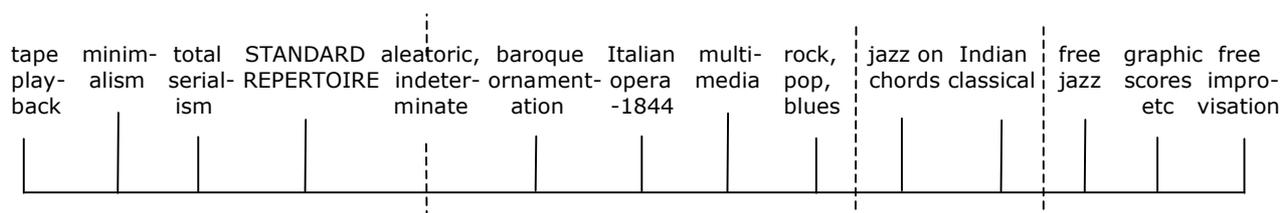


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The Improvisation Continuum



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DAZZLE MUSIC

The Improvisation Continuum

Preamble, January 2004

Theorising and the writing down of ideas in words are a crucial part of my compositional process: I have kept sporadic work journals throughout my creative life, continuously since 1983. As I make musical shapes and systems I feel two needs: first, to explain them (primarily to myself, thereafter to others) and second, to make a record of compositional processes which I might otherwise forget (I have forgotten my systems often in the past and have subsequently had to reconstruct the process by analysing its result – the piece of music concerned). This article comes three fifths of the way through composing *Third Sonata: Cellini, Blueprint* and *Stillness* are completed, *Boethius* and *Navratilova* imagined and sketched.¹ These words – and that music – represent my latest thoughts on improvisation. The article represents not only a crystallising of my thoughts, but also quite a radical revision of earlier ideas. Some of these I had put into words only a short time ago in the process of making this same piece: for example, in December 2003 I wrote:

Improvisation can take place on many levels: the ornamentation required in baroque instrumental music or in the operas of Rossini is (when properly done in real time) improvisation, but on a relatively 'low' level; improvisation in Indian classical music or playing choruses on a jazz standard represent 'higher' levels; and free improvisation with no predetermined structure or melody represents a 'higher' level still. None of these levels is 'better' than another...

Appendix to *Third Sonata*, draft of December 2003.

Even as I typed these words into the computer I was troubled by them: specifically by the hierarchy implied in the 'vertical' concept of levels, my disclaimer notwithstanding. It was never my intention to make value judgments about improvisation, or its relative worth at any so-called 'level': but I could not get away from this implication if I stuck to a vertical ordering. On 3rd January 2004 while composing *Stillness* the idea occurred to me of a horizontal ordering – a spectrum or continuum.

¹ By the time the article was complete (see **My Third Sonata** and **Coda** below) a sixth sonata, *Minotaur*, had been conceived and written. *Boethius* and *Navratilova* however had not progressed beyond the sketches which existed in January. When I began the article the Sonatas' current titles did not exist (they arrived on 4th February) but I have edited them into in the Preamble 'anachronistically' to avoid confusion.

Toward a definition of improvisation

Improvisation (Latin *improvisus*, unforeseen) in my definition exists to some extent in virtually all performances of music (not quite all: Varèse's *Poème Électronique*, for example, only needs the performer to press 'play'). It is not, emphatically not, restricted to the generation on the spur of the moment of an entire musical texture. That type of improvisation does exist (it is done by free improvisers and the odd church organist as the congregation waits) but it does not represent what people commonly think of when improvisation is mentioned. Indian classical music relies on set scales – *rags* – and rhythmic formulae – *tals* – which have been passed down unaltered through the centuries. Jazz on chords begins from a melody – often a 'standard' one, strictly played – and proceeds through improvised solos on the strict rotation of the chord sequence (the *chorus*). Thus we see that the two kinds of music that most readily come to people's minds when improvisation is mentioned are not of the type involving the generation from scratch of the entire musical texture. They involve spontaneous melodic invention in a conventional context. A definition of improvisation must take this into account.

It should be noted that in both Indian classical music and jazz, these 'spontaneous melodic inventions' are seldom new: the player has a repertoire – a 'vocabulary' – of phrases which they have played many times before, from which they improvise 'sentences' and 'paragraphs'. During the period of their training these phrases – in jazz they are called 'licks' – are *practised* in all keys (or in all the *rags*) until they are second nature. Still we call this improvisation. Our definition must take this also into account.

There is also an improvised accompaniment in jazz (the accompaniment is less improvised in Indian classical music, which relies on drones). Behind the statements of the tune and the solos, the piano and bass normally play roles exactly analogous to figured bass in baroque music, providing harmonic support and the counterpoint of a bassline. This accompaniment is not usually fixed – sometimes it is – but more often it is improvised (unlike baroque music the bassplayer is free to improvise the bassline) and is changed radically from chorus to chorus in close interplay with the soloist, the changes always respecting the integrity of the chord sequence.

Neither Indian classical music nor jazz restrict themselves to *melodic* invention. In both disciplines the percussionist – the tabla player or the drummer – plays constantly behind the soloist improvising embellishments to the 'given' rhythmic pattern. Then percussionists often take solos, improvising more freely alone. So no definition of improvisation can restrict itself to the invention of melodies. A further example: singers of popular songs regularly perform (say Gershwin or Lennon/McCartney) without changing the notes, but

improvise enormous *rubati* onto the rhythms: indeed I would argue in the case of the popular song that *the written text (the song copy) does not even represent the composer's intentions* – that this *rubato* style is essential and idiomatic – that even melodic embellishment is not frowned upon – that the song copy is a simplification for ease of notation – in fact, that without the improvisation the composer's intentions are not being realised. This last point is also true, by the way, in the operas of Handel, Rossini, Bellini, Donizetti and others (see below).

Once this is accepted we begin to notice how much of almost any musical performance is improvised. *Rubato* is not restricted to the interpretation of jazz melodies: it is even more widespread in 19th century concert music. In my parlance, even the traditional concept of *interpretation* in a through-composed score – say a Chopin *Nocturne* – involves improvisation.

Performers of the standard repertoire (by which I mean Western art music roughly between *The Creation* and *The Rite of Spring*) are commonly expected to bring two things to their interpretation: faithfulness to 'the composer's intentions' and an interpretative gloss which illuminates the text in new ways and stamps the performer's personality on the music: this we call her/his 'reading'. A review selected randomly from *The Guardian* of 6th January 2004 demonstrates this: Tim Ashley is writing about a concert by The King's Consort: '... the Consort aimed at authenticity, allotting solo lines to the leaders of the sections...' and later 'Best by far was cellist Jonathan Cohen, weighty of tone, gaunt and anguished in the G minor Cello Concerto.' And this of a performance of Vivaldi.

These two things, faithfulness to the composer and the personal reading, can be affected and even distorted by another factor, the performance tradition current at the time. For example Mozart's 'intentions' in his piano music included the playing of the left hand in strict tempo while imposing *rubato against* this in the right. This is never done today: a completely different performance tradition holds sway, 'inauthentic' in so far as it imposes on Mozart a concept of *rubato* probably invented decades after his death by Chopin. Brahms said that the flow of his music should be varied in tempo, but only *con discrezione*: such variations should be so slight that 'only a metronome would show that a change had occurred': but even the 'period' recording whose programme note quotes this instruction ignores it.

An even more crucial point is that in the standard repertoire personal readings – interpretations – of a piece of music are not only encouraged, are not only considered essential and performers damned if their absence is detected, but *they are actually considered better when spontaneous*. 'Brendel was on magical form, seemingly possessed and imbuing the Schubert especially with a transcendence I have rarely heard, even from

him.' I made that one up but you wouldn't have known. So – what is this 'spontaneous interpretation' but improvisation? Only a definition which limited improvisation to embellishing or changing the actual notes could exclude it. Surely such a definition is too narrow. Interpretation is a form of improvisation.

A doubter might reply to this: 'it's improvisation, yes, but not in *the real sense*.' My argument throughout this article is that this so-called *real sense* – the everyday use of the word 'improvisation' in a musical context to denote spontaneous melodic invention – is both limiting and wrong, and has damaging results both in performance practice and in music education. Improvisation covers a very broad spectrum of activities, and my usage covers *more* senses than the doubter's, and approximates more closely to everyday usage *outside* music: eg in cookery ('I hadn't any fresh rosemary so I improvised') or DIY ('I improvised an extra shelf for my CDs') or public speaking ('I abandoned my script and improvised') or, in the other arts, the paintings of Jackson Pollock, the films of Mike Leigh or the stage work of Peter Brooke. My usage is wider and presents a richer seam for the researcher than that of the doubter.

It may be objected that I am proposing 'interpretation' as a subset of 'improvisation' when it should be the other way round. I disagree. Actually both could be seen as subsets of 'performance': but I must insist that improvisation 'contains' interpretation within it.

The definition and its qualifications

Improvisation is real-time invention applied to one or more parameters of a musical performance.

The previous section sets out some instances of improvisation in specific contexts, in order to illustrate the breadth of its application: we must now describe *what it is*. To my mind there are two functions of music-making, and only two, which must be present for improvisation to be said to be taking place: it must involve *invention* on the part of the performer and it must happen in *real time*. Both these terms need qualification.

Invention is our first *sine qua non* and surely any definition of improvisation would assume it. My usage is unusual in the breadth of its application beyond the melodic, and in various assertions I make regarding spontaneity.

1. *Invention is any performance practice where a choice is made by the performer.* If the choice is made in real time during performance (see below) we have improvisation. No

restrictions are placed on the form this inventiveness can take (limiting it to the melodic, as we have seen, is too narrow).

2. *Invention is any performance practice additional to the written score, if there is one.* Where there is an existing piece of music but no score a performance may be given rigidly from memory or embellished: in the second case invention is taking place. Where there is a score, if the performer makes the slightest deviation from the bald text (this might be as small as a *poco rall* at the cadence) invention is taking place. In the case of the *poco rall* it might be objected that despite the absence of an instruction in the score the composer clearly intended it, that it is implicit in the performance tradition. This objection is invalid: that the *poco rall* qualifies as invention by the performer is demonstrated by the following question: *how much rall?* The performer chooses how much, and invents while doing so. In the event of any choice, even if there are only two available, by choosing one of them the performer is inventing.

Here is a (necessarily partial) list of activities which might qualify as invention: slight dynamic changes; *rubato*, *stringendo*, *rallentando*; inserting accents; adopting a different tempo than that rehearsed; proceeding *attacca* to the next movement; ornamentation; melodic embellishment; melodic invention on a chord sequence or mode; the realisation of an indeterminacy score; interpreting a graphic score; free improvisation.

3. *In improvisation there is no such thing as a 'blank slate'.* It would hardly be suggested that the act of *composition* is divorced from its period. Miraculously, young composers arriving on the scene all seem to write in a style consistent with, springing from or moving on from what is current at the time they live. Wagner does not arrive straight after Haydn, he only appears – *he is only possible* – after the achievements of Beethoven and the Romantics (and in the milieu of the politics and philosophy of the mid-nineteenth century, which informed his creative thinking). Similarly young improvisers arriving on the scene emerge from the time they live in: John Coltrane does not arrive straight after Lester Young, he only appears after the achievements of Charlie Parker.

At the age of two I am told I galvanised a family Boxing Day party by performing a long virtuoso/gibberish improvisation at the piano, arms flailing and head tossing, in my grandmother's front room. This, from one so young, is perhaps the ultimate candidate for an improvisation that springs from 'a blank slate'. But was it? – of course not. I was aping the gestures of performances I must have seen. Nor was this truly an improvisation – at least, not a musical one: it was a piece of theatre with probably little musical content other than parodic gesture. Who was I aping? It is unlikely I would have been taken to a concert at that age, especially in Leicester in 1948: did any concerts take place there, only three years after the end of the Second World War with rationing still in force? TV did not yet exist nationally; and I was not taken to the cinema for the first time until I was about eight. No, I think it was my

mother I was copying, one of whose favourite pieces (she never played it 'in public', but I remember later in my early childhood sitting on the floor behind her mesmerised by the sound, by her passion and by the look of the score) was the *Pathétique* Sonata of Beethoven.

4. *In improvisation the invention results from training as well as talent.* The world's great improvisers – Ravi Shankar, Thelonious Monk, Eddie Prévost – have spent lifetimes in practice and preparation: it is a myth that an improvisation is created from nothing at the moment of performance: according to a similar myth the child Mozart sprang, a fully formed composer, from nowhere (yes he was precocious but it is possible to follow his development – his *education* – in the increasing complexity and mastery – and, admit it, *quality* – as his childhood compositions give way to his early maturity). Improvisers are among the most highly-trained and schooled performers in the world and often spend lifetimes perfecting the presentation of a single work – I could write here 'just as interpreters of Beethoven do' but we have seen that interpreters of Beethoven are improvisers.

5. *Improvisation can be prepared.* If an improviser is to be trained, that training must inevitably include the inculcation of stock phrases. It is another myth that improvisers never, or *should never*, repeat themselves. As we saw above, jazz musicians practise 'licks' in every key, which then form the basis of their improviser's vocabulary. Recordings confirm this. In *Friday and Saturday Nights at the Blackhawk*, 1962 (now re-issued relatively complete on four CDs) Miles Davis plays his characteristic licks over and over again on tune after tune: sometimes varied, sometimes note for note. More than a quarter of a century later many of these same licks are present on *Amandla*, 1989. Miles Davis, let us remind ourselves, is recognised as one of the greatest improvisers of all time.

Free improvisers sometimes deny that they prepare material in advance. It is not my concern here to contradict them (but see my comments below on free improvisation). Suffice it to say that my remarks above hold good for most improvisers.

When I teach professional musicians and students to improvise I tell them to prepare and practise. I prepare and practise myself.

Real time. In the light of the above our stipulation of real time as a *sine qua non* for improvisation could be seen as a problem. It is not, as anyone who has ever taken part in a conversation will quickly see. As we talk to one another we use stock vocabulary, stock phrases, stock syntax. All the time, however, we are *choosing what to say in real time*. So with musical improvisation. Contrast this with writing an email, where we consider, edit, rewrite. So with musical composition.

6. *When improvising we pick from a stock vocabulary in real time.* This is true throughout the continuum. As interpreters of the standard repertoire we arrive at our above-mentioned *poco rall* and decide, in that instant, how extreme or mild it will be. As jazz improvisers we arrive at a chord of F⁷ and choose a lick that will fit, leading on seamlessly from the stream of phrases we have played before. As interpreters of a graphic score we see a pictorial event that suggests *length* and choose a long event from our stock.

Some standard repertoire performers open their minds more than others to doing these things in real time (some prepare every nuance assiduously and reproduce 'the same' performance on every occasion) but *all* do it to an extent, as demonstrated by our old question, *how much rall?* On any two occasions a *rallentando* can be performed in *exactly* the same way only by a recording or a computer. No human being can achieve exact repetition. So, sorry mate, you're an improviser.

7. *The trick is to put our stock events into beautiful (and sometimes new) formations.* What singles out a great raconteur? I would suggest, *turn of phrase* and *structural elegance*. We can all tell a story, and we are all aware of sometimes telling it better than others. We recognise the person who has the ability to tell a good story as having a talent. It is an improvisatory talent: and so with musical improvisation. The great improvisers are great *storytellers*.

8. *Success in improvisation depends on response and interplay between performers and listeners.* The more our storyteller responds to the audience's laughter by making subtle changes in timing or tone of voice, the better raconteur we think her. But imagine a group of comedians improvising: the interplay is multi-directional, between the performers themselves as well as between them and the audience. A *feedback loop* is set up, an upward spiral of appreciation and performance. So with musical improvisations.

9. *Very occasionally when we are inspired something truly new will occur.* Improvisers (including the apocryphal 'Brendel' cited above) experience transcendental moments when the music-making seems to rise to a new plane: we feel it as an 'out-of-body' experience when the music seems to play itself without our help: 'not I, not I, but the wind that blows through me'. With the greatest of improvisers (such as John Coltrane) these moments come thick and fast and transport the audience, too, to a higher, almost spiritual plane. (The quotation above is from D H Lawrence, showing us that this experience is not confined to improvisers: the composer too, of words, of music, has similar experiences. Also Stravinsky: 'I heard and I wrote what I heard; I am the vessel through which *Le Sacre* passed'.²)

² Stravinsky and Craft, *Expositions and Developments* p.148, Faber and Faber, 1962.

9. *Real time means we don't stop to reconsider: we accept what has gone before and build on that.* This is the crucial consideration.

Cage³ says of the way he wrote *Sonatas and Interludes*, 'The method was that of considered improvisation... mainly at the piano...' but despite the fact that *we know what he means*, he is using the term improvisation wrongly. By the time he made this statement Cage was using chance operations to determine every aspect of his music: a method as circumscribed as total serialism and as far from the conventional way of composing as possible. Looking back at *Sonatas and Interludes* he saw how comparatively freely he had invented them and chose to insult his earlier method with the word 'improvisation'.⁴ But conventional composition is different from improvisation: you find something you like, you try it at the piano a couple of times, you wonder what might come next, you try something, you try something else, you think the second option's better and adopt it, you go on, you stop and start, and so on. That is of course just one way of composing but a very common one, and my guess is, that is what Cage is describing. *But it is composition, not improvisation.* In improvisation you don't stop: you build on what you've got and go on from there: *there are no second thoughts.*

This process, *accepting what has come before and continuing from there*, also contributes strongly to the feedback loop between performer(s) and audience which I mentioned above. It's just like a raconteur telling a good story or comedians doing a group impro. Marvelling at a particularly unexpected turn of phrase, we *impel* the performer(s) to greater and greater heights of invention. And of course our 'Brendel' and his audience experience this in the same way as our free improviser: it happens throughout the continuum.

This is exactly what Stravinsky and Cage, to name but two 20th century composers, disliked and tried to legislate against in their own music. Stravinsky's position was something like 'if you play exactly and only what I have put in the score you will give a correct reading of the piece'. Cage's position, preferring indeterminacy to improvisation, is well-expressed in a remark he made to me personally in 1988: 'something that happens by chance is always more interesting than something a human being thinks might be interesting'. Of the two (though I disagree with it) Cage's position is the more realistic.

Historically, true improvisation has rarely formed part of the compositional process, probably because it is so difficult to do both things at once. Stockhausen and Cardew (teacher and pupil, then colleagues and rivals in the 1950s and 60s) wrote pieces to be improvised, but didn't improvise themselves while composing. We have seen that improvisation is invention in real time: since you don't stop, it's hard to remember afterwards what you improvised. You need a phenomenal memory, and in any case when improvising you are using the wrong bit of the brain for memorisation. After the invention of the tape recorder improvisations could have been done onto tape, but were seldom attempted by 'art music' composers, principally

³ *Composition as Process*, Darmstadt 1958, reprinted in *Silence* p.19, Wesleyan University Press, 1961.

⁴ In general Cage seems to have disliked improvisation, but see my article *John Cage, Electric Phoenix, 4 Solos for Voice and the Cage Mafia backlash*, Dazzle Music 2005, and on my website.

because rigid systems were the order of the day just then: at the very moment tape recording made improvised composing possible, it happened to be intellectually out of order to let your fantasy have free rein.

Recently with the development of the computer any technical problems have been solved and improvisation has become available to the composer as an everyday tool. I began improvising into a tape recorder in 1985 with *Lady Lazarus*; and into a sequencer in 1990 with *From Two Worlds* (using it simply to generate percussion patterns). In 1997 with *Scafra Prelude No 4* I was exploiting the sequencer's wider compositional potential. By 2000 with my adoption of the dot music technique I had begun to use the computer's graphic possibilities in a creative way.

Programs now exist which combine a sequencer (which 'records' and reproduces an improvisation with total accuracy) with a notation facility. This has the effect of allowing the composer to improvise freely and at length, secure in the knowledge that the computer will reproduce the music exactly, later. It also, incidentally, greatly enhances the speed and accuracy with which other operations can be carried out: inversion, retrograding, transposition, expansion/compression, canonic work and scafra processing (not to mention score layout). My technique since 1997⁵ has been to begin a piece (or a passage) with an improvisation which the computer converts to notation, and which I then cut, assemble and edit (almost always radically, sometimes unrecognisably) into a *composed* piece of music. I find that this technique combines the spontaneity of improvisation with the control and systematising of composition in the best possible way. I can also modify my notational practice to produce scores that are not only better looking but which advance my compositional technique in important ways, especially in notations for improvising by the performer.⁶

⁵ in certain works only: *Scafra Preludes* Nos 4, 8, 9, 10 and 12, *Landscape with Slow Pan*, *Sonata (Gracing)*, *flutz*, *dot music*, *Island*, *bass'z*, *reedz*, *Flute Sonata*, *Third Sonata* and *Maybe I Can Have An Everlasting Love*.

⁶ See my article *dot music*, Appendix to *Alison's Piano Book*, part 2, Dazzle Music, 2004; and *RIG Notation*, Edition 2.0, Dazzle Music, 2001.

To recapitulate

Here is the complete definition of improvisation with its qualifications:

Improvisation is real-time invention applied to one or more parameters of a musical performance.

Invention is any performance practice where a choice is made by the performer.

Invention is any performance practice additional to the written score, if there is one.

In improvisation there is no such thing as a 'blank slate'.

In improvisation the invention results from training as well as talent.

Improvisation can be prepared.

When improvising we pick from a stock vocabulary in real time.

The trick is to put our stock events into beautiful (and sometimes new) formations.

Success in improvisation depends on response and interplay between performers and listeners.

Very occasionally when we are inspired something truly new will occur.

Real time means we don't stop to reconsider: we accept what has gone before and build on that.

Armed with this we can proceed to an exposition of the improvisation continuum itself.

A new construct: the improvisation continuum

In my model of improvisation there is a continuum, from music where there is little or no creative input from the performer to music where there is no input at all from a composer.⁷

Figure 1

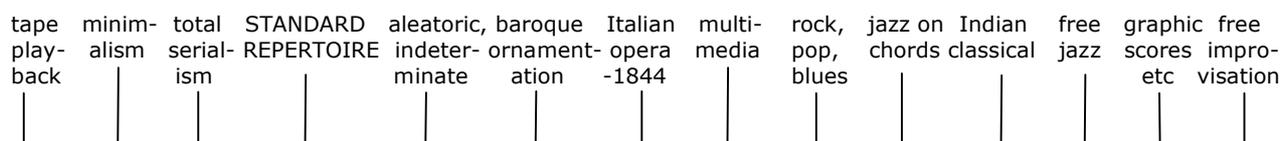


Figure 1 shows the continuum with my suggestions for some of its stages. (This is in no way intended as some kind of bible: other commentators would make different continuums:⁸ mine contains no reference to musics such as flamenco and gamelan, of which I have no knowledge.)

From right to left

On the extreme right of the continuum is **free improvisation**, which by definition has no composer present. This may not always be literally true: many composers also perform as free improvisers – John Tilbury and Reynaldo Young being two examples among many – and it would be fatuous to suppose they leave their composer's mentalities at the door when they improvise. But we have seen above what different activities improvising and composing are, the crucial distinction being the *real-time* nature of improvising. When a composer improvises she may well be at an advantage in grasping possibilities for structural and thematic development, but the process remains different: a composer can surely improvise on occasion without being accused of 'infecting' the process. So let us say that in free improvisation, even under these circumstances, no composer is present *imposing her compositional ideas on the other performers*.

⁷ The choice whether to put the 'extreme' of free improvisation on the left or right of the continuum gave me pause. As a political 'leftie' I found myself predisposed to favour the left, but the idea of 'left and right brain' – right being the 'creative' side – provided a counter-claim. But as Alison Truefitt points out, the 'brain' idea is both crude and not scientifically exact; and in any case the 'left' brain operates the right hand, and vice versa. Also the political analogy is crap: left-wing politicians since well before Marx have shown themselves to be doctrinaire, inflexible and closed to creative reactions in particular situations – closed, in short, to improvisation. In the end I put improvisation on the right of the continuum, leaning if anything toward the 'right brain' idea: but the choice was essentially an arbitrary one.

⁸ Reynaldo Young has persuaded me to reverse one aspect of my ordering: I had put total serialism to the left of minimalism. It's a matter of opinion perhaps, but the mechanical *Music for Pieces of Wood* could justly be said to be more rigid than the flamboyant *Third Sonata* for piano of Boulez.

We might be forced to make an exception when a composer is improvising solo: I myself set some rules in advance when recording my free improvisation score *Dicing with De'Ath*.⁹ Other performances of this piece, notably a wonderful one by the cellist Nikos Veliotis, are 'purer' in that respect, though I stand by my recorded reading.

Free improvisers perform with no preconceptions of the result: no pre-arranged forms or shapes toward which they aim, no pre-arranged material, melodic, rhythmic or even in the guise of raw sound, to get in the way of pure inspiration: so the music will be different – and brand new – every time. This statement is of course an over-simplification: I have written above that no one improvises from a total blank slate: we all have our musical life up to now – as listener, performer or composer – to draw on, and everyone except a rank beginner has an existing technique in the form of the previous improvisations they have performed. This will result for every free improviser in a personal style, one which tends to be consistent from performance to performance. Even one's instrument, be it a saxophone, a sitar, a home-made synth or a stone from the seashore, represents a predisposition, something *a priori* you bring along to the performance. This said, it remains true that free improvisation is the most extreme form of the discipline, and its practitioners would claim it to be *pure* in the sense that it is the only one where a composer is absent from any stage of the process.

The composer enters (on tiptoe) in the next position, **graphic scores etc**, a fairly wide group of genres united by the substitution of *instructions* of various kinds for conventional written music. These include scores which consist entirely of abstract designs, music which uses new notations designed to increase the performer's creative input,¹⁰ and sets of rules for the playing of improvisation games. Such techniques can be combined in any way with one another and with conventional notation.

With **graphic scores** the composer offers the performer literally a picture from which to improvise. There are two kinds: ones which are purely pictorial (eg *Treatise* by Cardew) which invite the performer to respond in any way they feel appropriate to the visual image; and ones (such as *December 1952* by Earle Brown) which represent alternative *notations* which are to be interpreted more or less strictly.¹¹

⁹ CD *Overlays*, British Music Label BML 030.

¹⁰ I am not suggesting that *all* new notations do this: they can be used for a wide variety of purposes including the *restriction* of the performer's creative input. Wishart's *Vox I* for instance employs notations which give minutely precise instructions for certain parameters which the composer wishes to control more closely than anyone before him, and which consequently have never before needed to be written down. One example is the exact ratio of noise to pitch in the vocalist's sound-production, notated as an infinitely variable continuum.

¹¹ I should perhaps qualify my remarks about *Treatise*. The graphics in that piece do include musical clefs etc but I don't believe these represent any strict notational instructions (truth to tell, they embarrass me: I consider them a weakness in the conception: to my mind a clef should be an instruction, not a evocative image of 'music' in a Hallmark Cards sort of way). It is also arguable that in *Treatise* vertical height can be read as pitch height, but this would not work on every page. Therefore I maintain that *Treatise* is a picture in all respects except one – it reads from left to right.

With **game pieces** such as Stockhausen's *Aus die Sieben Tagen* and John Zorn's *Cobra* the flow of improvisation is guided by rules similar to those of a game, and a play-like atmosphere results for performers and listeners alike. Cage's *Four Solos for Voice* might be said to fit this category.¹² My own *Set of 5* is a hybrid work combining game rules with RIG notation.¹³

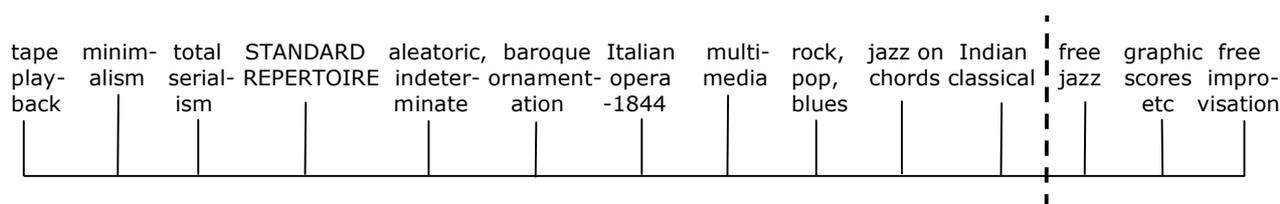
In the next position I suggest **free jazz**. It might be argued that this is simply free improvisation by jazz musicians, but the fact that they are undoubtedly improvising *jazz* leads me to give its own category: also jazz groups often have a leader who proposes a style for the improvising – if only in the choice of the other players. These two considerations lead me to put free jazz to the left of graphic scores.

Next comes **Indian classical music**. Suddenly we are in the presence of very strict performance traditions and rules for improvisation which have passed down many generations. Indian classical music is a branch of religious observance and as such is resistant to change: the Karnatic saxophonist Kadri Gopalnath, whom I heard in Bangalore, was for many years rejected by older musicians until he proved his credentials in the ancient tradition; despite which the influence of John Coltrane can be clearly heard in his playing. As mentioned above, Indian musicians improvise very strictly within melodic (*rag*) and rhythmic (*tal*) conventions.

First Boundary

We can put a boundary in our continuum, marked with a dotted line, between (on the left) disciplines which incorporate a strictly regulated set of rules based on a long-established performance tradition, and (on the right) ones which allow the free flow of ideas without prescribed rules.

Figure 2



¹² See footnote 4 above: but it has been argued (by William Brooks and others) that Cage intended this work as an indeterminate piece, the game-like improvisation rules being merely incidental (almost *accidental*) and of no interest to him at a structural or philosophical level.

¹³ See footnote 5 above.

When free jazz arrived in the late 1950s there was an enormous row around just this division: traditionalists (and I mean *beboppers*, the previous decade's iconoclasts) refused to accept the new style simply because it threw out what they considered to be sacred rules. Everything they had come to value, to fight for and protect, was being threatened. In Bangalore in 1994 I saw a similar rejection by Indian classical dancers of recent developments demonstrated by a new avant garde of returnees from England.

Jazz on chords is close on the continuum to Indian classical music. It too represents a strict discipline with a tradition and rules. However because there is no religious connotation in jazz it was able to progress in style over the course of its history. This continued until the mid-1970s when ossification began to set in, due not to any spiritual considerations but to commercial and, later, educational ones (see below).

Within any of these disciplines it is my guess (certainly it is my universal experience, where I have such) that you will find practitioners who are 'more left' or 'more right'. As a young jazz musician in the 1970s I encountered players of the type I mentioned above, deeply resistant to the changes sweeping through the music at that time. Others, including myself, embraced the advances and tried to help carry them forward. (I should add that many of those more conservative musicians were fine players, players who on a good night could still blow you away.) I have encountered similar ranges of willingness or otherwise to experiment, in – among other fields – my work as a free improviser, as an interpreter of the music of John Cage and of Mozart, as a composer, and as a teacher of student composers.

I place **rock, pop and blues** to the left of jazz. In these disciplines we find, despite the presence of a large amount of improvisation, a lack of interest whether *improvisando* passages are improvised or not (this would be anathema in jazz). I offer two instances among very many. In the song *In My Life* by the Beatles,¹⁴ an instrumental break is provided (in the spot where one might expect an improvisation) in a pastiche of baroque harpsichord, clearly pre-composed and, if proof were needed, recorded on piano at half speed to sound as unrealistic, as un-live, as unspontaneous as possible. At the other end of the scale of hypocrisy, in the 1970s I took part as a backing musician in concerts at the London Palladium by The Carpenters¹⁵ where, on *Goodbye to Love*, the group's guitarist played the raving solo at the end note-for-note as it appears on the single – *and was applauded by Karen and Richard as if he had just improvised it*. The fact is, these are not musics whose first reason to exist is improvisation, much fine impro though we undoubtedly find there.

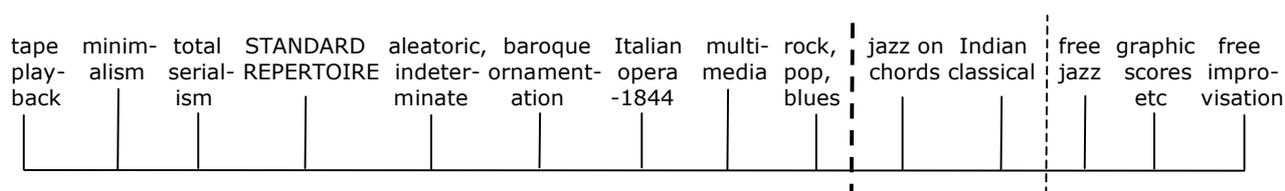
¹⁴ The Beatles, *Rubber Soul*, 1965, Parlophone CDP 7 46440 2

¹⁵ LP *Carpenters Live at the Palladium*, 1976, Hallmark SHM 3142

Second Boundary

In view of this we can say that we have discovered another important boundary, between music (to the right) whose first reason to exist is improvisation, and that (to the left) which may use improvisation as a major component but exists primarily for other reasons.

Figure 3



I feel slightly shamefaced, plumping rock, pop and blues, an enormous range of music, into a single category. But the links are perhaps greater than the differences: and anyway within, say, baroque, surely we find as great a spread (Monteverdi to Corelli to Purcell to Bach...) Some might prefer me to lump jazz and blues together, but from the point of view of the importance of improvisation in each they find themselves firmly on opposite sides of our new boundary.

Moving left, in the next position there is a new genre of electro-acoustic music in which real-time decisions are made from the computer keyboard and/or mixing desk.¹⁶ **Multimedia** events often mix audio with video and live performance (musical or others such as dance). The electronic and digital elements are controlled in real time by sound and video projectionists, of equal status as performers, and often as composers, with the others taking part. This new performance art has no fixed place on the improvisation continuum as it might be done in a strictly pre-arranged way (in which case it comes further left) or completely freely (in which case it comes further right). The position I have put it in recognises the collaboration that takes place between the creative artists involved, and represents my guess as to the 'average' amount of real-time invention which happens within this discipline.

There is a further consideration with music involving computers: 'random generators' in certain programs make it possible to put real-time *random choices* into a performance: choices of the order of the material, choices of pitch or dynamics, choices of mix, any choice which could be made by a human decision. Do these choices qualify as *real-time invention* under our definition above? The first qualification to the definition stated that *invention is any performance practice where a choice is made by the performer*. Is the computer the performer here? If so, then invention is taking place, undeniably in real time, and the computer is improvising.

¹⁶ or from a conventional instrument electronically set up to trigger responses in a computer, as in the work of the improvising trombonist George Lewis.

Despite my affection for Mr Brent Spiner I think the situation is more complicated than that. Any randomising has to be set up by the programmer, within strict parameters (lines of program are written, which, if not accurate, will not produce the desired result) and crucially, this is done *in advance*: so that although the actual program, with its random choices, runs in real time, the choices themselves were set up before the performance began. Does this equate with, say, practice in advance by a conventional player? – in which case (following our fourth and fifth qualifications: *improvisation can be prepared and when improvising we pick from a stock vocabulary in real time*) improvisation by the computer truly is happening during the performance. Or is the computer simply an instrument with a semi-random set of sonic options (like a tam-tam, wind chimes, a multiphonic on a woodwind instrument or vocal fry) which may or may not be triggered when the player initiates a sound? – in which case we don't have improvisation.

Of course, the *results* of the computer's random choices, in the responses they evince in the human players, certainly constitute invention (but by the players, not the computer).

We now come to the art form from the past that most closely resembles present-day rock and pop: 18th and early 19th century **Italian opera**, with its great virtuoso vocal stars misbehaving and improvising all over the place. This improvising was certainly not frowned upon by the composers of the music: Rossini, for one, did not consider his operas complete until the wonderful improvising singers of his day, the greatest of whom he hailed in Maria Malibran (1808-36), had added their interpretative genius to his compositional one. It has been a commonplace since the polemics of Wagner that this style is second-rate and lacks drama: Percy Scholes in *The Oxford Companion to Music* (1938) writes apologetically 'The work of the Donizetti–Bellini–Rossini era is not contemptible [sic]: it offers much good music (shapely melody on a simple harmonic basis), but the dramatic side comes secondary to the musical' – before going on to prefer Verdi, 'infinitely deeper as music and worthier as literature and drama.' This libel (which many a contemporary production of *Il Barbieri di Siviglia* contradicts, even with no improvised ornamentation) is at bottom a prejudice, which persists today, against improvisation. Of course operas from Handel to Bellini prove difficult to stage using present-day theatre techniques – the *da capo* arias are impossible to make interesting in an age used to *verismo* – but this is only because they do not lend themselves to that kind of production. The *da capo* is where you improvise, and improvisation is intensely theatrical. But of course in Scholes' day – even today – they don't improvise: at best they put in some polite gracings worked out in advance. Only when such works are performed as intended – with improvised melodic invention – will they emerge in their true greatness.

The grid says 'Italian opera up to 1844' because that was the date of Verdi's first opera, *Ernani*, which signalled the beginning of the change away from the improvised style.

Continuing to move left, we find **baroque ornamentation**. This was always improvised by contemporary performers. Many composers, Handel certainly, would have considered their pieces incomplete without extensive (not just a tasteful minimum) improvised ornamentation. Any performer who couldn't do this would have been laughed out of court and dismissed as incompetent in a central technical skill. Cartier in his *Violin School* of 1798 gives us (written down as a teaching aid) six possible gracings of a passage from an *Adagio* of Tartini, the first a graceful ornamentation, the sixth so wildly melismatic we can hardly recognise the original's melodic horizon.¹⁷

A second important feature of baroque music is the **figured bass**, identical in function (as we saw above) to the rhythm section in jazz (jazz on chords). For some reason the ability to realise a figured bass in real time (plainly an improvising skill) was maintained throughout the 19th century when many other techniques went out of fashion and were forgotten: forgotten to such an extent that even those few techniques which present-day performers think worthy of revival have had to be painstakingly rediscovered. Perhaps the hero in the survival of figured bass is that conservative institution, the church, whose sacred music would have been thought worth preserving. Melodic improvisation was always, even in its heyday, considered by the church to be the work of the devil.

The classical style which superseded the baroque is of more than passing interest. Figured bass disappeared, to be replaced by composed accompaniment figures, a revolutionary development which saw the composer taking control of the musical context in a new way: the *ground* as well as the *figure* was determined by the maker: no longer did he allow his 'school' to fill in the background of the picture. This resulted in the wiping out of a complete improvisational layer from the music: with figured bass eliminated, only ornamentation remained, and this too began to go out of fashion. Beethoven, a wonderful improviser (we are told) put none at all in his composed music: or when he wanted it he wrote it out. Did he have such a low opinion of other improvisers that he dared not trust them to mess with his own music? or did he have a low opinion of improvisation? – unlikely, as he was so good at it. Whatever the reason, this brilliant improviser excluded improvisation from his music: written-out improvisation is no improvisation at all.

I won't even mention current performance practice in classical music, which, even at its most 'advanced', languishes in a nowhere land of half measures. Where it is not so advanced it is loathsome in its anachronism.

Aleatoric and **indeterminate** music is a complex category containing many different styles of composition by a wide range of composers including John Cage, Morton Feldman, Christian Wolff, Earle Brown, Pierre Boulez, Karlheinz Stockhausen, Henri Pousseur and

¹⁷ reprinted in Thurston Dart, *The Interpretation of Music*, Hutchinson 1954.

Witold Lutosławski. No consensus yet exists as to the definitions of the two terms, not to mention others such as 'mobiles' and 'open form' which cover much the same ground. The confusion for our continuum is that while some of the above composers introduced improvisation freely into their works, others, especially Cage, set out to reduce it to the absolute minimum, and in certain of his utterances (not all, see below) appeared to condemn it. I have nevertheless put this music onto the continuum as a single category because it does represent a cluster of linked styles occurring during a specific historical period (1950-present: the defining connection between all the composers mentioned above being John Cage).

I shall offer the following definitions in this article: as I have said, they are not universally accepted (none are) but for my purposes I hope they will be considered useful. Let us describe as **aleatoric** any music in which the *vertical* aspect of the score is deliberately left unsynchronised. Players are instructed where to begin a musical paragraph, perhaps by a conductor or by a cue from another performer, but once they have started they are independent in tempo from everyone else. Examples of aleatoric music are Earle Brown's *Available Forms II*, 1962 and Lutosławski's String Quartet, 1964.

I shall adopt Cage's definition of **indeterminacy**: any music is indeterminate which is designed and notated so that it can be realised in performance in a number of substantially different ways, ways to be determined in advance by the performer. Examples of indeterminate music are Cage's *Winter Music* and Feldman's *Projections*.

It will be seen that a piece of music can be *both* aleatoric and indeterminate: the two definitions are not mutually exclusive. The key difference for our continuum is that aleatoric techniques are to be employed *during performance*, while indeterminate ones are to be prepared *in advance*. This means that aleatoric techniques are improvisatory while indeterminate ones need not be. The indeterminate techniques used in *Winter Music* are so complex that they could not possibly be improvised (there are 20 pages, each containing up to 61 chords, each note of each chord requiring a separate decision as to what clef it should be read in). But Feldman's *Projections*, as Cage himself notes, must be improvised:

Feldman writes his music sometimes on music paper and other times on graph. In a series of pieces called *Projections*, written on graph paper, he indicates only high, middle and low in reference to pitch. A player is free at the instant of playing to play any note in the register indicated.¹⁸

¹⁸ Cage, *Juilliard Lecture*, 1952, quoted in *A Year from Monday* p.102, Wesleyan University Press, 1967. I have ignored the special layout Cage used as a performance tool while delivering the lecture.

This is one of several places in his critical oeuvre where Cage mentions improvisation in a positive light.¹⁹

The terms aleatoric and indeterminate do not cover the entire spectrum of this type of music – they provide *sufficient cause* for inclusion here but not *necessary cause*. I can't actually think of any pieces – ensemble pieces at least – which are *not* one or the other, or both: Cage's 'numbers pieces', for example, are unfixed vertically and so can be accurately described as aleatoric: so can Berio's *A-Ronne*. But how useful is it to do so? Does the word aleatoric seem an appropriate label for either Cage or Berio – is it one they themselves would have been happy with? Solo works are also a problem, because by definition they are not aleatoric, and some cannot be described as indeterminate either: so there is no category available to them. Berio's *Sequenza III* for solo female voice is a good example.

Also there is a certain crossover between this category and **graphic scores etc** (for example, where does Penderecki's *Polymorphia* – partly graphically notated, partly conventional – go, there or here?) We can only decide on a work-by-work basis whether improvisation is sufficiently central to a particular piece to put it in the **graphic scores etc** category: in my opinion *Polymorphia* would on balance best be described as an aleatoric score.

For the purpose of this article I am not really interested in resolving either of the above dilemmas: suffice it to flag them. Let us say simply that the present category covers aleatoric, indeterminate and other related styles.

A digression One aspect of improvisation we have so far ignored in this discussion is how far it spreads through any group of performers: at any time, *who is actually improvising?* Let us look first at music such as the standard repertoire where *interpretation* is the normal form of improvisation. (I will discuss baroque music and 18th–early 19th century Italian opera, as well as Indian classical music and jazz, separately below.) In the standard repertoire, if there is a single performer, obviously that person is doing the interpretation. If there is a duo we might assume that both performers are interpreting, though many times, for example in lieder, one of them (the singer) will dictate the interpretation and the other (the pianist) must follow. With a larger chamber group, a string quartet, say, the leader may impose a reading on the others, or it might be democratically arrived at. By the time we reach a conducted group or a symphony orchestra one person is doing the bulk of the interpreting: the conductor. Individual players may get the chance to interpret a melody in their own way, but the conductor has the final say even over this, and may veto the player's interpretation; and even this small amount of freedom is afforded to a very small number of players in the orchestra: the principal wind players and any specialists,

¹⁹ For further examples of Cage's positive comments on improvisation see footnote 4 above.

eg piccolo or cor anglais, principal brass and strings, perhaps a percussion player, the timps, the harp... maybe at best 20 people out of 80 (and not all twenty in every piece: the principal double bass, for example, will wait a long time for Mahler I to come around). An exception to this is aleatoric music, where individual players can take some of their own decisions, such as adopting their own tempi.

Curiously, most orchestral players in my experience actively don't want the chance to interpret: they just want to turn up to work and let someone else – the conductor – take decisions, and consequently any flak that's going. Orchestral players can be a sad bunch. As Cleo Laine's bassplayer/pianist and later as a member of Electric Phoenix I performed with most of the great orchestras of the world, and, more revealingly, rehearsed with them: often a dispiriting experience. (There are wonderful exceptions such as the Berlin Philharmonic.) I remember thinking to myself on many occasions, are these people, resentful, defeated, the same who as youngsters – perhaps only ten years ago – badgered and nagged their parents to let them go to music college because music was so great within them they knew they *must* devote their lives to it? What happened?

What happened was, they joined an orchestra and surrendered any interpretative freedom: they were forced over and over again to reproduce someone else's interpretation and suppress their own invention: until finally they lost the will to do anything else but parrot and whinge. In the end, if you let someone else risk taking the flak, they get all the artistic satisfaction too. Forbidden to improvise, the musician in us dies.

Even the conductor must give way to the soloist in a concerto. In opera the conductor will shape the overall interpretation but may (or may not) allow the singers individual interpretative moments. (The exception to this *ought* to be 18th–early 19th century Italian opera – see below – but today, scandalously, it isn't.)

In other musics the number of people improvising is more clear-cut. In baroque music any soloist should use melodic invention as and when appropriate (today a few do, lots don't: if they don't, then they should: but for the purposes of this argument we can lump *that* kind of baroque playing in with the standard repertoire); and in ensemble playing the continuo keyboard or lute will improvise accompaniment patterns from the figured bass. With the Italian opera of the 18th and early 19th centuries (was this conducted? – I don't know, but until about 1800 I doubt it) the singer would have improvised, often wildly: there would also often be a continuo present (much opera of this type falls within the baroque period). In Indian classical music a drone is provided by the ensemble for the two main improvisers, the soloist (often a sitar) and the percussionist (often a tabla). In jazz on chords the primary improvising passes around the soloists within the

group, while others (the rhythm section) improvise the accompaniment in a secondary way. In free jazz this demarcation disappears and everyone has equal status: no 'accompaniment' occurs.

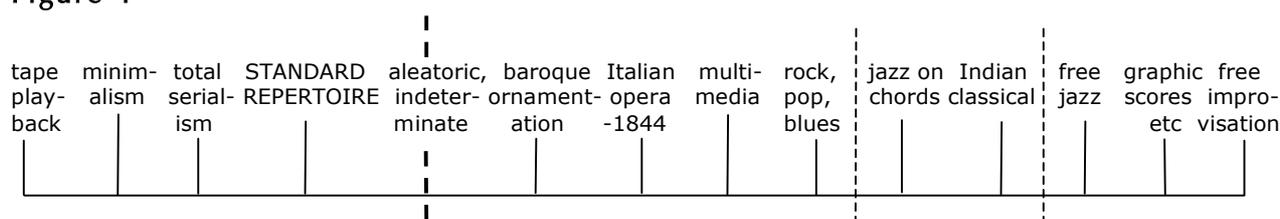
It can be stated as a generalisation that improvisational 'democracy' tends to increase the further right along the continuum we move.

But to return to the continuum, we now come to the **standard repertoire**, that single entry which represents such an enormous edifice within the Eurocentric musical experience: an edifice some, even today, would consider the central pillar of all music (they would be wrong). In earlier sections of this article I have shown that improvisation (in the form of interpretative decisions taken in real time) takes place constantly in all performances of the standard repertoire. Nevertheless it cannot be denied that one aspect is missing: melodic invention.

Third Boundary

This represents an important new boundary in the continuum, between (on the right) disciplines which allow for melodic invention and (on the left) those which do not. Unfortunately the position of the boundary is obscured by aleatoric and indeterminate music, which employs melodic invention only at times. The new boundary, therefore, must go *through* aleatoric and indeterminate music:

Figure 4



Even today in 2004 (and beyond if music teachers and the colleges don't change their methods) most 'classical' performers rarely cross this boundary, and often experience fear when they do. But the boundary represented by this dotted line is in many ways an artificial one. It arose as the Enlightenment swept through Europe in the 18th Century, imposing the Cartesian mind-body dichotomy on to every intellectual venture including music. The concept of *the work* arises for the first time at this period, and we find for the first time in written music a burgeoning of instructions over and above the plain notes, such as dynamics, phrasing, accents, tempo and interpretation (just the stuff, come to think, that I

have banished from dot music). *The score* was apotheosised as the Platonic repository of the musical idea, relegating performance (and by extension improvisation) to a secondary place. As the Romantic era dawned the *genius* took centre stage, whose tiniest creative spark was worth more than the improvisatory ramblings of any mere mortal: thus was the myth cemented that creativity is the prerogative only of the great artist, the genius, *the Composer*.²⁰ All this remains firmly entrenched in the contemporary Western view of culture (and not just in music: in cinema the *auteur* is positively encouraged to abuse his actors and crew to the point of cruelty, allowing no interpretative view but his own: Fellini in *8½* has his director withhold from the cast even *what is going on in the script*.) The situation is reinforced by a hagiographic media and an increasingly philistine education system. The only artistic ventures which escape from its vice-like grip are those, such as rock music, which evade teachers. Jazz was one of these until 20 years ago: it can now be seen, in music conservatories, to be in the process of stultification. (Rock music now has the additional challenge of evading the constraining pressures of the music corporations.)

Second digression How can we rectify this? A century and three quarters ago improvisation went out of fashion, and must soon have found itself actively discouraged. Perhaps it was the church that tried to stamp it out: perhaps it was the new, disreputable music that sprang up at the turn of the 20th century – jazz – that caused such an outbreak of (racially motivated) disgust and fear for our children's moral welfare that all steps were taken to prevent them coming anywhere near it. The prejudice that improvisation is disreputable still persists among parents whose children take up 'classical' music: also the myth that playing by ear hinders their learning to read music. Alison Truefitt's parents actually forbade her to play the piano by ear for this second reason.

It can't be done in a single generation. The skills needed to improvise are innate in all of us, but like so many others they are knocked out of most of us as children by parental prejudice and the education system. Many generations have passed since these skills were lost. Most of today's 'classical' musicians and teachers are ill-equipped to reverse the trend, since they don't possess the skills themselves: at worst they don't even value them: so they can hardly be expected to teach them.

What exactly are the skills of improvisation? I have set out above in the 'definition' sections how they manifest themselves, but have omitted so far a crucial physiological ability without which

²⁰ Of course geniuses exist: they always did, long before they were elevated to godlike status by the developments I have spelt out: and they still do, producing the greatest art we have. *But*: firstly, the hall of genius also contains *performers* – Keith Tippett, Irshad Khan, Maurizio Pollini, Eric Clapton, Maria Malibran – improvisers all, in whatever repertoire; and secondly, we need not confine improvisatory excellence to the genius: it is available to all.

improvisation is nearly impossible. This is the ability to transmit an idea – a musical phrase – an improvisation – from our brain to our hands and play it. (For singers the idea has to pass from brain to larynx.) In practised improvisers this skill is second nature: they invent a phrase and know 'instinctively' (but actually by long training) how to transmit it to their instrument. The absence of this skill is the barrier preventing otherwise good musicians from improvising. I call it the *how-to-walk barrier*.

Nobody who knows how to walk has to think how to do it every time they get out of a chair: they just walk. Nobody who can speak has to deduce what is the word (in English) for the object (made of fabric, straw or felt) on a person's head: we see it and immediately say 'hat'. Nor do we have to think how to generate the precise muscle movements for the consonant 'h', the vowel 'a' and the consonant 't' before saying the word. No car driver has to mentally rehearse the clutch–gearstick–clutch sequence before changing gear. No trained typist has to look down at the 'qwerty' keyboard for every letter of a word. No trained musician when sight-reading has to verbalise 'this is an E-flat quaver on the second beat of the bar' – we just play what we see. Similarly with trained improvisers there is no impediment, no *how-to-walk barrier*, between their creative thought and its implementation as performance.

There are probably many different processes in operation in the above activities: I shall concentrate on two specific ones. The 'hat' example shows that on a visual *stimulus* a word (in the language we speak) comes into our mind: then we say the word – the brain has triggered the musculature to an appropriate *response*. In musical performance the stimulus can be visual (the reading of a page of music: there is also a conductor or leader's downbeat) or aural (the hearing of the music): the response is a vocal or instrumental gesture. In music with no melodic invention present (music where we simply interpret) we use both stimuli: visually we use the written score to ascertain the right notes; aurally we monitor our rhythm and intonation. To maintain ensemble with the other players, if any, we use both visual and aural stimuli: we look to the conductor, or a chamber music partner, and we combine this with listening.

In other music, for example in free improvisation, the aural stimuli take precedence, but visual ones can rarely be said to be absent.

I will now assert that in every respect, from an evolutionary point of view, from a historical one, and from the simple observation of what happens with our children's first introduction to musical experience, *the aural stimulus is prior to the visual one*. We first learn to sing by listening

and copying: in this way improvisation begins, for we soon begin to make up our own songs. This skill we acquire at roughly the same time as we learn to walk (but for some reason we don't later forget how to walk). Playing an instrument comes later: we are capable of doing this at roughly the same time as we learn to draw (that too is a skill most of us never develop very far). Reading music comes later still, and the question must be asked, *why does the learning of music notation appear to kill our improvising ability?* The answer is that it doesn't: reading music and improvising are parallel activities, we can do both. But the loss of our improvising ability at this time is not a coincidence: teachers do tend to believe that playing fluently by ear will deter us from learning to read music, they discourage playing by ear for that reason, and in many cases this stops our improvising dead in its tracks. The teaching method is what we must change as a first step to the fostering and development of improvising in our young musicians.

We began to improvise before we began to read (because the development of our brains allows it) and the first step was *Twinkle Twinkle Little Star*. As things stand today children continue to develop their improvisational skills until they learn to read music, when it is knocked out of them.

Improvising is best learned young: then the improviser can develop her ability (freed from the *how-to-walk barrier*) through a lifetime of music-making: because improvising skills grow as we use them. For those who lost them as a child, it is possible to re-learn them: but, like a second language learned in adulthood, it is difficult, and our 'accent' may never be perfect. But our first task in reinstating melodic invention as a central pillar of the edifice of music-making must be to look to adults. Once enthused, they will teach their children (or at least have the good sense not to *unteach* them) and we can go from there. A new generation of youngsters will become improvisers and they will encourage their own children to do the same.

I feel more pessimistic when considering the music conservatories: the corporate world has them in its grip, imposing a business model on them, with courses whose modular nature discourages interdisciplinary cross-fertilisation and tends to discourage inventiveness, either by teacher or student, and to propose 'learning outcomes' set in stone. The colleges continue to churn out sausage-machine musicians to a formula they assume 'the business' (the music business) requires. They take little account of how 'the business' may have deficiencies built into it which need changing, particularly in its attitudes to creativity and improvisation. If we are to do anything we must transform the conservatories. We must end the myth, entrenched in today's educational system, which tells young singers and players there is a dotted line between them

and invention. There is not. I have tried to show that the improvisation continuum progresses smoothly along its length and that its boundaries – if they exist – can be crossed, given the right teaching from as early an age as possible. Unfortunately those barriers are currently manned by our instrumental and singing teachers.

The boundary between young musicians and melodic invention, as I have said, is an artificial one put up by the philosophers of the Enlightenment and cemented by the Romantic movement. Good god, if scientists still used the working practices of 1850 there would be an outcry. Once a youngster realises that in playing Schumann *they are already improvising* the possibility of 'moving right' along the continuum opens up, there and then.

To return to the continuum: one development which tried to do away with the 'genius composer' was **total serialism**. Its inventors, in the aftermath of the Second World War, attempted to throw away everything that had brought the world to ruin and ossified the arts, including music. Among the things they jettisoned was Romanticism. They adopted a 'scientific' method in composition where every aspect of a piece of music was subjected to a central structural rule. The resulting music was extremely complex, the scores were loaded down with instructions, and the performer was expected to reproduce the written text as accurately as possible with very little 'interpretation'. Unfortunately for our discussion this had the effect of replacing the 'genius composer' with the 'genius scientist' and music actually progressed *leftward* along the continuum. Despite the fact that very great works were produced in the total serialist style, most of the composers involved saw quite soon the sterility of the direction they were moving in, and in various ways 'turned right': Boulez and Stockhausen, for example, introduced indeterminate elements into their pieces, while Stockhausen even experimented with melodic invention, often dressed up as complicated game-playing (thus he kept control over his performers). A few composers continued with total control, even ones from later generations such as Brian Ferneyhough, but generally speaking this spectacular development was short-lived.

In America in the late 1950s a younger generation of composers came up with **minimalism**. Caught in a pincer movement between European serialism and Cage's equally rigid indeterminacy, intoxicated by jazz and rock (newly-respectable with the intelligentsia) and wishing to write equally exhilarating and attractive music, they invented their repetitive systems as a way out of the nutcracker. It was impossible in those days to be taken seriously as a composer unless you had a *system* with which to assert your intellectual credentials: minimalism provided this. Unfortunately these composers were forced by the same intellectual climate to dispense with exactly those things which make jazz and rock exciting – rhythmic and melodic invention – and their music moved further again to the left of the continuum, forcing performers into mechanistic and more or less

inexpressive playing.²¹ I believe it to be in response to the sterility of this leftward movement that, like the serialists, they soon abandoned their founding principles. Minimalism today has virtually ceased to exist, its erstwhile practitioners (except perhaps Reich) retreating into diluted standard repertoire clichés.

We need spend little time with **tape playback**, which obviously contains no interpretative element whatever, in real time. It forms the left-hand extreme of our continuum. The very term 'tape playback' is now going out of date: with the rise of hard disk audio any pre-recorded material will soon normally be played directly from that medium. Since well before the rise of multimedia (which is now eclipsing it) tape playback was on the wane: with nothing to look at except some loudspeakers it proved boring for concert-hall audiences, and it may soon come to be seen as a passing event of the second half of the 20th century, arising with the invention of analogue tape and disappearing soon after that medium was superseded.²²

Coda

I have argued that in all musics except mechanical playback (and perhaps two genres unique to the Euro-North American tradition in the second half of the 20th century, total serialism and minimalism) the creative and interpretive input of the performer is improvisatory and essentially always 'of the same species' moving along a continuous spectrum.

There grew up in Europe at the end of the 18th century (here I will expand on my earlier arguments) an unnecessary barrier between melodic improvisation and interpretation. This regrettable development persists, and militates against the correct performance of classical, baroque and earlier musics; here and in the standard (19th-20th century) repertoire the cult of the 'genius' tends to reduce orchestral performers to ciphers who are allowed to do nothing but reflect the controlling power of the conductor and soloist, self-serving star celebrities who pretend to 'serve' the creative genius of the composer but who actually want to be considered geniuses themselves, producing more and more extreme 'interpretations' of music much of which would be better off without it (the godlike status of Glenn Gould is a particularly distressing case in point). The music itself, meanwhile, is a

²¹ Some minimalist pieces benefit from the adoption of a boogaloo-like 'groove', which is certainly an interpretative function.

²² Currently there is a resurgence in pop music of that other superseded method of reproduction, the vinyl record. DJs use vinyl in preference to CDs because it allows them to interfere with the audible sound manually in real time, stopping the turntable with their fingers and moving it backwards and forwards in the rhythm of the track in a technique known as 'scratching'. This adds a fascinating improvisatory element to a performance which would otherwise be as sterile as tape playback. On the continuum it comes, naturally enough, within **rock, pop and blues**.

toy, a 'warhorse' to be moulded like plasticine until its true nature is completely obscured (beg pardon: its 'unsuspected spiritual depths are revealed') and it has served its purpose as grist to the capitalist mill.

And immediately I will contradict myself.²³ Every interpretation of music, extreme or not, is valid so long as it works, so long as it speaks to the listener. No piece of music *belongs* to its composer or to its time (just think what directors at The National Theatre would make of an attempt to force an unrelieved diet of 'authentic' Shakespeare on them). At completion a piece of music is presented as a gift to the world and belongs to the world, to do with it as it will. 'Authentic' performances – insofar as we can be sure we can produce them – are no more necessarily valid than others. If a Mozart concerto played on a synth speaks to its listeners more directly than one on a fortepiano, the performance on the synth is the right one. But, but, but, *where ARE the authentic performances?* – the truly authentic ones? – surely there is room for just one or two? – why does no one attend to what the composer actually wanted? You can twist and bend the music out of shape to accommodate your interpretative will all you like – you have that right – but what you *ought to be doing is improvising*. Yes, improvising, practising that hard, severe, ascetic, unforgiving, joyful, ecstatic, hilarious, obscene, chaste, spiritual discipline. Improvising should mean obeying the composer's intentions, not ignoring them. In music where melodic invention was intended you ought to be employing (real time) melodic invention. In music where strict tempo was intended you ought to be in strict tempo. In music where right-hand-only *rubato* is intended you ought to be doing right hand-only *rubato*.

Does no one care to even try out a piece in the way its composer intended? – might not the result be revelatory? And if the early music crowd answer 'But we're doing just that' I reply, darlings, you have only the foggiest idea. If Western art music is to survive as a living thing, not a 'heritage industry', the education of our children and teaching methods at our conservatories must be radically reformed to correct this long-standing error.

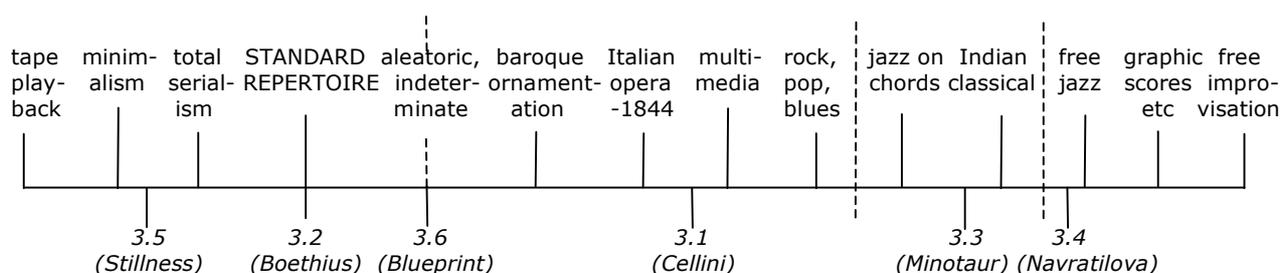
²³ *Do I contradict myself?*
Very well then....I contradict myself;
I am large....I contain multitudes.

Appendix: My *Third Sonata*

In the preamble to this article I mentioned that its genesis was bound up with the process of composing *Third Sonata*, a work which in its various manifestations traverses the Improvisation Continuum. The six sonatas²⁴ have a common structure which is set out in its most basic form in the 'original' *6 Blueprint*: it consists of 13 scafra elements, each with a set length and a prescribed mode, laid out in a matrix of 56 elements. Within this matrix various elements recur from twice to eight times. One element occurs once only. The music is to be improvised within this structure.

Two further **instructions** are given: **1**: on each repeat of any element the material must be the same, but *reimagined*; **2**: a number of specified elements must be inverted and/or retrograded. All six sonatas reproduce this same structure, and the two instructions.

Figure 5



1 Cellini is a partly composed version of the basic structure. I have provided a reasonably full working out which leaves room for some ornamentation and melodic improvisation. The notation is dot music, which necessitates a deeper than usual amount of interpretation. This places the work in the same area as Italian opera up to 1844 – perhaps a little to the right of it.

2 Boethius is through composed – a perfectly standard piece of music, conventionally notated.

3 Minotaur is laid out like the first, but the composer's input is minimised, consisting of a few notes for each element. The performer's input is consequently much higher but still circumscribed to a great extent. I would place this version in the same region as jazz on chords and Indian classical.

4 Navratilova adopts the convention of a given opening (or in the case of retrogrades, closing) for each element, from which the remainder is to be freely improvised. This places

²⁴ *Minotaur* was composed during the writing of this article: *Boethius* and *Navratilova* were completed soon after.

it to the right of all the dotted-line boundaries, even the furthest right (between disciplines which incorporate a strictly regulated set of rules and ones which allow the free flow of ideas).

5 *Stillness* is the strictest of all the sonatas. The 56 elements are represented by 56 single chords, each to be played softly and held for the requisite number of seconds. No room is left for interpretation of any kind. This places the sonata very far to the left of the continuum, in the area of total serialism and minimalism (though I hope the effect of the music is far removed from either).

6 *Blueprint* reproduces the skeleton from which all of the other versions were made. This consists of a mode and a length in seconds for each element: no further notated music is present, though the two **instructions** apply.

It was not until I had composed large parts of *Cellini* that I realised *Blueprint* was performable as a piece in its own right: however if this is to be done a tremendous amount is expected of the performer. **Instruction 1** above (on each repeat of any element the material must be the same, but *reimagined*) means that the improviser must hold thirteen separate elements in mind *and* reimagine each one as it recurs; **instruction 2** (a number of specified elements must be inverted and/or retrograded) places an enormous further burden of structural manipulation on the performer. It is obvious that the process cannot be accomplished without preparation: surely most performers would want to write out sketches of the elements as they first intend to play them, in order to have them to hand while improvising later (reimagined and altered) appearances.

This process will in effect turn *Blueprint* into an indeterminate score. As we saw above, any music is indeterminate which is designed and notated so that it can be realised in performance in a number of substantially different ways, ways to be determined in advance by the performer. But it remains also an improvisation score: like Feldman's indeterminate music, subsequent to its preparation it will be improvised in real time.

My *Third Sonata* spans almost the entire continuum as, even more extensively, does the rest of my oeuvre. In conclusion I should like to present a second version of the continuum showing how particular works might fit into it. Figure 6 contains, above the horizontal line, works by others, and below, by myself, in their appropriate places. (To avoid repetition I have not included *Third Sonata* in Figure 6.)

Figure 6

