

# **AN INTRODUCTION TO SERIAL COMPOSITION FOR GUITARISTS**

**with ten pieces for solo guitar**

**by**

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## HISTORY: THE BREAKDOWN OF CHROMATIC DIATONIC MUSIC – 'FREE ATONALITY', AND THE BRIDGE TO SERIALISM

Serial composition arose in the period of the 1920's in Germany and Austria, largely as the result of the deliberations of two composers, Schönberg and Hauer, working independently. The 'take-off' into serial techniques may conveniently be said to date from the Schönberg *Five Piano Pieces*, op 23 – (1923), as the result of, and subsequent to, a prolonged period of experimentation with composition in a style which is best called 'free atonality'. The whole subject and nomenclature is bedevilled with contradictions and misinterpretations brought about by the fact that Schönberg and his followers, with some justification, disliked the term 'atonality'. (The expression itself was used by hostile critics as a term of abuse and a stick with which to beat the practitioners of the methods involved.)

The young musician studying the subject today is liable to be further confused by the accidental development of serialism in close association with 'free atonality'.

### NO ESSENTIAL CONNECTION BETWEEN SERIALISM AND ATONALITY

Although serialism developed historically out of the school or period of 'atonality', as a method of systematising the somewhat chaotic process of composing in the style of free atonality (among the ruins of the chromatic-diatonic key-system) there is no reason why a serial method of composition should necessarily be associated with 'atonality' at all. This fact is not readily appreciated even today, since the teaching and practice of serial composition is intimately associated with the theory and practice of 12-tone composition.

A certain, justifiable, hostility among some musicians, to music which lies outside the confines of the diatonic key-system that has dominated European music during the relatively short period of a few hundred years, is less justifiable when one considers the very narrow confines involved. Even in western Europe the folk-music stood outside these confines; and in Hungary, Spain, Russia and the Balkans a largely modal music, with curious chromatic *melismata* and *acciaccature*, the whole based on asymmetrical rhythmic frameworks suggestive of distant Asiatic influence, lived side by side with the 'four-square', orthodox, diatonic classical music of the eighteenth and nineteenth centuries. Throughout the rest of time and the rest of the world 'music' did not conform to what western European 'classical' musicians thought it should sound like.

### CLASSICAL DIATONIC MUSIC: A POSSIBLE COMPARISON WITH REALISTIC POST-RENAISSANCE PAINTING: MODERN DEVELOPMENTS IN THE VISUAL ARTS AND CONTEMPORARY MUSIC

It is tempting to consider this classical diatonic music to be the equivalent in sound of post-Renaissance realistic painting. Painting was for several hundred years greatly valued in Europe for its verisimilitude to Nature, for a realism which today would be obtainable in an excellent colour photograph. But in much of the world painting was never like this; nor was the Greek 'realistic' ideal in sculpture necessarily valid. Painting in the 20th century can be said to have returned to its roots with the abandonment of perspective and the discovery of 'primitive' art (see for example Picasso's *Les Femmes d'Alger*); while at the same time the first moves towards cubist abstraction were launched. The date of the famous Picasso painting is only a little earlier than Schönberg's most famous 'atonal' works *Pierrot Lunaire* and *Ewartung*, and Stravinsky's most notorious piece of 'primitive' exoticism *Le Sacre de Printemps*. Diatonic musical composition, while it continued to exist and still does today, can be regarded as having collapsed, or as having been abandoned by some of the most thoughtful musical composers of western Europe in the early years of the twentieth century; abandoned in two directions, both tending to distance the art from the 'realistic' orthodoxy of the diatonic key-system. The first took music towards its roots in 'primitivism'; towards modality and free rhythmic exploitation; the second – the 'atonality' of Schönberg and his associates – towards a species of 'abstraction' akin to the abstraction of cubism in painting; an abstraction in which the music seemed chaotic because there were no obvious key-centres. The rhythmic clichés of the familiar, strong, four-square rhythms were absent and the harmonic palette was found to be confused and highly dissonant by orthodox comparison.



## ABSTRACTION IN THE VISUAL ARTS AND MUSIC: A DOUBTFUL PARALLEL

The parallel between abstraction in the visual arts and music is a useful one in the above context, but one must beware of carrying it too far, since, in a sense, all music is 'abstract'. The abstraction we have referred to in relation to 'atonal' music is really a way of expressing a radical departure from an accepted norm which in the case of the visual arts is one of photographic representation and perspective, and in the case of music an accepted diatonic (key-based), formally organised composition.

### THE ACHILLES' HEEL OF DIATONIC MUSIC; MODULATION LEADING TO EXCESSIVE CHROMATICISM

The Achilles' heel of the diatonic system that led to its 'downfall', is the 12 semitones, which have permitted unlimited modulation within the system. To use another metaphor, modulation has acted like a sort of virus which, attaching itself to all the key relationships, has spread among them and destroyed the meaning of 'key' as an entity.

At the time of Mozart the semi-tones permitted those heart-searching occasional movements of a chromatic kind within the vocal line and the inner parts of a piece of music which add soul and character to the four-square relations of a few chords and keys in a particular piece. Earlier, Johann Sebastian Bach had explored much more energetically the multiple chromatic possibilities of semi-tonal movement within the orthodox key framework. (This development had actually become superseded and unfashionable by the time of his death.) However, once composers during the late nineteenth century began to use the pivotal possibilities of the semi-tone to modulate within the piece, there was no stopping the process, and it was not difficult to write a piece of music in a key and modulate within a few bars to a dozen keys and back again, so that the architecture of the key-system was vitiated, e.g. the formal implications of the 'dominant', when to all intents and purposes the 'tonic' section had hardly been established. The introduction of chromatic passing-notes in a multiplicity of situations, and the actual isolation of many complex chords implying a 'high' degree of dissonance for their own sakes completed the destruction of the key-system. But at the same time it could not be said definitely that this so called 'chromatic diatonic' way fully rejected the key-system. Usually the works were ostentatiously declared to be based in a specific key and returned to it at some point in the music — even if it was only the last note.

### MUSIC AND ARCHITECTURE: CHROMATIC DIATONIC MUSIC COMPARED TO A DEGENERATED, OVER-ORNATE STYLE OF ARCHITECTURE.

The total effect of an extensively ornate chromatic diatonic style can be usefully compared to some sorts of extra-musical construction. Music is often compared with architecture as its formal constructions in time invite comparison to buildings in space. The chromatic diatonic construction is indeed very like a building which has been devised in an orthodox style with orthodox materials which were capable at one time of yielding structures capable of displaying a certain gaiety and a certain simple grandeur; but, as happened with some sorts of degenerate architectural styles and practices, what was originally pure and valid became garnished with a mass of decoration which did not improve the original, and eventually weighed it down with superfluous and ornate excrescence. The deliquescence of late nineteenth century harmony of such composers as Strauss, Mahler and Scriabin, while it still appeals to western audiences, nevertheless contains within itself the seeds of destruction, and cannot offer itself as a point of formal departure to the generations of composers coming after. The Schönberg of the early *Verklärte Nacht* was himself very much a part of that era of chromaticism. In moving forward into the 'free atonality' of his second period he was obviously impelled not only by harmonic but by architectural aspirations in the reform of musical composition; but it is doubtful if the implications of those aspirations were fully apprehended by the composer himself until he came later in the 1920's to the systematisation of composition with the 12 semitones. Some would doubt, having formulated his *zwölfton* method (called twelve-tone, but in fact comprising the twelve 'notes' or twelve semitones) whether he was able in his own 12-tone works, to carry out the full implications of his method architecturally; and would moreover, assert that this was first successfully achieved by his pupil Webern.

## SCHONBERG AND 'FREE ATONALITY'.

Schönberg successfully carried out the first act of honest rejection in disowning the key-system as such. Since the key was the tonal 'leader', it followed — with the use of twelve semi-tones — that there was a democratic attitude towards the constituents of the music. This already had some negative formal implications, since the old reiterative laws relating to the reappearance of sections in the dominant and similar devices were 'dead ducks'. As for the harmony employed, the official harmony, based on orthodox chord relationships, was replaced by a democratic build-up of harmony using the 12 semitones in a way which some would call anarchic, since it was not controlled by anything other than the expressive requirements of the composer. Cynics will note that the well observed dislike of human beings for a legal and authoritarian vacuum more or less guaranteed that, before long, the overthrow of academic diatonic laws and formulations would be followed by another form of systematisation.

### FREEDOM FROM SCALAR CHROMATIC MOVEMENT.

A very important part of the 'free atonal' style — one could say a vital part — and one which has given rise to the strongest hostility and the greatest misapprehension, followed from the abolition of the scalar chromatic movement which dogged so much late romantic music. So many works of the era suffer not only from the excessive lusciousness of the music, the harmony of which becomes 'cloying', but also from an increasing tendency for the parts of the music to move by semitonal progressions. It is as though the diatonic basis itself is hidden behind a chromatic decoration of serpentine character. In deploying the twelve semitones in the style of 'free atonality', the first and most noticeable aspect of Schönberg's approach, is his abandonment of the obvious scalar component of chromaticism. This he does by a process of spatial freedom which I will call 'dislocation'.

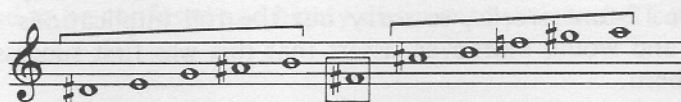
### SPATIAL DISLOCATION OF THE SEMI-TONES OUT OF THEIR OWN OCTAVE

Schönberg's process of spatial 'dislocation' is one which critics of the method have regarded, perhaps with some justification, as one of the most 'abstract' of his approaches (if indeed the word abstraction can be legitimately brought into the discussion). To Schönberg this ability to move spatially is an essential part of his later twelve-tone systematisation, so that a particular semitone among the twelve has no precise location within the octaves available on the instrument employed. The new approach to musical 'space' was accompanied by a deliberate return to polyphonic methods and the use of soloistic (chamber music) techniques in orchestral writing; and for this reason the use of wide intervals and leaps proved extremely valuable constructively, *Ex. 1*, and 'at a stroke' abolished the creeping effect of complex

Ex. 1



The 11-note serial row used in the 4th guitar piece (p 34) was conceived in this 'dislocative' form. However it can also be seen as two pentachords, of tonal, scalar quality, in E minor and D minor posed around a central F-sharp. The inversion yields similar descending, 'tonal' scales (C minor, and D minor).





chromatic instrumental parts. One should remember that the writing of melodic parts in this way is by no means strange to players of string instruments who take naturally to writing 'in space' — and have done so since the days of J.S. Bach. The guitar in particular, with its contrapuntal potentiality, is well able to contend with wide leaps, and simultaneous material using the lowest strings and the uppermost positions, provided that the material is organised so as to move subtly through the open strings. The wind instruments — and more so the human voice — were, and are, faced with more formidable problems as the result of what I have called the 'dislocative' melodic techniques of 'free atonality', as can be seen in a work like Schönberg's early *Hertzgewächse* (op 20). Some of these melodic techniques, especially as applied to the human voice, have more significance than that of a purely technical device to abolish scalar chromaticism.

### HISTORICAL EXPRESSIONIST MOVEMENT AND DISLOCATIVE MELODIC WRITING.

Schönberg's emotional aims and predilections can be related at this juncture to the art-movement labelled Expressionism, which was particularly significant in the Central Europe of the early years of the twentieth century. One of the main characters of this movement was the free, even violent expression of emotion. Constant Lambert, criticising Schönberg's *Hertzgewächse*, which employs a soprano voice of very wide compass and a tiny instrumental group of harp, harmonium and celesta, used the expression "nightmare". Certainly, dislocative melodic styles produced that sort of effect on earlier listeners to Schönberg's *Ewartung* and *Pierrot Lunaire*. *Ewartung* is based on a nightmare situation of a woman encountering the corpse of her dead lover; and there are sections of Berg's *Wozzeck*, composed in the same style, which are as near a nightmare as makes no difference. Here the huge leaps and similar dislocations of melodic line justifiably produce the heightened expression desired by the composer, in line with the horrific situation in the operas.

A closer knowledge of the music however shows that the allegation that melodic dislocation must necessarily cause a hyper-emotional or nightmare-ish effect does not hold water. If we listen to such a work as Webern's *Five Canons* (op 16) for soprano and clarinets we can find, in the section *Dormi Jesu, mater ridet*, that dislocative melodic writing can be used to produce a contemplative and religious effect, the nearest parallel to which is to be located in the religious arias of Johann Sebastian Bach.

### ATONALITY: A VALID TERM OR NOT?

If Schönberg disliked or even disowned the term 'atonality' in relation to his work, how did this term come to be associated with his abandonment of the key-system and to what extent was his objection valid? Most artistic movements have such titles and tags which have usually accrued as the result of the attentions of the journalists of the art-form concerned. They have the excuse that they have the responsibility of finding terminology to refer, in print, to the matters in hand. The employment of the so called 'atonal' style of composition abolished the diatonic system, but it did not necessarily abolish tonality. Therein lies the problem; Schönberg's compositions of the period should perhaps have been called 'a-diatonic'; but then multi-chromatic diatonically-based compositions may often appear 'a-diatonic' from moment to moment. Schönberg's objection to the word 'atonality' may have had some deeper objections related to the theory of harmony; but on a simpler plane it can be pointed out that it did not take him long to discover, as others have done travelling the same path, that from point to point tonal centres emerge as evident bases for the music, even though such centres may be shifting, and to a degree ephemeral. Some such centres impose themselves by the very nature of the material,  $E_{\times 2}$ , although the composer has not designed them as such. A good

Ex. 2

(a) 

(b) 

From Five Guitar Pieces – No 3 (p 32)

Serial material employed to compose music not designedly 'tonal' can nevertheless give rise from moment to moment to passages with strong tonal implications.

- (a) cadence implying dominant in 'key' of C
- (b) tonal centre of D emerges.

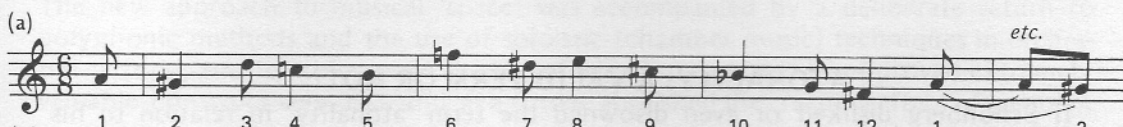
example of such events is the use of pedal points which suddenly tend to focus the upper parts in the direction of the tonality of the pedal points. Furthermore, three or four notes with intervals of a minor third or more between them may come to have tonal implications, especially if (accidentally or purposely) a bass note comes to have a certain relationship with them. This argument may seem to lack point, rather than validity, if the tonal centres are shifting so rapidly that it is impossible to discern them.

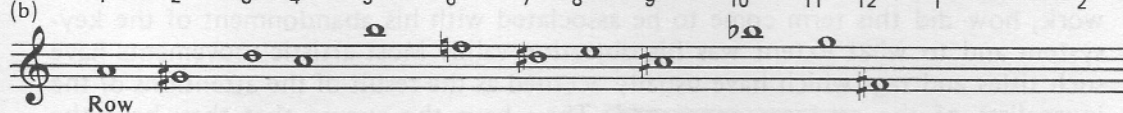
### THE THEME AND FREE ATONALITY.

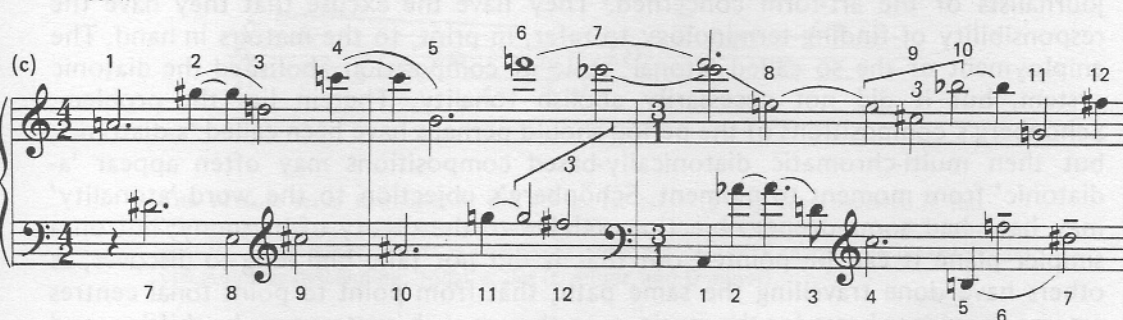
We have reached a point in the discussion of 'free atonality' in which some explanation has been given of the abandonment of chromatic diatonicism and the key-system and the subsequent launching into a style of composition using the twelve semitones freely. At the same time the importance of combining this resource with a dislocative technique in melodic writing has been stressed as an aid to contrapuntal and orchestral writing, and to provide not only freedom from a creeping semi-tone by semi-tone chromatic line, but to allow certain expressive – even hyper-expressive – possibilities, especially in relation to the human voice. A further implication of these techniques must be mentioned since it has led to a great deal of confusion and even hostility; this is the status of the *theme* in such music.

It is of course perfectly possible to construct a theme which embodies 12 semitones, Ex.3, and, since a theme, in the absence of some formal serial organisation, tends

Ex. 3

(a) 

(b) 

(c) 

- (a) 12-tone serial row
- (b) Can yield equally well a 'chromatic diatonic', theme-like statement,
- (c) or a contrapuntal passage like the following



to be the strongest formal 'generator', the polychromatic theme may well itself introduce that atmosphere which we have loosely called 'atonal'. But the theme as a recognisable, repeatable entity, especially as an expansive tune, is really a creature of western European classicism of relatively short duration. A very recognisable theme of diatonic or modal character is not even very good material for classical construction, since, though charming and repeatable, it resists treatment other than repetition — rather like an excessively beautiful and talented person who fails to fit into an organisation of more ordinary dull human beings. Even in western Europe, earlier contrapuntal eras produced a whole corpus of church music which was based on quite limited 'motives' of a few notes (which is in fact the best sort of basic material for contrapuntal construction). There must however be no confusion here between melody and theme. The theme automatically implies a constructive role, a sort of malleable and disjointable building-block. It is intended to be repeated again and again, recognisably used (as it is in the 18th century), for formal and symmetrical architectural purposes; and only to a limited extent altered about in its development, which must proceed from the harmony implied in it and the few rhythmic formulae which it suggests in its course. Melody, on the other hand, need not be thematically based. It need not be 'poetic' or symmetrically-rhythmic; but may be 'prosodic' or free-flowing. A contrapuntal piece is, by definition, composed of a number of melodic parts which continue indefinitely throughout the work, but the voices may flow in continuous melody which has little in the way of a theme — a mere 'cell' perhaps of notes, in the terminology which has become popular today. In the era of 'free atonality' there is a strong tendency for theme to revert to the role which it fulfilled in the contrapuntal era. The rhythmic elements, which were used constructively in the theme of the classical era, may re-appear as motivic material which is divorced from the statement of particular notes, but is valid just as a rhythmic statement or motto.

This loss of a diatonic or modal-based simple tune as the fundamental character of a particular musical piece has always seemed intolerable to some musicians, and accounts perhaps for their disinterest in the music of Schönberg and his associates; and their dislike of much music of the post-Schönberg era.

#### INDIAN CLASSICAL MUSIC: SOME POINTS IN COMMON WITH SERIAL MUSIC OF THE TWENTIETH CENTURY.

Every musician must obviously play the music that he or she likes, and there will always be some who are temperamentally confined to the music of the classical period, just as there are those whose interests are not directed to that period at all, or to the contemporary music under discussion, but who want only the simple modal or chromatic-diatonic 'tune' with sophisticated, repetitive-rhythmic accompaniment which passes under the names of the various popular styles of jazz-pop/rock. It is worthwhile, however, considering at this juncture the situation in such an art as Indian classical music, which is not only highly sophisticated, but also in touch with a mass audience throughout the sub-continent. Here a huge, unsophisticated public can get pleasure and spiritual uplift out of a system of music which is entirely valid, without many of the essential elements of western 'classical' music, but which at the same time contains a number of elements which are much more closely in focus with recent developments in the Schönberg and post-Schönberg era. In common with earlier western music is the fact that the music is tonal, but, as it were 'totally tonal'. A tonic is sounded and continues to be sounded by string and drum drones throughout. Therefore the 'Achilles' heel', as it was previously described, which laid western diatonic music open to destruction, is absent. It is impossible suddenly to modulate and destroy the effect of the tonic. The twenty-two *śrutis*, into which the octave may be divided, very nearly corresponds to a system of quarter-tones; and this micro-chromatic resource gives rise to the multiple subtle hoverings and emotional dippings of the music. But the whole is based on a succession of scale-like 'ragas', one of which has to be chosen for the piece, and which can only contain some of the available tones. This brings the system very close to one

aspect of the final systematised Schönbergian departure of 'twelve tone' music, in that the Indian musician must choose his notes or row or raga for each piece and stick to them. But it cannot be described as serial in method, since he is not confined to repeating the notes of his raga in a specific order. Moreover each raga, which is an arrangement of notes ordered by tradition, has a specifically emotional atmosphere often associated with special times of day, Ex.4, and with underlying religious

Ex. 4  
PURVI THAT



(After Ravi Shankar) Flattened-D and A indicate the *sandiprakasha* group of ragas associated with sunrise and sunset. The term 'That' would appear to be the basic scale; but is described by Ravi Shankar as the North-Indian Classification of Ragas of V.N.B. Bhatkande (d. 1936) into ten species. Note: an F-natural, acting as a sort of appoggiatura on E-natural, appears in the Raga but not in the 'that'. In South India there are 72 primary scales (melas) produced by variations of the 7 fundamental notes, and the 'that' classification is not accepted.

PURVI RAGA



significance. When we come to discuss the serial method we shall mention the importance of the non-scalar quality of the row, in that the intervals between the notes condition the harmonic vertical consequences of its use. The raga has no harmonic consequences in theory, so that it loses nothing by being scalar. It is very interesting to note that in the early development of non-dodecaphonic serialism by various composers (Debussy, Stravinsky, Scriabin, Bartok, Roslavetz) referred to by George Perle<sup>1</sup>, the emphasis on a set note-order was nothing like so strong as in later Schönbergian practice, nor was it essential in Hauer's practice, which was closer to the concept of the Raga.

When we come to the matter of theme we are again likely to be struck, in Indian music, with its dissimilitude to the orthodox, classical methods of the west. There may be some recognisable motto-themes which have descended traditionally, but in general the musician composes his own music on the raga, and what results is an uninterrupted flow of free melody, flowing like a river for as long as he wants to play and the audience is prepared to listen, sometimes for hours at a time. Unlike western serialism however the music is perforce anchored to a very carefully laid-down rhythmic framework, the *tala*. The western listener to such music, almost as though determined to be awkward, will often find fault with it and declare it monotonous on account of those features which he reveres in his own music, such as a strong element of tonality, because it fails to alleviate the ear by modulation. At the same time the non-thematic nature of the continuous prosodic melody, and the highly complex rhythmic variations against the basis of the *tala*, bring the music into focus with those elements which he finds difficult to assimilate in the music of the serial composers from Schönberg onwards — asymmetry, absence of recognisable theme, and so on.

<sup>1</sup> George Perle: *Serial Composition and Atonality*. Faber (1962)



## THE TRANSITION TO 12-TONE SERIALISM.

The broad discussion of 'free atonality' above leads us inevitably to a consideration of what has happened to 'free atonality' in the process of becoming 12-tone composition. Students of mathematics will recollect that the concept of tiny increments attached to the two sides of the equation of a curve led to the concept of infinitesimals and limits, differentiation and integration. Without this classroom fact no complex calculus is possible, no nuclear physics, and perhaps no end to the world. The concept of ordering the twelve semi-tones specifically for constructive purposes seems a simple matter at this late juncture, but it must have been a remarkable enough leap into the unknown at the time. Some would say it has destroyed western music as it once was — others that a vital element in the contemporary music of the last half century depends upon it. Of course mathematicians cannot dismiss such vital tools as the calculus; but some musicians would argue that they can go on very well in music without Schönberg and the serial developments which his discoveries entailed.

### TWELVE-TONE SERIALISM: A SPECIAL CASE IN A GENERAL CONCEPT.

The vital consequence of the introduction of the twelve-tone system was that it introduced the general concept of serialism into musical composition. The less vital part, but nevertheless important aspect of Schönberg's system was that it set up the special method of total construction simultaneously both melodic and harmonic, using the initial 'row' (*reihe*) or 'set' of semi-tones. Furthermore Schönberg had taken a vital step in perceiving that music is an Alice in Wonderland world in which everything happens by mirror images in the looking glass; that any direction of movement must be capable of being varied by its reverse, and that all scalic and arpeggio-like material must be capable of progressing upwards and downwards.

### THE SERIAL MATERIAL.

In devising the idea then, that the music should be derived from the basic 'row', Schönberg stipulated, as an essential rule of the method, that the material of this basic row should give rise to the same order of notes whenever used. This rule is vital to the true concept of 'serialism' or an ordered series, but is, like most artistic rules, bent or even ignored to a minor degree; and sometimes to a greater degree, in artistic practice. The original 12-note row can be modulated to commence on any of the remaining 11 semitones of the chromatic scale, providing the composer with 11 identical variants of the original row (12 rows in all), although there is no incumbency except for artistic reasons that any of the additional 'modulated' rows should be used in the piece under consideration. Since these 12 variants of the original can all be stated in inversion according to the orthodox musical practice, the composer will have in hand 24 rows. Each original can, however, be also stated in reverse order or 'retrograde' version, in just the same way as a scale or arpeggio ascending returns to earth in reverse order. There is nothing perversely academic about this, as was suggested by some hostile critics in earlier years — the objections were, it seems, derived from the confusion generated by the mistaken parallel with certain highly artificial contrapuntal practices of stating thematic material backwards. But the basic row and its variants is not thematic material, but basic building material, like the diatonic scales and arpeggios, and like them must be totally invertible and reversible, Ex.5.

The 48 possible tracks or row-variants obtained by modulating the four originals are written out before commencing a work based on a 12-tone row (*three variants only* per ROW, INVERT, RETRO-ROW, RETRO-INVERT. given below, for brevity, ascending by semitonal level).

Ex. 5

Ex. 5 displays four musical staves, each representing a different type of 12-tone row variant. The first two staves are labeled 'ROW (Original and first two semitonal modulations)' and 'INVERSION'. The last two staves are labeled 'RETROGRADE' and 'RETROGRADE INVERSION'. Each staff contains a sequence of notes on a five-line staff, with a double bar line and 'etc.' indicating that the sequence continues. The notes are written in a way that shows the relationship between the original row and its variants.

In composing a piece of music it is stipulated that the composer uses only this building material, these tracks of 48 notes, and that, as a fundamental rule notes are not repeated before the 'quota' of semitones have been deployed or 'used up'. By 'repeated' in this connection there is of course no suggestion that notes cannot be repeated 'on site', as they would be in a melodic feature requiring staccato reiteration of a note, in string bowed-tremolandi, trumpet-staccati rhythms, flute flutter-tonguing, guitar tremolandi, and so on.

The material of the forty-eight tracks is actually enormous. It is quite possible to build a whole movement or even a whole work on the rows and inversions without using the retrograde tracks. On the other hand, all four variants may be deployed from the start with deliberation, for use as contrapuntal material. A substantial movement could be composed without using any of the modulated rows being employed, by simply using the original row and its inversion with skill. A work so constructed has a special coherence due to the fact that everything in it is derived from a single source.

### THE UNPREDICTABLE ELEMENT.

It will be remembered that in Edgar Alan Poe's *Masque of the Red Death*, in spite of all the careful arrangements to exclude the fatal visitor, he succeeded in gaining entrance. The Achilles' heel of diatonicism is the capacity to modulate, which destroyed the system by introducing the fatal effects of chromaticism. In the serial system of composition the possibility of using a further 11 modulated rows (not to mention the inversions and retrogrades) provides not an Achilles' heel, as in the diatonic system, but an unexpected dimension of total freedom, which is at variance



with an otherwise carefully controlled system to keep the composer working from and within the material he has elected to choose.

The way this dimension of freedom works to 'destroy' the careful control of the basic material itself is simple in the extreme. When the twelve semi-tones agreed on have been stated, as they have been 'used up' in a form which is partly melodic and partly harmonic in implication, the ear will then 'expect' and the system 'demands' that the first of the 12 semi-tones is then sounded anew somewhere in the mesh of the music. But there is no incumbency on the composer to do so, since he is at liberty to choose any other modulated version of the row he wishes according to the interests of the progression of the piece. Whatever step he takes next, unless he repeats the original row, will vitiate the system. He can indeed vitiate it in a special way by choosing the next variant to begin on the note with which he has just finished the original row, thus breaking the 'no repeat of notes' rule.

Fortunately, the above 'vitiating' is a philosophical hiatus in the system, rather than a practical one, and carries vital constructive consequences with none of the long-term destructive overtones of modulation in the diatonic system. Music is not about obeying precise rules as opposed to artistic judgement; indeed, the ability of the composer to pass from one modulated row to another and sound any note he likes at every twelve-note junction provides just that degree of artistic freedom which critics of the method of composition, having had little experience of it, say it fails to accord. Practitioners of the twelve-note system will confirm how astonishingly quickly 12 semitones can go, 'used up' perhaps in two 6-note chords, Ex. 6, leaving

Ex. 6

(a)

(b)

[Row 123, 456, 789, 10,11,12, (Inversion) 456, 789, Row (123) 10,11,12

Illustrating the 'dimension of freedom' to 'modulate' to a new level of the row or its inversion/retrogrades, every time a statement of the row is complete.

- (a) the Row  
 (b) 5-bar passage. The tones are 'used up' rapidly by the chords of bar 1 and 2, and in theory the ear now demands the 1st tone (A natural) again at this point. However the composer may elect to proceed with any of the other 47 variants, rather than the original. If he elects to proceed with the inversion on the semitone below, he can sound the 'wanted' A natural and its following tone G-sharp, as in bar 3 (ex. 6).  
 (c) Inverted row (see below).

(c)

(Inversion semitone below original).

the composer with nothing but his own decision and artistic integrity to decide which 'row' to proceed with next; and this decision has to be made again and again, every few seconds throughout the piece, in addition to the free decisions as to what way to deploy the notes within the row itself 'in space' as opposed to in order. Even the order may be the subject of minor artistic variation, though gross variations of this rule tend to turn the procedure, by definition, into one which is no longer 'serial'.

### THE DUAL ROLE OF THE NOTES IN A ROW IN RELATION TO MELODY AND HARMONY: THE IMPORTANT FUNCTION OF THE INTERVALS BETWEEN THE NOTES OR ELEMENTS IN THE ROW

In describing the method of composition using the row of twelve semi-tones, we have up to now, dwelt only cursorily on the dual role of the semitones in relation to the melodic and harmonic components of the piece — a matter which may still be highly confusing to musicians who are performers, but not necessarily students of compositional technique. Let us therefore recall for a moment the elementary techniques of 'orthodox' composition — melodic thematic, and contrapuntal. An elementary act of composition consists of hearing a tune mentally, and then supplying some orthodox chord sequence, tonic, dominant, subdominant, which will 'support' the tune, which usually begins and ends in the key of the tonic. An elementary act of contrapuntal composition consists of taking a few related notes as a motto theme and deploying them in varying levels as 'voices', starting and ending before or after each other, so as to derive between the voices 'acceptable' vertical harmonic relationships — the best example being a simple canon, such as the tune *Frère Jaques*.

In describing the procedure in twelve-tone composition two important matters must be taken into consideration. The first one we have not yet touched on, in the somewhat crude and insufficient description previously given of the choice of the 12 semitones. It was assumed that, as one of the exercises was to avoid a snake-like chromaticism, we avoid a row of adjacent semitones. But the procedure, after a very short experience of the technique, is bound to go much beyond this. In fact an attempt by the reader to write down 12 semitones at random will at once derive a 12-note row; but an inspection of the row will quickly reveal that the most interesting thing about it is the interval relationships between the various semi-tones. It is quite possible, to write a row entirely of whole-tones (two groups of six) *EX.7*; to write

Ex. 7

(a)

(b)

'semitonal' possibilities

Types of serial row with fixed intervals have architectural deficiencies from the point of view of composition

- (a) 'Semitonal row'; dislocated positions; but in fact a chromatic scale, and of little compositional value.
- (b) Whole-tone row. Monotonous repetition of major-second or 9th intervals. There are two semitonal possibilities, and the dimension of freedom at the end of each row allows of the introduction of another interval at this point only. Nevertheless, a limited and monotonous resource.



- (c) Rows with fixed intervals of fourths and fifths. Monotony of possibility, alleviated only by the introduction of 'new' intervals at the end of the row statement.
- (d) A Row with adequate potential for intervals of mi-ma 3rds/6ths mi-ma 2nds/7ths, Augmented 4th, 4ths and 5ths. Varied harmonic and melodic possibilities are enhanced by an organised interval pattern avoiding monotony.

(c)

(d)

a row of juxtaposed semitones at semitonal intervals; to write a row composed of nothing but fourths, and so on. But in composing music from such rows unpleasant or boring consequences may follow. A row of fifths means a jump of a fifth at every statement of a note, (or a fourth by spatial displacement). Whole-tone statements unrelieved may give rise to rapid monotony. The initial capacity of a 12-tone row to be useful, interesting and valid, is in fact, determined by its intervallic capacity, which distinguishes it from the possible less 'useful' alternatives. What the composer will do, initially by instinct and later by deliberate choice, is to choose a row which has, in the 11 interstices between the semitones which make it up, interval relationships of a varied kind. If the row contains for example several intervals of the minor second, a major third, an augmented fourth, a fifth, a minor third and some major seconds, the melodic and harmonic potentiality is great, remembering that such a row will invert so as to give other intervals. Reverting to that unexpected degree of freedom we mentioned before, every time the row ends a new interval is available 'on request' by choosing which modulated row to go on with.

#### THE FREEDOM TO PLACE NOTES OF THE ROW IN ANY OCTAVE: SPATIAL CONSIDERATIONS.

Our second consideration has been widely referred to above as the process of spatial 'dislocation' of the semi-tones. The word 'dislocation' has a certain pejorative if not pathological ring about it in relation to orthodox melodic practice; but it refers conveniently to the practice of permitting notes to sound in any octave, thus producing wide leaps in the melodic line. What the procedure refers to is the fact that nowhere in Schönberg's original concept of practice, or subsequently, has it been seriously suggested that the ordered semitones must be sounded at a particular level only. It has been assumed that there is a sort of free 'space continuum' for all notes, extending over the seven octaves or so of pitch. Thus a D natural, stated originally in the row as D-above middle-C, may reappear the second time round in the double bass compass, and next time in altissimo in the piccolo. One effect of this is that within the original row and without inverting it, stated intervals have a very wide capacity for 'transmutation'. A composer may think out a row as starting with a D-flat followed by the E-flat in the octave below (ma-seventh); but at next appearance it may be the E-flat adjacent (ma-second). A fourth (of the row) sounded below will in fact become a fifth, sixths become thirds and etc.

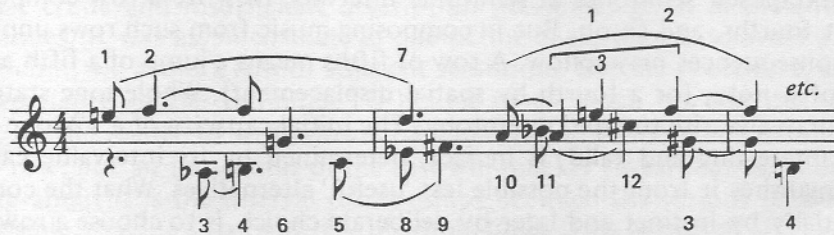
'TRANSMUTATIONS' (dislocations) of notes in 8vo alt. or basso  
ARE A VITAL NECESSITY TO THE COMBINED MELODIC HARMONIC  
TECHNIQUE.

The possibility of these multi-octave transmutations of the individual semi-tones and the important initial selection of the row, with its significant intervals, will now make it more evident how the row can function, both melodically and harmonically. Every time a semi-tone is sounded it sets up a harmonic relationship with a previous one which is still sounding, (sometimes even if it has ceased to sound), or, if held on itself, with the next semi-tone following, which is perhaps a sixth away from it in the bass. Without labouring the point, it can be seen that should the composer elect to write "two-part harmony" he could proceed by using two successive semitones of the row at the soprano level and hold the last one on; then sound the two successive semi-tones next due in the bass and hold the last one on, so proceeding by two voices, *EX.8*. This simple illustration shows how semitones 1 and 2, 5 and 6, and 9 and

### Ex. 8

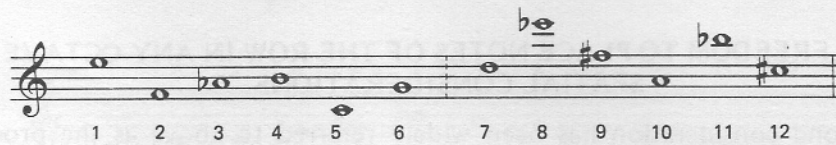


Simple contrapuntal treatment of 12 tone row: Even at this early stage in the piece, artistic considerations require the slight 'displacement' of the 6th tone to give 6,5 rather than 5,6.

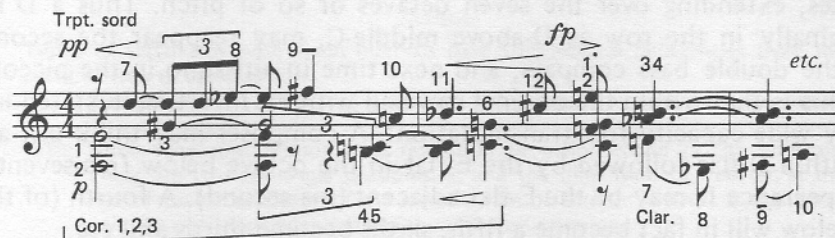


10 would provide a melodic counterpoint to another voice using semitones 3 and 4, 7 and 8 and 11 and 12 in the bass, after which time a modulated 'row' or a return to the first semi-tone of the original row is demanded. Alternatively the matter can proceed by 'hexachords'  $\in_{x,9}$ , — i.e., by providing a voice made out of the first six semi-

## Ex. 9



Proceeding by 'hexachords'. The initial lower counterpoint (horns) commences with the notes of the first hexachord. The upper voice (trpt sord pp) is derived from the second hexachord (notes 7-12).

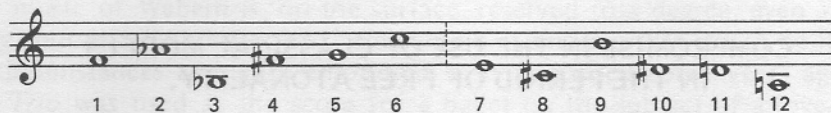




tones of the row, deployed against a counterpoint derived from the last six semitones; matters may be further carried on by deploying the first six semitones **against their own inversion or retrograde version** (or the inversion or retrograde of the opposing 'hexachord' (half-row)). With each return to a modulated-row the element of the 'new' interval or what we may call 'intervallic discontinuity' creeps in. Sometimes the intervallic discontinuity may lead to a 'discovery', and this particular opportunity for an interval not in the row may be seized on for the purposes of a melodic-motto of some kind, which thereby comes to have 'thematic' significance.

The employment of a single row in each work is regarded as important from the point of view of economy and structural coherence, *Ex. 10*. However no hard and fast rules

Ex. 10



See *Five Pieces for Solo Guitar* (p 38)

The Five Pieces are derived from a single row and its variants. In this case the relationship between 'tones' is further strengthened by the fact that the 2nd hexachord is an inversion of the first (modulated down a minor second).

can be laid down where large works are concerned, in, say an opera, where music derived from one row and its variants may be used in a contrasting way for atmospheric purposes, as against music for other scenes or acts derived from other rows. In this case it is often regarded as valid to construct the new rows by choosing a new arrangement from the original by picking out, say, every second note, or third note. One may thereby truthfully say that the resulting basic-row is 'derived' from the original material. It is however, doubtful whether the procedure has any real validity, except in so far as it gives the composer a certain psychological satisfaction to feel that there is a genuine relationship between the different rows, even if it leads to quite different music and cannot be perceived by the listener, only the student and programme-note reader.

#### RHYTHM UNSYSTEMATISED IN STANDARD SERIAL METHODS.

Nowhere in this system is there any control on or any 'systematisation' of rhythm, unlike Indian music where, although note-order in the raga is not systematised, the rhythmic framework or tala has to be carefully observed for each piece. It is up to the serial composer to introduce what rhythmic relationships he likes between the semi-tonal material of the row, and to decide what overall rhythm he is going to employ in the music. At first sight, the absence of any kind of rhythmic 'system', in view of the careful organisation of the melodic and harmonic basic material, is a little surprising. One of the first moves of the young composers of the 'post-Webern' school was to suggest and even to act upon the idea of serialising of those elements which (mercifully) the second Viennese school had left alone, such as rhythms and dynamics. Certain consequences follow from the serial technique of Schönberg which make it important that there should be rhythmic *freedom*. The absence of a strongly thematic element with its reiterative implications means that rhythmic characteristics and motto forms of a rhythmic kind may be freely introduced to form important unitary components in the piece, lending distinctive elements which are required for definition of atmosphere and emotional implications. At the same time a system of composition which has moved into a freely rhythmic, non-thematic and contrapuntal sphere is not at all well suited to the sort of four-square reiterative framework which is characteristic of so much classical symphonic music — which, to tell the truth is based on the development of rhythms derived some centuries ago, from 18th century dance movements.

1. Note "Cliché". *Lit. in French* has the meaning of a plate, illustration-block or stereotype, or typewriter-stencil. It is used to denote those rhythmic harmonic and melodic stereotypes which form the main building-blocks in chromatic diatonic classical composition, without necessarily implying a pejorative meaning, such as the word has come to have in literary criticism.

## RHYTHMIC AND HARMONIC CLICHÉS ESSENTIAL TO CLASSICAL DIATONIC CONSTRUCTION.

Looking more closely at the framework of classical music we shall find that in addition to the chromatic diatonic 'clichés' of its harmony and its diatonic, key-based themes it demands a number of clichés of rhythmic origin which are an essential element in its construction, and are often related to that classical (18th century based) element of symmetry which has been characteristic of western European music, but is foreign to most other cultures. Some of the formal repetitive contrapuntal clichés of the classical era have not been abandoned even by such revolutionary serialists as Webern, who was deeply committed to such devices as 'canon'.

## COMPROMISE IN THE USE OF CLASSICAL MODELS IN THE PERIOD OF FREE ATONALITY.

At the time of the period of 'free atonality' the deployment of classical models by Schönberg and Berg was, on the face of it, a curious phenomenon, contemporaneous as it was with the 'revolution' of atonality. This course of events is partially explained by the fact that the atonal revolution was itself taking place at the same time as the emerging era of neo-classicism launched by Busoni in 1909, and followed in enthusiastic style in the post-war era by many composers, of whom the most brilliant and distinguished convert was Igor Stravinsky. Suffice it to say that Schönberg and Berg appeared not contented with their revolutionary creations of 'free atonality', but 'wrapped them up' in a respectable framework of neo-classical clichés, as though they were at that stage unable to proceed formally, as opposed to their melodic and harmonic experiments. There was perhaps even an element of respectability to be gained by composers under fire and accused of 'anarchy' and 'chaos' by their enemies, by deploying neo-classical forms and assuming neo-classical labels. Fortunately many neo-classical labels have come, over the years, to mean very little, so that for an 'atonal' composer to entitle a work *Canzonetta* or *Aria* need not necessarily entail more than a suggestion of an atmosphere of 'cantabile' about the piece. In the opera *Wozzeck* Berg gives a particularly good illustration of the slightly spurious 'justification' of atonal techniques, by using neo-classical titles and making a show of neo-classical forms in various sections of the opera. The work of course is not a 'serial' one, though the listener may not necessarily find it easy to tell the difference.

## CLASSICAL CLICHÉS WHICH ARE ESSENTIAL TO CLASSICAL WORKS ARE UNNECESSARY AND EVEN SPURIOUS IN SERIAL COMPOSITION

The clichés of classical composition provide essential landmarks and ways of progressing from one point to another but they have no real validity in serial composition. A good case in point is the device known as 'sequence', which can wear pretty thin even in orthodox classical works. But this device provides an easy way of progressing for the composer of diatonic works, at various junctures in the score, as a way of modulating or developing thematic material. Certain sorts of obsessive rhythmic material, such as repeated 'dotted-quaver' rhythms, are typical of much classical music and are an orthodox way of progressive movement, derived from 18th century clichés, which in opera are usually associated with either aggressive marching or old, doddering angry men shaking their sticks at recalcitrant wives or daughters. Needless to say such devices can have no 'legitimate' role in serial composition. Other rhythmic devices which find their way again and again into contemporary neo-classical scores are such clichés as the 'quaver two semi-quaver-quaver' rhythm, and the tarantella fast-triplet, both of which have descended from the fast movements of J.S. Bach and composers of that era. Such devices are, by their repetitive nature, destructive of unhindered progress in serial composition, and — though of value in their time — have regretfully to be 'declared redundant' by the composer of serial compositions. Yet it is with some surprise that we have to note that, for all his brilliant imaginativeness in launching the ideas and the practice of the system itself, Schönberg, the composer, was never fully able to free himself from the use of neo-classical clichés, and even in such a late work as the *Violin Concerto* it is possible to observe them widely deployed.



## THE MATERIAL OF THE SERIAL ROW SHOULD GIVE RISE TO ITS OWN FORMS

It was not until the period of Webern's mature works that the spectacle could be made public of a serially derived music which stemmed architecturally, in the true sense, from the material, without recourse to thematicism or to rhythmic and formal clichés. The unique quality about this art is its total derivation from the material itself. To continue the architectural metaphor, one would not expect an architect, having at his disposal wonderful new materials and techniques, which were not available or appreciated previously, to go ahead and build with these materials a pseudo-Gothic cathedral or a mock-Tudor house. But this is a matter of 'art' as opposed to expediency, and there will always be those who are less interested in art than in a renowned impersonation of art, or in entertainment. The more austere realities of art may even, in many people, conjure up boredom and repugnance.

The music of Webern is, on the surface, reserved to a degree, even at times forbidding; but the 'expressionistic' element in it ensures that it can be heard in the right circumstances as highly emotional — as happened some years ago when his *String Trio* was used as the score for a ballet on the subject of a love-triangle. In these circumstances the atmosphere on the stage was greatly heightened by the music. In other circumstances Webern's music seems to possess a coolness and detachment that conjures up the sculptural equivalent of a Gabo or a Brancusi.

## SOME QUESTIONS POSED BY THE APPARENTLY NEGATIVE ASPECT OF SERIALISM.

It will not have escaped some readers that our earlier description of some elements of 'free atonality', and the above references to the basis of serial composition, have involved something of what appears to be a journey into negativism; a jettisoning of a number of familiar components of classical composition. It must be stressed that what has replaced them is a composition in which the forms are derived for each work from the material itself, and not from classical building blocks or clichés. Is serial music a real music at all, or is it, as the result of the abstraction of old familiar elements, a kind of mirror of real music; even an anti-music with something of the quality of the anti-matter now set up by physicists against the familiar 'matter' of everyday life? That this is not so is perhaps not helped by misapprehensions which have often arisen, as the result of linguistic confusion. The term 'Variations' used by many serial composers as the title of their works is a case in point (e.g. Schönberg's *Variations for Orchestra*). Is there such a thing as Variation form in serial composition or is the title an abstraction? The term 'variations' in classical music is almost always held to refer to a series of pieces based on the musical treatment of a **theme**, such as the development in its restated form of material derived from its intervals and its rhythmic peculiarities. In more modern times a departure has been made in expanding the term, so that it includes variations on other musical features beyond the 'theme'; but such departures are not extensive. In the case of 12-tone serial music however, although works do exist in which the row itself has a thematic content and construction, theme is not a common feature and there may be many works which are non-thematic. If we consider once again how the music is constructed it will be remembered that the act of composition involves taking a specific arrangement of semi-tones and using them to construct a musical edifice in as varied a way as possible. The composition is in fact a continuous process of 'variation'. The term 'perpetual variation' is a common technical appellation for the recent techniques of 12-tone construction, which aim at building musical edifices out of the material with the total abolition of classical clichés, and the repetitious gestures of orthodox classical composition. Thus the term 'variations' as used in serial composition does not imply variations on a theme, which may, in classical terms, be non-existent. It cannot really mean more than a series of short pieces as opposed to one long piece, each of the short pieces exploring some aspect of a particular serial-set or row. In this context the title 'Twelve pieces' would have much the same significance as '12 Variations', since they are all in fact variations on a serial row. Such knowledge may avoid the frustration of a performer looking for a 'theme' on which he feels the music 'should' have been based.

## SERIAL MUSIC AS CONTINUOUS VARIATION.

In the light of what we have just discovered we can now say with some precision that all twelve-tone serial music is an essay in variation form. It may consist of one long movement in which the material is varied with maximum dexterity throughout, using all the variants of the row itself as well as varying the spatial use of the semi-tones therein; or it may consist of a series of pieces, 'variations' or numbers indissolubly linked by the material and its intervals which give it interior cohesion. There is nothing negativistic about this. Some of the components of classical composition have been jettisoned, but others are more rigorously employed in such matters as contrapuntal and polyphonic resource. The real meaning of the term 'variations' in relation to serial music has an interesting parallel in some particularly significant and pertinent remarks made by Constant Lambert<sup>1</sup> in his account of Satie's "sculpturesque" view of music, so that the three movements, instead of being three contrasted movements with some dramatic significance in their following each other, are akin to the view of the same piece of sculpture from three different angles. It would not be too far fetched to regard variations on serial material in the same light. There are other visual parallels of which the most obvious one is what happens to the 'given' material in a kaleidoscope, which is always the same, and yet when given a different jolt or twist produces a quite different pattern or arrangement. The fact that serial elements follow each other in a fixed order had led George Perle to point out that serial use of material is also in fact a continuous ostinato. Ostinati are an essential basis of classical construction, in which case the ostinato usually functions either as a ground bass or passacaglia like element, or as the basis of reiterated rhythmic elements of an exciting character. The fact that serial material is used in ostinato-like repetition exerts no effect on the music itself, since the notes are discontinuous in effect, their relationships in time and space being unpredictably variable, so far as the listener is concerned.

## APPARANT ABSTRACTION A FALSE EFFECT, DUE TO THE FACT THAT FREE-MELODIC WRITING REPLACES THEME.

Theme in the classical sense has been replaced in much serial music by 'melodic' writing as it would be understood in the earlier contrapuntal schools of western Europe, or as it is represented by the monodic freely running 'melody' of such oriental music as the Indian. The landmarks of classical repetition, and above all the symmetrical repetitions have been abolished, as has the use of certain repetitious rhythmic clichés. To the unsophisticated listener, this distancing from the 'realistic' familiar patterns of popularly understood classical music of past centuries does have a bewildering effect, which may indeed give rise to a superficial picture of 'abstraction'; but it is a false abstraction, which is in reality due more to a removal of landmarks and qualities in music, that are not so much an essential part of all music, as of a very specialised conventional music that was valid during a relatively short era. It should however be recorded — with a certain regret for our own situation in the realm of European music — that this contrapuntal aspect of music which is uniquely characteristic of our own art has always posed problems of appreciation and understanding; and this has tended to confine its full appreciation to an educated and sophisticated public, whether that public be, as it was in the middle ages and renaissance eras, one of courts and monks, or as it is today the 'educated musical public'. This may be regarded as a limiting factor in European high-art, which tends towards an interior contemplative and even religious purpose, and which is not to everyone's interest or taste.

## EXPRESSIONIST ART AND ITS HISTORICAL ASSOCIATION WITH FREE ATONALITY.

'Free atonality' seems to have been born out of and associated with the 'expressionist' movement; with art which aims at the strong and even violent expression of emotions and with the expression in music of subtle psychological states, such as were the subject of psycho-analytic research in the Vienna of its origin at the very time the movement came to birth.

<sup>1</sup> *Music Ho! Faber (1934)*



## WEBERN AND LATER SERIALISM A CLOSER RELATION TO THE INFLUENCE ON WESTERN THOUGHT OF CONTEMPLATIVE ORIENTAL PHILOSOPHIES.

With some of the music of Webern one comes much closer to a mood of contemplation and detachment, which is in essence religious. The movement towards the oriental philosophies of contemplation which has come in Europe and America some time after the death of Webern himself, might find in this music something of an artistic counterpart. What has been jettisoned in the musical accoutrements of the 19th century, results not so much in a negative music as a music stripped of non-essentials, which brings to mind the stark simplicity and asymmetry of a Japanese painting or sand-garden, constructed under the influence of the philosophy of Zen. What has been pared from the music is the excessive noise, the inflated aggressive gestures, the over-ornate orchestration, the excessive length and repetitiousness, as well as the more obvious obsession with symmetrical forms which characterise music of the classical period. The resulting organism is really more like an 'organic' form than say a house or similar man-made structure. All artistic parallels and metaphors have something of a hollow ring about them. One cannot justifiably compare music to anything. But if a comparison is to be made, the most satisfactory one in the case of a composer like Webern, using a 'pure' technique of serialism for constructive and expressive purposes, would be to compare his pieces to plants or trees. The tree does not shout for recognition but is content to BE. Its construction from the minute building-blocks of organic molecules and chains of molecules gives rise to a trunk, branches and leaves. The branches and leaves are, in a sense, infinitely monotonous in their close similarity to each other; each one consists of a small variation of the same pattern, but they come to take up positions and colours which make up the totality of the beauty of the tree. The same metaphor is very much applicable to the infinitely variable construction of a piece of Indian music based on the relationship between raga and tala. But there is an essential difference here, apart from the fact that we are not dealing with a contrapuntal art. The difference lies in the fact that the music is so firmly rooted in tonality, a matter which we have so far avoided discussing in relation to serial composition.

## THE ROLE OF TONALITY IN FREE ATONAL COMPOSITION.

In dealing with the phenomenon of free atonality earlier we were at pains to point out Schönberg's dislike of the term 'atonality' and to give some explanation for this. We came to the conclusion that the term 'atonality', although it earned that title to some extent by its deliberate removal from the key-system, yet it was only a partially accurate term, in that an inspection of so called 'atonal' music would reveal that from minute to minute the music could often be regarded as tonally based. But at the same time the listener could be forgiven for regarding music as atonal when the shifts of tonality were so rapid as to be totally confusing to the ear, and the degree of dissonance such as to render the tonal derivations a matter of professorial inspection, rather than something appreciated by the ear. It is, after all, not of much interest to the cinema-goer to be informed that what he is looking at is a series of still pictures, if they are moving so fast that his eye cannot appreciate this fact.

## SERIAL COMPOSITION AND TONALITY.

The matter of tonality in serial composition is much more fundamental, in that serial composition is systematised. Furthermore, as pointed out early in this account, there is no essential connection between serialism as such and 12-tone composition or so called 'atonality'. The fact that they are connected in the mind is due to a historical chance — that serialism came to be 'discovered' as the systematisation of 'free atonality'. But to deal with the matter of tonality as it affects 12 tone-serialism it is necessary to return to our consideration of the 12-tone row in a way which has so far escaped us — that is a consideration of the effects of the significance of the intervals between the various notes which make it up. There are no such fixed intervals in free atonality, though of course, in any system the sounding of any two notes will imply an interval; but in this case the intervals are arbitrary and shifting — unsystematised in fact.

## INTERVALS IN A SERIAL ROW MAY GENERATE TONALITIES.

As soon as a 12-tone row is constructed with suitable intervals, it will be found that some groups of juxtaposed notes when sounded together come to have the character of triads with tonal associations, and groups of four notes will come to form four-note 'chords' with strong tonal associations. As to what degree these groups of note forming 'chords' register as frankly tonal or not depends on the composer, who may have to work quite hard at avoiding a dominating tonality if he does not want one, but at the same time has by inexperience constructed a 'row' which has led him into this situation, Ex.11. In fact the tonal implications and possibilities

- (a) A Row which has the implications of a 'theme' in the 'key' of D
- (b) It would be hard for the composer to get away from the triadic effect of juxtaposed tones.
- (c) The row here does not apparently have the shape of a tonal 'theme' as does the row at (a), but it has an unfortunate sequential shape and
- (d) its 'tonal' triadic implications are maximal.

Ex. 11

(a)

(b)

123      234      456      11,12,1

(c)

1    2    3    4    5    6    7    8    9    10    11    12    12

(d)

123      234      345      678      89,10      9,10,11      12,1,2

of the row are immense. They can largely be avoided, or they can be avoided in sections of music for emotional and expressive purposes which require greater tension, and they can be embraced where the music requires a more simple tonal atmosphere. The classical case of the deployment of such means is in the *Violin Concerto* of Alban Berg, where triadic material is deployed from time to time in a way which has strong tonal implications. But the setting out of a twelve-tone row also comes to have strong tonal implications should the half-sections or 'hexachords' be rotated in an obvious ostinato-like fashion, Ex.12. This use of the material is contrary to the ideas



A twelve tone row conceived to be without tonal possibilities will rapidly give rise to tonal music if sections of the row are deliberately rotated or used in ostinato-like fashion so as to yield tonal centres.

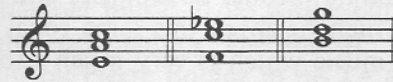
- (a) Row used for the Five Guitar Pieces (p 38)
- (b) on closed examination this row will yield the three triads
- (c) Ostinato like rotation of the hexachords against a regular rhythm pattern yields a tonal centre with A natural functioning as dominant and D as tonic.

Ex. 12

(a)



(b)



(c)



of Schönberg, who, it will be remembered, regarded the non-repetition of tones as an essential part of the system — that is the non-repetition until the 12 semitones had been 'used up'. The ostinato like repetition of hexachords or even of smaller groups within the row immediately restores some of the repetitious clichés of classical composition. Though 'forbidden' by Schönberg, it is nearer to the practice of that other great pioneer of sérialism, Hauer, who permitted the free or rotational use of the notes within his 'tropes'. The author in his earlier use of 12-tone material found himself in a phase in which his interest in serialism was great, but his opposition to the abandonment of tonality was considerable; in such works as the *Guitar Concerto* (1954) he employs the above technique of the rotational use of hexachords, in all three movements of the work. But a more compulsive use of this technique was in the composition of ballet scores, where there was a strong demand for some sort of rhythmic pattern and recognisable ostinati from the choreographers. Considerable experience of this treatment of serial material leads to the conclusion that it is a contradiction in terms, although it may have been of value for certain pragmatic purposes and in a certain stage of development. Nevertheless the valid points have been made (I) that tonality is implicit in the way in which the intervallic aspect of the row conditions what sounds come out of it; and (II) that tonality is readily available to the composer using 12-tone serial methods by his deployment of triadic material or by his deliberately 'breaking the rules', by rotational use of sections of the row, which brings certain notes into repetitious significance and leads to their interpretation by the listener as tonal centres.

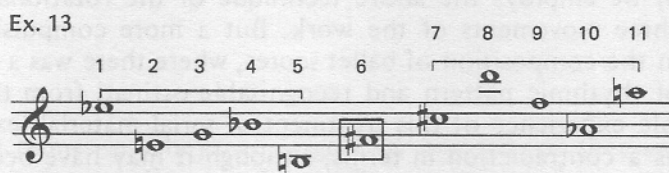
## SERIAL TECHNIQUES DO NOT NECESSARILY LEAD TO 'ATONAL' COMPOSITIONS: SERIALISM IS NOT NECESSARILY 12-TONE SERIALISM.

In considering the matter of tonality and serialism we must at this point progress to the final disjunction (stressed, in passing, above) between serialism and its accidental historical connection with 12-tone composition and atonality. In this matter we are somewhat in the position of persons in the computer-age, who have been used to dealing with the decimal system, and have now to be reminded that the mathematics of the binary system is equally valid.

As has been pointed out, the rotation of the hexachord or six note section of the 12-tone row will rapidly result in tonal implications. But suppose the row itself is only six notes long? This has in fact been done quite frequently in 12-tone composition, by making the row of a 'transcendental' type, such that the second hexachord is an inversion or retrograde of the first. This technique need make no difference to the 'atonal' sound of the piece, if the initial six notes are chosen in a certain way. But it is perfectly possible for the composer to choose his six-note row so as to include deliberately the maximum tonal possibilities and to combine this row with inversions or retrogrades which heighten this same tonal possibility. He will therefore write a piece of serial music which is very much a tonal piece, but is not based on the key-system and is not in any way committed to the rhythmic repetitive or symmetrical clichés of the classical system. The author worked along lines which had a good deal in common with the above method in composing the music to a ballet which dealt with the period of ancient Sumeria. The music of the period was assumed to have derived from pentatonic scales, so the serial material was based on two pentatonic scales each with an additional leading note making two hexachords separated by an augmented fourth. The overall effect of the music is completely tonal, (sometimes, of necessity bi-tonal or even polytonal), but constructed serially from the material throughout. But this pragmatic use of the row was adapted to the 12-note method, whereas there is no reason whatsoever why a six-note or five-note serialism should not be valid in its own right.<sup>1</sup>

### THE VALIDITY OF OTHER SUB-12-TONE SERIAL ROWS.

The question presents itself, then, as to what degree it might be legitimate to reduce the serial material from what has become the 12-tone norm. Would there, for instance be any great advantage in experimenting with not just five- or six-note rows, but with mini-rows of only three or four notes? Probably not, for if the material is set out according to Schönbergian principles with its 48 variations, one could simply end up with 3- and 4-note sections of 12-tone rows. The point of this discussion however is much more in relation to the possible role of tonality, and to demonstrate that it is perfectly possible to deploy a tonal serialism for tonal purposes and to invalidate the myth, current in some circles, that serial composition is necessarily bound up with the historical fact of its emergence from the era of 'free atonality' into the 12-tone 'atonality' of Schönberg and his successors. One interesting development of 'sub-12-tone' systems is that the row based on odd numbers of tones can, if desired, be made symmetrical round a central pivotal note — for example in the 11-tone series two five-note arms of the set can be arranged like a mirror image of each other, in relation to a central note. Ex.13. The 'missing' semitone of



An 11-tone row is employed in *Guitar Piece no 4* (p 34). The row is divisible into 2 'pentachords', placed in relation to a central tone (F sharp). The second pentachord is a modulated version of the first.

<sup>1</sup>see *guitar pieces 1 and 2* (pp. 27 and 30)



the 12 in an 11-note system will of course be picked up every time the row changes or 'modulates' on to a different level; and this picking up of extra semi-tones applies to the other rows of lesser number of notes. The present author has used an 11 note row to construct an extended serial work based on the idea of the 22 'Arcana' of the Tarot pack (Which is, in reality, not a system of vulgar fortune-telling but a shorthand of ancient moral philosophy.). In the work, 22 chamber orchestral 'variations' were composed using 22 instruments taken 11 at a time, chosen by 'random manoeuvres', prior to composition. The use of random procedures can be employed to construct serial rows themselves; but, as has been pointed out earlier, it is best that the composer chooses carefully the intervals he requires in serial material, as these will irrevocably condition his music, whether he likes it or not, and chance manoeuvres may impose on him a row which is intractable when it comes to employing the material in the composition he has projected.

### SERIAL COMPOSITION AND THE GUITAR.

Serial composers were among the first to re-introduce the guitar and mandolin into the orchestra and chamber music, from which plucked instruments had largely lapsed since the early eighteenth century. The dramatic and immensely difficult part written for the instrument by Pierre Boulez in his *Le Marteau sans Maître* in 1954<sup>1</sup> was a gauntlet thrown down to composers and guitarists, who were quick to respond. But by that time, largely by his virtuoso arrangements of contrapuntal works by J.S. Bach, Segovia had shown the way back to the contrapuntal genius of the guitar which had been largely forgotten since the days when its close cousins, the vihuela and the lute, had been the chosen instruments of great composers of the 16th and 17th centuries. The guitar in the late 20th century has blossomed out into several different instruments, deployed in fields each with their own public. The amplified plectrum-instrument, which has a special sound, could well be used in the context of 'serious' contemporary music — and has been so used by Stockhausen, among other composers; but it is predominantly the instrument of the popular and media-composer. The sound of *flamenco* guitar playing, which was special to Spain, has now its *aficionados* and adherents all over the world, and many of the works written for the 'classical' guitar are still influenced in part by the Spanish and Latin-American ambience. The very special capacity of the guitar for producing exciting reiterative dance rhythms is something which, at first sight, might seem to distance the instrument from music composed in serial technique which is by its nature opposed to this sort of engagement in repetitive and reiterative rhythmic material.

However, in the discussion of serial techniques of composition we have already pointed out how modifications of 'strict serialism' in the direction of rotations of portions of the row in an ostinato like fashion can yield rhythmic patterns which will be capable of providing the necessary impulse for dance movements either in ballet music or in musical dance movements which have been traditionally associated with the guitar. Once the guitar gets away from this historical 'dance-image' it comes very closely into focus with the contrapuntal role which it played in the music of the 16th-17th century, which was so much associated with the lute and vihuela. This contrapuntal resource which is bound up with its wide compass, its many strings, its unique chordal ability, its ability to sound several moving parts simultaneously, makes the guitar a valuable instrument for serial composition of a more serious and contemplative character, which tends to move in space along separated planes and in dislocative melody, embracing wide intervals so easily obtainable on the instrument.

### SUBTLE POSSIBILITIES OF GUITAR TIMBRES: GREATLY INCREASED TECHNIQUE OF THE MODERN SCHOOL OF YOUNG PLAYERS.

One of the attractions of the guitar is that it embodies within itself a whole 'orchestra' of subtleties. Much of the guitar music of the nineteenth century failed to explore many of these subtle possibilities. One of the virtues of the contemporary music of an 'avant garde' nature is its rigorous exploitation of the resources of instruments and its attention (derived largely from Webern) to the qualities of the 'note' itself, its timbre and dynamics. So great has been the emphasis on this aspect of music in the last two decades, that it would appear to many that the process has been overdone, and the musical public may become weary of being asked to listen to new works which are simply an exploitation of timbre and colour — rather like

<sup>1</sup> Published by Universal (1954)

a surfeit of abstract paintings, which are limited to washes or areas of colour and are quite without any line, depth or representative elements. Even if this be so, there can be no denying that in the realm of the percussion for instance, the orchestral and chamber-music resource has gained almost infinite possibilities in the exploitation of previously undeveloped aspects of percussion instruments. In the same way, the guitar is susceptible to the exploitation of its large range of natural and artificial harmonics, the subtle differences in timbres between the same notes on different strings, the great difference in timbre obtainable by moving between the bridge and the finger-board, the use of quarter-tone and tremolando effects, the use of percussive beats interspersed with musical notes, in a method derived from flamenco playing; and various other devices, some of which are bound up with electronic distortions and amplifications of sound.

Serial composition is ideally suited to the employment of such devices as are listed above, the totality of which can give a whole new dimension to guitar music, which was hardly suspected half a century ago. Such developments, of course, put a heavy strain on the player's capacity, and mean that the young performer now has to be prepared not only to understand what contemporary compositional techniques are about and are trying to achieve, but to go out and embody deliberately in his own guitar technique the added potentialities of the instrument, which he will find exploited by the aware and interested contemporary composer; the alternative is to leave the whole thing alone and turn his back on all such music. Fortunately the experience in other instrumental fields has shown that no sooner are compositional developments available and techniques required of players than, in a very short time, young performers appear who have almost miraculously availed themselves of the opportunity to study those requirements and can deliver the desired standard of developed technique, to a degree which astonishes the composers themselves.

### THE GUITAR AND TONALITY.

The relatively weak dynamic possibilities of the guitar in comparison with other instruments may cause some performers to harbour a conviction that the instrument requires its music to be centred tonally, or in specific keys which will allow the added resonances obtained from open strings and 'solid' chords of a diatonic nature. They may feel that the multiple dissonances of such styles as 12-tone serial writing and free atonality are bound to result in a blurred sort of music which lacks 'body' and emphasis. There could be an element of truth in such assertions, but in fact it is difficult to justify them, if only because there are elements in 'dissonant' writing which positively favour the guitar due to the potent emotional effect of its sound, which led the poet García Lorca to describe the music of the instrument as 'like the weeping of water, like the wind over the snow-drift'.

*como llora el agua,  
como llora el viento  
sobre la nevada.*

To sound the B-natural below middle-C on the pianoforte and to follow this by an A-sharp at the major seventh above has a very limited effect. The same manoeuvre commenced on the second guitar string, followed by the A-sharp above on the first string, almost suffices in its poignancy, as a piece of music. The resonance of the instrument in serial composition can be greatly enhanced by using the multiple opportunities which will inevitably come along to place sounds on the open strings, and deploy these open sounds in short or long 'pedals'. These open sounds can be embodied, however high a degree of dissonance the piece involves and however rapidly shifting the tonal centres, so as to give, as we have described above on the analogy of 'moving-pictures', an illusion of 'atonality'. But, as we have been at pains to point out, serialism is not necessarily committed against tonality, and the degree to which the guitar-music 'sounds' tonal within the serial context is a matter for the composer and his aims in the piece involved at the moment.

Since we have stressed that serialism and 'atonality' are not the same thing and that the use of a serial technique does not eliminate the possibility of a tonally based music, the further question should be anticipated and answered before leaving the matter: What is the 'point' of, or advantage of serial techniques which result in tonal music? Why not, indeed, go back to 'square one' and simply write a diatonic or modal piece. Here one must either refer the reader to everything which has been discussed previously in this essay, or recapitulate briefly, for emphasis:



The diatonic or modal piece suggested above will be the statement and development of a 'theme' based on certain limited recognised chord formations, legitimised, rendered, so to speak, sacrosanct by a short period of musical-historical approval, possibly decorated and even corroded by a personal chromaticism. The modal piece will again be the statement of a theme or folk-tune. Here the harmonisation will have a degree of illegitimate arbitrariness, since modal material, though firmly tonal, is in reality monodic and anti-harmonic. The serial piece will differ from these earlier historical models in that — provided it does not deliberately come to obvious terms of compromise with multiple clichés of classical practice — it will be a structure growing out of the stated serial material, in which the melodic progress and the harmonic relationships grow directly out of the order of the notes and the intervals between them. This of course gives it the commendable virtues of logic and clarity and the honesty of deriving its various dimensions from the initial material and from nowhere else. But this honesty of derivation and purpose cannot guarantee its qualities, as music. They furnish a good start for the piece, since, at least, the disadvantages of a dishonest split between the material and the way in which it is developed, treated and used to build the musical structure, is avoided. The result is a matter of the artistry, the genius, the inventiveness which the composer is capable of bringing to bear upon the material. There is a lingering dislike in some circles, brought about by years of living with the romantic tradition of composition, of the whole idea of a composer not composing in an inspirational vacuum; of the picture of a composer as a careful craftsman, working basic material which he slowly moulds with care and thought into the final product — a process which is described by the pejorative word 'cerebral'. Careful and systematic organisation however need not always produce a 'better' piece of music; nor can serial methods be described as a 'better' method of composition, merely a different one, with certain admirable provisos built into it. To the serial composer, the method of working will seem advantageous, in that he can produce an original structure for each work, without falling back on classical clichés of progression and rhythmic reiteration; without limiting himself to the peculiarly obsessive importance given to thematic development in recent European classicism, which now, by wider standards of world-music comes to have an element of provinciality; and without immersing himself in the exploitation of a degenerated diatonicism that has, as a source, become over-played and over exploited in its limited historical context and ambience.

#### NOTES ON THE MATERIAL USED.

Pieces 1-5 are devised so as to use as basic material a 5-tone, 6-tone, 7-tone, 11-tone and 12-tone row, respectively.

Pieces 6-10 constitute a single work, a set of pieces or serial 'variants' based on a single 12-tone row.

Throughout a good deal of the work I have avoided using phrase-marks, as there is always a good chance in guitar music of getting these confused with the slur-fingering marks. However in this music (unlike tonal classical music) the phrasing and what is or is not cadential material may be very obscure. I have tended to use ✓ from time to time as a 'breathing mark' or *slight* pause-mark, showing phrasing.



# No. 1

Is based on a 5-tone row, with its inversion and retrogrades of both row and inversion (R, I, RR, and RI.) The approach is the simplest, in that no modulated positions of the rows and inversions are used, and in fact R and I are not combined with RR and RI, but are used only antiphonally (Original material up to bar 11, then Retrogrades up to bar 22. R and I return end of bar 22, Retrogrades end of 27, original material last 7 bars.)

The diagram illustrates the four forms of the 5-tone row used in the piece:

- ROW:** A five-note sequence on a treble clef staff: C4, D4, E4, F#4, G4.
- INVERSION:** The inverse of the row: B3, A3, G3, F#3, E3.
- RETROGRADE ROW:** The row played backwards: G4, F#4, E4, D4, C4.
- RETROGRADE INVERSION:** The inverse of the retrograde row: E3, F#3, G3, A3, B3.

Duration 2' 50"

DENIS APIVOR  
Op. 72(a) 1981

[♩ = 108] *Con espressione; un poco inquieto, piangendo; ma sempre con moto*

The musical score is written for a single melodic line on a treble clef staff in 4/4 time. It consists of three systems of music.

- System 1 (Measures 1-11):** Begins with a half rest, followed by a series of eighth and quarter notes. Dynamics include *f* (forte) and *mp* (mezzo-piano). A "pont." (ponte) marking is present. A triplet of eighth notes is marked "12 Hrm." (12 Harmonics).
- System 2 (Measures 12-22):** Continues the melodic development. Includes a "Hrm." marking, a circled "6", and a circled "5" with a box around it. A "modo nat." (natural mode) marking is under a circled "4". Dynamics include *f*, *mp*, and *sfz* (sforzando).
- System 3 (Measures 23-29):** Features a triplet of eighth notes marked "3" and a quintuplet of eighth notes marked "5". Dynamics include *sfz* and *sf* (sforzando).

$\frac{1}{2}C5$

Hrm. 12

3

2

3

1

5

5

10

Hrm. 12

vibrato

3

4

3

3

tasto

3

2

5

4

4

f

15

pont.

2

4

2

1

4

3

6

5

mp

vibrato

modo nat.

4

2

1

3

4

2

3

1

3

2

4

20

6

5

fp

3

2

3

3

2

4

5

1

V

1

2

4



Hrm. 5 Hrm. 12 25 *pont.* *sfz* *sfz* *sf* *vib.*

*mp* *mf* *p* 1 3 4 5

1 2 4 3 6 Hrm. 12

30 *p* *sf* *sf* *sf* *sf* *s. pont.* Hrm. 12

Hrm. 12 *modo nat.*  $\frac{1}{2}C5$  *f*

*tranquillo, justo* *sf* *p* *vibrato*

35 *mp* *f* *rit.*

*fp* *fp* *fp* *fp* Hrm. 12 *pp*

*s. pont.* *modo nat.* *nat.* *tasto (vibrato)*

## No. 2

Based on a 6-tone row. The 24 semitonal modulations of the row and its inversion were freely drawn on in the composition, but no retrogrades were employed. The piece demonstrates how a serial composition can be non-thematic, but employ a recognisable rhythmic framework, (in this case a modification of the guajiras rhythm) to create a dance atmosphere.

The row has well marked 'tonal' elements, being divisible into two triads.



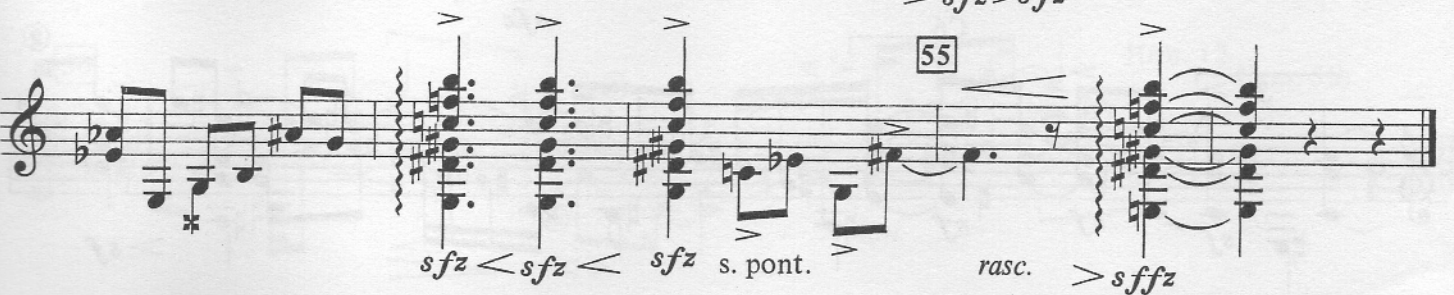
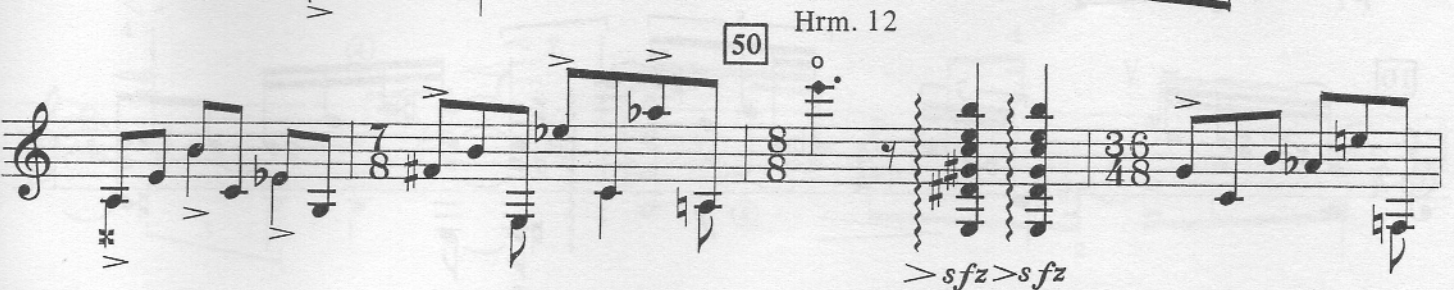
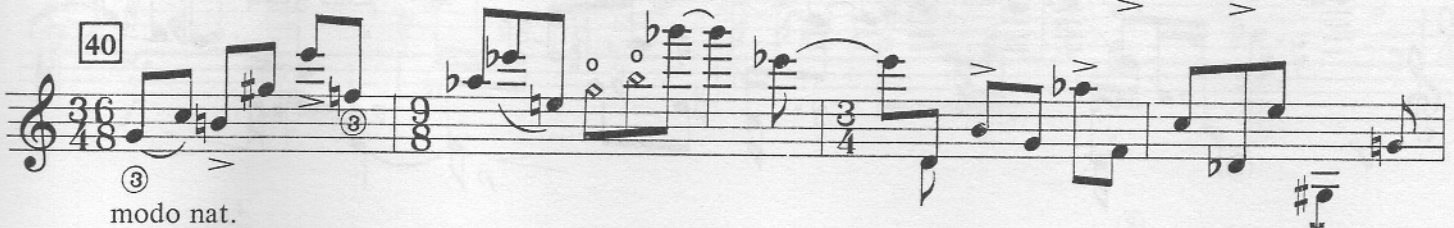
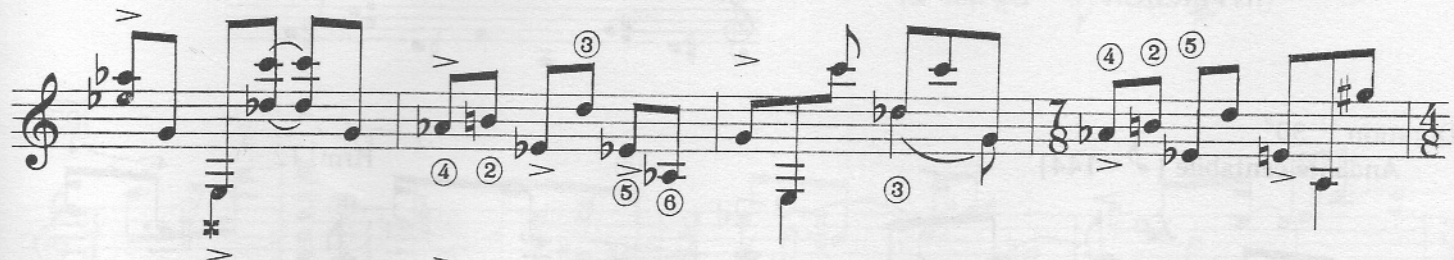
Duration 1' 15"

Alla danza;  
Molto vivace [♩. = 80]

*f* (wood ad lib) *sim.* 5 *sfz sfz* *pont.* *modo nat.* 4 10 15 *sf* 20 2 3 5 4 5 3 4



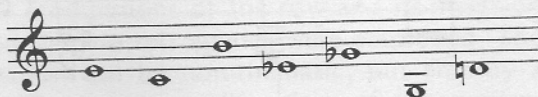
Hrm. 12



# No.3

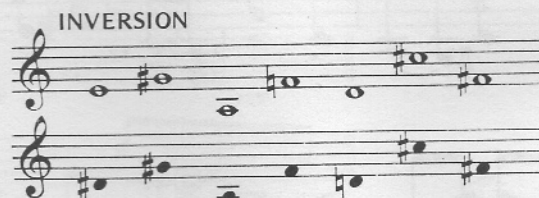
The row is a 7-note row derived by adding one note to the retrograde of that used in the 2nd piece

The inversion of this is



but it has been slightly modified throughout by depressing the first tone by a semi-tone to give the interval of a fourth instead of a major third. Row and altered inversion are used in various 'modulations' at different levels.

(modified — used in the piece)  
(INVERSION D# not E)



Duration 1' 30"

Andante cantabile [♩ = 144]

Hrm. 12



15 C5

5 2 3 4 1 3 2 3

sf

20

1 3 2 4 5 3 2 1 3 2 3

25

f

sf

30

Hrm. 12 Hrm. 5th

dim.

# No. 4

The basic material is an 11-note row and its inversion (modulated to give the possible 24 variants). No retrogrades are used in the piece.

ROW

1 2 3 4 5 6 7 8 9 10 11

INVERSION

1 2 3 4 5 6 7 8 9 10 11

The row can be regarded as two 'pentachords', placed symmetrically on either side of a central tone, the one pentachord being a displaced 'mirror image' of the other — or an inversion of the retrograde of the first pentachord.

The preponderance of implied diminished seventh triads would make this row of limited value for an extended work. The fact that each pentachord is a tonal statement is not evident in the placing of the row with wide intervals. It can however be written as the form below:

(similarly the Inversion)

Duration 2' 45"

Quasi lento, ma con passione

[♩ = 96]

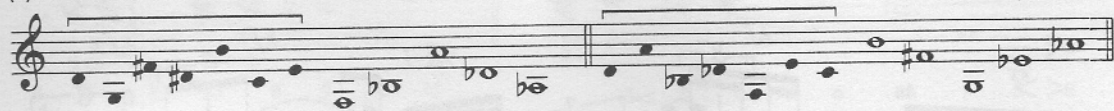


Musical score for "The Firebird" by Igor Stravinsky, featuring a piano and orchestra. The score includes various musical notations such as notes, rests, and dynamic markings like *ff*, *sfz*, and *sf*. It also includes performance instructions like *Hrm. 5*, *tasto*, and *pont.*

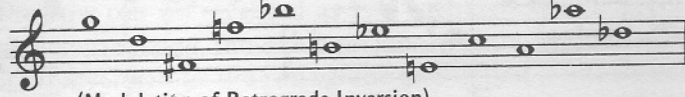
# No.5

All the 12 semitones are used for the first time to build up a 12-tone row. The row is an extension of earlier ones with the additional semitones added – (white notes)

(a) ORIGINAL ROW



(b)



(Modulation of Retrograde Inversion)

The piece in fact uses only retrograde versions of the inversion, somewhat sparingly in three modulated positions see (b) for one of them.

The piece commences with an intertwining of the hexachordal material and a bending of the 'rules' to allow the repetition of tones 78910 and 123 before the whole series is stated and 'displacement' of 2,3 and 9,10 to 3,2 and 10,9.



Duration 1'

Vivace [♩ = 132] \*

\* Accentuate the beats with sforzandi on the wood, at the discretion of the performer.



15

20

25

30

35

*sf*

*ff*

*sfz*

*ff*

*quasi allarg.*

The musical score consists of seven staves of music. The first staff (measures 15-19) is in 4/4 time. The second staff (measures 20-24) changes to 3/4 time. The third staff (measures 25-29) changes to 2/4 time. The fourth staff (measures 30-34) changes to 5/4 time. The fifth staff (measures 35-39) continues in 5/4 time. The sixth staff (measures 40-44) continues in 5/4 time. The seventh staff (measures 45-49) continues in 5/4 time. The music is characterized by frequent use of accents (>) and dynamic markings. The piece ends with a 'quasi allarg.' marking.

# FIVE PIECES FOR SOLO GUITAR

Based on a single 12-tone row with its inversion and their retrogrades; with free use of the 48 possible modulated levels of the variants.

The row is of a 'transcendental' type which is constructed so that the second hexachord is an inversion of the first at the minor second below. There is therefore in the true sense no 'inversion' of the row, which simply becomes a rearrangement of hexachords.

ROW

INVERSION

(RETRO-ROW)

(RETRO-INVERSION)

Total duration 9' 20"

Duration 2' 5"

## No. 1

DENIS APIVOR  
Op. 72 (b) 1981

Accarezzevole; patetico, ma senza rallentare [♩ = 72]

*f*

*sf*

38



15

20

Hrm. 12

pp

25

30

Art. Harm.

Hrm. 5

f

mp

f

pp

# No. 2

Duration 1'

Molto ritmico; justo [ ♩ = 152]

5

C3

10

C3

15

②

④ ③

C1



This page of musical notation contains six staves of music. The notation includes various musical symbols such as notes, rests, and fingerings. The key signature is one sharp (F#), and the time signature is 16/16. The music is divided into measures, with measure numbers 25, 30, 35, and 40 indicated in boxes.

The first staff shows measures 1 through 24, ending with measure 24. The second staff begins at measure 25 and continues to measure 29. The third staff continues from measure 30 to measure 34. The fourth staff begins at measure 35 and continues to measure 39. The fifth staff continues from measure 40 to measure 44. The sixth staff begins at measure 45 and continues to measure 49.

Specific musical markings include:
 

- Measure 25:** Fingerings 3, 1, 3, 4, 4, 2, 5, 7.
- Measure 30:** Fingerings 3, 2, 4, 3, 4, 2, 3, 4, 3.
- Measure 35:** Fingerings 5, 2, 5, 2, 5, 3, 6, 2, 4.
- Measure 40:** Fingerings 3, 2, 4, 2, 1, 2, 4.

Other markings include:
 

- Measure 30:** C3, 30.
- Measure 35:** 35.
- Measure 40:** 40.
- Measure 45:** vibrato, Hrnm., portando, sfz.

# No. 3

Duration 2' 15"

Cantabile [♩ = 84-88]

5

10

un poch. meno  
(tempo rubato)

Hrm. 12

port.



V Hrm. 12 Hrm. 5 C3

15

5 3

*f*

3 20 Hrm. 5

3 4 2 3 5

*mp*

*rit.*

Hrm. 12

3 2 5 3

25 2 1 < > 5

*sf*

3

*sf*

30 3 3 5 4

Hrm. 12

*pp*

# No. 4

Duration 2'

Semplice; teneramente [♩ = 66]

The musical score for No. 4 is written for a single melodic line on a treble clef staff in 4/4 time. The tempo is marked 'Semplice; teneramente' with a metronome indication of [♩ = 66]. The score consists of six staves of music, with measures numbered 1 through 15. The key signature is one flat (B-flat). The music features a variety of rhythmic patterns, including eighth and sixteenth notes, as well as rests. Fingerings are indicated by numbers 1 through 5. There are also some special markings, such as '<>' and 'C3'. The score ends with a double bar line and a repeat sign.





# No. 5

Duration 2'

Solenne: un poco maestosamente [ $\text{♩} = 60$ ]

The musical score consists of six staves of music. The first staff begins with a treble clef and a key signature of one flat (B-flat). It features a series of chords and single notes, with accents (>) and fortissimo (sf) markings. The second staff starts with a boxed measure number '5' and includes a triplet of eighth notes. Above the staff, 'C6' is written. The third staff contains a triplet of eighth notes and a fortissimo (ff) marking. The fourth staff begins with a boxed measure number '10', a fortissimo-piano (fp) marking, and the instruction 'modo nat.'. It also includes a 's. pont.' (sotto ponticello) instruction. The fifth staff continues the melodic and harmonic development. The sixth staff starts with a boxed measure number '15' and features several triplet markings. The score concludes with a final chord.



20

