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Maintaining disorder: some technical and aesthetic issues involved in the performance of Ligeti's *Études* for Piano.

Abstract: This article examines some of the particular questions and associated strategies concerning matters of rhythm, perceived metre, notation, accentuation, line, physical approach to the keyboard, pedalling, and more in the performance of Ligeti's *Études* for piano. I relate these issues to those encountered in earlier repertoire, including works of Schumann, Liszt, Stravinsky, Prokofiev, Bartók and Blacher, and argue that particular approaches and attitudes to both technical and musical matters in the context of these *Études* can fundamentally affect the concept of the music. A particular focus is upon issues of continuity and discontinuity, and the 'situation' of these works within particular pianistic and other traditions by virtue of the approach taken to performance.

The academic study of performance of contemporary music in the Western art tradition is often of an essentially pragmatic nature, presenting practical strategies for executing unusual or especially demanding instrumental and vocal challenges and techniques¹, the realisation of notational or rhythmic complexities, or other such requirements which are perceived as distinct from those appertaining to more mainstream repertoire². Wider issues of interpretation and conception have not regularly been the subject of more sustained consideration in scholarly literature, and it is not unusual in this context simply to encounter appeals to a generalised 'musicality', meaning the application of standardised modes of performance practice and interpretation such as might have been inherited through a contemporary Western conservatoire training³. The pianistic difficulties entailed in Ligeti's *Études* for piano

are considerable, but not necessarily that unusual (except in their intensity) for one familiar with a breadth of nineteenth- and early twentieth-century piano literature (except in 'Touches bloquées'); even the execution of ferocious pieces such as 'Vertige' or 'Coloana fără sfârșit' is predicated primarily upon fluent and rapid double-note technique combined in the latter piece with a sufficiently resilient mechanism to sustain an extremely loud dynamic for an extended period. More pressing are those demands relating to rhythm and accentuation, and also the projection of often multiple lines extracted from within dense realms of activity. In this consideration of some of these aspects of performance in such a context, I intend less to present a blueprint for their 'correct' execution, rather to consider how different approaches might relate to perceptions of the works on the parts of both performers and listeners. In order to do so, I wish first to give a brief overview of existing conceptions of the works.

In the large body of writing dedicated to the *Études*, which has grown since the works' first appearance in 1985 and, is too large to detail in full here, one can discern certain patterns and recurrent themes on the part of the commentators, which lead to particular constructions of the works and sometimes the composer in general.

- (a) Ligeti as cross-culturalist, as evidenced by the influence in particular of African drumming and Javanese/Balinese gamelan.⁴
- (b) Ligeti as both neo-romantic and heir to a golden age of romantic pianism, as influenced by the influence, made explicit by the composer⁵, of the piano works of Chopin, Schumann, Debussy and others, as well as simply the sheer virtuosity of the works.⁶
- (c) Ligeti as pro-American, as evidenced by the influence of Conlon Nancarrow, American minimalism, and of the jazz of Thelonious Monk and Bill Evans⁷.

- (d) Ligeti as postmodernist, on account of aspects of (a), (b) and (c) and other influences such as the *ars subtilior*⁸. In this context (often situating the *Études* within a broader body of work beginning with the Horn Trio (1982)), Ligeti's range of historical and geographical allusions is presented as an antidote to supposed stylistic purity and abstraction of some 'othered' modernism⁹.
- (e) Ligeti as scientist, as evidenced by the influence of chaos theory, fractals, and the elucidation of many mathematical patterns within the works¹⁰.
- (f) Ligeti as (Western construction of) Eastern European melancholic and nostalgic, on account of the recurrence of the *lamento* motif¹¹ and hermeneutical readings of 'Automne à Varsovie' to the then-contemporary political situation in Poland.

Some of these constructions overlap, or are simultaneously present within single portrayals of Ligeti. Furthermore, some are clearly implied by Ligeti's own pronouncements and consequent self-fashioning, often reiterated in a rather unmediated fashion by his more slavish or hagiographic commentators¹². More importantly, perhaps, constructions (a)-(d) and (f) resonate strongly with directions in musicology (especially in the English-speaking world) in the 1990s and 2000s, periods which witnessed a new antipathy towards certain notions of a post-war Western European avant-garde (almost invariably presented in a caricatured form), against which variously non-European musics, European pre-modernist traditions, American music (including that of the New York School)¹³, and Eastern European neo-tonalisms and neo-romanticisms¹⁴, have all been brandished as polemical weapons. The hostile reaction from various figures towards the Horn Trio, perceived as capitulationist, during the 1984 Styrian Autumn Festival in Graz¹⁵, at a time when

the German-speaking debate on postmodernism was at its peak¹⁶, has provided an ideal pretext for the appropriation of Ligeti as a martyr at the hands of the avant-garde and hero figure for the Anglo-American postmodern factions which emerged the following decade; the *Études* are then also easily employed in the service of such positions. Ligeti's own positions on this have wavered, at one point describing the Horn Trio as a "typical postmodern piece"¹⁷, at other times describing his music as neither modern nor postmodern¹⁸, evoking the term only to subsequently disavow it¹⁹, claiming simply not to "give a damn" if he was accused of being a postmodern composer²⁰, but also stating how he "couldn't stand the postmodern tonal-modal kitsch" and that the Horn Trio constituted an "ironical *flirtation* with postmodernism"; here he also posited the *Études* as a 'completely different third way' from either the avant-garde or postmodernism²¹. Whether or not these various positions were motivated by a genuine disdain for the term postmodernism, coupled with a realisation of the extent to which his work was being placed in such a category, or a more mercenary attempt to skirt modernist and postmodernist camps in order to maintain support in both²², can only ever be speculation; nonetheless, in light of this and the continually frustrated attempts on the part of advocates of postmodernism to arrive at a workable definition²³, such easy appropriations can fairly be treated with a degree of scepticism²⁴.

My own particular interest, however, is upon how these and other conceptions might affect approaches to performance of the *Études*, and wish to suggest as a hypothesis that the very existence of such discursive contexts has facilitated the works' assuming a role in the repertoire of many pianists who do not otherwise perform a great deal of contemporary music, and as such are less frequently in the position of having to grapple with major new interpretive questions. That discourse

which includes construction (b) above in particular serves to legitimize and encourage those performances which most strongly resonate with nineteenth century pianistic traditions. One need not necessarily denigrate such approaches to performance, whilst questioning whether they constitute an ideal. Furthermore, like all neo-romantic ideologies, that applied to Ligeti itself rests upon a construction of the very 'romantic' tradition to which his works are related by many writers (as mentioned above²⁵), a construction which I would maintain is essentially normative and ossified. However, as I will argue below, the particular sub-strata of the nineteenth and early twentieth-century 'tradition' to upon which Ligeti builds are idiosyncratic, by no means necessarily representative even of the particular composer's complete oeuvre. For this reason, such 'tradition' (combined with other influences from elsewhere) is better viewed as a way of evincing a very individual lineage for Ligeti's late composition rather than indicative of a conservative aesthetic.

Most of those writing on the *Études* acknowledge the interplay between various degrees of order and disorder in most of the works, by means of harmony, line, rhythm and texture; the presence of order as well as disorder should not necessarily be seen to betoken a conservative approach, any more so than the integration (and radical defamiliarisation) of triadic chords and historically-derived gestures in some of the mature work of Helmut Lachenmann or Brian Ferneyhough. A truly non-hierarchical relationship between order and disorder is probably a utopian fantasy, not least of the inescapable factor of linear time in any musical work of fixed duration, which creates hierarchies as a result of the temporal position of passages dominated by one or the other element. Many of the *Études* lead towards conclusions more like 'cut-offs' than structural closures²⁶, creating trajectories most often leading from order towards disorder, hardly the approach of a traditionalist.²⁷, though this can be mitigated by

such factors as whether one plays the final staccato chord in 'Der Zauberlehrling' as a rounded and conclusive period, or a terse, snatched sonic fragment, or even whether the pedal is raised at the end of 'L'escalier du diable' so as to gnaw into and ultimately disintegrate that large body of sound which has been built up.

Also, in addition to the ideological constructions of Ligeti and the *Études* mentioned above, perceptions of this and other music can also be affected by the very *style* of writing through which it is refracted. Even in the much-admired articles and monograph on Ligeti by Richard Steinitz²⁸ there is frequent recourse to poetic metaphors for individual pieces taken as a whole, or one of a plethora of received and reified affective categories, in a manner which I have argued is characteristic of a good deal of British journalism concerning new music²⁹. Examples would be the likes of the following:

Performed together in one concert the *Études* make a splendidly varied sequence: breathtakingly virtuoso, tender, playful, sorrowful, ingenious, monumental in turn – or all at once.³⁰

The result is music of Lisztian dimensions: volcanic, expansive, dazzling – and obsessive.³¹

['Automne à Varsovie'] [...]like tired labourers returning home, united in resignation and only distinguishable by the speed of their gait.³²

['Vertige'] All these musical spirals suggest an infinity of motion, their rotating systems apparently capable of endless repetition. Each sets up a giddy vortex, as if the ground itself were turning and the listener spinning on a revolving plane.³³

['Der Zauberlehrling'] In a final flurry, the Debussyan harmony of thirds and tritones blossoms into an upward sweep of consonant dyads – preceded by a whole-tone scale rising in octaves through rippling *ostinati* – then as rapidly descends, and all is done.³⁴

Battling his way up the ascent to his apartment, the music and title of *L'escalier du diable* came into his mind: an endless climbing, a wild apocalyptic vortex, a staircase it was almost impossible to ascend.³⁵

These metaphors betray, I believe, a certain unease towards the complexities and ambiguities of the music³⁶, requiring it to be translated into more familiar or at least easily imaginable, in a manner reminiscent of an older style of pedagogy in ‘music appreciation’, or even sometimes of writing aimed at a young audience. It might be argued that this constitutes a valid attempt to render the music more ‘accessible’, in a cultural climate where new music remains a small minority interest nonetheless needing both to generate audiences and satisfy funding bodies. But I remain unconvinced that the level at which this style of writing is pitched is not somewhat lower than a good deal of writing for non-specialist lovers of Bach, Mozart, Beethoven, Berlioz, Wagner or Debussy – or Elvis, James Brown, The Beatles, Hendrix, Madonna or house music – and thus have doubts as to whether such an approach might win such types round to Ligeti. More importantly, as I have argued elsewhere³⁷, this mode of discourse serves a totalising function with respect to the pieces, rendering them conceptually more apprehendable and thus easier to ‘consume’, avoiding as far as possible wider issues of cultural meaning such as might be provided by a contextualisation of their very specifics³⁸. Steinitz does describe the *Études* as manifesting a ‘precarious balance between order and disorder, pattern and chaos’³⁹, but his style of writing works against such an interpretation.

To provide a serious and sustained alternative to this discursive approach would take more space than is available in this article; here I am concerned to look at ways of counteracting such a tendency in performance. It is possible to match a parallel discourse in performance, foregrounding ‘acrobatic display’, that which might seem most obviously ‘tender, playful, sorrowful, ingenious’, evoking a ‘giddy vortex’, or other such banal responses. But to me, such an approach in performance places the more disruptive strategies at play in the music at a safe distance, turning each work

into a relatively self-contained entity whose effects do not exceed the tried and tested affective categories which might be brought to bear upon it by habitual modes of listening. Yet I believe the *Études* – as might be said of most deeply individualised yet coherent music – work with and frequently undermine habits of listening, in ways which may be no less radical than those associated with composers more commonly situated within an avant-garde canon⁴⁰. And above all practically every étude, through its working-out in time, resists which ever totalising filters might be imposed upon it (though some (especially within Book 3⁴¹) might fairly be said to exhibit relatively formulaic linearity). As Arnold Whittall rightly argues, “Ligeti’s reinvigorated modernism is tangible in his continued refusal to allow his music to settle down into unambiguously resolving, stable structures”⁴². I now wish to examine some of the ways by which this is made manifest in the works, and how a performer might respond to them.

Rhythm, Metre and Cells

No-one could reasonably doubt the central importance of rhythm and metre in these works, though of course those parameters are equally central to a good deal of other very different music. So what are the distinctive aspects, and what do these mean for the performer? This question via a short detour through some sub-sections of the *Études*’ pre-history, especially through the work of Bartók – less in order to appeal to ‘tradition’ as the antithesis of modernism as described above, rather to reveal some of the roots of contemporary techniques in some of the more arcane moments in earlier music.

Many histories of the post-war European avant-garde have been framed first in terms of the influence of techniques derived from the Second Viennese School⁴³, with a few dissidents (such as Xenakis or Ligeti) who critiqued this tendency, then an expansion into multiple directions from the late 1950s and early 1960s onwards, not least through the influence of Cage. But equally significant is the influence of Bartók on the first generation of young post-war composers, as has been traced in particular by Danielle Fosler-Lussier⁴⁴. Those aspects of Bartók's approach to rhythm and metre which would be most influential upon Ligeti—specifically the use of accentuation to generate varying pulses within an otherwise quite amorphous and continuous line, and also the employment of expanding and contracting rhythmic cells - do not appear until a relatively advanced stage within the older composer's output for piano. The *Fourteen Bagatelles*, op. 6 (1908), whilst tonally and harmonically advanced, and employing ample amounts of syncopated rhythms, rarely deviate from basic periodicity, often with highly emphatic downbeats. Similarly, the four books of *For Children* (1908-10), whilst employing the characteristic rhythms of the Hungarian and Slovakian melodies upon which they are based, and several accompaniments made up of repeated chords, mostly maintain periodic rhythms in a regular metre⁴⁵. However, in the third of Bartók's *Études* op. 18 (1918), one finds progressive contraction of a left hand figuration (from the last bar on the first system here):



Figure 1

Béla Bartók, *Études*, op. 18 (1918), no. 3. © 1920 Boosey & Hawkes, London, UK.

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The same piece also features groupings of two or three semiquavers, with the first accentuated, as a means of shifting character dramatically within an ongoing semiquaver figuration, in a way which anticipates Ligeti's writing in 'Galamb Borong', 'Entrelacs' or 'L'escalier du diable' (and of course had earlier been used extensively by Stravinsky, not least in *Le sacre*).

The use of mutating cells of varying length plays a part in the *Dance Suite* (orchestral version 1923, piano version 1925), but finds its most concentrated expression in the next works from this period in Bartók's career, specifically the Piano Sonata (1926) (see for examples bars 21-35, 44-54 of the first movement, or 92-107 of the last movement).

But this technique remained relatively rare in the remainder of Bartók's piano music. There are a few comparable moments in the first movement of *Suite, Out of Doors* (1926), and a few others in Bartók's last major work, the six volumes *Mikrokosmos* written between 1926 and 1939, and also in the third movement of the Second Piano Concerto (1930-31), in which Bartók's combination of counter-metric accents with expanding and contracting cells comes closer to such an effect as found in Ligeti.

In 'From the Diary of a Fly', from the last book of *Mikrokosmos*, Bartók begins with a cell which expands then contracts in inverted form⁴⁶:



Figure 2

Béla Bartók, 'From the Diary of a Fly', from *Mikrokosmos* (1926-39), Book 6. © 1987. Boosey & Hawkes, London, UK. Reproduced by permission. All rights reserved.

He does not continue with this technique after the outset, though does towards the end present an unusual pattern of simultaneous arpeggios in 8 and 6 quavers respectively, so as to create polymeters. Only with the Sonata for Two Pianos and Percussion (1937), amongst those later works featuring the piano prominently, do we see a true return to the principle of expanding and contracting cells which were such an important part of the earlier Piano Sonata. Examples of this can be found in the first movement in bars 14-18, 42ff, and 292ff.

This work arguably goes further in some respects than Bartók's other most extravagant rhythmic innovations, such as in the Fourth String Quartet (1928); for whilst in the earlier work Bartók's most rhythmically and metrically amorphous passages do ultimately 'resolve' into sections with emphatic downbeats, this type of opposition is nowhere near so stark in the later Sonata. And it was this work which would be most important for some of the post-war avant-garde: Bruno Maderna drew extensively upon this model in his Concerto for Two Pianos and Instruments (1947-48, revised twice 1949) and Fantasia and Fugue for Two Pianos (1948)⁴⁷; Karlheinz Stockhausen wrote a thesis on Bartók's Sonata for Two Pianos and Percussion in 1951⁴⁸. The work was frequently played in festivals in immediate post-war Germany, and together with Messiaen's *Visions de l'Amen* helped to established the viability of two pianos as a medium, as used in important works of Goeyvaerts and Boulez. Furthermore, during the period from 1949 to 1955, Bartók was the most frequently performed composer at the Darmstadt Ferienkurse⁴⁹. And it was not only the avant-garde who were drawn to the example of Bartók. Karl Amadeus Hartmann's Sonata "27. April 1945" is clearly indebted to Bartók's Suite for Piano op. 14⁵⁰,

notwithstanding the particular inspiration for the Hartmann work, whilst in the first of Boris Blacher's *Ornamente* for piano of 1950, we see a clear foreshadowing of a more systematic (or arguably formulaic) employment of post-Bartókian cellular technique, as Ligeti would also develop more radically in his *Études*⁵¹.

Ornamente für Klavier

Sieben Studien über variable Metren

Virgil Thomson

I

Boris Blacher (1950)

Vivace $\text{♩} = 103-113$
2 3 4... 8 9 8... 3 2

sempre stacc.

Figure 3

Boris Blacher, *Ornamente. Sieben Studien über variable Metren* for piano (1950), No. 1. © 1951. Bote & Bock, Berlin, Germany. Reproduced by permission. All rights reserved.

Ligeti's employment of similar techniques in early piano works is somewhat tentative. In the *Capriccio Nr. 2* (1947), he does employ developing rhythmic cells – in 5/8, 6/8, 7/8, 8/8, made up of groups of 2 and 3 quavers – but these are ultimately rooted within 5/8 as the dominant metre, whose extended use towards the work's conclusion mitigates against a sense of overall metrical instability. In *Musica ricercata* (1951-53), Ligeti goes less far in terms of pursuing these types of techniques, except perhaps in the tenth piece, which is essentially a hybrid of the Bartók of the *Dance Suite* and Piano Sonata, whose innovations are more in terms of restricted pitch material rather than significant new rhythmic writing.

However, with *Continuum* (1968), Ligeti took a step further the type of writing which Bartók had used in 'From the Diary of a Fly', in a way which also anticipates American minimal works such as John Adams' *Phrygian Gates* (1977). By the time of the composition of the first movement of *Monument-Selbstportrait-Bewegung* (1976), Ligeti has made the device of expanding/contracting cells his own, with groups in each piano assembled from a few single pitches and an octave subject to continual topological distortion⁵².

In the Piano *Études*, this type of technique, in specific types of manifestations, becomes a defining element. In the first book, Ligeti is to some extent still discovering his way, drawing quite extensively upon earlier models - the second movement of *Monument-Selbstportrait-Bewegung* in 'Touches bloquées', the highly Bartókian second movement of the Horn Trio in 'Fanfares', the fifths-dominated

harmony of the second movement of Bartók's Second Piano Concerto⁵³ (and perhaps also Charles Ives's *Central Park in the Dark*) in 'Cordes à vide'⁵⁴. Only perhaps with 'Désordre', 'Automne à Varsovie', and in a different way in 'Arc-en-ciel' (to which I will return to in the context of considering line) do more significantly developed new idioms emerge, which are then developed most extensively through the course of Book 2. 'Touches bloquées' is reasonably integrated into the first book precisely through its own use of the expanding/contracting cellular technique, in a much more intricate manner than had been the case in the earlier two-piano work, as does 'Cordes à vide'. But in 'Cordes' such a technique is one feature amongst several, rather than necessarily occupying a central position; a similar situation appertains to 'Fanfares' (in which syncopation is arguably more vital than rhythmic cellular development). In 'Désordre' and 'Automne à Varsovie' this technique is utterly central, as is also true of almost all of Book 2 (except perhaps in the last piece!).

But what does all of this mean for the performer? Much depends upon the degree of stability or instability they wish to project; this is made apparent via the extent to which the more adventurous rhythmic elements are played either as localised deviations ultimately leading to resolution (which would give a greater sense of stability), or elements which continually threaten to upset precarious elements of regularity and regular metre⁵⁵. In 'Désordre' and 'Automne à Varsovie' this question is reasonably straightforward. The former piece begins with the hands in rhythmic unison but immediately upsets this through progressive rhythmic displacement of the right hand, the contraction of bars, until a hammering 4/8 ushers in a return to momentarily stable sense of 4/4, notwithstanding the presence of what then amount to syncopated rhythms. But then Ligeti uses similar techniques to those employed earlier in the piece to destabilise this short-lived 4/4 by progressive degrees as the music

proceeds towards the final progressions up to the top of the keyboard. The two passages of relative stability are so obviously progressively undermined that it is hard to imagine an interpretation which would communicate a sense of stability in the totality. However, it is not out of the question that the pianist might project *elements* of such an interpretation, or at least a greater stability than otherwise. From the beginning one question the pianist must ask is which hand is to 'lead' – which hand they will perceive as constituting the basic beat, around which the other develops. The pianistically most natural solution would be to use the left hand for this purpose, for this hand remains in a stable 4/4 until the bars start contracting, whilst the right hand loses a quaver beat every four bars. Furthermore, since the bass register has a stronger sonority, this provides a natural foundation⁵⁶. But this maintains a sense that the music is 'in 4/4' for considerably longer, with the displaced right hand accents assuming a syncopated function; as Adorno pointed out in the case of jazz⁵⁷, the purpose of syncopation is ultimately to reaffirm the presence of the downbeat, from which it derives its very meaning. To lead from the right hand would create a greater sense of instability right from the fourth bar onwards, and facilitate the possibility of neither hand occupying a foregrounded position.



Figure 4

Ligeti, 'Désordre', beginning. © 1986 Schott Music GmbH & Co. KG, Mainz, Germany. Reproduced by permission. All rights reserved.

This is less of an issue in the later section, as there it is the left hand which is displaced, and the whole material is in a higher register, so neither voice has an such an obvious foundational quality. It is notable that Ligeti here instructs the pianist to play the right hand slightly louder in order to ensure balance.

In 'Automne à Varsovie' this is less of an issue, as periodicity or rhythmic regularity are never more than extremely localised phenomena except at the outset, and frequently the more regular parts are indicated at a quiet dynamic, against which more accentuated choral and other progressions become almost inevitably foregrounded.

These types of issues, as encountered in 'Désordre' and 'Automne à Varsovie', resurface in 'Galamb Borong', 'Vertige', 'Die Zauberlehrling', 'En suspens', 'Entrelacs' and 'L'escalier du diable'. 'Fém' can easily sound essentially like a syncopated study in a regular metre; the apprehension of such a sense of metre adds stability and perhaps also increases a listener's sense of the pianist's rhythmic security. But I believe Ligeti's instructions "Play very rhythmically and springy (with swing) so that the polyrhythmic diversity comes to the fore" in part counteract this, though the instructions are themselves ambiguous. To 'swing' requires some sense of a relatively regular metre, but this could be a merely localised phenomenon, whilst 'rhythmically' by no means necessarily need imply such a thing; in this case I would suggest it refers to clarity of profile of the small cells, which can be achieved by placing a small accent on the beginning of groups, regardless of whether or not this strategy offsets the pulse that might be provided by the barline. Ligeti writes in the score "There is no real metre here; the bar lines are only to help synchronisation". In one version of the autograph score⁵⁸, he inscribed brackets around each group, which are visually more prominent than the bar lines, emphasising to the reader of the score (at least at this stage in the work's history) the grouping. A strategy which makes this clear, such as placing a slight emphasis at the beginning of each group, helps avoid from the sense of the music being in a regular singular metre, and thus being a more conventional type of piece.



Figure 5

Ligeti, 'Fém', version of autograph score. © 1994 Schott Music GmbH & Co. KG, Mainz, Germany. Reproduced by permission. All rights reserved.

The issue is more tricky in 'Fanfares', in which the repeated ostinato figuration which runs through the whole piece in one sense provides an anchor, a continuing sense of the piece as being in a syncopated 4/4.



Figure 6

Ligeti, 'Fanfares', opening. © 1985 Schott Music GmbH & Co. KG, Mainz, Germany. Reproduced by permission. All rights reserved.

Here Ligeti's precise dynamics are very important. For almost all of the piece, the ostinato remains at a dynamic between *pp* and *pppp*, save for the odd crescendo briefly up to a slightly higher dynamic, and a passage in the top register at *mp*, probably to compensate for the weaker sound in that register. Only on the final page, when both hands play the ostinato for a few bars, does it finally move up to a dynamic of *fff*, only to move back down to *pppp* just as quickly. Maintaining *pp* or even *pppp* for this ostinato, whilst still bringing out the accents, is no easy task, and many pianists play it closer to *mp* or even *mf*. This is not necessarily a wholly bad thing, but if not matched by a parallel shift upwards in the dynamic of the other hand, it can quite significantly skew the 'melody/accompaniment' relationship. With the melody as a clear *Hauptstimme*, and the accentuation observed carefully, the 11-quaver units from which the melody is constructed can at the very least vie with the accompaniment for metrical supremacy, especially in those passages where the accentuation of the melody is most at odds with the ostinato (for example bars 116-132, 139-148, and 151-165).

Linear Extraction

Since Ligeti's essay on the *Études* first published in 1985⁵⁹, and an expansion of his ideas in a 1987 interview⁶⁰, in both of which he used the model of the hemiola to describe both processes by which rhythmic and melodic patterns are created within otherwise more continuous writing of Ligeti's *Études*, this has become the dominant

model for many of his commentators⁶¹. There are countless examples in the keyboard literature of figuration in which embellishment exists around a central melodic line, all played by the same hand; a pioneer in this respect was Sigismund Thalberg, who employed in his music such a device in order to create his 'three-handed' effect⁶². But more unusual are cases where a line is extracted from within a figuration (which I will call 'linear extraction') in which it is by no means self-evident. The following are three rather idiosyncratic examples:



Figure 7

Robert Schumann, Piano Sonata No. 3, 'Concert sans orchestre', op. 14, (1835-36),
last movement.



Figure 8.

Franz Liszt, *Douze Grandes Études*, No. 8 (?1837-39)

Unlike Schumann, who likely conceived his piece for his relatively light Viennese Graf piano, on which many local accentuations can be executed primarily with the fingers, Liszt was by this stage fairly regularly playing on the pianos of Érard⁶³, with a significantly heavier action (the closest that any pianos of the time would come to later, 'modern' actions), on which such an approach would barely be possible. To execute Liszt's stresses above, it was likely necessary to employ a particular technique involving lowering the wrist at the beginning of each group of four demisemiquavers, then raising it at the end before lowering again for the next group⁶⁴. The resulting downward motion of the wrist adds a throw to the fingers which facilitates and enables the line to come out – a technique I personally find indispensable for playing most of Ligeti's piano works. By the time of Liszt's revision of this work in 1851, he was playing on stronger and more resonant pianos⁶⁵, and the writing to be found in the earlier work would have been unarticulatable at the frantic tempo he required, so he reconfigured this into a simpler form.

But this technique of extracting lines by no means need be limited to brilliant or virtuosic passages, as the following example demonstrates:

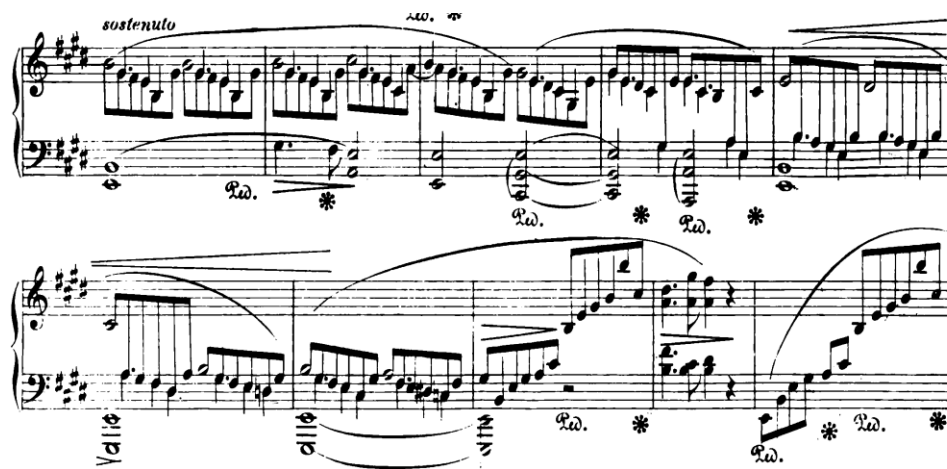


Figure 9

Frederic Chopin, Piano Sonata No. 3 in B minor, op. 58, third movement (first German edition, Breitkopf & Härtel, 1845). The French and English editions differ somewhat in terms of the phrasing marks in both hands and some dynamics, but not in terms of the beaming⁶⁶.

Comment [K1]: Put this text into the footnote.

For the first four-and-a-half bars of this example, the sustained notes (which are rarely differentiated in performance) simply outline triads in various positions, with the bass note doubled at the octave. But then Chopin maintains the rhythmic pattern in terms of which notes to sustain in order to accentuate a richer chordal progression⁶⁷.

Perhaps somewhat surprisingly, this technique is only to be found on a tiny number of occasions in Debussy's piano music, and then only in its mildest of forms. In much of his more toccata-like piano writing (such as the Toccata from *Pour le piano* (1894-1901), 'Jardins sous la pluie' from *Estampes* (1903), or 'Doctor Gradus ad Parnassum' from *Children's Corner* (1906-1908)) Debussy will accentuate notes to form melodic lines, but these are usually either downbeats, or new pitches which break with the previous pattern of the line, neither of which move beyond the 'melody

with decoration' model. There are just a few small passages in 'Cloches à travers les feuilles', and 'Poissons d'or' from Book 2 of *Images* (1907) which might be said to form slightly stronger forms of linear extraction, and also in just one of Debussy's *Études*, the eleventh, *Pour les arpèges composés*, from the opening.

Three years later, however, Bartók employed the technique more pronouncedly (and echoing its use in the Schumann example above) in the last of his *Études* (see Fig. 1). Ligeti's own technique for extracting such lines on the piano can first be found in the last of *Monument-Selbstportrait-Bewegung* (1976) (see bar 15ff)⁶⁸. His use of accentuated octaves and later chords in 'Désordre' actually falls into the more traditional model of a line with decoration (notwithstanding the volatile nature of the 'decoration')⁶⁹, whilst in 'Cordes à vide' he simply accentuates the beginning of discrete groups or, more occasionally, patterns of the uppermost notes within successive groups. The first time the technique appears properly within the *Études* is in 'Arc-en-ciel', which introduces a new musical tendency into the cycle as surely as did 'Désordre' in terms of polyrhythms and polymeters.



Figure 10.

Ligeti, 'Arc en-ciel'. © 1985 Schott Music GmbH & Co. KG, Mainz, Germany.

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On the surface, this writing might appear as two hands, each of which consists of a melody together with a gentle accompaniment provided by a continuous flow of semiquavers, such as is implied by the beaming. But the tessitura of each of the four parts counteracts this, with melody and accompaniment continuously overlapping one another, whilst in the left hand part of bar 3 the 'melody' switches between the upper and lower registers. Here it is also worth noting Ligeti's approach to accentuation: for the first 15 bars (out of 24, the last of which is silent), he consistently accentuates the first of each group of six semiquavers in the lower part, the only exception being at the first climax in bars 11-12, where these accents are momentarily displaced. Otherwise, in the right hand, Ligeti uses the accentuation (which, together with articulation, is neglected to an astonishing degree in much scholarly and analytical literature on Ligeti⁷⁰) to extract lines within lines – principally descending part-chromatic or other scalar figures (as in the example above) which then serve to anticipate the more extended *lamento* figures in the next piece, 'Automne à Varsovie'⁷¹. Here, an approach to performance which treats the accents less as localised stresses to create extra shape to what are nonetheless essentially smooth melodic contours, more as a means to illuminating distinct melodic substrata, can add an extra structural layer to the group of *Études* as a whole 'Automne à Varsovie' itself develops this process in a somewhat more complex though not necessarily more extensive fashion, deriving complex interactions between plain melodic lines (sometimes made up of chords) and also patterns derived from accentuation of beginnings of figures (usually descending) within the accompaniment, from the

eleventh bar onwards. Only in a very few places, such as in bars 80-85, does the linear extraction become more complex in terms of its relationship to the 'accompaniment' figurations⁷².

In 'Galamb Borong', Ligeti goes marginally further in the process of linear extraction; in bars 12-16, the choice of which notes from the accompaniment to which a melodic note is added is by no means simply self-evident from the contour of that same accompaniment (the rhythmic pattern, counting from the *p dolce* in bar 12, is in terms of number of semiquavers per group 3-3-2-3-4-3-3-2-3-4-3-3-2-3-3, thus mildly oscillating up and down in terms of length, but not in a regular fashion); nor does the accompaniment simply serve to decorate the melody. This melody does not 'emerge naturally' out of the material, rather it appears deliberately and self-consciously enacted upon it, ending as abruptly as it begins, notwithstanding the *dolce* indication. This factor, combined with the awkward tessitura relationship between melody and accompaniment, enmeshed amongst one another, enables Ligeti to create a level of tension which prepares the ground for the more explosive and percussive writing which is to follow; an over-mellifluous approach can detract from this effect.



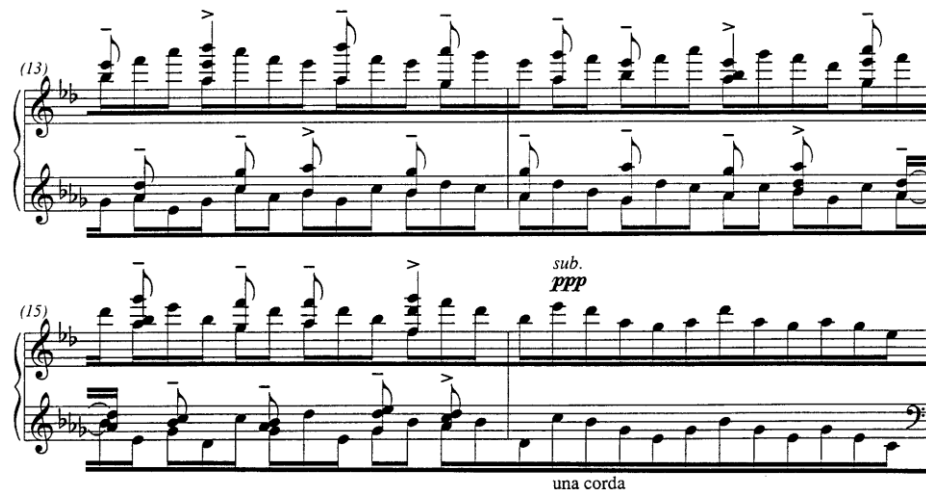


Figure 11.

Ligeti, 'Galamb Borong'. © 1998 Schott Music GmbH & Co. KG, Mainz, Germany.

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Ligeti in this piece seems to offer up the possibility of a more long and sustained melody at various points, but withholds this from the listener. Something akin to such a melody appears to arrive at bar 46, but despite being indicated *molto cantabile* (though also *misterioso*), the tessitura is narrow (only beginning to expand outwards towards the end, by which stage the material is starting to morph into something else) and the dynamic quiet, creating a sense of pensivity rather than expansive lyricism. This is in marked contrast to the melody which does indeed emerge in 'Entrelacs' at bar 35 which is wide and expansive (and, of course, diatonic rather than whole-tone) from the outset and relates to a more chord-rich melodic passage at the climax, at bar 64.

If there are many similarities between 'Galamb Borong' and 'Entrelacs' – both use of quasi-polymetric accentuation between two parts populated by continuous semiquavers, and different pitch modes for either hand, I believe the inclusion of both

within the same book should not be seen merely as a sign of repetitiveness on Ligeti's part. Rather, because of the contrasting approaches to implied and actual melody in either one, the latter serves as a complement to the former, in a sense providing a form of at least temporary 'closure' of that which was anticipated five études previously.

In 'Vertige', Ligeti adopts a new technique, extracting a line simply by effecting a sudden and quite drastic slowing down of one of the descending chromatic lines (with corresponding accentuation), then the introduction of wider intervals, often spelling out diminished sevenths or other chains of major/minor thirds and tritones (as from bar 25), which are later made to form dominant ninth harmonies and some triads; Manfred Stahnke discerns parallels with the idea of a higher 'pitch curve' or 'envelope' of the whole structure, deriving from Ligeti's work with Gottfried Michael Koenig in Cologne in 1956.⁷³

'Die Zauberlehrling' is more straightforward with respect to rhythm and line; almost all the techniques employed there can be found in earlier études, except for the extreme tempo, which derives from *Continuum*. Then 'En suspens' applies accentuation techniques in the manner of 'Arc-en-ciel', but with a sunnier range of resultant melodies than the keening descending figures in the earlier piece – when both books are played together, this provides another structural correspondence which parallels that between 'Galamb Borong' and 'Entrelacs'. But here the pianist also needs here to distinguish between accentuation, which adds pointed stresses onto particular notes within a line, and smoother forms of shaping: at the outset, if the pianist, after playing the second chord quieter than the first (because of the accent on the latter), then employs a small *crescendo* between the second, third and fourth chords, then the effect of multiple lines is diminished.

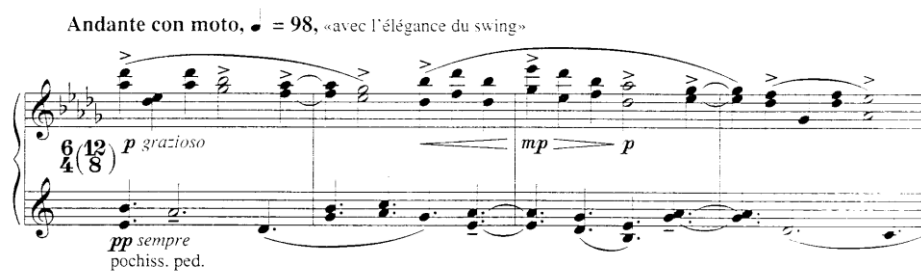


Figure 12

Ligeti, 'En suspens'. © 1998 Schott Music GmbH & Co. KG, Mainz, Germany.

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Finally, 'L'escalier du diable' introduces one new technique of linear extraction: the possibility of accentuating either the first or last note of short figures; at the end of bar 7 Ligeti suddenly shifts in this respect. Otherwise he employs most of the armoury of these types of techniques as found in the earlier quick pieces, allowing the process of drastically slowing lines (or at least giving the impression of so doing), as introduced in 'Vertige', to apply to all parts so as to create the starkly contrasting central chordal section, grander than anything which had previously occurred, yet anticipated through the course of the cycle.

These techniques of fluctuating rhythmic cells and linear extraction are not merely exotic details of the works; they are fundamental to the workings of the pieces in terms of continuous *process*, process which potentially could expand well beyond the literal boundaries provided by the beginnings and ends of the works. I also hope to have demonstrated the extent to which an awareness of these techniques and their development implies structural dimensions to the cycles (as defined by the books) played as wholes, in ways which would not otherwise be obvious to the performer, and then offer scope for projection. Performance strategies which do not relegate the

techniques I describe to the status of minor local deviations stand more chance of projecting the works, and the thoughts, desires, illusions, emotions they can engender – many of these incomplete or fragmented – outside of the physical and mental spaces in which some might enclose them. A detailed study of existing recordings and performances of the works, and the approaches to these questions contained therein, would require more space than is available here; for now, it must suffice to say that in my own experience of close listening to the recorded legacy and many live performances, these more radical approaches are rare. This is not to say that therefore they would necessarily be 'better' (and, by implication, existing performance traditions are substandard), but simply that there exist still a range of performance possibilities over and above those which have already been encountered, which in turn allow for the possibility of articulating different attitudes towards Ligeti and the *Études* to those which are now well-established amongst performers, listeners and scholars.

¹ Examples of primers of this type would be Bartolozzi, B. (1967). *New Sounds for Woodwind*, (R. Smith Brindle, Trans.). Oxford: Oxford University Press; Levine, C. (2002). *The Techniques of Flute Playing/Die Spieltechnik der Flöte*. Kassel: Bärenreiter; Veale, P. (1998). *The Techniques of Oboe Playing: A Compendium with Additional Remarks on the Whole Oboe Family/ Die Spieltechnik der Oboe : Ein*

Kompendium mit Anmerkungen zur gesamten Oboenfamilie. Kassel: Bärenreiter; Strange, P. & A. (2001); *The Contemporary Violin: Extended Performance Techniques*. Berkeley & Los Angeles: University of California Press; and Henck, H. (1994). *Experimentelle Pianistik*. Mainz: Schott.

² See for example many of the essays in Nonken, M (Ed.) (2002), *Performers on Performing*. *Contemporary Music Review* 21/1; and Webb, B (Ed.) (2007). *Contemporary Performance*. *Contemporary Music Review* 28/2.

³ A few texts do entail a wider intellectual exploration, such as Holzaepfel, J. (2002). Cage and Tudor. In D. Nicholls (Ed.) *The Cambridge Companion to Cage*, Cambridge: Cambridge University Press pp. 169-185; or Henck, H. (1980). *Karlheinz Stockhausen's Klavierstück X: A Contribution Toward Understanding Serial Technique*, (D. Richards, Trans.). Cologne: Neuland Musikverlag.

⁴ See, for example, Wilson, P.N. (1992). Interkulturelle Fantasien. György Ligeti's Klavieretüden Nr. 7 und 8, *Melos* 51 ('Klaviermusik des 20. Jahrhunderts'), 63-84, pre-figured by various writings and interviews of Ligeti himself, such as Bouliane, D (1989). Stilisierte Emotion. György Ligeti im Gespräch. *MusikTexte* 28/29, 52-62 and Ligeti, G (1989). Über meine Entwicklung als Komponist. In G. Ligeti, & M. Lichtenfeld (Ed) (2007), *Gesammelte Schriften II* (pp. 119-121). Mainz: Schott Music. Only a few writers have begun to look somewhat more critically at the issues of exoticism and imperialism such ventures might entail, such as Scherzinger, M. (2006). György Ligeti and the Aka Pygmies Project, *Contemporary Music Review* 25:3, 227-262, or Bauer, A. (2008). The Other of the Exotic: Balinese Music as Grammatical Paradigm in Ligeti's 'Galamb Borong', *Music Analysis* 27/ii-iii, 337-372.

⁵ Ligeti, G. (1997a). Liner notes to CD SK 62308 *Ligeti Edition 3: Piano Works* (A. McVoy and D. Feurzeig, Trans.).

⁶ See, for example, Lobanova, M. (2002). *György Ligeti: Style, Ideas, Poetics* (M. Shuttleworth, Trans.), Berlin: Verlag Ernst Kuhn, pp. 278-305.

⁷ Nancarrow, Monk and Evans are all mentioned in Ligeti (1997a). Many English-language commentaries devote considerably more space given to American influences upon Ligeti's later work than other European contemporary developments amongst European composers, as for example in Steinitz, R (2003). *György Ligeti: Music of the Imagination*. London: Faber & Faber.

⁸ Explored in most detail in Schütz, H. (1997). Wiedergeburt der Ars subtilior? Eine Analyse von György Ligeti's Klavieretüde Nr. 2 „Cordes Vides“. *Die Musikforschung* 50/2, 205-214. Manfred Stahnke recalls how Ligeti used to play recordings of music of the *ars subtilior* in his Hamburg classes. See Stahnke, M. (2011). The Hamburg Composition Class. In L. Duchesneau & W. Marx (Eds.). *György Ligeti: Of Foreign Lands and Strange Sounds* (p. 228). Woodbridge: Boydell Press.

⁹ An especially prominent exposition of this view in general can be found in Clendinning, J.P. (2001). Postmodern Architecture/Postmodern Music. In J. Lochhead, & J. Auner, (Eds.). *Postmodern Music/Postmodern Thought* (pp. 119-140). New York & London: Routledge..

¹⁰ This produces fascination on the part of such writers as Dibelius, U. (1994). *György Ligeti. Eine Monographie in Essays* Mainz: Schott,; pp. 214-223. Steinitz, R. (1996). Music, maths & chaos. *Musical Times* 137/3, 14-20; Schütz, H (1996). Musik und Chaostheorie: Gedanken zu Ligeti's Klavieretüde Nr. 1 - Désordre“. *Musica* 50/3, 170-176; and Bader, R. (2005). Berechnung fraktaler Strukturen in den *Études für Klavier* von György Ligeti. In Stahnke, M. *Mikrotöne und mehr: Auf György Ligeti's Hamburger Pfaden* (pp. 105-126). Hamburg: Von Bockel. Rachel Beckles Willson,

however, shrewdly responds to other commentators' awe-filled bewilderment "But is this entrapping not the point, in fact? Are the pieces not mask?". See Beckles Willson, R. (2007). *Ligeti, Kurtág, and Hungarian Music during the Cold War* Cambridge: Cambridge University Press, pp. 184-185.

¹¹ See Taylor, S.A. (1994). The lamento motif: Metamorphosis in Ligeti's late style. Unpublished doctoral dissertation. Cornell University, and Steinitz, (2003), pp. 294-299. This subject receives more sophisticated treatment through the course of Bauer, A. (2011). *Ligeti's Laments: Nostalgia, Exoticism, and the Absolute*. Farnham: Ashgate.

¹² To varying degrees I would include in this category Niklas Wilson, (1992); Dibelius; (1994); Floros, C. (1996). *György Ligeti: Jenseits von Avantgarde und Postmoderne*. Vienna: Verlag Lafite; Griffiths, P. (1997). *György Ligeti*, second edition. London: Robson Books; and Steinitz 2003. For some examples of 'the ease with which Ligeti's rhetorical manners infiltrate the prose of his commentators', and Ligeti's simultaneous evocation and disavowal of aesthetic movements, see Wilson, C. (2004). György Ligeti and the Rhetoric of Autonomy. *twentieth-century music* 1/1, pp. 5-9.

¹³ Nowhere more strongly than in Gann, K. (1997), *American Music in the Twentieth Century*. New York: Schirmer, but also in a good deal of other literature in various languages. Constructions of 'America' versus 'Europe' in the historiography of post-1945 music have rarely been explored by scholars; one take on this can be found in my paper, Pace, I. (2010, September). Transatlantic Rivalries in the Discourse Surrounding Experimental Music. Paper presented at Coventry University Symposium on Experimental Music.

¹⁴ This latter strategy has gained currency in particular with the growth of an anti-modernist strain in musicology dealing with the Cold War; examples include Brody, M. (1993). Music for the Masses: Milton Babbitt's Cold War Music theory. *Musical Quarterly* lxxvii/2, 161-192; Stonor Saunders, F. (1999). *Who Paid the Piper? The CIA and the Cultural Cold War*. London: Granta; and Taruskin, R. (2005). *The Oxford History of Western Music: Volume Five: Music in the Late Twentieth Century* New York : Oxford University Press. Amongst various critiques of these arguments are Rosen, C. (2011, April 7). Music and the Cold War. *The New York Review of Books*, and Pace, I. (2011, December). The Cold War in Germany as Ideological Weapon for Anti-Modernists., Paper presented at Radical Music History Conference, Sibelius Academy, Helsinki..

¹⁵ See Ligeti's own account of this in interview Dibelius, (1994), p. 262; the view of Ligeti as a martyr at the hands of the avant-garde is enthusiastically taken up in Steinitz, (2003), p. 251. A more nuanced view of Ligeti's relationship towards avant-garde traditions at this point can be found Toop, R. (1999). *György Ligeti* p. 189. London: Phaidon Press; Sabbe, H. (1993). Vorausblick in neue Vergangenheit: Ligeti und die Tradition. *Neue Zeitschrift für Musik* 154, 5-7 and especially Wilson, C., 2004. However, see also Stahnke, 2011, pp. 231-232, on Ligeti's adversarial stance towards 'the old avant-garde' during his teaching.

¹⁶ For an overview of the German debate, see Tillman, J. (2002). Postmodernism and Art Music in the German Debate., In Lochhead and Auner, (2002), pp. 75-92.

¹⁷ Ligeti quoted in Peter Niklas Wilson, P.N. (1998). Vom Nutzen der Wurzellösigkeit. Notizen nach einem Gespräch mit György Ligeti., *Neue Zeitschrift für Musik* 159 (1998), p. 44, cited in Wilson, C. 2004, Ligeti and the Rhetoric of Autonomy, p. 12.

¹⁸ See Ligeti, (1997a).

¹⁹ See Ligeti, G. (1997b). Liner notes to CD SK 62309 *Ligeti Edition 7: Chamber Music* (A. McVoy and D. Feurzeig, Trans.)

²⁰ Szitha, T. (1992). A Conversation with György Ligeti. *Hungarian Musical Quarterly* 3/1, 15, cited in Searby, M. (1997). Ligeti the Postmodernist?, *Tempo* 199, p. 9.

²¹ Ligeti, G. & Beyer, A. (2000). An Art Without Ideology. In A. Beyer. *The Voice of Music: Conversations with Composers of our Time* (J. Christensen & A. Beyer, Ed. And Trans.) (p. 8). Aldershot: Ashgate. Later in this interview (originally published in 1992-93), Ligeti says “the direction that the French call *retro*, this postmodern glance backward, is false and kitsch’ though also ‘the avant-garde has become professorial” (p. 12).

²² This possibility is asserted rather more forcefully than I would in Wilson, C. (2004), pp. 7-9, evoking Bourdieu and describing Ligeti’s statements as “performative rhetoric”.

²³ One of the most valiant attempts at so doing can be found in Kramer, J. (2002), The Nature and Origins of Musical Postmodernism. In Lochhhead and Auner, *Postmodern Music/Postmodern Thought*, pp. 7-20. Nonetheless, this remains deeply problematic as most of the attributes Kramer employs can be found in many earlier musics. I refer in this article to the ‘postmodern’ purely to indicate the rhetorical term employed by various writers.

²⁴ Searby, (1997), p. 9, argues for a moderate position, describing a postmodernist label as “misleading”, though describing Ligeti’s later compositional approach as “more conservative”. Eric Drott, in Drott, E. (2003). The Role of Triadic Harmony in Ligeti’s Recent Music. *Music Analysis*, 22/iii, 283-314, is also sceptical about the term ‘postmodern’, but contrasts the later work with “the (late) modernist concern for stylistic consistency and purity, leaning instead towards a more inclusive musical language” (p. 285), without clearly defining which word is considered “(late) modernist”. The most subtle treatment can be found in Wilson, 2004, pp. 7-16.

²⁵ This attitude is prominent in a number of writings on the works by performers, such as Chen, Y-J (2007). *Analysis and Performance Aspects of György Ligeti’s Études pour Piano: Fanfares and Arc-en-ciel*. Unpublished doctoral dissertation, The Ohio State University.

²⁶ At least in those études which finish at rapid tempi; the quasi-cadential endings of ‘Cordes à vide’, ‘Fém’, ‘En suspens’, ‘Pour Irina’ and ‘Canon’ (and also ‘Vertige’ and ‘Entrelacs’) have a much greater degree of finality. Only ‘Arc-en-ciel’ and to some extent ‘White on White’ and ‘À Bout de Souffle’ resist such a type of ending.

²⁷ Which, however, is not to say that milder elements of the same cannot be found in various earlier music.

²⁸ Most reviews of this book were wholly praiseworthy, such as Bauer, A. (2006), *twentieth-century music* 2/2, 302-309; Whittall, A. (2003). *Tempo* 224, 62-65; Clendinning, J.P. (2004). *Notes* 60/3, 674-676, mostly on account of its including new biographical material and some sketch-based. Bauer does however acknowledge that the book at times “reads almost like a ghosted autobiography” and that “The author’s closeness to the composer precludes an overtly critical treatment of Ligeti’s career”, p. 308.

²⁹ For various examples of this, see Pace, I. (2009). Verbal Discourse as Aesthetic Arbitrator. In Heile, B. (Ed.) *The Modernist Legacy* Farnham: Ashgate, pp. 81-100.

³⁰ Steinitz, (2004), p. 277.

³¹ Ibid. p. 279

³² Ibid. pp. 293-294.

³³ Ibid. p. 303. Elsewhere Steinitz uses a very similar piece of prose to describe 'Vertige', 'L'escalier', and 'Coloana infinită': "These various musical spirals suggest an infinity of motion capable of endless repetition. Each cascades us into a fantastic whirlpool of giddy hallucination, as if the ground itself were turning, and the listener a spinning figure on a revolving plane" (Steinitz, 1996, p. 17).

³⁴ Steinitz, (2004), p. 304.

³⁵ Ibid. p. 308.

³⁶ On a distrust of ambiguity in English-language discourse around new music and a striving for 'the positivist's rhetoric' compared to German discourse (treated with an equal degree of scepticism), see Hocking, E. (1995). Helmut Lachenmann's Concept of Rejection. *Tempo* 193, pp. 4-5.

³⁷ Pace, (2009).

³⁸ Bauer, (2006), p. 309, does comment upon "a sometimes frustrating reliance on fuzzy sound bites in lieu of explication".

³⁹ Steinitz, (1997), p. 15. Arnold Whittall argues that this replaces the dialectic between 'clocks' and 'clouds' in Ligeti's earlier works. See Whittall, A. (2000). *Musical Composition in the Twentieth Century* New York and Oxford: Oxford University Press, p. 300.

⁴⁰ As Whittall, (2000), p. 300, puts it, "the later Ligeti is rather more subtly modernistic than the earlier one".

⁴¹ As well as greater degrees of consonance and stability in other ways. For a detailed consideration of how these factors are made manifest, see Knop, F. (2007). Kontinuität und Unbekanntes. Beobachtungen an György Ligeti's letzten Klavieretüden. In F. Widmann, T. Ahrend & H. Von Leosch, *Vom Erkennen des Erkannten*. *Musikalische Analyse und Editionsphilologie. Festschrift für Christian Martin Schmidt* (pp. 535-548). Wiesbaden, Leipzig & Paris: Breitkopf & Härtel.

⁴² Whittall, (2000), p. 300. Griffiths, (1997), pp. 119-120 arrives at a similar

⁴³ At least in works published since the mid-1960s; earlier histories, in various languages, were more inclined to divide music by country, a reflection of the importance of the ISCM and the concept of 'Weltmusik' during the first post-war decades

⁴⁴ Fosler-Lussier, D. (2007). *Music Divided: Bartók's Legacy in Cold War Culture*. Berkeley: University of California Press, especially pp. 28-50.

⁴⁵ Except for a few exceptions such as 'Wedding Day and Night' or 'The Lovely Girls of Budapest', which alternate groups of 3/4 and 2/4 bars; only 'The Old Shepherd' very briefly anticipates Bartók's later use of expanding and contracting cells.

⁴⁶ Beckles Willson, 2007, pp. 183-184, also suggests that this piece may have influenced 'Touches bloquées' Beckles Willson, 2007, pp. 183-184.

⁴⁷ See Fearn, R. (1990). *Bruno Maderna*. Chur: Harwood Academic Publishers . pp. 17-25, on the importance of this work for Maderna.

⁴⁸ See Von Blumröder. C. (1993). *Die Grundlegung der Musik Karlheinz Stockhausens*. Stuttgart: Franz Steiner Verlag, pp. 39-41, for a discussion of this unpublished dissertation.

⁴⁹ As can be gauged from the programmes in Borio, G. and Danuser, H. (Eds.), *Im Zenit der Moderne: Die Internationalen Ferienkurse für Neue Musik Darmstadt 1946-1966*, Band 3. Freiburg im Breisgau: Rombach, pp. 533-576.

⁵⁰ As I believe is made clear through a comparison of the pianistic figuration of the second movements of either work, and that of the third movement of Bartók's Suite with the fourth movement of Hartmann's Sonata.

⁵¹ There are also some comparable examples of variable metre in Blacher's 24 Preludes of 1974, but nothing so starkly foreshadowing Ligeti's work.

⁵² Michael Searby, on the other hand, draws attention to the terraced dynamics for individual notes (citing Amy Bauer's relating of this to Messiaen's *Mode de valeurs et intensités*: see Bauer, A (1997). *Compositional Process and Parody in the Music of György Ligeti*. Unpublished doctoral dissertation, Yale University, p. 368), suggests instead a range of multilayered strands of individual pitches or octaves, "very much like a carillon". See Searby, M. (2010). *Ligeti's Stylistic Crisis: Transformation in His Musical Style 1974-1985*, Lanham, MD: Scarecrow Press, p. 92.

⁵³ The same can be said of the chords at the end of 'Fém'; Beckles Willson compares these with the opening of Bartók's Third Piano Concerto, but presumably means the opening of the slow movement of the Second. See Beckles Willson, 2007, p. 183.

⁵⁴ Paul Griffiths argues that the processes to be found in the *Études* can be traced back to *Monument* and *Continuum*, with the addition of some tonal harmonic elements. See Griffiths, P. (2011). *Modern Music and After*, third edition. New York: Oxford University Press, p. 361. However, this does not account for some of the other new techniques which Ligeti employs in the *Études*, which I describe here.

⁵⁵ Christine Mennesson identifies 'Désordre', 'Automne à Varsovie', 'Fém', 'Entrelacs', and 'L'escalier du diable' as the principal études based around rhythmic ambiguity, but in the section of her article devoted to performance, there is little about how to make this most apparent. See Mennesson, C. (2000). György Ligeti *Études pour piano* (Plus particulièrement *Automne à Varsovie*): les illusions acoustiques comme matériau d'une écriture. *Analyse Musicale* 36, 76-93 (especially pp. 79-80, 87-90).

⁵⁶ And this is indeed the approach I myself have taken when performing this piece up until reconsidering it in the context of preparing this article.

⁵⁷ See Adorno, T. (1932). On the Social Situation of Music (p. 430), (W. Blomster, Trans.); (1933). Farewell to Jazz (pp. 497-499), (S. H. Gillespie, Trans.). In T. Adorno, & R. Leppert (Ed.). (2002). *Essays on Music*. Berkeley: University of California Press.

⁵⁸ Reproduced in Wilson, P.N., 1992, pp. 79-82; the opening is also printed in Dibelius, 1994, p. 231. However, in that version printed in Ferguson, S. (1993) Tradition – Wirkung – Rezeption. *Neue Zeitschrift für Musik* 154, p. 14, the brackets have been removed, seemingly without trace, suggesting they were added to one copy, but not another.

⁵⁹ Ligeti, G. (1988). On My Etudes for Piano (S. McLauchlan, Trans.). *Sonus* 9/1, 3-7. The original text, 'Études pour piano – Premier livre', can be found in G. Ligeti, & M. Lichtenfeld (Ed) (2007), *Gesammelte Schriften II* (pp. 290-293). Mainz: Schott Music.

⁶⁰ See Bouliane, (1989).

⁶¹ See for example Wilson, P.N., (1992), p. 65; Dibelius, (1994), pp. 225-227; Floros, (1996), p. 180; Griffiths, (1997), p. 121; Lobanova, (2002), pp. 290-295; Steinitz, (2003), p. 300; and Taylor, S.A. (2003), Ligeti, Africa and Polyrhythm. *The World of Music* 45/2, 83-94. See also Bauer, (2011), p. 90 for a short commentary on this model.

⁶² Thalberg's effect in this respect has been explored by numerous scholars and writers on nineteenth-century pianism. See Hominick, I. G. (1991). Sigismond Thalberg

(1812-1871), *Forgotten Piano Virtuoso: His Career and Musical Contributions*. Unpublished doctoral dissertation, Ohio State University; Gooley, D. (2004). *The Virtuoso Liszt* (pp. 18-77). Cambridge: Cambridge University Press; Hamilton, K. (1998). The virtuoso tradition. In D. Rowland, (Ed.). *The Cambridge Companion to the Piano*. (pp. 57-74), Cambridge: Cambridge University Press; and Hamilton, K. (2008). *After the Golden Age: Romantic Pianism and Modern Performance*. Oxford: Oxford University Press, pp. 158-161.

⁶³ See Walker, A. (1987). *Franz Liszt: The Virtuoso Years 1811-1847*, revised edition London: Faber & Faber, pp. 92-93.; La Mara (Ed.) (1892). *Classisches und Romantisches aus der Tonwelt*. Leipzig: Breitkopf & Härtel, pp. 241-42, 254 ; Keeling, G. (1986). The Liszt-Pianos – Some Aspects of Preference and Technology, *The New Hungarian Quarterly* 27, 220-231.

⁶⁴ This is a technique employed by various pianists and pedagogues, described most clearly in Sándor, G. (1981). *On Piano Playing*. New York: Schirmer.

⁶⁵ By now he had a more modern and stronger Érard in his house in Weimar. See Walker, A. (1989). *Franz Liszt: The Weimar Years 1848-1861*. Ithaca, NY: Cornell University Press, pp. 74-77.

⁶⁶ The French and English first editions differ somewhat in terms of the phrasing marks in both hands and some dynamics, but not in terms of the beaming. All can be viewed at <http://www.cfeo.org.uk/apps/> (accessed 16/6/12).

⁶⁷ Taylor, (2003), pp. 84-85 cites an example of a 'complex hemiola' from Chopin's Ballade No. 4 in F minor, op. 52, bars 175-176 (also cited a year earlier in Tsong, M.K. (2002). *Analysis or Inspiration: A Study of György Ligeti's Automne à Varsovie* Unpublished doctoral dissertation, Rice University, pp. 37-38), but this essentially consists of a melodic extraction from the tessitural peaks of Chopin's line, it belongs more to the Thalbergian model rather than the more intricate type of linear extraction I am examining. Ligeti cited the use of hemiolas in this work as a starting point for the conception of 'Automne à Varsovie', in Bouliane, (1989), p. 54; another example from this work is considered in more detail in Lobanova, (2002), pp. 292-295.

⁶⁸ For one examination of the process of linear extraction in this piece alongside other aspects of pitch, see Sabbe, H (1987). *Musik-Konzepte* 53. *György Ligeti: Studien zur kompositorischen Phänomenologie*. Munich: edition text + kritik, pp. 37-45.

⁶⁹ As pointed out in Steinitz, (2003), p. 282.

⁷⁰ For example, the most detailed study of the second book of the Études - Chang, L. (2007). *György Ligeti: Lorsque le temps devient espace. Analyse du Deuxième livre d'études pour piano*. Paris: L'Harmattan – simply provides a table of different articulative types and a few very general comments about the uses to which they are put (pp. 175-176).

⁷¹ But not necessarily simple chromatic scales. Clifton Callender uses advanced analytical techniques to discern multiple simultaneous laments from the first bars, claiming “all of these lines are clearly audible and are driving the harmonic progression” (p. 12). However, his analysis takes no account of the notated accentuation See Callender, C. (2007). Interactions of the lamento motif and jazz harmonies in György Ligeti's *Arc-en-ciel*. *The Journal of Applied Musical Thought* 21, 41-77.

⁷² Interestingly, this passage does not receive any special attention in some of the analyses of this work, such as Floros, (1996), pp. 181-183, or Rümenapp, P. (1997). *Wie eine Flutwelle: Raumkonstruktion und Zeitorganisation in Ligetis sechster*

Klavieretüde. *MusikTexte* 67/68, 40-43; though Taylor, (1994), p. 80, sees bar 85 as the culmination of an interplay between disparate lines.

⁷³ See Stahnke, (2011), pp. 236-242, for one of the more interesting accounts of the harmonic results of this process of extraction. On the connection with Shepard's scale, see also Weber, M. (1994). Towards Interpretation. *Systematic Musicology/Musicologie Systématique II/2*, 273-293, and Schneider, A. (2005). Was haben Ligeti's Études pour Piano mit Shepard-Skalen zu tun? Über "auditorische Illusionen", *Vertige und Columna infinită*. In M. Stahnke (Ed.). *Mikrotöne und mehr – Auf György Ligeti's Hamburger Pfaden* (pp. 81-104). Hamburg: Von Bockel.