Radical openness

Chord symbols, musical abstraction and modernism

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'Would anyone like to suggest a chord?', said Keith Jarrett, swivelling on the piano stool to face the audience. There were a few shouts from the auditorium such as 'A minor nine' and 'E flat seven sharp eleven'. Jarrett listened distractedly for a few moments, then said, 'It's okay, I've got my own', and turned to begin another solo improvisation.

Jarrett does indeed have his 'own chords'. That is not to say that the note combinations he uses are somehow unclassifiable in conventional terms, defying the kind of categorization exemplified by the suggestions from the audience, but that his chord voicings are distinctive and contribute to his recognizable sound as a pianist and improviser. Like all good music, they have a quality which exceeds their standard theoretical or analytical representation. Jarrett's teasing of the audience in this way seems to express an opposition to standardized chord categorization, a nod towards what we might describe as a critique of the reification of musical harmony: that simultaneously sounding note combinations in interesting music are not, or should not be, reducible to a standardized chord symbol.

Such a critique, would, of course, be a less radical version of the more thoroughgoing modernist critique of tonality as a whole, typified in practice by the atonalists and serialists of the twentieth century, and in theory by the musical aesthetics of Theodor Adorno. Musical modernists of this type took their hostility to the reification of musical language to its logical conclusion and insisted on the historical redundancy of the tonal system on which the concept of chords depends. And yet, not only do chords persist, but so too does the chord symbol, and not simply as an analytical tool. It has become well established as a practical, functioning musical concept, essential to the creation not only of various formulaic musics, but the kind of music Jarrett himself makes. Many of Jarrett's own compositions circulate in a written form which uses them, and arguably are unplayable without thinking by means of them. So ubiquitous is the chord symbol these days that it is easy to lose sight of the fact that, in the form that modern musicians know it, it is of relatively recent origin. Tracing its origins may illuminate the historical peculiarities of contemporary music-making.

The chord symbol is most likely to be found in certain kinds of written music; that is, certain kinds of musical score, chiefly of Western popular music. Where written representation, or instructions for performance, of popular music exists, the chord symbol is a central part of it. It may be the only component of it, as in the chord chart; it may appear combined with a limited amount of conventional notation, as in the lead sheet; or it may appear as a supplementary element to a fully notated score. Its importance as a written form should be enough to dispel the common notion that in contrast to the art-music of the West, popular musics are defined in part by their non-literariness, their lack of a need for notation. But there is more to the issue of the chord symbol than trends in the history of music notation. As others have pointed out, notation's role in music and music-making is not simply as passive recorder of sounds, or intentions-in-sound. As Adorno argued, notation is not solely an aide-mémoire. The writing down of musical ideas wreaks an effect on those ideas, in the first place, as Adorno noted, by disciplining and spatializing what had hitherto been a purely temporal phenomenon. It is the writing down of music which lays the basis for the development of an autonomous music and the emergence of the musical work as an identifiable entity, as well as allowing for the expansion of compositional techniques which exploit the combination of many simultaneous musical parts.

If the very existence of notation has an effect on the nature of the music it represents, then so too must the form which that notation takes. Adorno argues that notation's spatializing effect is responsible for the regularization of rhythm, the imposition of the straitjacket of beat and metre on music. Notation enhances creative control over musical material

but 'always also regulates, inhibits and suppresses whatever it notates and develops', he argues.[1] The choice of form of notation is itself a reflection of conceptions about what music is – which are its primary elements and which are merely secondary, and how each functions – which, when solidified into an established convention, cannot fail to have a reflexive influence on the sounds themselves. This is a phenomenon which is of course not only true of music, but of language, knowledge, and every other human activity once it develops a theory to allow it to be taught, transmitted, expressed, discussed and, crucially, written down.

What we are discussing here is, in other words, *abstraction*: the capturing of concrete, particular elements and practices under generalized categories. Western music theory is composed of a whole set of such abstractions. At a basic level, there are the concepts of 'beat' and 'tone', each of which attempts to isolate supposedly stable and enduring characteristics from the continuous spectra of musical time and musical pitch (frequency), respectively. Building on these in their respective spheres come the abstractions of 'metre' and 'key', all of these inseparable from their approved forms of written representation: the note with its defined duration and pitch, the time signature and the key signature. So conventional do these concepts become that it is only when we are confronted with musics from beyond this tradition that our essentialist assumptions about what constitutes music are challenged.

In this context, the chord symbol, along with the concept it captures (it should now be clear that, for our purposes, 'chord symbol' refers not simply to the written mark but also to the *concept* of capturing note combinations in this way), represents another, more extreme instance of abstraction in Western music theory. The music of the Western 'common practice era' did not have any use for the chord symbol, although, of course, it did make use of the concept of the chord. However, the ability to name chords is largely limited in classical music theory to an analytical role. The identification of chords by name and the assessment of their role in a harmonic progression is an act of deciphering a musical score, not something that is revealed overtly by the score itself. In the classical score, chords are notated in their particularity via their component notes. Notes are abstractions, but there is no further abstraction in the presentation of chords, which are understood merely as combinations of particular notes. Or, to put it another way, chords in classical notation are expressed simultaneously with their voicings – that is, the particular combinations of pitches which comprise them.

What the chord symbol represents is a way of thinking about chords which is independent of their voicings, and it is this that makes the chord symbol a further abstraction in the realm of musical harmony. So, what is referred to by the symbol D^7 is not a combination of *particular* pitches, but any of the almost limitless possible combinations of the pitch classes D, $F^{\sharp}$, A and C. These pitch classes may be realized in any octave, and may be doubled at the octave, allowing for chords of as few as four notes[2] up to as many as can practically be played. In certain musical contexts, this system also allows for the addition at the performer's discretion of additional notes, unspecified by the symbol – 'chord extensions' – although these may also be included in the symbol as in, say, $D^{7\flat9\sharp9\flat13}$.

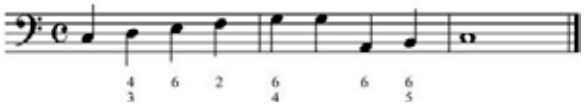
Chord symbols, therefore, are designed to capture combinations of pitches under a single concept, independently of their concrete instantiations in practice. A series of them, written in succession, provides the means to delineate a chord sequence or harmonic progression, itself a central concept in post-Renaissance Western music. What is novel about the chord symbol is the ability to express this aspect of music in the abstract, independently of any concrete musical material or characteristic such as tempo, rhythm, metre, style, beyond the relative durations of each chord. In specifying the harmonic progression, a series of chord symbols expresses in the abstract the tonal path which the music takes, or is to take, through time.

In this way, chord symbols appear to represent some kind of conceptual distillation of Western music's obsession with harmony, and the written manifestation of an increased level of abstraction in music over and above that which is already present in classical music theory. Consequently, there is a need to provide an explanation for this development in musical notation and the further degree of abstraction that it entails in conceptions of music. This would be a relatively straightforward procedure were it not for the fact that the chord symbol, by virtue both of the musical phenomenon it seeks to capture – the chord – and of the kinds of music with which it is associated – the popular – activates aesthetic-political debates and polarities which have resonated throughout the twentieth century. Thus, any examination of the chord symbol necessarily raises the related questions of the continuing validity

of the 'chord' itself and the concept of harmony on which it depends. As such, the chord symbol provides an opportunity to revisit the well-worn issues of modernism in the face of commodification, or 'serious music' versus the 'popular', from a new, and hopefully illuminating, angle. It is in this context that a constant touchstone in the following discussion will be Adorno, and in particular a debate about the role of dissonance in critical art and music. The aim is to reach a nuanced assessment of the chord symbol phenomenon which is capable of appreciating its potential as an aid to authentic artistic expression as well as registering its detrimental effects. First, however, it is necessary to give a brief outline of how and when the chord symbol established its central role in modern musical culture.

The history of the chord symbol

In fact, it is not true that the music of the 'common practice era' knew nothing like the chord symbol. One of the chord symbol's precursors can be found in the 'figured bass' system of the baroque period, in which chords were symbolized by numbers that indicated the intervals of their tones above a written bassline.



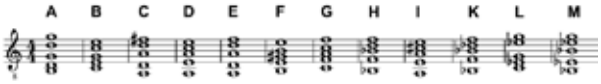
The figured bass bears an obvious similarity to the chord symbol in that it is the abstract chord, rather than its exact voicing, which is specified. Indeed it is possible to translate the above example into a series of chord symbols which would perform exactly the same function and allow for just as many possible concrete realizations.

In one respect, the figures of a figured bass are even more abstract than chord symbols, since they effectively express the required harmonic progression in a way which is independent of any key that the bass might be transposed into. However, in another respect, they are less so, since the chord information is meaningless without a more concretely notated element – the bassline. In any case, the figured bass system fell out of use in the mid-eighteenth century, probably for a combination of reasons. As the practice of using a purely accompanying keyboard part declined, itself partly because of the rise of ensembles such as the classical orchestra, which did not feature a keyboard, so too was the emphasis on improvisation in performance eclipsed by music which was fully notated in all parts. The composer asserted his control over all aspects of performance.

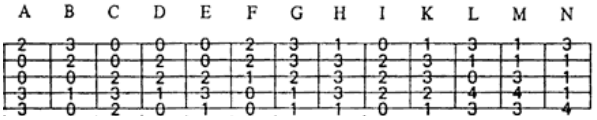
However, the chord symbol has another forerunner from roughly the same period in Western music history, one which has a direct link with the motivations for the emergence of the modern chord symbol. It is the *alfabeto* tablature system for strummed chords on the 'five-course' (five-stringed) guitar, dating from the latter part of the sixteenth century.[3] James Tyler explains:

> Beginning in the 1580s a special tablature system was introduced that enabled composers to notate full chords without having to write out each individual note. … [T]his notation was known as *alfabeto* for one exceedingly obvious reason – the chords are represented by specific letters of the alphabet. Unlike our modern chord system, however, the *alfabeto* letters do not correspond to a modern description of functional harmony. Rather, they're used purely as symbols, each letter signifying both a specific harmony and the position and inversion of that harmony on the fingerboard. For example, the *alfabeto* symbol A does not indicate an A major chord, but a G major chord in a particular position.[4]

The letters of the *alfabeto* system corresponded to the following chords on the guitar:



The following chart demonstrates that, like modern guitar chords, what the player actually associated with the letter symbol was a particular fingering or 'shape' on the fingerboard, rather than an immediate awareness of the actual pitches being played.



The *alfabeto* tablature system[5]

The impetus for the emergence of the modern chord symbol was remarkably similar to that for the *alfabeto* system. According to the accounts by Barry Kernfeld and Marvin E. Paymer, chord symbols owe their origin to the boom in the sheet music publishing of popular songs in the first half of the twentieth century. Before the emergence of cheap high-quality audio recording, this was the chief mechanism for the marketing of commercial music to the paying public, and even once recordings and films had overtaken printed scores as the primary means of disseminating popular songs, sheet music retained its

importance for the music industry because copyright law required it. It was not until 1972 in the United States that music could be 'fixed' for copyright purposes by means other than writing it on paper. As Kernfeld comments, from the point of view of the law, 'a song and its representation as a piece of sheet music [were] one and the same thing. Notation did not merely *represent* a song – notation *was* the song. … For the law, music had no sound.'[6]

At the turn of the twentieth century, popular songs were printed using conventional music notation only, on three staves: a vocal stave plus a piano accompaniment on two staves. During the mid-1920s, the craze for amateur ukulele playing led to the addition of tablature on many song sheets indicating finger positions on the frets to facilitate a basic strummed chordal accompaniment on that instrument (or on the banjo or banjulele hybrid). Then, in the 1930s, chord symbols began to appear for the first time.[7] The motivation for them appears to have been to provide chord information for guitarists, without creating confusion by printing two competing sets of tablature. Sometimes, there would be ukulele tablature plus chord symbols for guitarists; sometimes it would be the other way around; and sometimes only chord symbols would appear.

In other words, first tablature, then chord symbols allowed mainly amateur performers to contribute chordal accompaniments without the need to read traditional music notation. In the case of the tablature, players could follow the direct instructions as to where to place their fingers, whereas chord symbols required a higher degree of knowledge: the ability to associate chord names with shapes on the fingerboard. But the effect of this innovation went far beyond the pragmatic concerns that inspired it, as Kernfeld explains:

> In the culture of [popular music performance], the transition from piano music to string tablature and then to chord symbols represented an absolutely crucial move from the specific to the abstract. At the first stage, the piano part in a piece of sheet music specified how the music should be played … This piano part invariably included accompanimental figures which operated in ornamentation of, or in counterpoint to, the vocal melody. At the second stage, string tablature told an instrumentalist how to form chords, specifying exactly which notes to play, but otherwise it did nothing other than to make a direct connection between particular chords and particular notes of the melody. If an accompanist were to do something more than strumming simple chords beat by beat, then it was up to that player to invent the ideas. At the third stage, chord symbols carried this task in to the realm of abstraction. Chord symbols tied the name of a particular chord to a particular note of a given melody, but otherwise these symbols said nothing about how that chord was to be realized or about the further step of breathing musical life into that realization.[8]

The next stage in the historical evolution of chord symbols was the advent of TuneDex cards. These were an invention by George Goodwin in 1942 designed to provide an index of the popular music repertoire for those involved in the industry, and to capture the essentials of each popular song in order to allow jobbing musicians to 'fake' it – that is, to produce a passable live version of the song in response to a request at a gig or other demand. Goodwin's innovation was a card like those used for addresses in office Rolodex systems dedicated to each song with, on one side, composer, publisher and copyright details, and on the other, the basic elements of the tune itself. The form in which the music was presented was the 'lead sheet': the melody (usually only of the more catchy chorus part of the song, and not its verse section) with chord symbols printed above each bar. Goodwin offered a mail order subscription service to professional musicians in which 100 new tunes were added monthly to build an ever-expanding library of popular songs in this simplified, abstract format. The fact that this was a service to professional musicians is significant in two ways. First, Goodwin was able to secure licences from the copyright-holding publishers only on condition that his cards were not undercutting sheet music sales to the general public. But, second, it also signals the transformation of the chord symbol from an aid to musically non-literate amateur guitarists or banjoists to an indispensable element of the world of professional musicians.

Goodwin built a successful business around his TuneDex service and maintained it until 1963,[9] but in the meantime his invention had spawned new developments. Despite being much more manageable, and cheaper, than sheet music, the sheer volume of cards required to cover the burgeoning popular song repertoire was still too cumbersome to be a viable solution for working musicians. It was not long before groups of enterprising individuals were producing books that reproduced the music side of Goodwin's cards, three to a page, creating portable albums containing as many as 1,000 songs. These 'fake books' were flagrant breaches of copyright, and their illegal,

bootleg status meant that they were sold by travelling salesmen from the boots of cars to musicians across the United States.[10]

The story told by Kernfeld of the various attempts by the federal authorities to clamp down on this trade by prosecuting some of those found involved in it makes fascinating and humorous reading.[11] However, what concerns us here are the final steps to maturity of the chord symbol as an essential component in how music is written and conceived. In 1975, two students at the Berklee College of Music in Boston, at the time the only college offering a dedicated jazz course of study, produced a handwritten volume of several hundred tunes representing the core of the modern jazz repertoire. The book used the same lead sheet format of notated melody line plus chord symbols pioneered by Goodwin, and, in accordance with the jazz musician's credo that jazzers don't 'fake it' because there is no authentic original in the world of improvisation, they called their product a *Real Book*.[12] Prior to its publication, jazz musicians had learned the 'standards' by ear from recordings, resulting in all kinds of errors, mishearings and discrepancies between individual musicians' versions of them. So although this book was, like its predecessors, illegal, it quickly and hugely outstripped its compilers' expectations to become the 'Bible' of jazz musicians across the world. I bought mine from under the counter in a brown paper bag in a London music shop in the late 1980s.

It was not long after the birth of the *Real Book* that music publishers finally, and somewhat belately, came to the view that, rather than prosecuting those behind bootlegged lead sheets of popular songs, they should publish legitimate versions of their own. The format of such publications is one that relies heavily on the chord symbol. A 1983 guitar/vocal edition of the Beatles' complete works published by Wise Publications, for example, presents each song with its melody on a single stave in treble clef, with lyrics below each note, and both chord symbols and tablature for guitar above the stave with slashes to indicate the duration of each chord.[13]

The lead sheet is not the only format in which chord symbols circulate in contemporary music-making, and indeed is far from the most rudimentary. They are also used extensively in a form where the element of standard notation (the stave) is dispensed with entirely. Today, there are large numbers of websites supplying chord information for the hit popular song repertoire, as in the following example, 'Someone Like You' by Adele:

Intro: A | C♯m/G♯ | F♯m | D
A C♯m/G♯
I heard that you're settled down,
F♯m D A
That you found a girl and you're married now.[14]

Obviously it is not possible to play the song from the information supplied alone, as determining the rhythm of the chord changes relies on a knowledge of how the melody is sung, information which is not presented. This form of notation needs to be used in conjunction with an audio recording of the song. In addition, the presence of tablature effectively concretizes the information supplied by the chord symbols to indicate particular guitar voicings, though a keyboardist would face no such restriction.

Such, then, are the prosaic origins of the chord symbol. It is tempting to draw the conclusion from the account above that though this form of notation might be of minor sociological interest, it is hardly worthy of consideration as an artistic phenomenon. Its origins as a tool for 'illiterate' musicians makes the chord symbol easy to write off as something confined to the realms of the merely derivative, the imitative, and the downright lowbrow. I believe this to be a mistake, however, and hope here to explain why by taking seriously and addressing two related aesthetic critiques. The first we might call the critique of reification; the second is the wider, modernist critique about history, value and musical language.

Abstraction and reification

What kind of abstraction does the chord symbol represent? Clearly, this abstraction has little to do with artistic abstraction as conventionally understood. There may be a sense in which music, as a non-representational art, bears similarity to some 'non-naturalistic' schools of visual art. But since chord symbols do not feature directly in music – they cannot be heard as such – they cannot be viewed as analogous to anything in the visual arts. Chord symbols are better thought of as a form of knowledge about music, about what it comprises and how it works, which has its effect on the process of musical creation rather than directly on the musical sounds themselves. If Keith Jarrett's comments with which I began implied a critique of the chord symbol, it was a critique of this kind of conceptual abstraction, one which expressed a worry that attempts to capture the virtually limitless range of pitch combinations under simple formulae cannot fail to reduce the breadth and richness of creative possibilities. This attitude is probably widely shared and would appear to be an

instance of something more general in contemporary Western thought, identified by Peter Osborne as 'the reproach of abstraction', by which 'abstraction – understood here as conceptual abstraction – is accompanied by a certain melancholy (loss of the real object) and a certain shame (complicity in the domination of the concept and hence repression of other, more vibrant, more creative aspects of existence)'.[15] The championing of audio recording as the return to a direct relationship with sound[16] fits with what Osborne detects as a growing reverence for singularities, 'pure empiricism' and 'the event'.[17]

Osborne goes on to argue that the mistake committed by this position is that it conflates two kinds of abstraction. On the one hand, there is the kind that deserves criticism for its withdrawal from the object, from the concreteness of reality, such as the notion of the 'abstract individual' bearing 'abstract rights'. On the other, there are those conceptual abstractions which are absolutely necessary for an adequate knowledge of the world, not least because aspects of the world are themselves abstract. 'Self-valorizing capital', for example, is a 'real' or 'actual' abstraction of which there can be no true knowledge without an abstract concept.[18] However, can it really be said that musical harmony is a real abstraction which demands abstract concepts in order to grasp it? Isn't it more likely that the idea of chord symbols represents the degradation of tonal musical material in the twentieth century through the misapplication of a classificatory procedure derived from natural science to the realm of artistic production?

An unease about chord symbols, or, more accurately, about the rise to prominence of the abstract concept of harmony that the symbol captures, is even more strongly felt in the world of 'serious' music, and might seem to be vindicated by some of their harmful musical effects. The most obvious of these, and that which is captured visually by both the lead sheet and the chord websites discussed above, is the reinforcing of a particular reified understanding of musical texture. The two primary concepts for analysing the pitch-derived elements of music – melody and harmony – come to be defined rigidly as necessary and mutually exclusive functions. That is, under the influence of the chord symbol, music is conceived primarily in terms of melody (or 'lead'), on the one hand, supported by accompanying chords, on the other, an echo of the monodic texture of former times.[19] Inevitably, this tends to enforce a binary separation within the musical texture – chords versus melodic line – marginalizing in the process any more fluid or dialectical understanding of musical texture, and with it any alternative textural models of a more sophisticated nature.

This in turn tends to have an effect on compositional practice. Once music has been conceived in these quasi-monodic terms, it is easy for the harmonic element, understood reductively as the chord sequence, to begin to take precedence in the compositional process, despite its supposedly supportive, accompanying status. This is an odd reversal which is brought about by the notion that the melody must 'fit' the harmony, and hence the rise to prominence of a compositional technique which starts not with melody or motif or even intangibles such as mood, but with the chord sequence abstracted from all other elements. The resulting tendency is that harmony dominates the music such that all other elements are in the service of the chord progression, which tends to fall into regular repeating four- and eight-bar sections. We might go so far as to characterize this subservience of melody to harmony as representing the demise of melody proper.

Further, the chord symbol concept can also be seen to have a number of effects on harmony itself. The theory that underpins the chord symbol establishes a set of available chords, which, even when subjected to the extensions and alterations contributed by jazz harmonic theory, remains finite. There is no place, in principle, for combinations of notes that, because they fall outside the theory, are irreducible to a chord symbol – clusters of two or more adjacent semitone intervals are an obvious example. It is in this respect that chord symbols appear to be driven by the logic of natural science, imitating chemical symbols as part of an attempt to present an exhaustive list of all possible chords. Hence guitar and keyboard tutor books feature charts which resemble nothing so much as the periodic table.[20]

Having reified harmony as a distinct element of musical texture, the chord symbol as abstraction effects a further abstraction: that of removing chords from their tonal and harmonic context by presenting them as self-contained entities. Harmonic information as represented by chord symbols consists of a series of free-standing chords providing no contextual data such as key, or any guide as to the relationships between successive chords. That this is perhaps the most marked divergence between 'classical' and 'popular' understandings of musical harmony can be evidenced by the fraught and unresolved debate between musicologists of the former tradition over how to designate Wagner's so-called

Tristan chord given what follows it, whereas a chord symbol approach has no trouble straightforwardly labelling it as Fm7♭5.[21]

Perhaps as a form of compensation for this decontextualization, there is a tendency under the influence of chord symbols for harmonic progressions to take the form of standardized patterns which can be identified by players and used as harmonic building blocks by composers. This is an extension of the phenomenon of the stock cadential units of elementary music theory such that particular patterns become particularly associated with certain genres.[22] The ubiquity of these standardized units can have the general effect of limiting the range of possibilities for harmonic movement, and, once established, often take on the mantle of being 'correct' or 'natural'. That dominant chords 'want to' or 'ought to' resolve to their tonic is the most extreme example of this kind of reification, one that actually derives from twentieth-century 'classical', particularly American, musicology, but which then influenced American popular song and from there found its way into jazz theory.[23] This link demonstrates that the tendency to reify harmony conceptually as a series of chords with its own immanent logic is not exclusive to popular music despite the fact that it is only in the latter field that such thinking found its way into practical music-making.

Adorno, musical language and modernism

If Adorno had considered the chord symbol, his view no doubt would have been that the seeming degradation of harmony it exemplifies is a symptom of the continued use by vulgar musics of the worn-out language of tonality. The chord symbol's reduction of harmonic theory to something like the positivism of chemical formulae is proof that tonality, and, in particular, tonal harmony, is long since historically redundant for the conveyance of genuine aesthetic experience, living on only as cliché in a nostalgic shadow of its nineteenth-century heyday. Chords and stock chord sequences have become abstract ciphers, whose 'unchanging identity has become sedimented like a second nature', an 'implicit illusion' or ideology against which the 'new music' of atonality must rebel in order to keep alive any kind of aesthetic autonomy.[24]

Attempts by scholars of popular music and jazz to find fruitful ways to apply Adorno's aesthetic theory to the most prominent forms of twentieth-century music now form a well-worn path. It is perhaps the case that his specific critiques of jazz and popular music are less of a stumbling block for attempting to find a redeeming aspect of the chord symbol than is a reading of his musical aesthetics which focuses on his espousal of atonality and harmonic dissonance as central to any kind of authentic musical experience in the era of the culture industry. Here I intend to contribute to that debate by interrogating the extent to which the central categories of Adorno's modernism do in fact depend on such a focus, and hence to offer a rethinking of the chord symbol's significance on this basis.

In the first place, given that the vast majority of music circulating in the West, and increasingly across the world, remains resolutely tonal, we need to ask, to what extent should we take as self-evident the view that atonality is the only progressive solution to the problems of tonality that became increasingly visible (and audible) in the late nineteenth century? This conclusion, which was broadly shared by Adorno and Schoenberg alike, is clearly rooted in actual developments in the medium itself. It emerged from the straining at the boundaries of tonal harmony to be detected in the music of Wagner and Mahler in particular, of which the 'Tristan' passage referred to earlier is an example. These composers and others like them found themselves increasing the degree of dissonance in their harmony, often achieved through the extended postponement of harmonic resolution, in order to find a language which they felt was adequate to the aesthetic demands of their times. From this perspective, the German modernist moment can be understood as the explosion of tonal harmony from within, in classic dialectical fashion, through its own immanent tensions, leading to the installation of 'dissonance' as the watchword of modernist radicalism.

David Cunningham has questioned, in this journal and elsewhere, whether an overemphasis on this idea – dissonance – distorts the general thrust of Adorno's thought by making a specifically musical phenomenon the model for a commitment to a critical aesthetics in general.[25] After all, dissonance, although it has a wider meaning, can be applied only metaphorically from music to other art forms. Cunningham argues that, even if only applied to music, dissonance in Adorno's hands comes to act as the approved 'programme' for the critical rejuvenation of music and its resistance to commodification, implicitly marginalizing other possible ways of introducing 'non-identity with tradition'. We need to be open, says Cunningham, to a full range of techniques for modernist aesthetic subversion, and, moreover, to

understand that their critical effectiveness is necessarily relative to the particular music tradition from which they come. To the extent that Adorno can be read as suggesting that there was only one antidote to the culture industry's degradation of music to kitsch, this 'unilinearity' is a weakness which undermines the continuing critical relevance of his aesthetic theory.

Yet it is not surprising that Adorno's critical attention is drawn towards harmony given that, arguably, harmony is the chief contribution to music by the Western art-music tradition. Weber is often quoted in brief as having said 'rational, harmonious music is known only in the Occident', but reading the complete passage dispels much of the quotation's apparent Eurocentrism, both by acknowledging the achievements of other traditions and by specifying the meaning of 'rational' and 'harmonious':

> The musical ear of other peoples has probably been even more sensitively developed than our own, certainly not less so. Polyphonic music of various kinds has been widely distributed over the earth. The co-operation of a number of instruments and also the singing of parts have existed elsewhere. All our rational tone intervals have been known and calculated. But rational harmonious music, both counterpoint and harmony, formation of the tone material on the basis of three triads with the harmonic third; our chromatics and enharmonics, not interpreted in terms of space, but, since the Renaissance, of harmony; our orchestra, with its string quartet as a nucleus, and the organization of ensembles of wind instruments; our bass accompaniment; our system of notation, which has made possible the composition and production of modern musical works, and thus their very survival; our sonatas, symphonies, operas; and finally, as means to all these, our fundamental instruments, the organ, piano, violin, etc.; all these things are known only in the Occident, although programme music, tone poetry, alteration of tones and chromatics, have existed in various musical traditions as means of expression.[26]

Harmony, as understood by Western music, was made possible by the rationalization of pitch effected by equal temperament, an innovation which, as Weber knew well, compromised the 'purity' of musical intervals for the sake of a system of fully equivalent and interchangeable relationships.[27] The view that harmony is the 'master-trope' of Western music since 1650 is supported not only by the fact that the works of the concert tradition are in large part 'about' harmony in the way that their very form comprises the exploration of tonal relationships, but also that henceforth non-harmonic music becomes impossible. The 'pure melody' of older traditions ceases to exist, as can be seen from the fact that surviving folk tunes now demand chordal support and seem incomplete without it.

Understanding Western music as ineluctably harmonic goes a long way to explaining why the crisis in Western musical language makes itself felt at the turn of the twentieth century primarily in that particular element, and why both Schoenberg and Adorno address themselves to it in their respective ways over and above everything else. But it is also why Cunningham's proposal that candidates for achieving modernist subversion in 'non-classical' musics might be found in other musical elements, such as rhythm or timbre, misses the mark. The tonal revolution and the advent of harmony in music transforms Western music *as a whole*, not simply that of the concert hall. Consequently it also forms the basis of the language of all Western popular forms, notwithstanding any non-Western influences that these musics may also incorporate. Of course it is true that certain popular musics have revolutionized aspects of rhythm, though the fact that Adorno viewed these changes as a regressive capitulation to the reified temporality of capitalism serves to illustrate that, for him, innovation in and of itself is no guarantee of aesthetic authenticity.[28] And timbre has certainly been a site of experimentation and innovation in many forms of twentieth century music. But fundamentally, even where 'non-identity' with respect to tradition has been achieved through rhythmic and timbral innovation, popular musics of all types would still be open to Adornian criticism to the extent that they continue to use the obsolete language of tonality and cling to the falsity of harmonious reconciliation. If we are to find a way around this problem while remaining true to the essentials of Adorno's aesthetic theory, we need to be able to address the question of tonality, rather than merely sidestep it.

The underlying problem is not so much a conflation of the literal and metaphorical senses of the concept of dissonance, as Cunningham suggests, but an avant-garde understanding of modernism which makes the introduction of dissonance (in all its senses) the locus of authentic, critical artistic practice. The description of dissonance in *Aesthetic Theory* as the 'trademark' of modernism is often taken as proof of Adorno's commitment to a 'modernist principle of dissonance', but in fact Adorno's view of dissonance was rather more nuanced than this single quotation suggests.

Consistent with his dismissal of theories which claim that triads universally act as points of resolution by virtue of the overtone series,[29] Adorno's instinct is to understand dissonance in a radically relativistic way. Thus it is the immediate context which dictates what will be heard as dissonant, such that in atonal music 'it is precisely the triads which are cacophonous and not the dissonances!'[30] The reverse can also be true, as when he writes critically about Stravinsky's *The Rite of Spring* that 'even the dissonances which have been widely acclaimed as tragic symbols prove on closer observation to be completely tame.'[31] This is an explicit challenge to the standard view that musical dissonance is objectively measureable and only historically relative. On this view, there exists a spectrum of dissonance and consonance along which particular pitch combinations have fixed places, coexisting with a historical trend towards a greater use by composers of the more dissonant parts of that spectrum. The historical trend is explained variously as a natural feature of musical development; the result of a process of increasing acceptance by listeners of dissonances such that sounds which were previously heard as dissonant become perceived as less so over time (a kind of desensitization theory); or the musical analogue of increases in real-world 'dissonance' such as alienation or social antagonism.

Adorno appears to want to steer a course through these different positions. The 'emancipation of dissonance' is held to be a permanent feature of Western music, a 'desire' 'underlying all bourgeois music since Gesualdo and Bach'.[32] Elsewhere, Adorno links the emergence of atonality to the 'unbearable' conditions of modern life to which the dissonances of the new music testify.[33] On the other hand, he insists that the meaning of dissonance is not fixed: 'dissonance as a symbol of disaster and consonance as a symbol of reconciliation are neo-romantic relics.'[34] Rather, 'dissonance is the truth about harmony',[35] the obverse of consonance, without which both would be meaningless. Adorno is reminding us here that harmony, used in its musical sense, is not the same as harmoniousness,[36] but is the play of relative tensions between simultaneously sounding pitches.

Adorno's problem, however, is that he cannot quite let go completely of the more absolute sense of the term as it is used in music theory, the view that, irrespective of context, some pitch intervals are objectively more dissonant than others. He refers to the diminished seventh as the most 'extreme dissonance' and the minor second the 'sharpest dissonance', even if the first of these statements is qualified by 'for Beethoven' to acknowledge the constraints imposed by history on musical material.[37] The tensions between these different understandings of the phenomenon have the effect of undermining the stability of Adorno's notion of the 'emancipation of dissonance' with which he associates modernism. For something to be emancipated it must have a positive existence, feeding the widely held view that musical modernism consists in the deliberate use of those intervals which can be objectively defined as at the dissonant end of the spectrum. If, however, dissonance is a necessary element of all harmonic music, it cannot be liberated from consonance with which it is intimately bound up as its 'negative truth'.

The only way to reconcile these views, I suggest, is to focus on Adorno's notion of dissonance as *expression*, effectively the mimetic component of art which

is in constant tension with form's attempts to impose harmony (harmoniousness) upon it. As he puts it in *Aesthetic Theory*: 'Art, whatever its material, has always desired dissonance, a desire suppressed by the affirmative power of society with which aesthetic semblance has been bound up. Dissonance is effectively expression; the consonant and harmonious want to soften and eliminate it.'[38] It is in this sense that dissonance is in a necessary relationship to overarching structure, which itself has resulted from the sedimentation of previous content – a historical and dialectical conception that is at odds with a more voluntarist reading of Adorno's understanding of modernism as an injunction consciously to reject tradition through the wilful introduction of dissonant material.[39] Artistic material is the sedimented product of history, and, just like all material conditions, confronts every generation as a 'given', as 'circumstances not chosen by themselves, but ... transmitted from the past'.[40] Dissonance is no exception to this:

> The ciphers and characters of modern art are signs that have forgotten themselves and become absolute. Their infiltration into the aesthetic medium and their refusal of intentionality are two aspects of the same process. The transformation of dissonance into compositional 'material' is to be interpreted analogously.[41]

Adorno's espousal of the Second Viennese School of composers was made on the basis of his perception of their recognition and pursuance of trends *already emerging* in the musical material of their day. Since artists are participants in an aesthetic process by which social antagonism is reflected in the very artistic material they must work with, the composers to earn Adorno's approval were those whom he perceived to be prepared to embrace the contradictions of tonality and push them further, rather than those seeking to hide from them or paper over them by retreating into outdated styles.

This recognizes the stubbornness of 'the critically reflected objective state of the technical productive forces of an age in which any given composer is inevitably confronted'.[42] This does not mean it is a Hegel-inspired conception of musical history as an agentless process in which the role of composer is reduced to mere cypher of historic forces: Adorno demands that artists do not concede aesthetic autonomy; that they do not prioritize commercial or other non-aesthetic considerations. However, there is a world of difference between following where the dissonance of late-nineteenth-century music as a form of negativity within tonality was leading and imagining that entirely new systems of musical language can be invented. This is not to argue that Western tonality is a natural system, or that its self-proclaimed rationality grants it a historically immutable status. But it is to recognize that the fundamental elements of the material with which musicians have to work are deeply rooted in the bedrock of history and will continue to exert their presence in the absence of a radical transformation of society as a whole.

It is Adorno's theory of artistic material that marks his modernism out from more standard versions by characterizing it primarily as a 'condition', or an intensified set of demands upon artists, rather than as a strategy or programme. This aspect of his aesthetics can therefore help us to understand the continuing prevalence of tonality in contemporary music and the failure of attempts to supersede it. But the obstinate persistence of tonality does not necessarily mean that music is doomed to stasis or nostalgic repetition, or that it is incapable of accommodating dissonance, especially on Adorno's understanding of it. If Cunningham is correct to argue for an open, multifaceted understanding of modernist artistic development, I want to insist that such tendencies can be found also within still-tonal twentieth-century musical material, and, specifically, that the chord symbol has been a crucial part of such developments. Indeed, without being open to the possibility that tonality may have a meaningful 'afterlife', we run the risk of ceding what is arguably the central achievement of Western music to the forces of reification and historical obsolescence.

The chord symbol as modernist innovation

At a general level, it is possible to view the chord symbol – along with the conception of harmony on which it rests, and which, in turn, it reinforces – as a recognition of the centrality of harmonic progression to Western music by according it a still more prominent role in music. In this sense, the development might be regarded as the coming to fruition of the immanent tendency of the tonal system to render all musical elements ultimately harmonic and to make a harmonic focus the only meaningful one. Arguably, this is subversive in its own right, overturning a long-standing hierarchy in which the individualized, subjective expressivity of (especially, sung) melody has been privileged over the purely supporting role of harmony; the more so if rhythm – that other allegedly repressed element of Western music – is held to be in alliance with harmony understood this

way, as reflected by the terms 'rhythm guitar' and 'rhythm section'. Nevertheless, if such a downgrading of melody does represent a suppression of individualism, as Adorno argued (and feared),[43] there is no reason in principle why this cannot be in favour of a cooperative and non-repressive collectivity of the type associated with progressive social movements, about whose musical analogues more will be said shortly.

A more specific benefit of the emergence of the chord symbol is the potential it opens up for the rapid 'vertical' development of musical harmony; that is, the increase in the types and varieties of chords. This tendency is the dialectical obverse of the drawback identified earlier that chord symbols *limit* harmonic options to a finite number of defined types. The advantage holds as strongly as the disadvantage in that a focus on the chord as a self-contained entity has facilitated an exhaustive exploration and theorization of ever more complex chord types that can be drawn from the various diatonic scales of Western tonality. With their ability to capture sevenths, extensions, alterations and substitutions, chord symbols allow for the possibility of a harmony that is far from the repetition of anachronistic and exhausted procedures, but builds upon the richness, complexity and, indeed, dissonance found in the music of Debussy and Ravel, while remaining essentially tonal.

Perhaps paradoxically, given that the chord symbol belongs to the realm of harmony, rather than 'anti-harmony', the tendency fostered by it to view individual chords in isolation from their tonal context leads to a form of dissolution of tonality from within. We have already seen the effect of that in an analytical context with the example of the Tristan chord, but more important is this tendency's potential effect on actual chord sequences. Non-diatonicism[44] follows via a number of routes. Much rock music, by and large using the simple triadic chords of classical harmony, has witnessed some displacement of standard major/minor tonality in favour of a new kind of 'modal' harmony. This new modality, based on the principle, implicit in the chord symbol, that one free-standing chord can follow any other, without worrying about whether it 'belongs' in the same key, is not a return to some pre-tonal past, despite its name, but represents a genuine development of the principles of tonal harmony while breaking free of the contextual straitjacket of major and minor keys and standard forms of harmonic resolution.

While such chord sequences in rock usually remain within the bounds of a single mode or seven-note scale, something simpler and yet more radical has occurred with the blues. Once beyond its early pre-harmonic, 'folk' phase, the blues settled into harmonic patterns built, at first sight, on the three primary chords – the tonic, subdominant and dominant (I, IV and V) – of conventional tonal harmony. However, the fact that in the blues all three of these chords are generally played as dominant sevenths introduces a curious effect. The simplification of the chord progression to a single type of seventh chord produces a non-diatonic chord sequence, unclassifiable in terms of conventional harmonic theory, as no single seven-note scale accommodates all three of the flattened sevenths thus incorporated. The use of 'blue notes' in the melodic lines complicates the harmonic picture still further. Again we have an erosion of conventional tonality by tonal means.

In the case of American popular song of the first half of the twentieth century, the repertoire which has become known as the Great American Songbook and which provided such a rich resource for the development of jazz, the chord symbol's decontextualization of chords produces yet another kind of development. The composers of this genre, perhaps because they were formally musically educated, continue to hold fast to the dominant–tonic relationship at the heart of tonal harmony, but use it to produce ever more audacious effects. Many of these songs are characterized by their rapid and frequent modulation from one key to another, and in many cases between distantly related keys. Although it is generally possible to identify an overall key, it is quite common for songs to pass through half a dozen keys or more during their (usually) 32-bar length. Added to this, and a feature built upon by the jazz musicians who drew on this material as the basis for improvisation, is the preference among these composers for complex, extended and altered chords. This produces a similar result to that already noted in the blues, whereby the proliferation of added notes in each chord produces a chromaticism which begins to undermine the sense of overall tonality at any particular point in the song. Later generations of jazz composers build on these practices and intensify this breaking out of the boundaries of tonality from within. In this respect, it might be argued that John Coltrane's tune 'Giant Steps', with its relentless juxtaposition of unrelated perfect cadences, is at least as radical and modernist as the freer quasi-atonalism of his later work. We can add, too, to these developments in jazz the more recent emergence of so-called 'split chords', the result of experimenting with the playing of standard triads

in conjunction with bass notes which are 'foreign' to them. The result is recognizably tonal sound combinations removed from a conventional functional-harmonic context and placed in new relationships with each other.

It is important to acknowledge the limits of these developments. Each of them exists as a tendency which is realized at best only partially and patchily in twentieth-century popular musics. Their existence by no means contradicts a general assessment of most of the music which circulates in our society as deeply marked by the effects of commodification at the hands of the culture industry. There remains much music which simply recycles the basic procedures of classical harmony and is thereby open to the charge of complacency and conservatism. And to the extent that the tendencies outlined above are progressive and are the product of, or at least connected with, the adoption of the chord symbol as the means for expressing harmonic progression in music, they cannot be separated, as I have argued, from the regressive effects that this phenomenon simultaneously encourages.

A glimpse of new musical relationships

Access to its progressive tendencies depends on grasping and exploiting to its fullest extent the abstract nature of the chord symbol. As we have seen, the chord symbol's distinctive abstract quality lies in its ability to capture chord structures, and by extension harmonic progressions, independently of any particular, concrete instantiation, or voicing, of them. It is in grasping this that the full potential of the innovation can be realized. For the chord symbol can then become a precondition for musical freedom, providing the basis for an individual's creative contribution to an ensemble effort which goes beyond that prescribed by the conventionally notated score, exceeding that imaginable by any composer. This is not the kind, or extent, of the freedom involved in, for example, 'free improvisation', which arguably suffers from the weakness that the combined effect of the contributions of multiple participants is in large part random, accidental and somewhat arbitrary. Rather, the chord symbol allows the kind of structured freedom in which each participant can contribute in her own way to a collective outcome within a previously agreed framework.

When chord symbols are used in this way, a striking dialectical reversal takes place in which the initial, reductive identification of harmony with 'the chords' played by the guitars and keyboards is overcome by an understanding of the entire musical texture *as harmonic*. In other words, a texture all of whose elements contribute fully to the flux of tensions we refer to as harmonic progression, or 'the changes' as jazz musicians often call it; the adoption of 'a harmonic perspective which includes all melodic events, and the dynamic conception of tonality as a whole', as Adorno puts it in relation to Beethoven.[45]

In another dialectical reversal, what begins as a convenient mechanism to facilitate the uncreative mimicking of existing commercial material, thereby reinforcing the hierarchy between professional artist and amateur imitator, turns out to have the potential to begin to erode the entrenched rupture in Western music between composer and performer and re-establish the long-since extinct tradition of creative performance, but this time on a collective basis. It is of course in jazz that this potential has been exploited most fully, but it is present to a degree in any situation where musicians are required (or permitted) to devise elements of what they contribute to an ensemble from a series of chord symbols, written or memorized.

Whether the music produced this way qualifies as 'modernist' is another question, one which it may not be productive to pursue. Instead, we need to understand that the 'non-identity' which Adorno believed was necessary for the artwork to retain its autonomy in the era of the culture industry is *already present* within artistic materials; first because, as all post-Hegelians are aware, negativity inheres in all phenomena, but second because artistic materials cannot fail to bear the traces of the complex socio-historical processes which have forged them. What qualifies as the broad criterion for judging the success and progressiveness of musical works, therefore, is the extent to which elements of non-identity in the musical material at the disposal of the musicians are allowed to express themselves, are exposed and integrated, rather than ignored or repressed.

The lesson of the curious history of the chord symbol is that even when new artistic practices are introduced as a result of regressive motives, this does not preclude the possibility of authentic artistic development as a result. Chord symbols were, and in their most common usage remain, the product of an uncritical acceptance of standard tonality, a mechanical and reductive view of what constitutes harmony within musical texture, with the goal of reifying, simplifying and homogenizing it still further. At a social level, their purpose as a 'painting-by-numbers' aid for the replication of 'hit' songs by amateurs

encourages a vacuous and reactionary view of music-making in which the best to which most people can aspire is to imitate the most commercially successful products of the culture industry. But the radical openness afforded by the chord symbol's abstract nature, its conceptualization of pitch combinations independently of determinate instantiations of them, also enables these effects to be reversed. It gives us a glimpse in the here-and-now, within the confines of existing musical materials and languages, of new expressive possibilities, and of new creative relationships between individuals and collectives capable of eroding the profound schisms between composer and performer, producer and consumer, which have bedevilled the sociology of music in Western modernity.

Notes

1. Theodor Adorno, *Towards a Theory of Musical Reproduction*, Polity, Cambridge, 2006. pp. 52–3.
2. Or even three – in some genres of music, the fifth (A) is deemed non-essential to a D7 chord.
3. Harvey Turnbull et al., 'Guitar', *Grove Music Online*. *Oxford Music Online*, Oxford University Press, www.oxfordmusiconline.com/subscriber/article/grove/music/43006#S43006.4; accessed 8 April 2013.
4. J. Tyler, *A Guide to Playing the Baroque Guitar*, Indiana University Press, Bloomington IN, 2011, p. 10.
5. J. Tyler, 'The Role of the Guitar in the Rise of Monody: The Earliest Manuscripts', *Journal of Seventeenth Century Music*, vol. 9, no. 1, 2003.
6. Barry Kernfeld, *The Story of Fake Books: Bootlegging Songs to Musicians,* Scarecrow Press, Langham MD and Oxford, 2006, p. 40.
7. It has been suggested that the very first use of chord symbols in written music was in the banjo part of Ferde Grofé's arrangement for the first performance in 1924 of Gershwin's *Rhapsody in Blue* by the Paul Whiteman orchestra with Gershwin himself at the piano. The motivation here, it is claimed, was haste, but it's not clear whether it was a shortage of time for Grofé to complete his arrangement or for the banjoist to learn his part, or both, that was the issue. Gerry Gates, 'Chord Symbols As We Know Them – Where Did They Come From?', Berklee Music Blogs, http://jerry-gates.berkleemusicblogs.com/2011/02/16/chord-symbols-as-we-know-them-today-where-did-they-come-from; accessed 9 April 2013.
8. Kernfeld, *The Story of Fake Books,* pp. 46–8.
9. Ibid., pp. 1–20.
10. Ibid., pp. 51–71.
11. Ibid., pp. 51–115.
12. Ibid., pp. 129–39.
13. John Lennon, Paul McCartney et al., *The Beatles Complete (Guitar/Vocal Edition)*, Wise Publications, London, 2003.
14. Adele Adkins and Daniel Wilkins, 'Someone Like You', 2011, chorded by Anton Gavzov, http://muzland.info/songs.html?auth=443&song=4; accessed 10 April 2013.
15. Peter Osborne, 'The Reproach of Abstraction', *Radical Philosophy* 127, September/October 2004, p. 21.
16. See, for example, Chris Cutler, 'Technology, Politics and Contemporary Music: Necessity and Choice in Music', *Popular Music*, vol. 4, 1984, p. 287.
17. Osborne, 'The Reproach of Abstraction', p. 22.
18. Ibid., p. 27.
19. Monody is the musicological term for the texture of solo voice supported by an accompaniment played on chord-playing instruments such as the lute, harpsichord or guitar, found in Italian secular song between *c.*1600 and 1640. Nigel Fortune and Tim Carter, 'Monody', *Grove Music Online*. *Oxford Music Online*, Oxford University Press, 2007–2015, www.oxfordmusiconline.com/subscriber/article/grove/music/18977; accessed 11 September 2015.
20. The view that chord symbols are analogous to chemical symbols has been explicitly expressed; see, for example, Ted Greene, *Chord Chemistry*, Alfred Publishing, New York, 1981.
21. The difference lies in the insistence in traditional musicology that chords cannot be described independently of the prevailing key centre, in this case (for most analysts at least) A minor, a key to which F^{m7b5} does not belong. For a survey of the disagreements, see Jean-Jacques Nattiez, *Music and Discourse: Toward a Semiology of Music*, trans. Caroline Abbate, Princeton University Press, Princeton NJ, 1990, pp. 219–33.
22. For example, the ii – V – I in jazz, extended cycle of fifth progressions in certain kinds of pop ('Killing Me Softly', 'I Will Survive'), or the bVII – IV – I 'With a Little Help From My Friends' progression in many rock songs.
23. See particularly, for the former, Walter Piston, *Harmony*, Norton, New York, 1941; and, for the latter, Lionel Grigson, *Practical Jazz: A Step-by-step Guide to Harmony and Improvisation*, Stainer & Bell, London, 1988.
24. Theodor Adorno, 'Music and Language: A Fragment', *Quasi una Fantasia: Essays on Modern Music,* Verso, London, 1992, p. 2.
25. David Cunningham, 'A Time for Dissonance and Noise', *Angelaki: Journal of the Theoretical Humanities*, vol. 8, no. 1, June 2003; and 'Notes on Nuance', *Radical Philosophy* 125, March/April 2004.
26. Max Weber, *The Protestant Ethic and the Spirit of Capitalism,* trans. Talcott Parsons, Routledge, London, 2001, pp. xxix–xxx.
27. Max Weber, *The Rational and Social Foundations of Music*, trans. Don Martindale et al., Southern Illinois University Press, Carbondale, 1958.
28. I discuss this at length in M. Abel, *Groove: An Aesthetic of Measured Time*, Brill, Leiden, 2014.
29. Theodor Adorno, *The Philosophy of Modern Music*, Continuum, London, 2007, p. 24.
30. Ibid., p. 25.
31. Ibid., p. 153.
32. Ibid., pp. 178–9.
33. Ibid. p. 6.
34. Ibid., p. 79.
35. Theodor Adorno, *Aesthetic Theory*, Continuum, London, 2004, p. 144.
36. The translation of the passage by Weber, cited earlier, makes this mistake.
37. Adorno, *The Philosophy of Modern Music*, pp. 25, 61.
38. Adorno, *Aesthetic Theory*, p. 145.
39. See, for example, Peter Osborne, 'Adorno and the Metaphysics of Modernism: The Problem of a "Postmodern" Art', in Andrew Benjamin, ed.,*The Problems of Modernity: Adorno and Benjamin*, Routledge, London, 1989, p. 37.
40. Karl Marx, 'The Eighteenth Brumaire of Louis Bonaparte', in David McLellan, ed., *Karl Marx: Selected Writings*, Oxford University Press, Oxford, 1977, p. 300. Adorno's theory of artistic material is clearly influenced by Marx's approach to history, encapsulated by this famous passage.
41. Adorno, *Aesthetic Theory*, p. 125.
42. Adorno, 'Vers une musique informelle', *Quasi una Fantasia: Essays on Modern Music,* Verso, London, 1992, p. 281.
43. See his discussion of the 'expressive-dynamic' and 'rhythmic-spatial' in *The Philosophy of Modern Music*, pp. 142–3.
44. Music which is not atonal but exceeds the bounds of a single key or tonal centre.
45. Adorno, *The Philosophy of Modern Music*, p. 25.