

WHAT IS MUSIC?

“Some people come by the nature of genius in the same way an insect comes by the name of a centipede – not because it has a hundred feet, but because most people can’t count above fourteen”

Georg Christoph Lichtenberg 1742 – 1799
German scientist & satirist

Anyone trying to figure out what music is, and therefore what composing is, is caught between the past, the present and the future. Music, like popular culture, is a moving target, forever evolving. Analysing composing, one is forever comparing and contrasting between the past and the present, uncovering commonalities, traditions and precedents, attempting to offer insights into the future. Teaching composition is not about whether ‘this chord sequence is good’, or ‘whether this melody works’, it’s about embracing traditions, styles, approaches and using them as a blank canvass for your own new ideas, interpretation, imagination and vision. No one ever literally ‘teaches’ composition, for in many ways it is unteachable; it’s about intensely personal decisions which are peculiar and specific to one writer. It’s about the emotional intelligence, creative abilities and intellect of one person and how they manipulate music structure to offer something which has enough elements of originality to make it theirs. Budding composers can be sensitively guided through a labyrinth of stylistic possibilities and opportunities in order to uncover their preferences and inclinations, from which, with advice and guidance, they can grow their own distinctive voice. Composers will deduce their own strengths and weaknesses, and will inject their own personal style. A good composition tutor is someone who can open the minds of composers to new ideas and possibilities; not overtly but in a way which makes it almost appear as if it had never happened.

There are rules of logic, science, engineering and science which underline and guide the whole creative side of music. Why we make the ‘creative’ decisions we do is down to our perception of architecture, placement, craft, precision and understanding about how to harness and manipulate what music offers us e.g. the almost limitless abundance of possibilities, permutations and potential music contains and is already there. By ‘already there’ I mean that every path we carve out through music, every road we navigate from the beginning of a piece to the end is made up from stuff that existed already. We do not invent the chords or the individual notes and do not own copyright on them individually. What we ‘own’ is the architecture; the precise method of construction; what we own is the context; the journey. The one thing we bring to music is the one thing it can’t do and doesn’t already possess - the ability to choose; to make selections and decisions. Every chord trick in the book already exists in principle but they never exist in *fact* until somebody chooses them. Music itself is not a conscious thing; it does not have a mind of its own. We are its mind. We bring the one thing it never had: humanity. So in essence composers are, principally and foremost, arrangers; they assemble. Composing is about choice; ultimately composers choose where to put stuff. A composer is not responsible for the fact that one chord might work well with the next; he or she is responsible for deciding to use such chords; for realising the chords work as they do.

Has music been damaged by its historians?

History is real but the retelling and interpretation of it is always someone else’s version; unless you wrote the book, in which case it’s your interpretation of any facts, opinions and archive material which might exist to support your case. The telling of history nearly always, and to an extent naturally, has a particular viewpoint. History, or at least the telling of it, is sometimes dripping in the kind of sentimentality which can and does make it prone to being exaggerated and therefore unreliable. History is not usually written by the people who live it; it is written by people who observe and report from afar, sometimes long after the event. Because of this, interpretation is everything. Similarly the nightly news is not generated or lived or experienced by the people who report it, but the reporters *frame* it and determine its context. In many respects there are rarely any absolute truths, only opinion and interpretation. Truth is frequently something we *create*, not always something that just *is*.

I say all this because, arguably, no other art form has been more damaged by industry, historians and academics than music. The history of music is prone to being manifestly misunderstood, misreported and misinterpreted by its scholars. I want to give you some examples of how the sentimentalisation of music's history can distort the past.

The myth of genius

Over and above the obvious need for heroes and the fact that holding individuals in great esteem helps and inspires us to succeed, there are other reasons society reveres the 'great' composers: because we are taught to. As I allude to elsewhere, people love music but for the most part they do not understand the method by which it is achieved, much less the process of conceptualisation and composition. Because few people outside the world of music can conceive of how it is created and built by composers, music has always suffered from a kind of emotional isolation and insulation. People love music but they do not understand it on any kind of deep meaningful level. This of course is part of its great charm; part of the reason people love it is precisely because they grasp it only on a surface level. In one foul swoop most listeners are both in their element and out of their depth; they revere something they don't understand and because of this presume it to be the result of greatness, because that's the way society (history books, the media, etc) 'frames' composers.

In society anything which is not understood or easily rationalised is generally either demonised or revered. Society refers to the great romantic composers as geniuses simply because it has no other terms of reference: they're so good it's unbelievable. And if it's unbelievable it must be genius. You could read many books on Beethoven and still be none the wiser about how he created music. You might read about what 'drove' him but about his process or how his music communicated emotion or created meaning you would find comparatively little. You would no doubt read a lot of reverential speculative context about *why* he wrote what he did, and when, and in what condition he was at the time. Few people appreciate or understand how composers compose and so instead the telling of their life becomes a disproportionate factor in any analysis, almost as if knowing who they were will enlighten us to how they composed music. This runs the risk that analysis of their work becomes added with speculation and supposition. Books often tell us what was written (which notes, harmonies and instrumentation) and they convey the brilliance of the structure and organisation of music, but little is written in terms of deducing how and why music affects us. These are some of the areas this book attempts to investigate.

In music there is no such thing as good or bad; there is only opinion and interpretation. Literally there is no such thing as good music; no such thing as bad music. Add to this the fact that 'opinion' is prone to being a societal concept in which the wisdom of the crowd is frequently the common denominator. Therefore Beethoven is a genius; and so is Elton John and Stevie Wonder and *anybody else* who does something people think is wonderful, whatever that means. Most people don't understand how or why music communicates, so they shroud it in words like 'art' and 'genius' – concepts which have no meaning, only conjecture, guesswork, opinion, supposition and presumption. Let us examine the words which normally shroud supposedly great composers; genius, art and inspiration.

Art

Art is a name we give to the result, the conclusion. We cannot in all truth define it. To call a creative process 'art' is meaningless; you might as well call your unmade bed *art*. Art is not a definable word we can employ to rationalise or understand music. The finished 'result' might, in some people's estimation, qualify as 'art' but the process that delivers it is about emotional intelligence, understanding, perception, placement, architecture, decision and profound judgment and awareness. I'm not saying we should avoid using any words which don't have a concrete unassailable meaning; simply that we should remember that such words are, quite literally, meaningless.

Genius

Genius is more about revealing our own opinions and imposing them on others. Saying someone is a genius is like saying 'look at me, this is what I think'. It is a platform for your own opinions.

Genius is a manifestation of our inability to understand a process - a process which only *appears* to defy explanation and only *seems* to be amazing and therefore 'genius'. Our desire to believe in genius is not entirely unlike our desire to believe in God: it says more about the believer. Genius is more of a concept than a reality; it is a lovely idea. The concept of genius hasn't always been here; it evolved as people became more attuned to the concept of personal greatness and eventually it became the prism through which society rationalised the work of the great thinkers and artists. This is a shame because the growth of the concept of genius is tantamount to society admitting that it has no proper tangible explanation for people who achieve great things. This is not an attempt to discredit or dispute the fact that immensely talented people exist; it is simply a desire to understand ability in a sensible way. It is a desire to deconstruct the creative process and understand what it is and how it works. The concept of genius fulfils our need for heroes. All this is perfectly understandable but stands as testament to the level to which the history of music has been seen through reverential and distorted prisms.

People do not tend to rationalise music in the same way they might interpret visual 'art' because for most people music lacks a visual dimension; most people interpret it using only their ears. People can understand visual stimuli better because they can see it; most have some kind of idea how the visual art is physically constructed because they can see and therefore have a basic idea of its construction. Phrases such as 'seeing is believing' do not happen by accident. Because people lack an understanding of how music is conceived and created, and because most people cannot see it (i.e. read it) the lack of understanding creates a vacuum which is sometimes filled by endless mystique and reverence.

Inspiration

The phenomenon of musical ideas arriving full-blown in the mind is called inspiration. The concept of inspiration is just as much a myth as 'genius' and the two concepts tend to fuel each other. Let us consider some statements from the great composers, when referring to how their ideas 'came to them'. Handel said "I thought I saw all heaven before me". Mozart said "Whence and how they come I do not know; nor can I force them". "The music of this opera was dictated to me by God", so said Puccini. Brahms said "I felt like I was in tune with the infinite". All the statements above share three common characteristics: they can't be understood, they can't be explained and they can't be challenged. Let us instead turn to what *is* known; to what *can* be proved fairly conclusively. Beethoven's sketches, like Mozart's (many of which have been carbon dated and subjected to other scientific tests) reveal that both had a habit of writing different sections of a piece at different times, after which they would place them in sequential order. Beethoven often worked on several pieces at the same time, often taking one section of a piece and putting it into another piece. He produced numerous drafts, often spanning years, and would mix and match different ideas from different pieces. Mozart regularly ran out of ink and used several different kinds in the composition process. By studying ink patterns scientists and musicologists have deduced that Mozart rarely wrote fully formed compositions; he sometimes mapped out the melody and bass first, adding chords and voicing later. He sometimes started pieces in the middle (or at the point at which he wanted the piece to achieve its grand statement) and then simply worked back to provide a proper delivery for the great moment. This is frequently how composers of the moving image often work and songwriters too.

Neither Beethoven nor Mozart would have worked this way if they'd copied perfectly formed pieces from mental images in their heads, but without this context we have the perfect illusion; the illusion of 'immediate linear composing', of 'inspired genius'. So, what is inspiration? Inspiration is sometimes referred to as the one aspect of composition which defies explanation. It defies explanation largely because it's a misleading term. When composers compose, what they are usually doing is converting the process of speculative conceptualisation into actual music. Ideas which 'come to them' will never literally come from nowhere; they come from within the mind and as such are the culmination of a neural process which distils memories, delivering them as ideas. Composers then begin to amend, convert, adjust and alter these thoughts. The *conversion* of ideas, thoughts, notions and concepts into a tangible finished product is the hardest part of composition. Most musicians have compositional ideas but most lack the skill required to knock these into a coherent structured entity.

How we listen and how we compose

When people listen to music they tap into unconscious or conscious memories of existing musical structures in order to understand, classify, categorise and rationalise what it is they're listening to. But this is also how composers *write* music. It's the same process but undertaken by someone who has the mental and emotional faculties to convert their knowledge into the creation of musical ideas. They invoke tradition and custom, usually because they can't avoid it; avoiding structure and form in the conceptualisation process is like a writer avoiding sentences. Structure and form is part of the deal. Composers explore and utilise different templates, habits and behaviours. They distil all this into structural blocks. They impose their own uniqueness using craft, architecture, placement, common sense, incredible expertise and intellectual ability to fine-tune the product into a unit for consumption. This 'imposition of uniqueness' isn't often a conscious process; it's simply part of how our brain works when we compose. We're probably not aware that a large portion of what we 'compose' is the result of our memories and our ability to translate memories into something relatively new. This doesn't mean that what composers do is any less fantastic or special or individual; this simply puts it into a more rational and less hysterical context in order to explain how people who are otherwise quite normal, can craft great music.

Granted, this doesn't sound as exciting as "being in tune with the infinite", or as thrilling as "seeing all of heaven before me". Nor does it sound as exhilarating as "being dictated to me by God", but it has the single virtue of being wholly more plausible and science-based. When composers compose they impose their own changes and alterations on existing structures. If they're lucky they impose enough changes to develop their own style and find their own 'voice'.

Listening with prejudice

As I alluded to earlier, when people hear music they listen through mental processes which are governed by a myriad of assumptions and probabilities the brain creates for us, based on previous listening experiences. We are creatures of habit. The employment of routine and convention is what prevents us inhabiting a world of permanent chaos and confusion. Music is rationalised according to how it fits with our preconceptions and our prejudices; how it rates alongside the thousands of other musical experiences we've had. The problem is that composers are guided in much the same way; they add a distinctive voice to the process and so claim moral authority and temporary legal ownership of it but most composers are essentially involved in the same journey; they are arrangers first and foremost, deciding where, and how to use what music structure offers us. If composers were not essentially involved in the same journey, different composers would sound less alike than they do and listeners would live in a world of aural chaos. We pick different apples from the same tree. The tree replenishes itself with apples which may have fractionally different dimensions, but it's still the same tree. Composers who really *did* change things - composers who fundamentally altered or genuinely evolved music - succeeded in plucking apples from a section of the tree no one else could see or reach. In some cases they succeeded in taking a cutting from the original tree and growing an entirely different tree.

Another fundamental reason that composers write in homogenised styles is because they're fine tuning a product into a unit fit for commercial consumption. Listeners respond quicker to something they can understand and composers fulfil their part of the bargain by writing in a way which is accessible. And so the cycle of commodification continues. The main reasons that the cycles manage to evolve at all is due to the changes in style, design and make-up and also the evolving variety of textures and production techniques.

Many composers do not always fully understand, appreciate or respect the process by which they achieve a creative work. Some don't understand the process of conceptualisation, the genesis of their thought process at the outset of the creative process. Many don't realise because they are understandably too busy writing music to think about it, which is absolutely fair enough. Some composers don't realise that a very similar journey has been done before, which makes it easier for them to see the path before them.

Chord sequences have a habit of becoming clearer as they evolve and progress; this is because as writers we are seduced by the safe terrain and comfort of something we know and understand.

When composers talk

When some composers try and explain their process they tend to either talk in bland generalities which could theoretically mean anything, or focus on the distinct and new areas of the piece which are personal and peculiar to *them*, or they drench the whole process in abstraction and mystery. This doesn't mean that composers are dishonest; merely that most of them simply don't sit and ponder or analyse how and why ideas come to them. Some that *do* are seduced by the romantic notion that ideas come from 'somewhere unknown' and are beyond rationale - something which further fuels the myth of genius. Paul McCartney, one of the 20th century's most prolific composers, along with numerous other popular composers, said he doesn't know where his ideas come from. This is a familiar mantra but the idea that ideas literally come from nowhere is absurd. Everything comes from somewhere and the concept that musical ideas are somehow immune from this procedure or separated from this process is an example of how we romanticise what we don't understand.

Composers and inventors

For example, we are perfectly attuned to thinking that the great inventions are the product of a perfectly rational mental process which involves science, engineering, design and ingenuity. We believe that the person who invented the Hovercraft or the cyclonic vacuum cleaner is a great engineer, planner and builder but we don't accord such relatively normal plaudits to composers. Instead many accept without a moment's hesitation the laughable concept that when composers conceptualise, their ideas come from *nowhere*. We suspend our normal healthy judgment and even scepticism and embrace, without reservation, concepts which have more to do with magic than anything rational. Composing is not done by magic. Nor is it done by genius, because the two concepts are unprovable and without merit. One is ridiculous; the other is a description without meaning or logic. Because people do not understand the process of composition, they often refer to composers or creatives as being 'gifted'. Once again this is a little disingenuous because it seems to suggest that musical brilliance is purely the result of result of being 'given' something, which in turn suggests that greatness is down to a quirk of nature or luck.

Despite the rich tapestry of harmonic possibilities music offers us; despite the almost limitless potential we have access to, the type of harmony used in song is usually quite simple. This means in turn that what listeners expect from a song is simple. That said, you will find as we examine songs that the ones that stick out are normally the ones where an element the structure or harmony has been dramatised and altered, which gets the attention of the listener. Sometimes it might be the arrangement alone that delivers this final touch and sometimes it might be a production identity.

We compose the same way as we listen; with prejudice. The notion that we sit down at a piano and compose whatever 'comes into our heart' is nonsense. Its good PR but it is essentially a lie. The notion that ideas come from 'nowhere' and are therefore the work of genius or some other implausible or metaphysical concept is a myth. Composing is a series of neural events governed by biological and intellectual factors, culminating in the creation of something which has an element of our own sculpturing. If every piece of music ever written was literally from the heart or the result of a baffling and utterly personal piece of inspiration unique to every individual, the music written by one person would sound radically different to the music written by the next person. Music would not sound as alike as it does which means it wouldn't be as listened to as it is. Music is not composed in an empty emotional or intellectual vacuum. It is the some of your parts; the culmination of your knowledge and understanding, distilled into music. Every piece of music you ever listen to plays a part in shaping your musical tastes, habits and routines. This is not meant to challenge what music *is* or how clever the individuals who craft it are; but it does shine a light on the essentially fanciful notion that some innate and utterly unique and unfathomable greatness of the individual is solely responsible for the music we listen to.

Improvisation

Composition is often referred to as ‘frozen improvisation’ and improvisation is often called ‘spontaneous composition’. Improvisation is often labelled ‘extraordinary’, but looked at dispassionately and from a non-reverential and non-musical perspective there is nothing necessarily extraordinary about the basic concept of improvisation. We all do it, all the time. We improvise not in tones but in words. We do not stop talking in order to conceive our next word or sentence. We just keep talking, reaching for the best idea and stating it in the most eloquent words possible. Musical improvisers do the same with harmony and melody. What *is* fantastic about musical improvisation is the considerable skill and dexterity involved in the conversion of ideas into physical delivery. Improvisers have a way of articulating their vast musical knowledge in exactly the same way others articulate memory and words. But improvisation is not as truly random as some would have us believe. Certainly it is no more random than speaking. Most of us do not randomly speak gibberish for no reason at all. Most of us articulate our thoughts through speech. Analysed properly most improvisations are a collection of compacted ideas, strung together and articulated. Often jazz improvisations are a collection of licks and phrases at least partly based on training, practice and rehearsal. What mesmerises us is that people can do this with *music* rather than words. What *is* truly exceptional about improvisation is the link between memory, imagination and performance technique which allows such perfect synergy between the mind, the body and instrumental technique. We must separate the concept from the practicality to highlight where the true expertise in improvisation lies.

Absolute Pitch

Absolute Pitch is highly revered, but speaking as someone who enjoys both the benefits and drawbacks of what used to be called ‘Perfect Pitch’ (the ability to recognise the pitch of a note on hearing it), there are important lessons to be learned about this area which tie-in to aforementioned notions of ‘greatness’ and ‘genius’. Before we come to AP, let us analyse some fundamental preconceptions about a number of music related areas and issues: We enjoy what we assume is instantaneous sight and sound. We are under the illusion that we simply open our eyes and see. Something makes a sound, so we ‘hear’. But sights and sounds actually come into our minds as partial and fragmentary information. Our perception systems restore the missing information with speculation, probability; what we *assume* is there based on information stored from the last time we saw something similar. This is why when we see something which is genuinely new or fantastic (a magnificent view of mountains, for example) we are so enthralled.

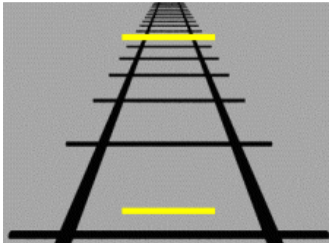
Sensory perception makes mental images of the world in our mind – representations of the world outside our heads. It is so quick we’re not aware of this procedure. So we presume there isn’t one. People often presume that things they can’t see or hear or understand simply *aren’t there*. This is why we believed the Sun revolved around the earth and that the earth was flat for so long. Whilst this inability to accept what we can’t see or don’t understand is understandable to an extent, it also distorts our understanding of fundamental mental functions. The concept of absolutely instantaneous sight or hearing is a complete illusion. Our perceptions are at the end of a long chain of neural events that give us the appearance, quite literally, of instant vision.

We have a problem acknowledging processes. We have no problem acknowledging events, because we know they’re real. But the *process* by which something happens can be abstract, theoretical and conceptual. So we ignore it. We ignore the process by which something happens and look only at the outcome, the result. There are many areas in which our strongest beliefs mislead us. The presumption that our senses give us an undistorted view of the world is a classic example. Everything we see we presume is exactly as it actually is in reality, but our perceptions are at least partly guided by ‘best guess’. Perception involves an analysis of probabilities; the brain’s task is to determine what the most likely arrangement of objects in the physical world is. We don’t look at every branch and twig but we know it’s still part of a tree. Colour is a psychophysical fiction; it is the imposition of a categorical structure we impose on what we see. Similarly but not as obviously, pitch is a psychophysical fiction; a direct consequence of our brains imposing structure on the world of frequency.

Frequency exists; pitch is something we invented to explain it. To go a little further, 'key' is also a fiction; it is a construct, a method by which we understand and categorise sound - in particular, pitch. It creates a hierarchy of importance; a pecking order. It exists only in our mind and on paper. It is something we imposed on music to make sense of it; it is how we humanised and dominated music.

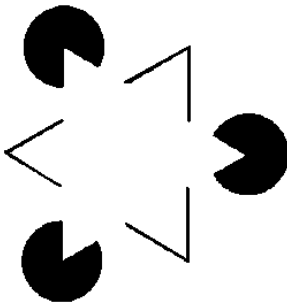
Our perception fills in the bits that aren't there.

Fig.1



Because 'seeing is believing', people are more ready to accept visual illusions as the most notable proof of sensory distortion. The 'Ponzo illusion' (left) is an optical illusion that was first demonstrated by the Italian psychologist Mario Ponzo (1882-1960) in 1913. He suggested that the human mind judges an object's size based on its background. He showed this by drawing two identical lines across a pair of converging lines, similar to railway tracks.

Fig.2



In the Kanizsa illusion (fig 2) there appears to be a white triangle over a black outlined triangle. Once again this is an illusion.

Most of the time the information we receive is ambiguous or incomplete, but our brain's ability to make identifications based on partial, incomplete or fragmentary information is brilliant. When we hear music our preceptors are unconsciously working hard to try and rationalise it based on simple determining factors

Brain categorisation simplifies musical memory as well as musical perception. Without categorisation the world would be confusing. A dog with a long tail would be totally different from a dog with a short tail. The same is true of our interpretation of melody. When music is performed several times, or a piece covered by different artists, we don't hear them as separate songs. We seldom notice individual characteristics. We seldom notice tunings. Categorisation disables us from listening to different pitch. What key something is in is irrelevant to our brains. People can easily remember songs without the burden of knowing exactly what key something's in.

So, returning back to 'absolute pitch', we can instantly name a colour by looking at it, but why can't we name a pitch by listening to it? In other words, why don't more people (in fact everybody) have absolute pitch? The answer is, quite simply, because there was never a *need* for it. Thousands of years ago our lives depended on our ability to distinguish colour, but our lives never depended on our ability to distinguish pitch. If we ate a certain coloured berry we might die. If different berries had sung at specific pitches instead of possessing specific and identifiable colour, we'd probably all have absolute pitch.

Perhaps more people have AP than we think

Imagine you knew the colour red but didn't know its name; you knew what it was but not what it was *called*. You could recognise but not classify. Now imagine you know what the pitch of the note of 'A' *sounds* like - what it feels like - but because of a lack of any training in music theory, particularly harmonic categorisation, you don't know what it's called. You can hear it, recognise it, repeat it but not classify it; and therefore you can't *prove* you have Absolute Pitch. If someone says to you, 'what chord is that?' or 'what note is that?' or 'what key is that?', you won't know unless you know the names of the chords, notes and keys. And even if you *did* the ability to recognise pitch would be meaningless unless you could contextualise the information in a practical and useful way.

Worse still, if you're not a musician you're probably not even aware that you *can* recognise a pitch. People might know you as being particularly good at Karaoke without anyone realising you have Absolute Pitch.

Absolute Pitch is thought to be rare but we don't even know *that* for sure, because AP requires musical knowledge to even realise you've got it in the first place. Remember, musical knowledge is required to prove you have AP and is probably required to even *know* you have AP. But it's not necessary to *have* AP. There are probably many more people with AP than we currently know about. In order for us to develop it we need to exist in an intensely musical environment, preferably from an early age. Many of the 'great' composers had it. Many arrangers and orchestrators have it. Speaking as an orchestrator, AP makes a huge difference because I can hear and see the various textures and colours in my head before a note is scored out.

The question as to whether AP makes you a better composer is a tricky one. It means you can hear your conceptualisations in your head clearly, so the creative process can be quicker and more intense. Whether that necessarily makes you 'better' begs the question, what is 'better?' Often people who possess AP have it because they have developed a susceptibility to it based on close constant exposure to music. Composers who write from an early age can develop an innate emotional relationship with music; this can foster and generate AP. People with AP are simply accessing an ability we all have the potential for but few have accessed. AP is behind a door that usually remains closed. AP has never been 'needed', unlike 'absolute colour'. Therefore comparatively fewer people appear to have it. To visit the phrase 'seeing is believing', consider this: if the ear as an organ was only as sensitive as the eye, we would hear less than an octave. The ear (or the brain's interaction with it) is capable of so much more than it actually does. When we listen to music, just like 'the illusion of instantaneous sight', much of what we think we hear was coming whether we liked it or not. We subconsciously fill in missing gaps with our knowledge and understanding of tradition and precedent, i.e. what we *expected* to hear. This continues to be how we rationalise music. The brain has a strange relationship with music. When conductor Clive Wearing lost large parts of his memory after an illness, the only bits which survived were memories of music and of his wife. What a wonderful world that must have been. When Ravel's brain deteriorated he lost his sense of pitch but not timbre. Hence the 'Bolero' was often said to be 'orchestration without music'.

Plato said: "The music masters familiarise children's minds with rhythms and melodies, thus making them more civilised, more balanced and better adjusted". He didn't say the music masters made children more 'controlled' but he might as well have, for in reality this can be the net result. In the book 'On the Track' Rayburn Wright and Fred Karlin, referencing recent cognitive studies, said "By four months old babies already prefer major and minor 3rds to the more dissonant minor 2nds". In the same book David Hutton, head of the Cognitive and Systematic Music Laboratory, was quoted: "Through constant exposure, synapses are trained to respond to the tones and characteristics of western music". So there we have it; our brains have adapted to the narrow margins of what music 'is' and are less receptive to what music 'might be' or 'is capable of'.

In order to completely kill off the myth that to be a great composer you need AP, I will simply state that excellent 'relative pitch' is sufficient. This is something we can generate and nurture. This will benefit your own music and your ability to understand and enjoy the music of others. Most people with AP can also name pitches of non-musical sounds, such as tills, car horns, bottles clinking, cats meowing, engine noise, etc. This makes life very interesting and also makes the world very musical but in itself it is not a great benefit to being a composer.

Music through the looking-glass of its industry

One of the primary battles any teacher of composition has, whether they acknowledge it or not, is to decide whether musical composition is taught within the reality of the industry which controls and dominates it, or whether it is taught as an autonomous 'art'. Should music be defined by the current music industry, or do teachers have a broader responsibility to contextualise the past and offer possibilities for the future? I say this because whilst this book aims to contextualise the past and learn from elements of its history and practice, I want to encourage young composers to avoid being defined purely by the industry and working practices that currently control music. We must endeavour to ensure the survival of the spirit of adventure and the notion of daring.

Almost every famous and successful songwriter / composer has brought something to the table around which he or she sits. Otherwise music would be permanently drowning in a sea of pastiche.

What do you call music?

Over the years I have occasionally asked people what they think music is; what defines it. Someone once said that Bob Dylan represented what music was, until he dared to play an electric guitar at Newport Folk Festival in 1965 when hundreds walked out. A jazz enthusiast told me that anything made before 1940 or after 1960 'isn't really jazz'. Whenever you try and uncover and unpick what music is, you encounter a world of pride and prejudice, bias and intolerance, misunderstanding and even bigotry. I even asked a Catholic Priest what he thought music was. He joked 'anything as long as it's not polyphonic'. He was referring of course to the Catholic Church's famous banning of polyphonic music (more than one part playing at a time) because they thought it would cause people to doubt the unity of God. We snigger at such intolerance in complete denial that exactly the same kinds of intolerances exist today, exacted by the current custodians of music; the music industry. The Church was famous for protecting and nurturing music but also for interfering with it. The Church banned the augmented 4th (also known as a tri-tone) – it was so awful that it must have been the work of Lucifer. I mention this because the Church was the Music Industry centuries ago. People often look back with horror to a time when music was controlled to such a perverse degree without, for even a moment, seeing the irony that the modern music industry, controlled as it is by corporate interests and business and commerce, does exactly the same thing. Educators are often no better; one Degree tutor told her students to "avoid 1st inversions" simply on the basis of personal preference. I could name a dozen pieces right now where a 1st inversion was crucial, critical and essential to the success of the music. Many teachers of composition make the fatal mistake of imposing their views, choices and preferences on others; teaching becomes merely a vehicle for their own opinions.

The industry's grip on music is perhaps the latest incarnation of society's desperate and eternal bid to control music. The classification and categorisation of music is probably essential in order to make a coherent industry out of it but it is control nonetheless. Categorisation creates hierarchy; a pecking order of importance. As an example, most composers readily work on the blissful assumption of melody being the prism through which music is heard. In fact harmony is probably the ultimate musical prism through which people understand and enjoy music. Harmony is music's emotional centre of gravity. Close analysis of music reveals harmony to be completely pivotal in almost every way. We assume melody is more important because this is the bit we can understand and easily remember; people do not walk down the street humming chord sequences or singing harmonic extensions or chord voicings. Humanity presumes that the most important aspect of music is the thing *it* can rationalise.

If we hear unaccompanied melody we instantly but usually unwittingly try to rationalise it harmonically. Melody will always be suggestive of harmony. It will nearly always suggest a chord. We hear it in context of that chord. Melody thus exists as 'horizontal harmony'. In some ways it could be said that there is no such thing as unaccompanied melody. When we hear it we subconsciously attempt to make sense of it, and the way we choose to try and make sense of it is to hear the harmony it implies.

In general composers either bow to the weight of expectation and use it as a platform for fumbling around in the dark searching for a new way to say something that's been said a thousand times, or they subtly distort or dislocate our expectations to try and create something which, whilst not qualifying as ground breaking, is nevertheless 'new' or 'original' in its application or context. For ages we have assumed that the only viable alternative to 'normal music' is to produce something wild, innovative and subversive. The prevailing myth is that tonality has had its day; it is broken, exhausted. This is simply not the case. We are nowhere remotely near exhausting the wonderful and almost limitless tapestry tonality offers. We do not have to jump off the 'deep end' in order to be original. Tonality is not as shallow as people think. What we do with tonality is shallow most of the time, but that's our fault, not *its*.

Tonality, due to the almost limitless and subtle choices it offers, is much more than the sum of its parts. A major sobering thought is that most of the real changes in music in the last hundred years have been largely stylistic. The biggest genetically lasting influence on popular music has been the structure and form given to us by Bach, and that was hundreds of years ago. Real musical changes to structure and form have been few, and were nearly always largely ridiculed at the time. There have been many changes of stylisation, genre, approach & method, but these are not changes to the idea of what tonality has to offer. We may think that songwriting has progressed because of the radical and varied stylistic changes it has gone through, but the fact remains that the industry is still besotted and dominated by the four-minute song, or as Cole Porter called them, 'little symphonies'. More than a hundred years after the birth of modern popular music we are still beholden to the concept of a commercial entity which contains almost the same harmonic patterns and devices it did a hundred years ago. Styles have changed but not the concept.

Taking it one stage further, the song itself is simply a crude commercial abbreviation of the Symphony. It's all based on an adherence to structure, simplicity and entertainment. My point is that surely there must be more? The industrialisation of popular culture and popular music has been the prism through which music is rationalised, studied and enjoyed. Why are convention and simplicity such potent and powerful constructs in music? As we discuss elsewhere, we *look* at art. This helps us rationalise and digest. We *listen* to music. The extremes of art play better on the eyes than the ears for most, but to repeat the earlier stated fact, if the ear as an organ was only as sensitive as the eye, we would hear less than an octave; the brain's ability to interpret sound is so much more advanced and sensitive than its ability to interpret sight, and yet, ironically, it is this sensitivity which disables us from understanding and appreciating music which strays outside what people would call normal. We are more sensitive to the aurally bold than we are to the visually bold. Perhaps if we could 'see' music and not just hear it, this synergy of information would allow it to be more understood and thus allow us to be more open. Another uncomfortable truth is that we have become punch-drunk and stupefied by the diet of simplicity we've been fed for a hundred years. This has made us immune to the musically bold.

How many illiterate authors do you know?

Large portions of this book require a good understanding of music theory, particularly notation and harmony; not the razor-sharp sight-reading skills needed for performance, just an ability to understand notation enough to be able to see the structure of music as well as hear it. Notation is the language of music; if we want to truly understand music we need to be able to not just hear through our ears but interpret through our eyes. A combination of listening to and reading music is the ultimate way of understanding how music works and why it sounds like it does. Aural and visual cognition is a heady mixture which will enlighten, educate and entertain.

Happily, more and more musicians want to create music, but unfortunately fewer musicians and composers than ever before seem to want to read music or feel that it is necessary. This area needs to be addressed in order to contextualise why so much emphasis in this book is placed on the importance of analysing harmony. Music is not scored out in this book simply to offer a visual reference or to allow you to 'play along'; it plays a crucial role in how we analyse and understand music.

The role of music in society

Until relatively recently written music has always enjoyed a special place within education. In ancient times music was studied alongside mathematics and astronomy. To the ancient Greeks music was a byword for intellectual culture and high art. The old association between music theory, maths and astronomy was maintained in medieval educational life. During the renaissance period the ability to play or sing was a massive social advantage and every artist and thinker had a working knowledge of musical theory. Music was central to the thinking of educational reformers of the 18th and 19th centuries.

Many of them took their cue from the French philosopher Jean-Jacques Rousseau, who suggested that young children should learn music by ear as they learn to talk, and later learn music theory, as they would language. But what damaged music tuition and eventually all-but banished music theory from the narrative of modern music education in Britain was the way education failed to react to changes in popular culture and popular music in the 20th century. Throughout the 20th century British music teachers were, in the main, classically-trained amateurs, many of whom feared and resented the evolution of popular music, which seemed at odds with what they'd been taught to teach. For decades prior to the latter part of the 20th century, music was taught – even in schools, in fact *especially* in schools – in an imperialist and elitist way which simply pretended popular music hadn't happened and wasn't there. I myself can remember music classes in the mid-1970s consisting of us all singing hymns. Later when I did my 'O' levels and 'A' levels, the only music discussed was classical music. I learned lots about Benjamin Britten and Dvorak and then went home and listened to other music.

This kind of life tainted the way a generation of youngsters viewed music. In a musical sense at least, school didn't reflect society or normality. The teaching of rigid classically oriented music theory became associated with the restrictive practice of only teaching classical music. Modern theory (chord symbols, lead lines, modern chord voicings) was not addressed at all. The only music theory addressed was the kind which might prepare you to work in a symphony orchestra. For any youngster wanting to be involved in pop music, school music lessons were the *last* place to be. If you scour the history of pop music of the 60s and beyond, you'll find many of the artists who went on to be amongst Britain's top performers and composers (Mick Jagger, David Bowie, John Lennon, to name but a few went not to Music College but to Art College. Nowadays pop music *is* acknowledged and taught in schools. Schools finally acknowledged the 20th century just in time to catch the end of it. Just as classical music was the singular prism through which music was taught in schools, now technology is the central dominating ethos, with most young students deposited in front of computer screens, able to construct music from samples. Music theory has been largely jettisoned and is considered by many educators as irrelevant and elitist. Music must, at all costs, be fun. Students must be able to create their own music and enjoy the sounds music makes without hardly any meaningful reference to what the music looks like. The unassailable message is that creativity must be effortless, enjoyable and never difficult. Theory is difficult and thus doesn't fit into the 'fun' narrative.

In a modern world it is perfectly understandable for people to want to understand and contextualise music in different ways. Technology has been massively beneficial to music. It has democratised, enhanced and liberated music, freeing it from the restrictions of its past; but this is no reason for the wholesale abandonment of the use of our eyes in understanding music. Some say that 'reading music' is irrelevant to a younger generation; music theory may be irrelevant to a handful of genres which are unable to be articulated through notation, but this has always been the case. Some of the most interesting, effective and ground-breaking music of the 20th Century couldn't be notated. But most mainstream music *could*, and still can. Musical notation, one of the most profoundly beneficial forms of musical enlightenment, is hardly ever referenced in the teaching of composition in schools and in many colleges and universities.

It means in most cases that students never learn about the beauty, the structure, the abstractions, the similarities, the traditions, the tolerances, the tricks, the methods, the techniques and the systems with the essential benefit of seeing what they *look like*. How, for example, would you teach orchestration without referencing musical notation? You wouldn't, and yet some think you can teach composition (which is inherently and inextricably associated with arrangement) without reference to notation. To read many composition books one would be forgiven for thinking that all we need to do to understand composing is to simply and endlessly *talk about it*. In some respects the study of music, and in particular composition, is its own nemesis. It has become shrouded in pointless discussion, undue reverence and academic gobbledygook. It has become immersed in supposition, assumption, guesswork and hypothesis. It has remained *amateur*. This attitude prevails in colleges and universities in Britain too. A majority of colleges of further education contain music courses where the teaching of theory is almost non-existent and where teachers themselves are musically illiterate. It happens in universities too, where you can encounter PhD lecturers teaching composition and/or songwriting without any knowledge of what music looks like.

Worse still, they try and justify their ignorance by claiming that musicians and composers don't need to read. They cite the many pop stars who don't read music. Obviously it is true that many pop artists don't read music, but what people fail to realise is two things: firstly, the vast majority of popular music would never see the light of day were it not for a vast army of professional session musicians, arrangers, orchestrators and sound engineers who participate in the recordings. Secondly, if you teach someone music without teaching them to *read* what it is they're doing, one or two might be able to become world famous pop stars but the rest will be relegated to the role of amateurs. They won't be able to participate in the *other* numerous professional careers musicians can enjoy, many of which involve reading music. A whole range of careers in music will be snuffed out simply because their music teacher thought it was okay to be musically illiterate.

To understand how important music theory (particularly notation and harmony) is, you have to understand how theory can be used in the practice of composing and in the process of analysing the work of others; because if there is no *use* for theory knowledge – no practical outlet - music theory remains *precisely that*; a theory. Musical notation represents the visual link between the composer and what they have created. It represents absolute proof that the student understands what he or she has created, and can therefore replicate it, enhance it, learn from it and progress. It can be analysed, investigated, scrutinised, explored and dissected. Composers who can read and interpret and analyse their structure and craft by looking at it have the means to analyse; to progress. They have two means of interpreting what they've done – visual and aural. Your ears alone will rarely be able to fully analyse every aspect of your music or someone else's music. Those who cannot read their own creations might never properly progress; they may simply become caricatures of themselves; different versions of the same thing, existing in an eternal present. One of the reasons the 'great' composers produced so much imaginative and vividly communicative music is because they could hear it and see it and understand it to such a fine degree. This is also one of the reasons how and why so many composers are able to distil the vastness of music structure and capture their thoughts so succinctly and quickly; they *understand* music aurally and visually. The breadth of understanding is complete. Composition for these people is not some romantic chance event accompanied by a flash of lightning. The degree to which they understand how music communicates has become ingrained in who they are. To be able to see rather than only hear is crucial. Writing freezes music, and in so doing gives birth to the grammarian, the logician, the historian, the scientist. The written note or chord or voicing is far more important than simply a visual reminder; it recreates the past in the present.

It has often been said that some elements of music technology offer the quick solution but sometimes lack context. It has been said, for example, that composers, producers and engineers need 'the context of the original equipment on which the plug-in is based' in order to properly understand its usage. I would argue against this as a general rule. The leap forward that technology has brought for music has been profound and fantastic. It is not necessarily relevant to understand what came before or what led to a certain technology in order to respect it. We are where we are and technology represents the latest instalment of the evolution of music. But some use this same logic as a reason to jettison musical notation completely from the landscape of music. The reason for retaining musical notation is not out of blind reverential respect for the past or to try and maintain the past in the present; it is to ensure the continuing role of our eyes as well as our ears in understanding music. Music notation is simply music, visualised. This is nothing to do with technology or reverence or the past, it's to do with human interaction – how we understand, appreciate, identify, empathise, realise, comprehend; in short, how we *know* music.

These are the reasons music notation plays such an important role in this book. A composer who doesn't understand music theory is someone whose full creative potential might never be fully realised. For any beginners wanting to know precisely which branch of music theory to work on to get started, I would suggest any of the 'Pop' or 'Jazz' theory books. When confronted with the hugely dominating classical music theory books I would turn and run hard and fast in the opposite direction. Only a small portion of information contained in classical music theory books is of any interest or relevance. There are no chord symbols, there are no modern voicings, most of the terminology is ancient and the music is too. You will drown in a sea of Schubert and appoggiaturas.

Often it has been said that ‘text’ (the score, the transcription, the chord chart etc.) is what mediates the relationship between the composer and the finished product, but we could just as easily replace ‘text’ with ‘studio’.

The word ‘composer’ does tend to evoke the image of someone sat at a desk with a score in front of them, but for most composers this image is a false one. But because of these images people sometimes see the written form of music as something only pursued by composers trying to cling on to the past; again this is largely untrue. In some ways these arguments are about interpretation of what music *is*. Music produced purely electronically, even when using sample libraries, can compromise the distinction between conception and execution that would have happened if people were playing from parts. Some say that music which has no accompanying ‘text’ has no room for the interpretation of the musician, but this is mistaken; the musician will interpret the composer’s wishes whether they play from parts or simply from a bunch of instructions given by the composer. The argument is whether the end-product would be better if musicians were following a written transcription. Many believe that it is precisely these written transcriptions that thwart the creativity of the individual. But that viewpoint tends to romanticise the non-reading creative player and presupposes that creativity can’t happen if someone is reading a chart. But what if creativity and improvisation is more about structure and instruction than people imagine. If we accept that structure and form play a crucial role in the performing of music then this tends to suggest that a reading performer, following a transcription written by the composer, might be more creative in that environment.

Some see notation as simply a blueprint; a set of instructions. This is not entirely true; a blueprint is a way of producing identical copies. It yields something which can be completely predicted. But there are no such guarantees with a score/transcription/chord chart because it depends on the almost limitless tiny differences that exist from player to player.

There are no rights and no wrongs. It is up to you to find the best way forward. But one thing is absolutely certain and involves little by way of opinion or ambiguity; if you want to learn the craft of music and understand and interpret the work of others as a means of carving a path to guide your own creativity, reading music is an absolute necessity.

Music and Meaning

Distinguished screenwriter Hanif Kuresishi describes popular music as ‘a form crying out not to be written about’ in his introduction to *The Faber Book of Pop*. (Thompson, 2001: 57). To an extent he has a point; many of the traditional critical theories which apply to music are from a different generation and some no longer apply to contemporary circumstances. This book, however, dispenses with most of the endless academic and journalistic speculative flotsam which so often attempts to contextualise the music we listen to. Instead this book looks at the structure, harmony, texture and production of music and presents theories about how, why and when certain songs communicate to their audience.

This section will attempt to unravel and highlight whether, and to what degree, music contains ‘meaning’. I will examine theories from some of music’s biggest critical thinkers and analyse whether traditional beliefs and notions translate in a modern context. Music analysed includes: By the time I get to Phoenix, Didn’t We (*Jim Webb*), The Big Country (Jerome Moross), The Magnificent Seven (*Elmer Bernstein*)

“I consider that music is, by its very nature, powerless to express anything at all, whether a feeling, an attitude of mind, a psychological mood, a phenomenon of nature. If music appears to express something, this is an illusion and not reality”

So said no lesser person than Igor Stravinsky, when responding to thoughts of whether music had the ability to communicate emotion and ‘meaning’. We accept without question that words communicate not because of what they are but because of the collective understanding we all share about what they mean. They form a language we all share and because of us, words have meaning. They don’t literally have meaning embedded in them; the meaning they create and impart is a result of the shared belief and understanding of people. And yet we are less able to accept that music might communicate to us, albeit in a less specific way.

One remains baffled as to whether composers such as Stravinsky said such things because they perceived them as fact or because they come from a subconscious and unintentional need to promote the concept of music as a kind of magic, devoid of the ability to convey meaning and therefore any kind of rational explanation. If a composer accepts that, for example, one of the reasons his/her piece works so well is because of the combination of chords in sequence, and they also accept that the same sequence has been used numerous times before in other music, then they accept that their own music wasn’t and isn’t quite the individual creative act of they assumed. And yet a majority of composers talk of not understanding ‘where their music comes from’. They talk of being inspired and suddenly coming up with ideas from thin air.

More honest composers might venture to suggest how comparatively easy it is to construct music; how effortlessly it falls into shape, how easily it communicates a sense of ‘meaning’ in its listeners. But to acknowledge this not only pits one against the 20th Century’s great intellectuals and thinkers, it also robs music of the eternal myth of the ‘individual greatness’ of the composers that so defines it. The discovery of penicillin is attributed to Scottish scientist Alexander Fleming in 1928. He showed that, if *Penicillium* were grown in the appropriate substrate, it would exude a substance with antibiotic properties, which he dubbed Penicillin. We assume, rightly, that his discovery did not come from thin air, or from nowhere. We know he was a great scientist who worked painstakingly and almost fanatically on this area of study, studiously joining the dots before finally arriving at his monumentally life-changing conclusion.

Clearly there is nothing that literally comes from nowhere; everything comes from somewhere. Nothing comes from thin air. Except music, some believe. The belief of thoughts arriving suddenly and without apparent provocation is what fuels the twin concepts of inspiration and genius.

If a tree falls and no one is there to Tweet about it, does it still happen?

To be clear, as I stated earlier when talking about language, I do not suggest that music, unilaterally and by itself has intrinsically contained meaning ingrained within it. Robbed of human interpretation, music is just sound. If we played Beethoven’s Fifth Symphony to a Frog, it may respond, but what it would interpret the music as would be sound, not music. If we listen to it, we hear it as music because we have the mental faculties to hear and respond to music as music. The famous quote “if a tree falls in a forest and no one is around to hear it, does it make a sound?” is a philosophical thought that raises questions regarding observation and knowledge of reality. To apply this to music is probably not a great idea, but let’s do it anyway: if music is being played and no one is there to hear it, then truly it isn’t music. It becomes ‘music’ when we hear it. Music lies within the interpretation of the composer and the listener.

To use the ‘tree falling’ analogy once more; if someone is affected emotionally by something they are intellectually unaware of, it *still* happens. For music listeners don’t require a list of instructions on how to listen or react. The basic instructions are hard-wired into us as humans.

The ability to touch music

A vast majority of people do not understand how or why they are affected by music in the way they are; but they still *are*. They do not necessarily need to understand it musically or intellectually in order to benefit from it.

The experience probably won't be as profound as it would have been if they'd had a greater understanding and awareness, but still they benefit. This is part of music's great charm; with most arts or sciences people have enough of a grasp to understand what they encounter, precisely because they are beneficiaries of seeing and hearing and/or touching. With music they are profoundly affected emotionally by something they cannot see, don't fully understand, can't touch and can only hear. That said, the more you know music, the more you will understand it, and knowing how and why you're responding in a certain way is part of the pleasure of enjoyment. If you can truly touch music, then you are able to connect to it visually (by seeing), aurally (by listening), intellectually (by understanding) and physically (by playing). Only then will you touch music.

The fact that specific chords can garner similar feelings within most listeners is a credit to the exactness and specificity of the harmonic shapes and the uniformity and consistency with which they are interpreted by most people. People behave in predictable ways. If a student walks into a lecture theatre twenty minutes late, most people will turn to look, especially me; I can't help it. People react in formulaic ways, so it is perhaps no surprise that we react in similar ways when presented with specific visual stimuli and even specific harmonic design.

Listening with prejudice

People listen to music based on their previous experiences. Just as most things we encounter in life are rationalised based on existing information the brain stores and categorises, our listening ability and aural cognition is largely based on how it compares and contrasts previous listening experiences to current ones. Many of our cognitive abilities are based on our ability to classify and categorise the world around us. We do not listen each time with a fresh perspective, just as when we open our eyes we do not freshly reinterpret everything we see. The existence of life depends on memory, and so does the success and effectiveness of music. Specific chord types and even chord sequences appear regularly, and because we interpret these emotionally, they establish a characteristic, a kind of 'meaning', within us. On a basic level this is the ability to associate major from minor and consonance from dissonance, but on an advanced level there are specific harmonic events which can create more specific meanings. When we hear fragmented or fractured harmony, where essential elements of chords are missing or skewed, we can interpret this in ways which cause excitement or anxiety. Because of the regularity with which some harmonic events appear, or the consistency of the context in which they appear, the emotions and 'meanings' they create within us become standardised and common to many people, not just one person. They take on a collective identity, or meaning, just like words.

Because most music is constructed from the same basic harmonic and textural DNA, we develop an understanding of basic types of harmony and when we hear 'different' harmony we sometimes respond in a specific and predictable way. Because music is constructed from such narrow harmonic DNA, such 'meanings' are not exclusive to one person but exist in a more general, social form.