

This is the text of a talk, slightly adapted to take account of the absence of audio examples, given in a doctoral seminar at the Royal College of Music in October 2008. It was revised in 2011, 2015 and 2021.

[5 February 2021]

The long and short of it: scale in musical structure

The impetus for this topic is my increasing awareness as a composer of the significance of duration in the success or otherwise of a piece. This awareness has grown over many years of both composing and listening to music. If I am presenting a single thesis, it is that a large amount of contemporary music is too long, and that a fairly substantial amount of earlier music outstays its welcome also.

I have to acknowledge that I come to this conclusion after several decades of listening. Therefore, I've heard over and over again a lot of what one might call the standard Western European repertoire. It might be said against me that I've acquired a jaded aural palette. One might argue that besides affecting my view of this familiar fare, a jaded aural palette might affect also the way I approach new music. My response to that argument would be to say that I continue to be excited and moved by a large amount of the standard repertoire, and that every so often, but not very often, a contemporary work arrests my attention in a way that heartens me and reassures that I'm still in the right occupation.

So, after thus laying out my credentials, I can proceed to the question of duration in music. I decided that all the examples to talk about should be of pieces that offer purely musical logic for their comprehension. Therefore, I'm not going to consider any works that involve words: no songs, operas, cantatas, motets. All composers know that, when setting a poem, the poet has done some of their work for them in providing a structure from which it would generally be perverse to deviate musically. This might take the form of a sequence of verses which provide points of change within a song, or a sequence of emotional states that must be reflected in the music. In opera, the composer must adhere to non-musical consideration for the structure – the plot. Even where plot is vestigial, all sorts of extra-musical elements inform the goings-on, so that although an over-long opera seems to be so because the music goes on too long, the reason for that might not be purely musical.

However, any form of programme music, tone-poems, characteristic pieces and so forth, would be admissible evidence, on the presumption that such pieces stand on their own in performance. Although the listener might be aware of their extra-musical import, they have to make sense to the listener who is not aware of the programme behind the music.

What I'm going to suggest is that there is an optimum duration for continuous musical coherence. This optimum can vary with the sort of musical language employed, but it is very frequently exceeded. There is a difficulty in demonstrating this: I might make an assertion about excessive length within this discussion, but it's not appropriate for my audience to have to sit through an allegedly over-long piece to

demonstrate my point. So, all the examples I've chosen are fairly short pieces. This is not really a problem for me, since I believe that examples of uninterrupted musical thought throughout the Western European repertoire rarely exceed 10-15 minutes. Thus my examples may be of a few minutes' duration, but they are not grossly shorter than the optimum I've suggested. By "uninterrupted musical thought" I am excluding, as well as music with words, pieces that are sectionalised: Liszt's piano sonata or the tripartite works of Franck.

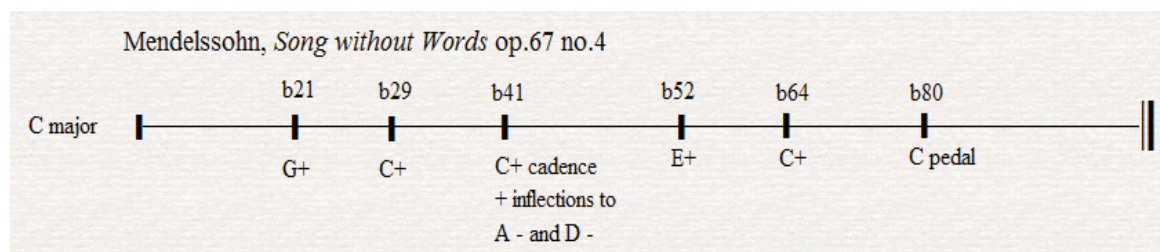
In order to show why, as I believe, the optimum duration in respect of contemporary repertoire is so often exceeded, one must look at durations in earlier, tonal music. We must thank Schenker for teasing out the essentials of that element whose importance cannot be overstated in accounting for musical structure within tonal music: harmonic progression. Paradoxically, harmonic progression is the last thing we may notice about a piece. What catches the ear of the vast majority of listeners is what takes place on the instant, within a few seconds – a fragment of melody, a rhythm, a poignant harmonic shift. So, as soon as you hear these four notes in this rhythm:



...you know what it is. But the factor that gives so much of the tonal repertoire its powerful sense of forward motion leading to culmination is its underlying harmonic movement. With apologies for going over familiar ground, the basic principle of tonal music is that the three primary pitch areas of tonic, dominant and sub-dominant, are linked in

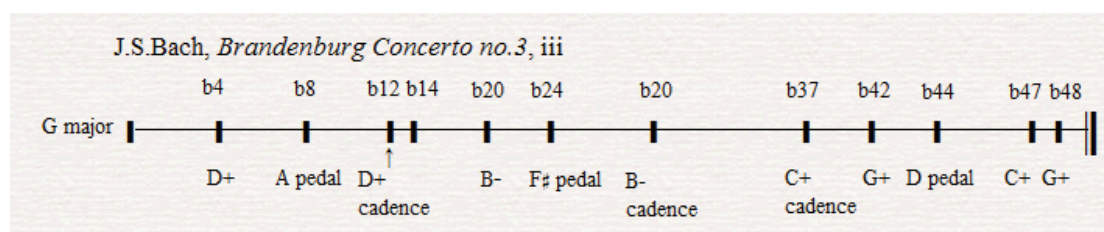
an hierarchy. Figuratively speaking – and we have no way of speaking about music other than figuratively – the progression of tonal areas that takes a piece from tonic to dominant and back to tonic via subdominant areas presents the most compelling sense of journeying forth and returning home that we experience musically. It provides thus the most satisfying sense of something achieved and complete.

Here are two examples. The first is c.1’50” long in a typical performance. It is Mendelssohn’s *Song without Words*, op. 67 no.4. There is no variation in texture, and semiquaver motion is continuous. The music returns home to the tonic (C major) three times on its short journey: the first time about a third of the way through the piece starting at bar 29, the second about two thirds through starting at bar 64, and the third starting at bar 80, from which point a tonic pedal anchors the harmony for the remainder of the piece (which constitutes its final fifth). The first “journey” is, familiarly enough, to the dominant; the second “journey” goes, at bar 52, to the mediant major, E major, and the third tonic homecoming is not followed by any outward journey. At bars 34 and 69 the mysterious characteristic of a subdominant inflection reinforcing a return to the tonic is clearly evident. (The proportions in the diagram are approximate.)



A subdominant inflection similarly forms the emotional crux of the last nineteen bars of Wagner’s *Tristan und Isolde* (1856-1859, first performed in 1865).

The second example is another work from the tonal repertoire, with characteristics similar to the Mendelssohn but a century apart: short duration, continuous semiquavers and clear exposé of the I – V – IV – I inescapable driving force. It is the third movement of J.S.Bach's *Brandenburg Concerto no.3*. It is typical of thousands of binary form movements of its period, with each of its two sections repeated. But consider the implications of these repeats. The diagram represents the tonal progressions assuming the sections are not repeated.



The sections divide at bar 12. Apart from determining whether the piece is x seconds long or $2x$, what is lost or gained by repeating each section? The point is, that if a tonal journey leads inexorably from the tonic away towards dominant areas and returns to the tonic via subdominant areas, à la Schenker, does it not become less inexorable if the journey is interrupted by a return to the tonic just as as the dominant is reached? This of course applies to the vast Baroque and Classical repertoire where repeats are found, and a good deal of Romantic repertoire too.

Why spend so much time on familiar tonal repertoire when the main thrust of this talk is concerned with contemporary language? What I want to show is just how powerful functional tonal language is; how it accounts for the underlying sense of forward movement in well-crafted tonal music; and, correspondingly, how much has been lost to the

modernist composer by the unavailability of this facet of tonal harmony. While working on this talk I came by chance on an article that tellingly reflects this. It's the "In memoriam" piece following the death of Bartók, which appeared in the Musical Times of November 1945. Unfortunately the author is not stated. I quote the paragraph that caught my attention:

"The common feature of the really significant composers of our time is the search for the means with which to relate, contrast and unify all the valuable discoveries which cannot be contained within the control of the classical key system. Not to add patch after patch to the old cloth, but to find architectonic principles capable of fulfilling, over an incomparably wider range of material, what the old key relationships fulfilled over theirs, is the goal. For these [architectonic principles], if found, would mean the solution of the problem of how to write large-scale works nowadays, how to have Beethoven's scale if you have the will and a like mind".

That was written over 60 years ago, and I am suggesting that such "architectonic principles" have not been found, and that no solution will be found to the problem expressed in the central sentence. That refers to the goal being *"to find architectonic principles capable of fulfilling over an incomparably wider range of material what the old key relationships fulfilled over theirs"*.

The composer employing atonal harmony is denied a crucial tool for imparting impetus to the music – in essence, he/she is denied the opposing characteristics of stability and instability that were central to the tonal system from at latest the 16th c. Infusing a sequence of atonal chords with a sense of forward movement is very difficult to achieve.

Assessing the consonance v. dissonance character of a harmony in its context is none the less for me an essential consideration during composition. In atonal music other factors are employed to create movement, such as gradual textural and dynamic change, speeding up or slowing down of micro musical events, sustained ascent or descent of pitches. For example, at the conclusion – the last 6', from p59 in the score – of Lutosławski's *Livre pour orchestre* (1968, total length c.21 minutes), the gradual introduction of a pulse into the texture imparts a feeling of forward movement. Note also that the final two chords, separated by long pauses, differ from each other in their pitches just enough to suggest cadential resolution.

None of the factors I listed as employed in atonal music - gradual textural and dynamic change, speeding up or slowing down of micro musical events, sustained ascent or descent of pitches - none of these has the potential derived from the interplay between hierarchical areas of tonality that is the backbone of tonal works, and that makes possible the longer structures of the 19th century.

The next example is one of the longest pieces Webern wrote, the fourth of *Six Pieces for Orchestra*, op.6. It is typically between 4'00" and 4'30 in duration. I had already selected this as an example when I read a CD booklet note by Calum MacDonald that hints at a connection between Webern's language and that of the late 19th c. After describing Webern's *Passacaglia*, op. 1 as a work of "Mahlerian clarity and refinement", MacDonald goes on, "*This 'Mahlerian' aspect is carried much further in the Six Pieces for Orchestra [1909]...The idea of an informal collection of pieces, evocations of colour and mood without ambitions toward*

symphonic coherence, doubtless follows the example of Schoenberg's Five Orchestral Pieces of the same year. Yet a symphonic impulse is evident in the masterly build-up of tension and release within the comparatively small forms, as if a Mahler symphony were to be experienced only in fragments or, so to speak, through snapshots of salient events". (What MacDonald calls "tension and release" I referred to as "instability and stability" earlier.)

MacDonald goes on, "*The new language of total chromaticism, miscalled 'atonality', made possible lightning transitions between expressive events".* (I assume his objection to the term "atonality" merely reflects the fact that there's a continuum from tonality through increasing chromaticism to atonality. Hardly any music with identifiable pitch is free from the emergence of anchor pitches at certain points, even if at a micro level.)

Let's connect two of MacDonald's comments. He talks of the "masterly build-up of tension and release" but qualifies it by adding "*within comparatively small forms*". He refers also to the "lightning transitions" that he says are made possible by what he calls "total chromaticism". He provides here one indicator as to why anything other than "comparatively small forms" is unlikely to be successful in a non-tonal language. If "lightning transitions" are the *forte* of this music, the works are going to be shorter. And although he's talking about one composer and a piece finished as long ago as 1909, Webern has been one of the most influential figures for modernist composers.

This leads us to an observation: the time-scale of this music is different from the 18th and 19th centuries; five minutes is a moderate length for a piece, ten or twelve minutes is a substantial length. My own experience

as a composer suggests that I am able to sustain continuous musical thought for between 10-13 minutes. I've also noticed that in pieces of this length, the balance between presentation of new material and re-iteration has led me to introduce a "recapitulation" that heralds the last section of the piece. I said that I "noticed" that I have tended to do this. This suggests an involuntary happening, and that suggestion is quite accurate. That's to say, the occurrence of a recap in more than one work is a characteristic emerging out of a compositional process, not part of a pre-plan.

You might think that the way I am describing this indicates that my musical language, like that of all the composers I have mentioned, is of a certain kind that involves "progression" and "growth". What about the music that, neither supported by text nor constructed by means of functional tonality, has a duration far in excess of the 10-15 minutes optimum I put forward? The 20-minute "phase" pieces of Reich, or Stockhausen's *Stimmung*, of flexible duration, at around 72 minutes on one recording? Such pieces also hint at trance-like states of mind that can be induced by various means.

Sebastian Faulks' novel *Engleby* has as its central character a psychotic young man of high intellect and no social skill. At one point he engages in a discussion with a fellow student about the durability of classical music compared with lighter popular music, using melodic memorability as a test. He adds a minimalist reference: "*Terry Riley isn't long on melody either, to be honest. You have to listen to it many, many times, and then you can begin to see how the pattern builds up.....The other thing you need to*

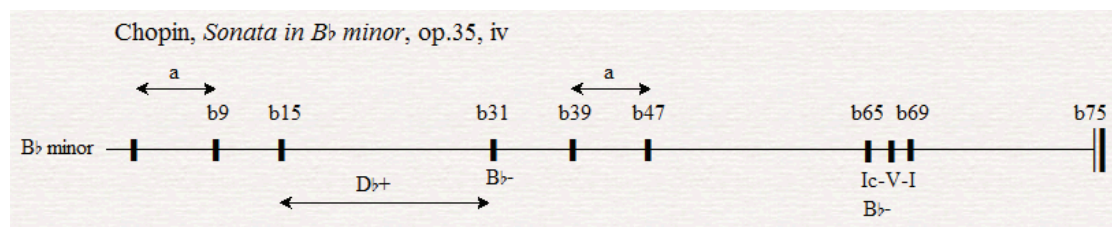
really appreciate T. Riley's music is to have smoked about ten quid's worth of premium marijuana. I'm pretty sure Riley had when he wrote the stuff."

This brings into the equation the stance of the listener in relation to duration, and I'm aware that I have been making the assumption that the listener is a certain kind of animal. This might be described as a musically experienced person, versed in the Western European cultural tradition, and not high on recreational substances. I defend this assumption, because listener response is central in evaluating a musical work; it's how music happens at all. Any analysis that claims objectivity through being detached from listener response is away with the fairies. I have for some years entertained the thought of a form of musical analysis solely dependent on what is heard, and independent of the notation of the work. Such a form of analysis would take account of the decay of the listener's memory, and would not assume that an apparent connection between something on page 3 and something half an hour later on page 250 would be aurally perceptible.

So, at the other end of the scale of durations, here are three examples of brevity. These might provide a link between music employing the resources of tonality and that which is without those resources. At these short durations, the tonal/atonal question is not so pertinent – the solutions to questions of structure invented by contemporary composers can be examined alongside structures dependent on functional tonality.

The first example is the fourth movement of Chopin's *Sonata no,2 in B flat minor*, op.35. Its duration is c.1'35". It has the minimum number of

dimensions possible for music of functional tonality, that's to say, two. All such music possesses a background of harmonic progression that has a logic independent of its detail. That's one of the dimensions, and it's the basis of Schenker's analytical principle. The detail is that by which the particular piece of music may be recognized, and in the case of this first example the detail is a continuous line of short notes of constantly changing pitch. That's the second dimension. No further dimensions – no rhythm, no thematic identity, no chords, no texture, just a single line expressed through octaves, although with subtle motivic references to previous movements. The second dimension can be described as the pitch direction of the uninterrupted flow of triplets. There is the ghost of a melody created by the prominence of certain notes within the flow; the forward drift of the harmony (what I called the first dimension), whilst being pleasingly elusive, is implied by the line of pitches. At b39, there is a reprise of the opening.



The second of the brief examples is the longest of the three, at c.3'30". It is Ligeti's work for harpsichord, *Continuum* (1968). This example also works through restricting its dimensions (dimensions meaning different structural components, not size). It's again a line of continuous short pitches, but, as in the Chopin, a ghostly second line is suggested through placing certain pitches outside the close pitch area occupied by the majority. To my ear, there is a continuous fluctuating tonal implication from the outset, with the G/B flat alternation. The structure is clear: the

pitches start close together, move apart, then converge in upward motion to a final high E.

The third and final brief example is the third movement from my *Abstractions I* (1984), for two oboes and cor anglais. This is c.1'12" long. Again, there is a constant flow of short notes; a further dimension is rhythm, in the form of a grouping into five pulses achieved by pitch direction within the flow. A gradual ascent of pitches functions as a conclusion.

Only after selecting the musical examples I've used did I realize that the Lutosławski, Ligeti and my piece all employ the gradual move to a pitch extreme to create a feeling of conclusion – upwards in these cases. It's a non-tonal equivalent to a cadence.

In pursuing these ideas about duration I realize I've hardly touched on the qualities to be assumed in the listener. This is especially pertinent if one is arguing that much music is too long. I quote a student of mine speaking of his former teacher Joseph Horowitz. The student says that Joe would go through his newly-presented work and having got to a certain point in the manuscript would bang the desk, saying, "That's it – I'm bored now. Time to do something different at this point". That may sound short on analytical detail, but in fact it cuts to the essence of the matter. The proviso is that the listener or score reader is a person of acumen and experience, which of course is the case here.

To end with, an example of the opposite case: a piece heard as too short. His friend August Jaeger opined to Elgar after the first

performance of the *Enigma Variations* that the finale ended abruptly; Elgar subsequently extended it as it is familiarly now known. The second version adds c.1'20" to the finale, a substantial amendment; a typical performance of the original version is just over four minutes, whereas the revised version is five and a half minutes. The approach to the harmonic resolution at the end of the original version is retained in the later version, but the resolution is deferred. This could have resulted in a mere sense of note-spinning; in this case, it results in a heightened anticipation and a greater sense of catharsis.

In conclusion, it's my contention that, whether it be the atonality of modernism or the static consonances of minimalism, contemporary musical language lacks the resource to sustain continuous musical coherence throughout durations greater than 10-15 minutes. The resource that made possible durations longer than that, moreover in only a small number of instances in the late 19th and early 20th c., was functional tonal harmony.

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