

ANALYSING ROCK: MEANS AND ENDS¹

The analysis of music requires no justification. The analysis of popular music, however, in its very ephemerality, is frequently thought to. It is my aim in this article to sketch out a method for such analysis, and then to illustrate one of the burning questions for which analysis is a necessary method. In theory at least, analysis seems directed towards two different types of question: firstly asking of a musical experience questions like what, how and why; and secondly asking questions of value, effectively analysing whether a particular aesthetic is achieved. Determining the aesthetic of a given piece of music needs to be based on explicit criteria because we can imagine mutually exclusive criteria of value: relational richness; motivic logic; surface diversity; economy of material; breadth of reference; structural coherence; emotional impact; commercial potential (etc.). Each of these criteria may be valid, but only for particular styles. (One of the most pressing of contemporary tasks is the explication of criteria for the various musics we encounter, for we have still not escaped the academic hegemony of the European canon.)

Michael Chanan (1994) has recently extended Roland Barthes' (1977b) emphasis on the importance of *musica practica*, acknowledging that the way listeners listen is greatly determined by whatever bodily knowledge they have of producing music. This has two important consequences. Firstly, as we now know, a trumpeter's neurological response to trumpet music differs from her neurological response to piano music, a response she cannot control. But, secondly, trumpet music will forever engage her more completely than it will a non-trumpeter, no matter how competent a listener the latter may be. In terms of focusing on the details of melodic and harmonic structures, particularly if we refuse the artificial aid of visual notation, experience of producing the sounds can be crucial, and this is my second point. Across a variety of fields, we find testaments to differences of mental operation in regard to these competences. From music education, Keith Swanwick (1988) follows Michael Polanyi in distinguishing 'explicit' from simply 'tacit' knowledge. From music theory, Nicholas Cook (1990) distinguishes 'musicological' from simply 'musical' listening. From psychology, Howard Gardner (1985) distinguishes 'musical' from other forms of 'intelligence'. From pedagogy theory, David Elliott (1995) distinguishes 'problem-solving' from simply 'problem-reducing' competences for music. Theodor Adorno (1976), of course, distinguished the 'expert' from the simply 'emotional' listener, while Mark deBellis (1995) combines analytic philosophy and cognitive theory to distinguish 'conceptual' from simply 'non-conceptual' listening. Despite disparities of detail, these writers are all acknowledging the same basic difference. In order to discuss how a musical experience was, we need to communicate its changing effect on us, and we therefore need to be able to identify parts of pieces precisely in order to do this. 'Popular', or 'non-conceptual' or 'problem-reducing' competences tend to have access to no such precise language. In the method outlined here, then, I am not necessarily modelling the sense any particularly listeners may actually make, I am ideally modelling the sense particular listeners will have the potential to make, related to their competence in the styles which articulate the structures they are hearing.

In traditional musicology, two distinct types of analysis predominate: the first attempts to explain the characteristics of single pieces, the second (and less favoured) explores the characteristics of particular styles. Lucy Green focuses on the necessary conceptual primacy of style. "Style is the medium by virtue of which we experience music, and without which we could have no music at all. No piece of music is ever stylistically autonomous. Whether particular

¹ The ideas on which this article is based have appeared elsewhere, particularly in RPT & PopMus article. The article itself is based on two seminar papers delivered at the University of Bologna in April 1998.

individuals hear all music in terms of either the pop or the classical styles alone, or whether they make finer distinctions between late Haydn and early Beethoven, Tamla Motown and Disco, whether such activity is self-conscious or intuitive, it cannot be avoided. This is not only because musical delineations so forcefully and ubiquitously divide styles of music into categories with appropriately related listeners, but also, because *we must have some knowledge of the style of a piece of music in order to experience inherent meanings as distinct from non-musically meaningful sound, at all*. Such knowledge is by no means acquired only through study, but is learnt through repeated experience of music ... and is gained, to varying degrees, by every normal member of society [a process she conceptualises by way of Anthony Giddens]. If not, an individual could not tell a song from the sounds of a cat-fight, let alone distinguish pop from classical music." (Green 1988:33-34). Interpreting this in terms of the practice of analysis, the characteristics of single pieces can only be explained according to the criteria set out by the style into which we, as listeners, place that piece. It is only individual pieces or songs which have existence - style is a concept which we employ to group together those elements of reality, but it is only a virtual concept.

In traditional analysis, styles are regarded as largely fixed entities, many of them historically complete, and their facets known, so that the process of allowing them to act as background for the analysis of a particular piece can be taken as read. It is only with this unspoken assumption that Schenkerian analysis has validity, for instance. But in popular music analysis, this is not the case. Therefore, the establishment of the tendencies of the style is a necessary first step. It is perhaps a subtle issue to talk of 'tendencies' rather than 'rules', but the conventional nomenclature of rules and their 'breaking' is problematic. In the period following his Second Quartet, Schoenberg did not 'break' the rules of tonality, since those rules still operate perfectly adequately for any composer who wishes to use them today (Moore 1997). It is more profitable to regard such things as 'tendencies', which can come into friction with a particular song at a particular point, but which have a varying degree of resistance to historical change.

Having identified a set of tendencies for a particular style ('type'), these can act as a series of norms, against which to measure the degrees of friction which a particular song ('token') may set up. It is rare, of course, to find a song which obeys every norm we could envisage, probably because such a song would be regarded as so loaded with cliché as to induce utter boredom. What follows is to suggest the arena in which we might discover such a series of norms. Indeed, taking a more informal line, we might simply envisage these as giving rise to a series of questions to ask of any song. The style to which these pertain is 'rock', although I am fully aware that 'rock' is not, perhaps a single style (see Moore 1993:3-4).

'Rock' is a musical style which employs instruments for its enactment. Although we would expect to find certain instruments (a drum kit, a bass guitar, perhaps electric guitars, piano or electronic keyboards and voices), a range of other instruments is possible. It is perhaps more fruitful not to begin from the instruments themselves, but from the functions they perform (the 'layers' they constitute) within the musical fabric. 'Rock' tends to utilise a discrete set of four such functions. These functions may well be shared with a range of other 'popular' styles, although this is one site of difference with earlier European musics.

The first of these functions is that of articulating explicitly a pattern of beats, the 'groove'. This is the role of the (nominally unpitched) drum kit, and often other associated percussion, in combination with the rhythmic profile of whatever functional bass is used. The second function is to make explicit a series of harmonic roots. This layer is normally filled by the bass guitar. In certain varieties of 'rock', we do find some variation on the assumption that it is the roots of harmonies which are emphasised - we can find the occasional inverted harmony, but roots tend to be very much the norm at the bass end of the texture. This layer, of course, without the root

restriction, will be familiar to us from the baroque trio sonata, for instance. The third function is to make explicit a series of melodies - we find primary and secondary melodic lines ('tunes'). These will normally use one or more voices, they will frequently employ an electric guitar, we can often find a saxophone here, and more unusually a flute, a violin or a trumpet, and keyboards. If listeners are asked to communicate their memory of a particular song, it is on this layer that they tend to focus. The fourth function is to fill the space between these bass and treble layers. This 'harmonic filler' will like the previous two, be familiar to us from the trio sonata. Here is where we can find the greatest range of instruments, from rhythm guitars, organs and pianos to saxophone choirs, voices, brass sections, even entire orchestras. It is arguably the constitution of this layer which has the greatest impact on the attribution of a particular style by any naive listener.

In respect of these layers, note firstly the simple presence of the first layer, distancing these styles from those of the Western concert tradition. Secondly, note the importance of the fourth layer in constituting style even where we are only talking of a single instrument: the guitar will exemplify. 1960s pop frequently uses regular strokes on the guitar to give a sense of density - on the Beatles' 'Taxman', for instance, the pungent offbeat strokes support the disillusion expressed in the lyrics. An alternative approach was developed by the Kinks, on the model of the legendary 'Louie Louie' by the Kingmen, where the guitar plays a single riff rather than complete chords. In its early manifestation (e.g. 'You really got me'), the rawness of tone this achieved was used to support the mild recklessness associated with the early mods, although within a decade this had developed into the power riff which would accompany the unrestrained expression associated with heavy metal. And yet, by the 1980s, the more flamboyant, less anarchic end of metal (Gary Moore's 'Victims of the future', for instance) signalled the iron hand within the velvet glove, by combining this type of articulation with the ringing arpeggiation of a basic harmonic sequence, usually within the same song.

Thirdly, with respect to these layers, two simple demonstrations of the notion of friction between song and style. On Nik Kershaw's song 'The riddle', a rather pop-flavoured style, with a prominent melodic guitar and reggae-tinged groove suddenly shifts towards the end. We hear a neat modulation, accompanied by the transformation of the band into a simulated pipe and drum band. This shift, together with the all-important omission of the bass at this point, seems to create an effect analogous to a change of film shot, where the camera pans out from attention to a particular detail, suddenly making the viewer aware that there is much more going on in the larger context. On Bjork's 'Army of me', the total absence of the 'comforting' filler layer results, in a rock context, in a sense of barely concealed menace to a male listener, which may be compounded by acknowledgement of the importation of a stylistic norm from a foreign style (drum & bass), the whole reinforcing the gender reversal suggested by the lyrics. This aspect of texture represents a simple starting-point, then, but one which can have notable consequences.

There is a second sense in which rock texture needs to be considered, the sense of the 'virtual textural space' or, more colloquially, the 'sound-box' (see Moore 1992a). This has two facets, the private and the intimate. To conceptualise the private, imagine a three-dimensional space, effectively an empty cube of finite dimensions, which will change with respect to time. The depth of this cube is the space between you and the wall you are facing, the extremes of width are formed by stereo speakers, while the remaining dimension spreads from floor to ceiling. To conceptualise the intimate, imagine this cube superimposed on your own head, front to back, left to right, and top to bottom. The strands which constitute the textural fabric will then appear to emanate from particular locations within this space, manipulation of which ensures that the record producer's role in the origination of the material we hear is given due weight. Manipulation within the stereo space is an obvious feature; the sense of depth is conveyed by the volume of a particular strand, while its register gives us the third dimension. Depending both

on the style and the era of recording, most production values for rock emphasise either the blending of disparate sounds within this space, or their separation to enable some strands to be foregrounded. A particular benefit of considering the 'sound-box' is that it enables us to conceptualise varieties of textural density and, thus, the presence of textural holes. Indeed, comparison of a range of recordings from the early 1960s to the late 1980s suggests a clear tendency towards thinking more in terms of this virtual textural space as studio technology develops, involving the beginning of a rethinking of the functions of instruments within this texture, a process which it seems has been further developed in dance styles.

There is a danger inherent in the prevalent theoretical position which some analysts take towards popular music, i.e. that which unproblematically privileges pitch, i.e. melody and harmony in their simple unfolding, whether on the surface or at deep structural levels. In place of such an analytic focus, we need to develop an alternative position which takes as its basis matters of timbre and, more particularly, texture. By the early 1970s, most rock producers on both sides of the Atlantic were accepting an aesthetic of stereo placement which put the kit dead-centre, with lead voice and bass following a slight diagonal through this, and guitar, organ (and whatever) more to either side. Today, this is how we expect to hear instrumental placements. Prior to this, however, there was no such aesthetic. In this 1970 studio recording of Grand Funk Railroad's 'Paranoid', the bass is central, kit to the left, voice slightly to the left, and guitar to the right. This analysis of texture provides information on the fluidity of production practice at the time, especially when we note that a live version, recorded just weeks later, is mixed normally. Earlier, in 1967, the Welsh band Amen Corner had released 'Bend me shape me', in mono, although recorded on two-track machines. An 'enhanced' version was released subsequently on a 'History of Pop'-type compilation; it can be clearly heard that the voice has been placed in the middle of the stereo spectrum, with rhythm section on one side and organ and horns on the other. Such a placement sounds strange to contemporary ears, which would expect the rhythm section to be placed centrally, but it was not possible to recreate that 'sound-box' from the original tapes. Here, concentration on texture yields information regarding practices of production and the re-cycling of back catalogues.

With these examples, concentration on melody, harmony and rhythm, at the expense of how they are articulated, leads to a grossly impoverished understanding. And yet, my call for analysis which takes as its basis matters of texture (of how the song 'feels'), is itself problematic. The literary historian Christopher Butler declared that there is general agreement "that the hearer in all cultures perceives pitch and duration as primary pattern-forming qualities for music" (1980:27). Indeed, there is very little in the literature of ethnomusicology which offers even a weak challenge to this view (e.g. List 1985), while implied protestations to the contrary from within popular music studies, mine own included, are as yet barely supported by focused ethnographic or psychological research. The key notion is Butler's isolation of 'pattern-forming qualities'. The music theorist Leonard Meyer distinguished between what he called 'primary' and 'secondary' parameters, or 'domains'. Meyer states that "[i]n order for syntax to exist, ...successive stimuli must be related to one another in such a way that specific criteria for mobility and closure are established. Such criteria can be established only if the elements of the parameter can be segmented into discrete, nonuniform relationships so that the similarities and differences between them are definable, constant, and proportional" (1989:14). Unless we wish to take the absurd step of denying syntax in popular music, we must take this argument seriously. This leads Meyer to the established definition of melodic, rhythmic and harmonic relationships as primary or potentially syntactic, while secondary parameters: dynamic levels, rates of activity, hence timbre and texture, can operate only in a statistical fashion. Meyer also acknowledges that this does not mean that the primary domains necessarily take priority in any particular style (indeed, they are unlikely to in any studio-based music). What it does mean,

however, is that we apparently cannot erect traditionally understood cognitive systems on domains like those of timbre and texture, which goes against my concern with specifying syntax. Perhaps, after all, we must focus on rhythm, harmony and melody.

In conceptualising aspects of metre in rock, the groupings into '4' are normative on two levels. Thus, four-beat bars, and groupings of bars into fours are expected. At a third level, can be found normative groupings into eight, twelve, or sixteen bars. Note that 'simplified transcriptions' very often smooth out irregularities by adding beats and even bars. In *Rock: the primary text*, I rashly identified a 'standard rock beat'. Although others have taken me to task for my presumed essentialism, I continue with this idea as an observation on what happens, rather than a prescription for the identification of a rock song. In 1990s parlance, of course, we should rename it the standard rock 'groove'. Here, normatively, the emphasis will tend to be on the 'back-beat', usually the second and fourth beats of a four-beat bar. Thus, we identify the bar-length by observing the snare attack on these beats, the bass drum supplying one and three, with the hihat often playing a pattern articulating half-beats or quavers. Recall, of course, that this is a non-notated style. Implicit in this is the identification of the drum-kit as a single instrument consisting of a range of pitches and timbres (bass, snare and tom-tom drums, hihat, ride, and crash cymbals at a minimum). Treating the kit as a single instrument remains normative to this day, although as early as 1982 Peter Gabriel was designing his kit parts at the computer, breaking them into the separate layers now familiar from drum sequencers. The identification of particular grooves (how the standard pattern is altered) is extremely important in the distinction between styles.

Harmonic practices in rock do not come from a single source. Black US practices, as found in the blues and gospel and, later, in soul, are important. So too are practices deriving from Broadway and Tin Pan Alley. Others have argued that practices deriving more closely from the Central European tradition are relevant, but in most cases these are marginal. The theoretical problem seems to be whether rock constitutes a unified style from these bases (my methodological assumption) or whether we need to conceptualise harmonic practices in *ad hoc* ways. My approach has two essential components: the first is to recognise the mutually dependent roles of harmony and formal archetypes in this music, and from this to accept a continuum of formal practices which determine the functioning of harmonies; the second is to adopt a 'modal' system for the nomenclature of harmonies.

Richard Middleton (1990) identified, two extremes of formal practice. The first derives from blues and gospel practices, giving rise to what he terms 'open-ended, repetitive gestures'. At this extreme, a harmonic pattern forms the basis for melodic invention, but does not determine in any sense the song's formal profile. Rather, it is the lyrics (particularly if they are in the form of a narrative) which determine the number of times we will hear the pattern. At the other extreme, we find practices which do derive from Tin Pan Alley and from the 32-bar structure of the dance band era. Here, the division of, say, 32 bars into four sections is paramount, with the harmonies functioning to articulate the formal pattern through levels of closure. There are other points along this continuum which we can mark, probably the two most important being 'blues' structures and particular sets of 'changes' as musicians often call them.

At the former end of the continuum, there is a tendency towards regular harmonic movement, such that we may find a sequence of either two or four harmonies, of equal length, or a sequence of three harmonies, where either the first or last of which takes the same amount of time as the remaining two put together. Of course, things are never quite this simple in practice. On Siouxsie and the Banshees's 'Hong Kong Garden', two harmonies alternate, although the bass disguises this pattern at the very beginning. Many musicians are aware of the formulaic nature of the patterns which result, to the extent that some of them have acquired

names: the 'La Bamba' changes, for example [I-IV-V-V], the 'Flamenco' changes [minor I-VII-VI-V] the 'Stand be me' changes [I-VI-IV-V] (see Moore 1992b).

At the other end of the continuum are what I call, following Schoenberg, period structures. Here, normally 16- or 32-bar verses and refrains are marked by the degree of closure at the end of each of (usually four) phrases. Open/closed pairings (where closure is marked by chord I) are common, while closed/closed and open/open are not unknown. As we might expect from classical practice, these pairings have some effect on the sense of continuity a song acquires. For instance, on the Kinks' 'Waterloo sunset', we have the AABA structure familiar from the inter-war popular ballad. Both periods are open, A ending on IV, and B ending on V, each leading to I at the beginning of the subsequent period. This structural elision and long upbeat lend momentum to an otherwise pedestrian verse. One of the stronger arguments towards regarding rock as a unified style is the fact that these separate practices interact not only within the repertoires of individual bands, but frequently within the same song. So, although open-ended patterns are redolent of collective participation while period structures carry the remnants of 'bourgeois song' and private listening practices, as Middleton notes: "the categories never present themselves in a pure state. They interrelate dialectically." (1990:217).

The second issue concerning harmony is that of nomenclature. Firstly, we need to note that rock (and a great deal of post-war popular music) conceives harmonies as a priori vertical slicings rather than as the result of horizontal movements. This is one of the reasons why I am sceptical of the thoroughgoing employment of Schenkerian analytic techniques for this repertoire, such as is found in the work of Walter Everett (e.g. 1996). Secondly, we need to take account of the 'problem of the stable flattened seventh root'. Consideration of this led me to propose the conceptualisation of rock harmonic practice as 'modal'. This is not entirely satisfactory, but it does avoid implying the 'flattened' seventh within a major context as 'deviant'. According to this model, instead of erecting triads on each degree of the familiar major and minor scales, we erect them on each degree of each of the seven 'white-note' modes. Rock musicians (and guitarists in particular) themselves have often tended to conceptualise their melodies in this way, and it requires only a slight extension of this practice to take account of harmony. One reason that it is not entirely satisfactory is that it does not adequately theorise a song which uses, for example, stable chords of A minor, G major and E major, because of the travelling nature of the G-G sharp. This is, however, a smaller problem than that of the flattened seventh root, and it can partially be accounted for by noting the blues guitar practice of parallel chords.

The problem of essentialism is rife in discussing the rock voice. Many writers make rather simplistic distinctions, almost approaching genre conventions. Thus we have the difference between the 'white' voice and the 'black' voice, between the 'trained' voice and the 'untrained' voice, between the macho 'cock rock' voice and the 'teenybop' voice, between the 'woman-as-nurturer' and the 'woman-as-sex-object', etc. In place of such a blanket terminology, it is valuable to be a little more precise about how the voice actually does sound, although David Brackett's (1995) employment of frequency spectra may go too far. The insight here came, again, from Roland Barthes (1977a) which suggests that *how* the voice articulates is at least as important as *what* it articulates. In theorising this, four characteristics are important. The first is *register*. All singers appear to use what we might call a 'middle' register, which frequently appears as a 'comfortable' register. Many singers also employ a high register, frequently a falsetto, which, in males, may carry connotations of weakness. Some singers also employ a deep register. A second characteristic is *resonance*, whether the voice is nasal (issuing through the nose), whether it is a 'normal' singing voice (from the throat), whether it is clearly resonant (from the chest) or whether it is being pushed from the diaphragm, with the connotations of effort that this carries. Indeed, it is the connotations rather than the accuracy here that are

pertinent. The third and fourth characteristics require us to posit 'ideal' norms, in that they ask us how a singer plays with senses of precise *rhythm* and precise *pitch*. So, we ask questions of the type of syncopation used, whether beats are anticipated or followed, by how much, and whether this approach varies within the phrase, whether the syntax of the lyrics is followed or not, and so on. We can also ask how precise the singer's sense of pitching is - whether notes are attacked from above or below, by how much and, again, whether the approach varies at different points in the line. In Joe Cocker's celebrated performance of 'With a little help from my friends', a number of features conspire together to create the sense that his expression of emotion is 'authentic', that his reporting of his feelings can be trusted. There is his generally wayward tuning, his uncomfortable high register at many points, the huskiness of his voice (which suggests that his voice is raw with shouting or crying) and the obvious sense of effort he requires to express anything at all. And yet, the immense degree of space he takes within the beat could be read as suggesting that he is actually in control of this expression. With this armoury of techniques, we can at least discuss how individual songs both articulate and deviate from stylistic norms.

While the question of why particular (groups of) listeners give value to some musical experiences above others may depend on what music connotes or denotes, it also depends on how the musical experience is constructed around a basic distinction which may be summarized as mainstream/margin, centre/periphery or, in its most powerful historical formation, as pop/rock. The burning question is one of belonging, and follows Green's (1988) theorisation of how music's inherent meanings affirm or aggravate us, as we feel positively or negatively towards a particular style's delineations. The pop/rock distinction here concerns the nature of the commercial enterprise surrounding any particular style: the degree to which it can be perceived as 'authentic'. Objectively speaking, of course, the commercial/authentic polarity is illusory, since all mass-mediated music is subject to commercial imperatives, but what matters to listeners is whether such a concern appears to be accepted, resisted, or negotiated with, by those to whom they are listening. While crucial, this issue is not always accorded sufficient space in the literature. It dissolves into three principal, related categories of authenticity, which are unfortunately usually collapsed. (Of the few other writers to propose detailed constructions of popular music's authenticity, a parallel analysis to this one appears in Taylor 1997:21-28). Authenticity of expression arises when a composer, or performer, succeeds in conveying the impression that his/her utterance is one of integrity, that it represents an attempt to communicate in an unmediated form with an audience. Authenticity of execution arises when a performer succeeds in conveying the impression of accurately representing the ideas of another. Authenticity of experience occurs when a performance succeeds in conveying the impression to a listener that that listener's experience of life is being validated, that the music is 'telling it like it is' for them.

Examples may be of value. The recent singing of Paul Weller, with its emphasis on gravelly vocals (the voice made raw from shouting, perhaps), its general eschewal of the finesse of embellishments and melismas, and his aesthetic refusal to treat the voice as an end in itself conveys to his audience that they are perceiving real emotion, especially when put alongside his propensity to record 'live' in the studio (i.e. with an absolute minimum of overdubs, multi-tracking and other devices which 'cheat' the listening ear). At the other extreme, the singing of Neil Tennant (of the Pet Shop Boys), in its flat, regular delivery, especially when combined with his generally static posture, conveys a refusal of emotional involvement which seems also to be widely perceived as a refusal to 'cheat' the listener. The blues rock movement of the 1960s was partly founded on the employment of a style ('the blues') which, in its origins in the racist and economically-deprived Mississippi delta, was felt to embody such a harsh reality that the reality became inherent in the style itself. Thus, to employ the 'blues' within a thoroughly different

social context (as did John Mayall, for example) by venerating its originators thereby enabled the appropriation of their authenticity. (That this category interpenetrates the first can be seen by the example of Eric Clapton, whose use of the 'blues' almost implied that that had been the reality of *his* life.) This category also overlaps the third. Within the synthesizer-dominated pop scene of the 1980s, focus on the guitar was taken to signify commitment to traditional rock values and, for white urban bourgeois youth, the music of bands nominally from the Celtic periphery (U2, Big Country, The Alarm) or socially-disadvantaged areas of the USA (Bruce Springsteen) created a space within which escape to a pre-modern communitarian ideal became possible.

How, though, might we find this third authenticity (arguably the most important for the listener) inscribed in sound? Rather than investigate this through ethnography (for reasons which I shall not pursue here) I have recourse to the concept of *affordance* originally introduced by the social psychologist James J. Gibson. While forgoing any attempt to chart the sense people say they actually make out of a particular musical experience, this allows me to posit the senses which are there to be made, and therefore helps avoid the twin pitfalls of essentialist interpretation and rampant relativism so fashionable in much writing on music.

In his foundational definition, Gibson suggests the following: "When the constant properties of constant objects are perceived (the shape, size, color, texture, composition, motion, animation and position relative to other objects), the observer can go on to detect their affordances. I have coined this word as a substitute for values, a term which carries an old burden of philosophical meaning. I mean simply what things furnish, for good or ill." (1966:285). To cite simple examples, we might talk of the object 'fork' affording 'eating', the object 'car' affording 'travel' (or, perhaps, 'status' or even 'manslaughter'), or the object 'river' affording both swimming and drowning, prior to any activity which might take place in the river. In *Rock: the primary text* I suggested that some music may afford a 'concept of authenticity', but I now think that is a slightly skewed interpretation. With respect to the act of listening, Gibson suggests that a "wave front is specific to the direction of the source ... [it] affords orientation and localization [while a] train of waves is specific to the kind of mechanical disturbance at the source ... [it] affords discrimination and identification". (1966:81). To propose a probably unwarranted divorce within our mental life, Gibson's citations tend always to imply involvement and action, rather than passive reflection. In the context of my work on U2, I have appropriated the philosopher of history George Allan's concept 'centredness', which implies an active lifting of oneself from an unstable experiential ground and depositing oneself within an experience to be trusted, an experience with centre (Allan 1986). The opposition to a postmodern characterization of 'de-centred' experience is, with respect to the early work of U2, intentional. My point is that, no matter what an individual listener may bring to the music of U2, and no matter what experience he or she may leave with, that experience will afford 'centredness', among other things. In the case of U2, this affordance is based on specific musical techniques, focusing on one song, 'With or without you', the third track on the album *The Joshua Tree*. In the full version of this research (Moore 1998), I argue the social specificity of this affordance - it is generally white, middle-class listeners who are so affected, particularly if they adhere to the Romantic bourgeois critique of industrialised modernity which issues in a variously disguised nostalgia for the rural past. Here, however, it is the musical argument which I want to privilege.

The song is far removed from any conventional verse/refrain structure. Instead, it falls into six phases which create a single emotional arc achieving the archetypal pattern *arsis-climax-catharsis*, with the climax coming in phase four. The coherence of these phases is assured by the harmonic structure: the song is totally open-ended, with an ever-present, nominally ionian I-V-VI-IV ostinato, over which the guitar initially arpeggiates I.

The first phase consists of twelve introductory bars: the first four utilize a 'dead' (non-resonant) kit, arpeggiated guitar and sustained synthesizer line. In the next eight bars the bass guitar is added, while the electric guitar gains in intensity. The subsequent entry of the voice suggests a 'verse', of eight bars' duration, a suggestion strengthened by a repeat of the melody, giving a second 'verse'. Bono then sings the title twice, but taking only four bars. A structure consisting of two verses and half-length refrain is very common in rock, and may be expected to continue with a third verse and refrain, possibly an instrumental verse, and finally repeating the refrain to fade. At least, a competent listener might expect this, although she will equally be aware that such a pattern might be unlikely here, owing to the extreme brevity of the verse.

The second phase seems, on the surface, to support this interpretation. A third 'verse' is supported by a yet richer guitar timbre, and it is followed by another, double-length, refrain. Bono jumps to a higher octave here, setting out an alternative vocal register which does not immediately relate to his initial register. At this point, then, we might expect an instrumental passage which will lead to the song's conclusion. What we get, however, is an increase in the timbral intensity of the kit and guitar, the latter's constant arpeggios being replaced by an echo-rich line. These features alone suggest that the song has a long way to travel yet. This short instrumental section is succeeded by a third melodic idea, beneath the words 'give yourself away'. This itself is by no means unknown in rock - we would expect it to function as a bridge, and to give way shortly to either verse or refrain. Instead, it does neither, but leads into a rough variant of the verse. The function of this variant, more importantly, is to link the two registers and timbres Bono has hitherto set up. In this, it completes the action set up in the second refrain. The 'bridge' then repeats, and it now becomes clear that the path of this song is not that of the alternating sections of a more conventional structure, even when this second bridge leads into another refrain.

This brings us to the song's climax, namely phase four. The climax is effected in three particular ways, the first two of which can be heard as completions of musical processes already under way. Bono's linking of his two registers in the previous phase was itself a completion of an action, but that completion was in turn opened out by a growing emphasis on the upper limit of Bono's employed range. That growth of emphasis is completed by the strong, downbeat high a, the melody's highest point, achieved on a structural downbeat. The second completion is that of the timbre of the kit - not until this point do we hear this instrument with the fullness of timbre that is normally associated with it. The third feature of the climax is Bono's wordlessness, as if overtly communicable meaning has been exhausted. I shall have more to say about this feature later.

A final refrain leads into the fifth phase. With the exception of the kit and the voice, this returns to the original dynamic and textural level. Structurally, it acts as a playout - rock songs frequently drop low after reaching a climax, and then fade into nothing or gently come to a stop. This interpretation is strengthened by noting that the bass stops its pattern here, coming to rest unambiguously on the tonic. And yet, the song fails to leave our presence. It moves into what I have identified as a sixth phase, raising the dynamic level, recovering the chord sequence, and thus threatening to relaunch itself, to re-enter somewhere within the middle of phase three. This relaunch is itself a false promise, however, for a fadeout is imposed mid-leap, as it were. Anecdotal evidence suggests that this cue for relaunch is not taken during live performances, although I am unable to confirm that it has never been.

A brief word is in order here concerning the lyrics. They are typical of U2's output in that they seem to demand, but also to resist, interpretation. The opening conjunction of 'thorn' and 'side', together with 'stones' and 'eyes' (the sharp sting of tears?) suggests a muddled image of

the crucifixion, while the later 'through the storm we reach the shore' has gospel references.² The final 'you've got me with nothing to win and nothing left to lose' can then easily be read as the climax to a conversion narrative, contextualising the helplessness of 'with or without', and justifying a reading of the song as an 'authentic' expression of Bono's 'state of mind', which can easily be supported by biographical references to particular points in his life. Such an interpretation, however, seems to me far too simple in its fixing of what really seem to be 'unanchored signifiers'. And what, in any case, of 'her bed of nails'? My argument, then, will continue by ignoring this route.

So, if this is 'With or without you', what sonic features does it have that afford centredness? In order to adequately answer this question, I shall have to enlarge my focus a little to cover U2's output to about this point (1987/8). I want to identify four broad features, which involve matters of construction, simplicity, spaciousness and vocality. The third of these features, 'spaciousness', I shall discuss in terms of four separate 'techniques'.

The first feature is the song's apparent lack of construction, at least when measured against a rock/pop norm of two verses - refrain - verse - refrain - bridge - verse - refrain to fade, or some transformation of it. It seems to move almost 'naturally' from beginning to end, in a single arc, suggesting an intuitive, 'immediate' approach to construction, affording identification (anyone could do it). Indeed, we know from Dunphy's biographical study (1987) that the lyrics to many of U2's songs have been developed by Bono during the recording process itself, rather than being worked out in advance. The approach which Barthes (1972) would describe as that of the 'écrivain', one who conceives a message and then searches for a linguistic expression of it, is a long way from the approach Bono takes. His approach is closer to that of Barthes' 'écrivain', which we may describe as the one who is concerned with the act of expression, leaving the meaning to take care of itself, an approach which suggests a 'being in touch' with a pre- or sub-linguistic level, hence Bono's climactic wordlessness. Although the explanatory facets of this feature are not unconvincing, they need to be set beside the more fundamental, if less obvious 'constructional' features of the song, the way that at least three times, predictable continuations (the initial verse/refrain patterns, the false payout and the threatened relaunch) are denied. In other words, the apparently 'intuitive', 'unmediated' nature of the song's construction is belied by the precision of its effect.

The second feature finds expression in aspects of the song's simplicity. Here, I take it as self-evident that overt simplicity, as the obverse of layers of accrued, cluttered meaning, will afford centredness, will constitute or signal authenticity. In 'With or without you', this simplicity has two pertinent expressions: the material of the bass guitar; and the harmonic approach. The bass guitar employs a 'driving' bass line, i.e. a line consisting of regular quavers, content to move from harmonic root to harmonic root without passing through scalar passages. The style of playing derives from punk rock, where it was claimed to be within the reach of even the most untutored player (indeed, it is found in bassist Adam Clayton's earliest U2 recordings), although this song is slow in comparison with most punk rock. Ever since that time, such a bass line has denoted 'amateur simplicity', carrying clear connotations of an untutored, 'street-credible' authenticity.

The song has an 'open-ended repetitive' structure, inviting interpretation as simple partly because its limited harmonic palette is minimally-defining of the song's passage. Largely because of these open-ended structures, U2's songs seem to be almost devoid of 'hooks', those repeated melodic, harmonic or rhythmic devices which often act as synecdoches for entire songs, and which are often allied with commercial success.

²Matthew 8:23-26 and Matthew 14:24-34.

These first two features are unproblematic in their effect, but the remaining two will require more detailed treatment. The third feature is the creation of a sense of 'space'. Spaciousness affords centredness as part of the bourgeois critique of industrial society, particularly the paradigm of escape from urban spaces. In the music of U2, this sense of space is the result of four particular musical techniques. The first of these is the creation of a wide but sparsely-filled registral space at the beginning to many songs. We have already heard this in 'With or without you', where an immense space is created between the guitar and bass, filled initially only with a barely resonating drum kit. This is the space later filled by Bono's voice.

The second technique is the use of a high degree of electronically produced reverberation. This is often talked of in terms of an 'atmospheric' background, and the sense is of registral and stereophonic 'holes' or 'silences' which are full of potential, rather than being simply absent of sound. The creation of this 'atmosphere' seems to rely on the sense of a sound bouncing around in a great amphitheatre, thus surrounding the listener although, of course, in wide open spaces sounds actually die rather quickly, because there is nothing for them to bounce back from. This paradox is quite fundamental to U2, whose contemporary publicity machinery, liner photos and the like would frequently portray them in wide open spaces (e.g. the sleeve of *The Joshua Tree*). Bearing in mind U2's background, the image of sound bouncing around in an Irish cathedral might be more apposite, although this option is never publicly portrayed.

The third technique hardly justifies the term, but does require mentioning. This is the use of long, sustained chords or lines on an organ or similar synthesizer timbre, or sometimes high, sustained guitar pitches. The sheer lack of movement here seems to suggest unchanging continuity, and hence 'empty spaciousness'.

The fourth technique is the creation of the illusion of space by a divergence between fast, intricate surface movement and slow, underlying harmonic change. This relates specifically to the perception of space in the visual domain, which is dependent upon the apparent difference of speed between a flying bird, say, at five yards' distance, and the same at the visual limit. The perception of this difference of speed creates the sense of distance between the two objects. This difference in speed apparent in the music of U2 is most notably a function of the guitar. Many songs open with a high register guitar arpeggio, put through a digital delay device, giving a very precisely timed echo. On 'Where the streets have no name', the first cut on *The Joshua Tree*, the slow rate of harmonic movement has already been indicated by the held organ chords, together with subtle reverb, prior to the entry of the guitar. The registral space is also apparent beneath the guitar: the repeated arpeggio degenerates into semiquaver strumming and then hacking, giving the voice space to parade.

The sense of space created by U2's style is a factor of all four techniques. It hardly needs stressing that each of these last three techniques is largely dependent on technological mediation. This observation might already suggest that the 'honesty to experience' which the music may afford is nonetheless carefully constructed, for it depends at one level on what is, for most listeners, a vicarious experience.

The fourth feature which affords centredness is what I call Bono's 'vocality', which is a feature not only of how his voice sounds, but also of the ways that he uses it. The studied avoidance of 'singing' found in his early vocal style can be traced back to roots in punk rock, where the accent is on the force rather than the shape of the utterance. Bono rarely has recourse to melodic hooks (i.e. ideas with a particularly strong pitch and rhythmic profile), and his chief mode of singing approaches a 'dampened' recitative, with the constant repetition of a single melodic shape being normative, as in the live recording of 'Bullet the blue sky'. The technique is ultimately derived from the style of US Pentecostal preachers, a context made clear in that performance.

Bono allows himself a certain amount of liberty in relation to the beat set by the kit, a liberty commensurate with his exploration of the registral space positioned between guitar and bass. This rhythmic liberty takes the form of a conformity to strong beats, but a general refusal to align himself with intermediate subdivisions of the beat. His approach to lyrics is similar, in that we frequently find a near-destruction of a clear syllabic setting. Both these aspects, the rhythmic and the asyllabic, carry the firm implication that Bono's lyrics are invented for performing rather than reading. The destruction of syllabic sense will often ascend into wordlessness at crucial points, carrying the further implication that words themselves are ultimately inadequate to the task of conveying Bono's meaning. These aspects combine to create Bono's distinct vocality, and I suggest that it is in its distance from a more conventional, 'trained' and 'considered' mode of singing that it affords centredness, a centre which we would earnestly love to construe as pre-linguistic, whether ontogenetic or phylogenetic.

Many of these four features (method of construction, simplicity, spaciousness, pre-linguistic vocality) can be found individually across the spectrum of rock music, but it is in the emphatic combination of all four that U2's music, in particular, affords centredness, that makes it easy for the label 'authentic' to be appropriated by it, at least until the emergence of *Achtung baby*. We must remember, however, that this 'authenticity' is carefully, albeit somewhat unselfconsciously, constructed.

What is crucial here is that this music will not afford 'decentredness'. With such a discrimination, 'affordance' can enable us to begin to chart a path between the twin perils of essentialism (which suggests that the meaning of a song resides only in the song) and relativism (which suggests that the meaning of a song resides only in the listener). This is not a particularly novel position, of course: in both film studies and literary studies the varied influences of Barthes, Bakhtin and Eco particularly have given currency to the concept of 'negotiation' of the meaning of the text between the viewer or reader and the viewed or read. However, to me the idea of 'negotiation' implies a two-way process, in which the viewed or read (in this case) can in turn respond to the viewer or reader, a response which will only be found in *subsequent* films or novels. 'Affordance' seems to me to offer a more precise approach. Of course, we await a thoroughgoing theory of musical affordances, but a few initial suggestions can be offered. 'Listening' and 'dancing' are commonplace, perhaps, although note that neither of these is forced upon a perceiver. More specifically, whereas a syntactic 'authenticity' affords 'centredness', 'irony' might afford what Scruton (1987) calls 'attentive demolition'. Scruton considers irony, through its refusal to reject while simultaneously deflating, to force on us a perception of kinship. A structural 'alterity', of the kind discussed in Ellie Hisama's essay on Ruth Crawford Seeger (1996), would appear to afford 'mental strength', a stylistic 'minimalism' might afford 'reinforcement of identity' through the degree of interpretive space created, and so on. Through asking what mental positions and social actions particular styles and genres, structures and articulations *afford*, I believe we can do more than simply report and analyse the music, and more than simply report and analyse peoples' "uses" of it, but we can improve on our attempts to imaginatively chart that link, to fill in that space between the experience which we have listened in order to inhabit, and the music without which that experience would not have been.

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U2: 'WITH OR WITHOUT YOU'

4 Instrumental	Dead kit / arpeggiated guitar / sustained organ
8 Instrumental	Add bass, guitars gain in intensity
8 Verse	Add voice
8 Verse	
4 Refrain	'with or without you'

8 Verse	Richer guitars
8 Refrain	Voice jumps to higher octave (sets out new register)

4 Instrumental	Fuller kit / echo guitar replaces arpeggiations
8 Bridge ?	'give yourself away'
8 quasi-Verse	Voice links registers [completion]
8 Bridge ?	'give yourself away'
8 Refrain	

8	wordless. Finally reaches high A [completion] Kit timbre complete [completion]
8 Refrain	

4	original level, except for kit and voice.
8	

8	threatens to relaunch
8	
6+	actual fade

Note: Figures indicate numbers of bars, while the orienting descriptions on the right hand side mostly refer to textural/timbral factors.