his opera with the Wagnerian music-drama project. Inasmuch as the Wagnerian project itself grew from literary origins broadly contemporary with Büchner, there is perhaps another kind of circular closure afoot here that in an uncanny way supports Berg's treatment. Secondly, in musical terms, Berg's proposed 'circular' connection, which must be set against the strongly cadential nature of the end of each of the three acts (the immediately previous point Berg makes in his lecture) would seem to constitute a claim of stylistic integrity across the work from beginning to end – or, at least, from the end to the beginning. This claim is not straightforwardly sustainable, although as Schmalfeldt, Perle and Douglas Jarman have shown, and as will be discussed later in this chapter, it can be supported through detailed analysis.

Table 7.1

drama		music
<i>expositions</i>	<i>Act I</i>	<i>five character pieces</i>
Wozzeck and the Captain	scene 1	Suite
Wozzeck and Andres	scene 2	Rhapsody
Marie and Wozzeck	scene 3	Military march and lullaby
Wozzeck and the Doctor	scene 4	Passacaglia
Marie and the Drum Major	scene 5	Andante affettuoso (quasi Rondo)
<i>dramatic development</i>	<i>Act II</i>	<i>Symphony in five movements</i>
Marie and her child, later Wozzeck	scene 1	Sonata movement
the Captain and the Doctor, later Wozzeck	scene 2	Fantasia and Fugue
Marie and Wozzeck	scene 3	Largo
garden of a tavern	scene 4	Scherzo
guard room in the barracks	scene 5	Rondo con introduzione
<i>catastrophe and epilogue</i>	<i>Act III</i>	<i>six inventions</i>
Marie and the child	scene 1	invention on a theme
Marie and Wozzeck	scene 2	invention on a note
tavern	scene 3	invention on a rhythm
death of Wozzeck	scene 4	invention on a hexachord
	interlude	invention on a tonality
children playing	scene 5	invention on a regular quaver movement

Formal models

Berg's organisation of the action into a regularised sequence of scenes also served a musical purpose which has become well known through the overview of its scenes prepared by his pupil Fritz Mahler, from which Table 7.1 derives.¹⁰ The composer's choice of textbook musical forms is in several cases explicitly related to the dramatic situation through similarities of pacing or in some way metaphorically. For example, as Berg himself said of Act II scene 1:

The second act ... has, as its first musical form, a sonata movement. It is not, perhaps, an accident that the three figures appearing in this scene, Marie, her child and Wozzeck, form the basis of the three thematic groups of the musical exposition – the first subject, second subject and coda – of a strict sonata structure. Indeed the whole of the dramatic development of this jewel scene, the twofold repetitions of certain situations and the confrontation of the main characters, lends itself to a strict musical articulation with an exposition, a first reprise, development and finally a recapitulation.¹¹

Rather obviously, and not for the first time in musical history, this takes into the realm of operatic music the principles of the Straussian symphonic poem, with its ambivalent appeal to notions of absolute and pro-

gramme music. But it also involves a neo-classical aspect, not so much through the use of textbook musical forms *per se*, but rather on account of their stylisation. For example, one cannot imagine Gustav Mahler, Berg's symphonic precursor, composing a 'strict' sonata movement which, like this scene, lasts no more than five minutes in a typical performance.

The distancing from the historical locus of the form which this implies is inevitably more explicit in the case of the first scene of Act I, which through the use of the baroque suite as a formal model, Berg suggests, 'acquires ... musically its proper, I should like to say, historical colouring'.¹² Douglas Jarman elucidates this by observing that the use of the 'old-fashioned' form is 'a comment on the Captain's out-dated, traditional and bourgeois moral stance'¹³ – in other words, the use of the form is not straightforward antiquarianism, but rather gives scope for an additional level of authorial comment on Berg's part. As the continuation of Berg's sentence makes clear, however, this was not his intention elsewhere in the opera: it was something 'which in this truly timeless drama I naturally did not otherwise keep to';¹⁴ at the same time, one may nonetheless observe an overwhelming quality of stylisation in the Suite, not least in the brevity of its 'movements'. The whole sequence – Prelude, Pavane, cadenza, Gigue, cadenza, Gavotte with two Doubles, Air, and a reprise of the Prelude (much of it in retrograde) – lasts about seven or eight minutes.

One might well ask how recognisable the forms are under such circumstances. Certainly, the opera's formal organisation met initially with incomprehension from some quarters – the Viennese critic Emil Petschnig, for example:

apart from a few bars of chromatic passagework in 3/8 time ... which are supposed to represent the Gigue, a section in [♭] about morality representing the Gavotte and its two Doubles ... and a section in 3/2 to which, out of much good will, one might apply the term 'Air', I was unable to discover anything that resembled a Suite or even to discover any of those features that immediately differentiate the old dance forms from one another.¹⁵

It is easy to belittle such judgements with hindsight, but it is also worth looking a little deeper. The brevity of the forms is of course connected with the brevity of Büchner's scenes, and thereafter is a consequence of Berg's decision to apply a separate musical form to each scene – albeit while grouping them into larger families, notably in the second act. In his brief article 'A Word about *Wozzeck*', Berg explained his reasoning:

The function of a composer is to solve the problems of an ideal stage director. On the other hand this objective should not prejudice the development of the music as an entity, absolute, and purely musical.

... It was first necessary to make a selection from Büchner's twenty-five loosely constructed, partly fragmentary scenes ... Repetitions not lending themselves to musical variation were avoided. ...

It was impossible to shape the fifteen scenes I selected ... so that each would retain its musical coherence and individuality and at the same time follow the customary method of development appropriate to the literary content. No matter ... how aptly it might fit the dramatic events, after a number of scenes so composed the music would inevitably create monotony. ...

I obeyed the necessity of giving each scene and each accompanying piece of entr'acte music ... an unmistakable aspect, a rounded off and finished character. It was imperative to use everything essential for the creation of individualizing characteristics on the one hand, and coherence on the other. Hence the much discussed utilization of both old and new musical forms ...¹⁶

In other words, the set forms were used primarily in order to give each scene or interlude 'a rounded off and finished character'; Berg employed other musical devices to individualise them, to give them 'an unmistakable aspect'.

The differentiation is indeed remarkable. The vocal characterisations and the combinations of characters, the memorable orchestral sonorities and in some scenes the reduction of the full orchestra to produce a characteristic range of tone colours: all of these things not only differentiate the scenes from each other but also lend them each an internal coherence. In Acts I and II at least, it is a moot point whether the coherence of this kind is more potent than the coherence provided by the stylised forms. Perhaps in the Passacaglia on a twelve-note theme that supports Act I scene 4 and through its twenty-one variations mocks the Doctor's obsessiveness, it is the formal basis rather than the diversity it permits Berg to compose into the variation sequence that is responsible for holding the scene together – though the intensity of Büchner's satire also plays its part. But in the tavern scene (Act II scene 4), or the preceding scene between Wozzeck and Marie – in which the reduction of the orchestra to chamber music proportions and the use of *Sprechstimme* in the vocal parts defines the musical character – it is surely less the underlying Scherzo and Trio form in the one case, or the underlying ternary form of the Largo in the other, that gives 'a rounded off and finished character' to these scenes, but rather the onset and cut-off of the foregrounded musical characteristics.

This is not to deny the tightness of the formal organisation in many of the scenes, nor to echo Petschnig's failure to recognise the reference to traditional archetypes. But in the rich balance of elements that Berg's creativity encompassed, the division of function between the musical foreground and the stylised forms is less clear-cut than the diagram Berg sug-

gested to Fritz Mahler and the explanation he gave in 'A Word about *Wozzeck*' have seemed to imply. Berg himself came to regret that the opera's use of traditional forms had become the topic of so much discussion: at one point in his 1929 lecture he suggests that 'until now [this] has done as much as the performances to make the opera well known'.¹⁷ His immediate published response to Petschnig was perhaps too robust in its defence of the forms – he claims their 'correctness and legitimacy'¹⁸ – and this may have led in part to the misunderstanding.

There is a further aspect to Berg's formal organisation of the opera that sheds light on his attachment to the idea. This concerns the overall categorisation of Act I as a series of five character pieces and of Act II as a Symphony in five movements. A letter Berg wrote to Schoenberg shortly before he began work on *Wozzeck*, quoted at greater length on pp. 117–18, tells us something of the origin of these models:

Unfortunately I have to confess, dear Herr Schönberg, that I haven't made use of your various suggestions as to what I should compose next. Much as I was intrigued from the start by your suggestion to write an orchestral suite (with character pieces), and though I immediately began to think of it often and seriously ... I found myself giving in to an older desire ... to write a symphony.¹⁹

The context for this letter was the sharp criticism Schoenberg had made of Berg's Opp. 4 and 5; its musical consequence was not in fact the Symphony, which never became more than a fragment, but the Three Orchestral Pieces Op. 6.²⁰ These were in full flow at the time of Berg's fateful visit to see *Woyzeck* in the theatre; in particular Berg's work on the *Marsch* was contemporaneous with his initial musical work on *Wozzeck*, which was concerned with Act II scene 2 and sketches for the third and second scenes of Act I (the latter ended up sharing some material with the *Marsch*).²¹ But most of *Wozzeck* was written after his return from war duties at the end of 1918. Act I was finished by 22 July 1919, scenes 1, 3 and 5 of Act II (in addition to scene 2, composed earlier) by the end of August 1920; Act II scene 4 and the whole of Act III were written in 1921, the short score being finished by mid-October; and the full score was completed in April 1922.²²

Thus by the time he came to write his 'five character pieces' and his 'Symphony' into the substructure of *Wozzeck*, Berg was, chronologically at least, at a distance from Schoenberg's attempts to humiliate him. Indeed, in the interim the older man had relented, even offering Berg the intimate 'Du' form of address in 1918.²³ But if Berg could distance himself from the experience, he seems never quite to have forgiven Schoenberg, who had also more than once expressed opposition to an operatic treatment of *Woyzeck*.²⁴ The central scene of *Wozzeck* ostensibly pays tribute to Schoenberg, both in its reduced orchestration, which follows the layout of the

older man's First Chamber Symphony, and in its use of the *Sprechstimme* device. But in view of the likelihood that the correspondingly central movement of Berg's next work, the Chamber Concerto, is secretly critical of Schoenberg's reaction to *his* wife's unfaithfulness,²⁵ it is tempting to speculate on the backhandedness of Berg's tribute to his teacher at the very juncture in the opera where *Wozzeck* challenges Marie to admit her relationship with the Drum Major. The music's reference to Schoenberg is further underscored at the beginning of the scene (bars II/372–3), when several characteristic thematic materials from other scenes are transposed from their customary pitch levels, exposing the interval A–E \flat (in German notation, Schoenberg's initials A. S.) in the bass. Berg's quotation from Schoenberg's Five Pieces for Orchestra at one of the Doctor's sillier moments (bars I/520ff.) may be a further example of a private joke at Schoenberg's expense.²⁶

Berg could never overcome the influence of Schoenberg in the way that his opera manages to consume Büchner's play. In terms of Bloom's 'revisionary ratios', what we have here is akin to the third of them, *kenosis*, in which '[the] later poet, apparently emptying himself of his own afflatus, his imaginative godhood, seems to humble himself ... but this ebbing is so performed ... that the precursor is emptied out also, and so the later poem of deflation is not as absolute as it seems'.²⁷ However one chooses to express it, one of the nicest ironies is that although Schoenberg told Berg as late as 1923 that he would never be successful with *Wozzeck*, the opera was within a few years of its premiere in Berlin on 14 December 1925 a popular success far greater than Schoenberg had ever achieved himself, or indeed ever would.²⁸ The even nicer irony is that Berg was suspicious of this success when it came to him, and had apparently to be consoled over it by the likes of Adorno.²⁹

Musical materials

In saying, at the end of his lecture on the opera, that his audience should 'forget everything that I've tried to explain about musical theory and aesthetics when you come ... to see a performance of *Wozzeck*',³⁰ Berg did not fully resolve the question of whether, for example, the symphonic structure of Act II is no more than a concept, or whether the act really *is* a symphony, but one from which attention is properly distracted by the drama. Nor is this easy to resolve with hindsight. In musical terms, the expansion of the musical range – to take in a lullaby (scene 1), a fugue (scene 2), folk songs and dance music (scene 4) – does not contradict the

symphonic basis, since this kind of genre expansion had been fully established by the Mahlerian symphony. But Mahler's genre expansion was part and parcel of his idea that 'the symphony must be like the world. It must embrace everything.'³¹ In *Wozzeck*, on the other hand, each scene is so short as to be only a small corner of 'the world' – 'nur ein Eckchen in der Welt', as Marie sings in Act II scene 1 – and there is a limit to how much each can embrace. Arguably, when borrowed genres appear, it is they, rather than the symphonic types, that tend to dominate the character of the scenes – although in the tavern scene these aspects happily coincide.

Symphonic in a different sense is what Adorno calls 'the inner construction of the music, its fabric [*Gewebe*]:'³² the way in which, as it were, the musical texture is, so very much of the time, 'woven' out of recurrent motivic, harmonic and other ideas. As Adorno goes on to point out, this technique allows the music to outline the 'exceedingly rich, multi-faceted curve of the inner plot ... It registers every dramatic impulse to the point of self-forgetfulness.' When Wagner brought this principle into the realm of opera in the 1850s, such musical textures had been associated mainly with the development sections of symphonic movements; but Schoenberg had since shown, in his early compositions such as the Chamber Symphony, that this kind of music could be employed almost ubiquitously in expanded classical forms by means of the combination of formal types and the principle of developing variation. It was this precedent which allowed Berg credibly to present a Wagnerian *Gewebe* as the musical substance of many different movement-types in the second act of *Wozzeck* under the banner of a symphony.

This aspect of the writing does not exclude the borrowed genres, nor is it confined to Act II. Indeed, as Perle and Schmalfeldt in particular have shown, there is a remarkably consistent substructure in the music of *Wozzeck* that interrelates many of the recurrent motives, harmonies and other configurations. The scenes of Act III are termed 'inventions' in Fritz Mahler's table – invention on a theme, a note, a chord, etc. – but this word might have been applied quite as appropriately elsewhere. Act I scene 4 could be called an invention on a twelve-note theme, Act I scene 2 an invention on three chords, and so on. Above all, the endless *Gewebe* shows Berg in a constant state of inventiveness, as he combines, adapts and recombines his characteristic motives, chords, rhythms and other musical devices.

What kind of relationships underpin this network of materials? Douglas Jarman, following a lead given by Berg near the beginning of his lecture,³³ shows how the two cadential chords from the end of Act I (Example 7.1, which follows Jarman in labelling the chords 'A' and 'B') constitute a rich repository of musical configurations.³⁴ Many of the opera's most

Example 7.1 Cadential chords A and B

Example 7.2 Relationship of Marie's 'Komm, mein Bub!' motive to cadential chord A'

Example 7.3 Relationship of Wozzeck's entrance motive to cadential chord B

prominent motivic and harmonic materials may be related to these chords in a fairly straightforward manner: for instance, Example 7.2 indicates how chord A, expanded by one note (B^b) into chord A' (cf. I/317) and transposed upwards by five semitones, can be split into the two harmonies p and q which habitually underpin a three-note motive that dominates much of Marie's music in Act I scene 3 (the orchestral presentation of the material at I/363–4 is shown in the example).³⁵ Example 7.3 shows how the notes of chord B, transposed upwards by a semitone and omitting one pitch (C^{\sharp}), give the substance of a motive associated both with Wozzeck's entrances on stage (cf. I/427, from the same scene) and, in inversion, his exits.³⁶ The motive which is indelibly associated from the opera's first scene onwards with Wozzeck's cry of 'Wir arme leut' ('we poor people') is easy to find embedded in the notes of chord B, suitably transposed (see Example 7.4); at the same time, it may be detected among the notes of chord A' (enumerated in Example 7.5a) at the three different transpositional levels shown in Example 7.5b, each of which is four semitones (ic4) apart.

This alerts us to what Allen Forte calls 'the structural importance of ic4 in the opera as a whole',³⁷ an observation which he makes in consideration of the aggregate of the pitch-classes in the two chords A and B. Only one

Example 7.4 Relationship of Wozzeck's 'Wir arme Leut!' motive to cadential chord B

Example 7.5 (a) Pitch-class content of cadential chord A'

(b) 'Wir arme Leut!' motive embedded in chord A'

other eight-note aggregate, he points out, has the maximum number (seven) intervals of this size among its constituent pitch-classes. Another way of putting this is to describe the aggregate as a combination of two augmented triads plus two other notes a major third apart – a description that applies equally to the other eight-note aggregate to which Forte alludes.³⁸ Although the two properties are demonstrably corollaries – a situation that repeats itself numerous times with respect to other interrelated pitch materials in this opera – the different descriptions are not exactly interchangeable. Indeed, insofar as it is the mode of description itself which makes available to discussion the thing it describes, a technical nuance such as this can have far-reaching consequences for critical analysis. In particular, the very question of aggregation – of studying the large configurations made up from small ones and seeing the small ones in this light – is one that defines a certain point of view. Broadly speaking, Jarman's analysis works from pre-defined large units (the cadential chords) towards smaller configurations such as the motives seen in Examples 7.2, 7.3 and 7.4. Janet Schmalfeldt's analysis tends to work in the opposite direction, often revealing unsuspected properties of larger aggregates in the *Gewebe* that seem at first sight to arise simply out of a collage of smaller units.

There is no doubt that collages of motivic materials are characteristic of *Wozzeck*, and perhaps of Berg's mature music in general. The classic instance in *Wozzeck* is at the moment of Marie's death, when, as Berg says, 'all the important musical configurations associated with her are played very rapidly ... as at the moment of death the most important images of her life pass through her mind distorted and at lightning speed'.³⁹ In such in-

Example 7.6 (a) Tetrachordal cells *a–d* in Act II scene 1 (after Perle)(b) Hexachordal aggregate of cells *a–d*

stances the distinct motives themselves must clearly remain in view, but one might also hope for analysis to grant some insight into the particular way in which they are combined. So, if aggregation (and by the same token its opposite, segmentation) are fundamental tools of analysis, a further significant aspect of the discussion that ensues is whether it seeks primarily to define an internal, self-referential consistency in the music, or to point beyond it into external musical norms such as those familiar from tonal music.

In his oft-cited analysis of the music of Act II scene 1, George Perle enumerates a number of tetrachords (shown in Example 7.6a) which he associates with different parts of the formal structure. He further suggests that ‘the movement as a whole is based on aggregates of the different cells’: one such aggregate is shown in Example 7.6b.⁴⁰ The levels of transposition in Example 7.6 are different from Perle’s and have been chosen so as to facilitate a comparison between this aggregate and the notes of chord A’ (Example 7.5a), from which it can be seen that only one note of the chord is missing from the aggregate of the four-note cells. Janet Schmalfeldt’s identification of a number of closely related set-classes associated with *Wozzeck* (Example 7.7) and *Marie* (Example 7.8) accomplishes much the same kind of comparison, though on a far larger scale and at a level of detail that cannot be summarised without doing the author a disservice.⁴¹ Schmalfeldt’s set-class names have been illustrated here by exemplar sets transcribed into music notation, in both prime and inverse forms (which are sometimes equivalent), highlighting with open noteheads the contrasting symmetrical bases of a (0, 4, 8) augmented triad in the *Wozzeck* materials and a (0, 3, 6, 9) diminished seventh chord in *Marie*’s, for reasons that will be discussed later in the chapter. Transposition levels of the sets have been chosen to make readily visible some of the inclusion relationships between the set-classes and some of the motivic connections they embody. An analysis seeking primarily to define a network of relationships within the opera itself might fasten almost exclusively on correspondences of this kind: in emphasising the piece-specific nature both of

Example 7.7 Set-classes associated with *Wozzeck* (after Schmalfeldt)

4-19 (prime)	4-19 (inverse)
<i>'Wir arme Leut!'</i>	
5-26 (prime)	5-26 (inverse)
5-30 (prime)	5-30 (inverse)
6-34 (prime)	6-34 (inverse)
8-24	8-24
<i>aggregate of chords A and B</i>	

Example 7.8 Set-classes associated with *Marie* (after Schmalfeldt)

3-3 (prime)	3-3 (inverse)
<i>'Komm, mein Bub!'</i>	
4-18 (prime)	4-18 (inverse)
5-31 (prime)	5-31 (inverse)
6-Z28	

small motivic units and of the larger units they make up in combination, such a view of where the work's coherence lies would fit well with a perception that in *Wozzeck* Berg was essentially working without the shared resources of the common-practice period.

However, both these authors are also well alert to connections beyond *Wozzeck* itself. The sense of tonality in the opera is indeed in many places extremely focused, and Berg's incorporation of passages from two of his own early piano pieces⁴² – not to mention parodied folk song and dance

Example 7.9 (a) G minor theme from Act III scene 1 (III/3–6)



(b) Twelve-note theme from Act III scene 1 (III/7–9)



genres – demands that technical analysis of the work should engage with the ramified resources of the vastly expanded tonal language available to Berg at the time. That is to say: not classical tonality, not even Wagnerian tonality, but something yet further developed by, for example, the accretion of new harmonic types such as quartal chords and the whole-tone scale. For one of Berg's most remarkable abilities was to accumulate his own experience and to re-synthesise it, so that as his career went on he did not simply move from one thing to the next but constantly broadened his range to the utmost. *Wozzeck* embodied his musical experience to date; the even greater richness of *Lulu* springs from the same source.

In the earlier work, Marie's Bible scene at the beginning of Act III exemplifies this by its treatment of two themes in a sequence of variations. The first theme (Example 7.9a) is in a barely-disguised G minor; the second (Example 7.9b) is a twelve-note sequence. At first the themes are presented in stark alternation, reflecting Marie's unsettled mood, but over the course of the variations Berg makes a plaything of the distance between the two: the tonal theme is presented as if it were atonal (III/26–8); the twelve-note theme is enveloped in an expanded F minor (III/38–9). The latter passage occurs in a variation the beginning of which is lifted directly from a fragmentary piano piece dating from the period of work that led to Berg's Op. 1: thus, when its theme is revealed, retrospectively as it were, as the model for the G minor theme of this scene, the correspondence with the nostalgia in the text at this point is multi-layered.

One of the most emblematic passages in *Wozzeck* is the opening of Act I scene 2 (see Example 9.3, p. 186). The three chords on which this is based are labelled X, Y and Z (following Perle)⁴³ in Example 7.10a, which also shows the passing chord (bar I/205) that leads back to a restatement of chord X. Berg's description of the three chords in his lecture is intriguing:

Example 7.10 (a) Chord sequence from Act I scene 2

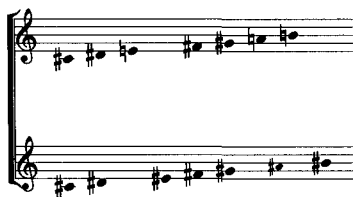
(b) Pitch-class aggregate of chords in (a)

The unifying principle of this scene is harmonic: three chords which represent the harmonic skeleton of the scene. That such a principle can act as a structural element will be admitted by anyone who thinks of tonality as a means of building forms and regards these three chords as having functions comparable to those of the tonic, dominant and subdominant.⁴⁴

It is clear that Berg felt strongly that these chords could act as a tonal analogue; less clear why he should relate them to the three basic tonal functions in the specific order of X as tonic, Y as dominant, Z as subdominant. The climactic placement of Z in the phrase would seem, in the absence of other criteria – that is, if the analogy were a mere contrivance – to align Z rather than Y with the dominant function. And it must be said that in tonal music the progression I–IV–V(–I) is far more commonplace than I–V–IV(–I), and that a standard harmonic sequence might have been expected to establish a tonal analogue more readily than a less standard one. So if we take Berg at his word there would appear to be more to it than that. Elsewhere in this book, Patricia Hall shows how an early sketch for the passage had a continuation that Berg marked ‘E \flat major and minor with unresolved D’ (pp. 184–6). She suggests that Berg was in this sense working explicitly with a ten-note aggregate that combined the pitch-classes of E \flat major and E \flat minor. In the final version, Berg had moved somewhat away from this: the three chords have a nine-note aggregate, shown in Example 7.10b. (The notes of the passing chord lie within the same aggregate, perhaps going some way towards confirming its status as a local point of reference.)

As Example 7.11 indicates, this aggregate could indeed still be formed by modal mixture: C \sharp minor and major combined have these nine notes

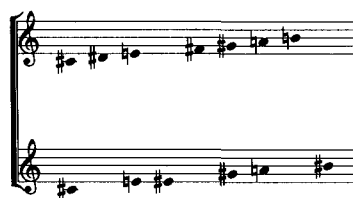
Example 7.11 Aggregate of C# minor and C# major collections



Example 7.12 (a) Cadential chord A' as hexatonic collection plus one note



(b) Aggregate of C# minor and C# minor/major hexatonic collections



plus one more. But there is a different modal interaction that generates the nine-note aggregate more exactly and relates these chords both to other harmonic materials in *Wozzeck* and to a strand of late nineteenth-century harmonic innovation that embodies the significance of ic4 to which Allen Forte has alerted us in this opera. Example 7.12a reinterprets cadential chord A' as a one-note expansion of the 'hexatonic' collection which is formed from interlocking augmented triads a semitone apart. As Richard Cohn has shown, this collection was known, understood and employed by composers such as Liszt, Wagner, Franck, Brahms and Mahler; it allowed them to shift easily between minor and major tonalities rooted a major third apart, both within and between phrases – though its appearances at the surface of musical textures at this time were apparently rare.⁴⁵ Example 7.12b shows how the diatonic scale of C# minor and the hexatonic collection that includes C# minor and major triads may be combined to produce the nine-note aggregate of chords X, Y and Z. Within this framework, the three chords may be regarded as semitonally altered forms of tonic, dominant and subdominant chords in a hexatonically expanded C# minor (Example 7.13), in correspondence with Berg's description. The

Example 7.13 C# minor analogue of chords X, Y and Z

Musical notation for Example 7.13, showing three chords labeled X', Y', and Z' in C# minor. The notation is presented in two staves: a treble clef staff on top and a bass clef staff on the bottom. Chord X' is shown in the first measure, Y' in the second, and Z' in the third. The chords are represented by notes on the staff lines, with accidentals indicating the specific pitches in the key of C# minor.

Example 7.14 Harmonic outline of opening of D minor interlude (III/320–38)

Musical notation for Example 7.14, showing the harmonic outline of the opening of the D minor interlude (III/320–38). The notation is presented in two systems, each with a treble clef staff on top and a bass clef staff on the bottom. The first system contains measures 320, 324, and 327. The second system contains measures 331, 335, and 337. The chords X, Y, and Z are indicated below the notation at the end of the second system.

prototype for chord Z incorporates an appoggiatura motion within the C# minor scale (cf. I/243, I/302ff.)

Remarkably enough, the semitonal displacement within chord X links it directly to the highly characteristic opening sonority of the cathartic D minor interlude that plays before the final scene of the opera. (Thus reconstituted as X', it is simply the same chord, a semitone lower.)⁴⁶ The first seven bars of this interlude were taken directly from the fourth of Berg's early sonata fragments, in which whole-tone expansions of dominant-quality harmony are prevalent. Example 7.14 shows a harmonic outline of the first nineteen bars of this interlude, over the course of which Berg gradually flexes his stylistic muscles, expanding his musical language before our very ears from the D minor of a 1908 Schoenberg pupil to the three chords X, Y and Z at bars III/337–8. The passage which continues from this point exploits these three chords again, transposed downwards through ic4 (Example 7.15). The putative hexatonic component thus remains constant, while the tonal component shifts to from C# to A. It is notable, therefore, that here the chords provide harmonic support for a

Example 7.15 III/339–41, showing chords X, Y and Z

The musical score consists of two staves. The upper staff is a treble clef with a key signature of two flats (B-flat and E-flat). It contains a horn melody with various intervals and rests. The lower staff is a bass clef with a key signature of two flats. It contains a piano accompaniment with triplets and a double appoggiatura. Below the piano part, three chords are labeled: X (t=8), Y (t=8), and Z (t=8). The chords are marked with a '3' above them, indicating a triplet. The piano part starts with a *pp* dynamic marking.

horn melody which duly begins in A major – this is Andres’s song from Act I scene 2 – and departs from the key only through whole-tone inflections which outline the augmented triad A–C#–E#. Note also how the end of the horn melody is immediately echoed *ic*4 lower, as is the double appoggiatura to chord Z.

Another small point is revealing in a different way: this is the appearance of chord X at bar III/331 (see Example 7.14 once more), here played without its companions Y and Z, and interpretable in its tonal context as a C^{13^b} chord. It serves as a reminder that a chord of this complexity is likely to be, in Schoenberg’s terms, a ‘vagrant’ harmony which can be interpreted tonally in a number of distinct ways and can thus work effectively within a continually modulating harmonic progression. The appearance of chord X at this moment in the interlude also serves to introduce the sonority itself as the tonal language expands, preparing for the complete statement of the tonal analogue X–Y–Z six bars later.

Hexatonic-diatonic interaction may be sought elsewhere in *Wozzeck*. The harmonies which begin Act I scene 5 (outlined in Example 7.16) combine the C major scale with the hexatonic collection G–B \flat –B \natural –D–E \flat –F#, and the ostentatious orchestral chords that frame the Drum Major’s posturing (bars I/670ff., see Example 7.17) all lie within hexatonic-diatonic aggregates similar to that of chords X, Y and Z – even if some of these inclusion relationships are statistically unremarkable. Yet it is difficult to believe that Berg actually ‘used’ hexatonic-diatonic interaction, conceived straightforwardly as an interplay of collections, as an explicit part of his compositional technique. This is not to play down the significance of the ‘invention on a hexachord’ in Act III scene 4⁴⁷ – a scene that was composed at a time when, probably influenced by his pupil Fritz Heinrich Klein, Berg seems to have been well aware of ideas about collection-based composition in the current work of Josef Matthias Hauer.⁴⁸ It is simply that a more likely explanation is that what might be diagnosed now as collection-oriented hexatonic-diatonic interaction is most likely to have arisen then out

Example 7.16 Harmony at opening of Act I scene 5 (I/656)



Example 7.17 Harmonies framing Drum Major's boast to Marie (I/670–88)

of a complex of ideas – far less cut-and-dried – involving modal mixture (specifically, adding the minor third and sixth to a major scale or vice versa), together with the long-established norm (it is a cliché in Schubert) of temporary modulation by a major third downwards to the flat submediant, and the association of dominant-quality sonorities with a latent whole-tone background in which *ic*₄ is prominent almost by definition.

The legacy of ideological differences in the 1920s and 1930s between the Schoenberg circle and the ‘wrong-note’ composers such as Stravinsky means even today that to suggest Berg may have created atonal music by adjusting tonal models seems more of an accusation than an analysis. Yet there is evidence of this both in the sketches and in the finished opera, perhaps most clearly embodied by Andres’s distorted ‘folk song’ in the self-same scene that first introduces chords X, Y and Z. The inflection of familiar models is also seen in other ways. Perle, Jarman and Schmalfeldt are among the commentators who have drawn attention to the ‘nearly whole-tone’ nature of many of the musical themes (such as the oboe melody of the opera’s opening bars, and cadential chord B);⁴⁹ the ‘nearly hexatonic’ nature of chord A’ (and likewise of A) has been seen earlier in this chapter. In Example 7.7 (adapted from Schmalfeldt’s ‘Wozzeck’ sets), the four-note sets are revealed as an augmented triad plus one note, the five- and six-note sets are ‘nearly hexatonic’ and the eight note sets are hexatonic plus two notes. The Marie materials in Example 7.8 similarly evade precise alignment with the regular diminished seventh chord (0, 3, 6, 9) and the octatonic collection (0, 1, 3, 4, 6, 7, 9, 10). A significant contrast may be seen here with the ironic connotations Berg finds for ‘purity’

in passages such as the diatonic C major theme in the Drum Major's march music (albeit over a C#–G# bass, bars I/334–5) and the famous isolated C major chord that is heard in Act I scene 3 as Wozzeck hands over to Marie the pittance he has earned. These kinds of game are the equivalent at the musical surface of Berg's handling of some (if arguably not all) of the formal models he manipulates at a different level of the entire conception. There is a tantalising psychological link here to Berg's well-documented fascination with symmetry, coincidence and numerology.⁵⁰ And indeed when all is said and done, the musical balance Berg maintains between the familiar, subtly altered, and the innovative, miraculously cohering, is but one of the wonders of this inspirational score.