

Liszt's Technical Studies: A Methodology for the Attainment of Pianistic Virtuosity

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In 1970, the Hungarian publishing firm Editio Musica Budapest began a long term project, ending in 2005, which endeavored to compile and publish all the works of Franz Liszt in a complete edition titled The New Liszt Edition (NLE). Through the efforts of this firm, Liszt's Technical Studies were published in a way that he had originally intended for the first time in 1983. Yet, although the eminent Liszt scholar Michael Saffle (1986) has stated that 'Pedagogy is one of the most thoroughly-mined veins of Liszt material ever uncovered', academic discussion on Liszt's Technical Studies (Walker 2005), his definitive pedagogical work for piano, is scarce. What it was that Liszt set out as being fundamental to the acquisition of pianistic virtuosity in the Technical Studies and the nature of the three books didactic trajectory is largely unknown. Through an examination of Liszt's detailing of arpeggio structures in the Technical Studies, this paper will demonstrate that the exercises are built on six artistic and mechanical principles designed to instruct the pianist in his/her quest for pianistic virtuosity.

Introduction

An examination of the didactic instruction Liszt supplied in the Preface¹ of the autograph manuscript of the *Technical Studies* and the technical descriptions he gave Valérie Boissier from 1831-1832, published in 1930 as the Liszt *pédagogue*,² make it possible to determine the nature of Liszt's methodology for the attainment of pianistic virtuosity as set out in the three books of *Technical Studies*. In the *Preface* to the *Technical Studies*, Liszt stated that

It will be useful to exercise the fingers, the ears and the intelligence simultaneously and to study, together with the mechanism, the dynamics and rhythm inherent in the music. Consequently, these first exercises should be practiced with every degree of intensity: crescendo, from pianissimo to fortissimo and diminuendo, from fortissimo to pianissimo.³

1. Imre Mező, Preface in, *New Edition of the Complete Works: Supplements to Works for Piano Solo; Technical Studies vol. I*, compiled by Adrienne Kaczmarczyk and Imre Mező (Budapest: Editio Musica; Kassel: Bärenreiter-Verlag, 2006), 2.

2. Auguste Boissier, *Liszt pédagogue: leçons de piano données par Liszt à Mademoiselle Valérie Boissier à Paris en 1832: notes de Madame Auguste Boissier*, (Genève: Slatkine Reprints, 1976).

3. Liszt in: Mező, *Technical Studies I*, 2. Liszt stated: "Il sera utile d'exercer à la fois les doigts, l'oreille et l'intelligence, et d'étudier simultanément avec le mécanisme, la dynamique et le rythme, inhérents à la musique. En conséquence, il faudra travailler ces premiers exercices à tous les degrés de la vibration du son, crescendo, du pianissimo au fortissimo, et diminuendo, du fortissimo au pianissimo." Liszt in: Mező, *Technical Studies I*, 2. See also p. XXII of this edition. The editor, Imre Mező (XXII) has stated that "This remark should be taken as applying to the whole series."

The Diary-Notes taken by August Boissier, while she sat in attendance of her daughter's lessons with the young Liszt contain direct statements about Liszt's technical methodology. In one instance, Boissier directly quotes Liszt as having said

Invent nuances and, if possible, new combinations; in this way you will find yourself prepared for any occasion. And if you add to all this the study of harmonization, the study of modulations, or to vary the exercises by using the modulations possible, you will have seized the art by its fundamental principles and you will be capable of doing everything.⁴

Boissier also states that because Liszt's methodology involved the exhaustive examination of each and every possibility of all the fundamental technical structures that he identified, the pianist will find that

As a passage is studied, the difficult points will have already been overcome in advance. Rarely are new combinations found: and if they are found, they are of so little importance that they need not stop us. If something unexpected is found, then it has to be made the subject of a particular study in all keys – and the new problem is quickly solved.⁵

Based on the mechanical and artistic commentaries of these two sources, the current author has identified six “fundamental principles”⁶ that are central to Liszt's methodology. A discussion of these may determine if the *Technical Studies* are still valuable in what they can confer about technique and furthermore, if this methodology can be used to instruct technique today.

4. Auguste Boissier, “Liszt Pedagogue: a Diary of Franz Liszt as Teacher 1831-1832,” cited in, *The Liszt Studies, essential selections from the original 12-volume set of Technical Studies for the piano*, edition and English translation by Elyse Mach. (New York & London: Associated Music Publishers, 1973), xxiii. Liszt stated: “Inventez des nuances et des combinaisons nouvelles si vous le pouvez, de cette manière vous vous (sic?) trouverez prête à tout événement. Et si vous joignez à tout cela l'habitude d'harmoniser, de travailler les modulations, ou plutôt de varier vos exercices sur toutes les modulations possibles, vous aurez pris l'art par ses premiers principes et vous serez propre à tout.” Boissier, *Liszt pédagogue*, 82.

5. Boissier, *The Liszt Studies*, xxi. Boissier states: Quand on étudie un morceau on les a vaincues d'avance, il se trouve rarement des combinaisons nouvelles, où les modifications sont si peu de chose, qu'elles n'arrêtent pas. Si quelque chose de différent se rencontre on en fait dans tous les tons l'objet d'une étude particulière et le nouvel obstacle est vite surmonté. Boissier, *Liszt pédagogue*, 68. Another example of this is: “He requires that all possible passages be related to certain fundamental patterns from which all combinations stem; and once the key has been found, all the combinations can be performed and everything read at sight.” Boissier, *The Liszt Studies*, xxii.

6. Liszt in: Boissier, *The Liszt Studies*, xxiii.

Discussion

The first principle is the vertical motion brought about by the drop of the finger, wrist, elbow or shoulder, while the second is the horizontal or lateral motion of these across the keys.⁷ This is what Liszt referred to as “the mechanism” of playing and it isn’t surprising to find that Liszt wrote specific exercises dedicated to the upward, downward and lateral movement of the fingers. It is worthy of note that he identified two exercises in particular as containing these two “principles” in their most quintessential form.⁸

The ways in which diatonic and chromatic scales determine the structures from which music is written and how these determine the interplay of the fingers and hands across the keyboard⁹ is the third principle. This includes the musical procedures of harmonisation and modulation, whereby each and every fundamental passage is exhausted of its possibilities in all the twenty-four tonalities.¹⁰ This aspect of Liszt’s methodology is intended to resolve all the mechanical obstacles that may arise in actual repertoire before encountering them in a score.¹¹ In this way, the pianist may never be “handicapped by finger obstacles.”¹² His recognition of the scale as a principle also accounts for the layout of the exercises, as with few exceptions they are almost entirely constructed from either the ascending and descending stepwise motion of the fingers as they traverse these or are otherwise based solely on the notes of the tonic major, minor as well as the diminished and dominant seventh chords that are derived from these.

To ensure that the pursuit of virtuosity would be addressed within a musical context and not become a mechanical end in itself,¹³ Liszt included the study of the nuance in combination with the exercises. This is the fourth principle and encompasses templates of musicianship such as; staccato and legato touch, dynamics, dynamic swell, namely, crescendo and diminuendo as well as the digital issues of phrasing and accent. The use of rhythmic figures in both simple and compound meter that are derived from various subdivisions of the crotchet into quavers, semiquavers and demisemiquavers is the fifth principle, while the sixth pertains to the way in which the aural senses define through “intelligence”¹⁴ what the pianist will produce musically.

7. Theodore Kullak, *School of Octaves for the Piano, Op. 48*, part I, II. Revised by O. Thümer (London: Augener’s Edition, 1913.), 6. Kullak states: “The hand can move in four directions:-upwards, downwards, from right to left, and from left to right. The last two are called side-movements.”

8. These are the “tapping” exercise (nos. 1 and 47), and the “two-finger” exercise’ (nos. 5 and 23).

9. Allan Walker, ‘Liszt’s Technical Studies: Some Thoughts and Afterthoughts,’ in, *Reflections on Liszt* (Ithaca and London: Cornell University Press, 2005), 215.

10. Boissier, *The Liszt Studies*, xxi.

11. Boissier, *The Liszt Studies*, xxi.

12. Boissier, *The Liszt Studies*, xxiv.

13. “Nothing should sound studied.” Boissier, *The Liszt Studies*, xxiv.

14. Liszt in: Mező, *Technical Studies I*, 2. See full quote in the text above.

Following the identification of these principles, Liszt's methodology can be summarized as unfolding through the following architectural framework:

1. Vertical Principles of Motion
2. Horizontal Principles of Motion
3. Diatonic and Chromatic Principles
 - a) Modulation
 - b) Harmonization
4. The Principle of the Nuance
 - a) Touch: Staccato and legato
 - b) Dynamics: loud, soft, crescendo and diminuendo
 - c) Accent and phrasing
5. Rhythmic Principles
6. The Intellectual Principle
 - a) The brain as the centre of musical and technical reasoning
 - b) The role of listening in technical development

An examination of selected arpeggio and arpeggio-based broken chord configurations in the *Technical Studies* will serve to demonstrate how the six principles identified in the current paper form the structural basis of Liszt's methodology. According to the comments of Boissier, this methodology endeavoured to resolve all the possibilities of the technical configurations Liszt considered to be fundamental to the pianistic art.¹⁵ Therefore, we should expect to find an examination of all the primary arpeggio and arpeggio-based broken chord configurations that are capable of execution.

Beginning, as all the exercises do, in c major, the first exercise that details the arpeggio features both broken chord figures followed by ascending and descending diatonic passages in root position, first and then second inversion configurations with hands set at an octave and in single notes. This exercise then backtracks on the ascending progression of inversions, exploring these patterns in c minor, from second to first inversion and then root position, thus addressing all the structural possibilities of these configurations.

Example 1a. Arpeggio and broken-chord single-note configurations, No.48
(II: 68-70, mm.1-18).

C-Dur / C major

15. Boissier, *The Liszt Studies*, xxi.

The inclusion of similar technical patterns to this passage of the diminished and dominant sevenths of d-flat major allow the exercise to modulate up a chromatic step from c, where this detail is then examined in this key and then through the remaining twenty-four tonalities.

Example 1b. Arpeggio and broken-chord single-note diminished and dominant seventh configurations, No.48 (II: 70, mm.19-26).

Des-Dur / D flat major

Liszt’s examination of these technical structures continues in an exercise that details the various ways in which chords can be arpeggiated or broken in patterns that break up and down following the same harmonic progression previously established, being:

C major → C minor → D-flat Diminished 7th → Dominant 7th of D-flat →
 (c,e,g,c) (c,e-flat,g,c) (c,e-flat,f-sharp,a) (a-flat,c,e-flat,g-flat)

D-flat major → etc.
 (d-flat,f,a-flat,d-flat)

The first of these examines the possibilities of a “stepped”¹⁶ configuration over two separate exercises. In the second of these, the semiquaver rhythmic pattern of the first has been converted into semiquaver triplets; quickening the tempo and thereby addressing the agogic possibility that such patterns may be encountered in both simple and compound time.

16. This term was suggested by Dr. Christine Logan.

Example 2a. Broken chords in “stepped” configurations and in simple time, first pattern: No.49 (II: 94, mm.1-5).

The musical score for Example 2a consists of two systems of piano music. The first system is labeled "C-Dur / C major" and the second "C-Moll / C minor". Both systems feature broken chords in "stepped" configurations in simple time, with detailed fingering and dynamics markings.

Example 2b. Broken chords in “stepped” configurations and in compound time, first pattern: No.50 (II: 106, mm.1-5).

The musical score for Example 2b consists of three systems of piano music. The first system is labeled "C-Dur / C major" and the second "C-Moll / C minor". The third system continues the "C-Moll / C minor" section. Both systems feature broken chords in "stepped" configurations in compound time, with detailed fingering and dynamics markings.

Exercise 6: A piano exercise in 4/4 time, starting with a treble clef and a key signature of two flats. It features a complex rhythmic pattern of eighth and sixteenth notes. Fingerings are indicated by numbers 1-5. The exercise concludes with a fermata over the final measure.

Exercise 8: A piano exercise in 4/4 time, starting with a treble clef and a key signature of two flats. It features a complex rhythmic pattern of eighth and sixteenth notes. Fingerings are indicated by numbers 1-5. The exercise concludes with a fermata over the final measure.

The same consideration of rhythmic factors can be found between exercises nos. 51 and 52; however, whereas in the previous two exercises the technical configuration broke up ascending and down descending, these exercises reverse this so that the figures now break down ascending and up descending. In this way the fundamental patterns of finger direction in single note arpeggios are exhausted of their possibilities and the technical gains that may be made from them exposed.

Example 3a. Broken chords in stepped configurations and in simple time, second pattern: No.51 (II: 115-116, mm.1-5).

Exercise 115: Labeled "C-Dur / C major", this exercise is in 4/4 time. It consists of two systems of piano and bass staves. The piano part features a sequence of broken chords in a stepped configuration. Fingerings are indicated by numbers 1-5. The exercise concludes with a fermata over the final measure.

Exercise 116: Labeled "C-Moll / C minor", this exercise is in 4/4 time. It consists of two systems of piano and bass staves. The piano part features a sequence of broken chords in a stepped configuration. Fingerings are indicated by numbers 1-5. The exercise concludes with a fermata over the final measure.

Example 3b. Broken chords in 'tiered' configurations and in compound time, second pattern: No.52 (II: 125, mm.1-5).

Following these exercises, the technical gains that can be made from two-note chord configurations are explored. These exercises are structured around the broken chord ascending and descending patterns established in exercise no. 48 and extend the former and primary examination of “the mechanism” of the finger to that of the wrist, elbow and shoulder. The first of these examines the possibility of two-note patterns featuring adjacent notes of the featured chords.

Example 4a. Two-note arpeggio configurations featuring adjacent notes in broken chords: No.53 (II: 136-137, mm.1-6).

The musical score for Example 4a consists of four systems of two-note arpeggio exercises. Each system is written for both the treble and bass clefs. The first system is for C major (C-Dur / C major) and the second is for C minor (C-Moll / C minor). The exercises are numbered 1 through 5. Fingerings are indicated by numbers 1-5 above or below notes. The exercises are structured as follows:

- System 1 (C major):** Treble clef starts with a C4 octave, followed by D4, E4, F4, G4, A4, B4, C5. Bass clef starts with a C3 octave, followed by B2, A2, G2, F2, E2, D2, C3. Fingerings are indicated above and below notes.
- System 2 (C minor):** Treble clef starts with a C4 octave, followed by Bb4, Ab4, Gb4, F4, E4, D4, C5. Bass clef starts with a C3 octave, followed by Bb2, Ab2, Gb2, F2, E2, D2, C3. Fingerings are indicated above and below notes.
- System 3:** Treble clef starts with a C4 octave, followed by Bb4, Ab4, Gb4, F4, E4, D4, C5. Bass clef starts with a C3 octave, followed by Bb2, Ab2, Gb2, F2, E2, D2, C3. Fingerings are indicated above and below notes.
- System 4:** Treble clef starts with a C4 octave, followed by Bb4, Ab4, Gb4, F4, E4, D4, C5. Bass clef starts with a C3 octave, followed by Bb2, Ab2, Gb2, F2, E2, D2, C3. Fingerings are indicated above and below notes.

The technical gains that can be made through the practice of other two-note configurations arranged in consecutive interlocking broken chord configurations extends from the examination of the intervals of a third and fourth in the previous example to the intervals of a fifth, sixth and seventh in an examination of arpeggiations in interlocking chord patterns.

Example 4b. Two-note arpeggio configurations featuring interlocking consecutive notes in broken chords: No.54 (II: 151-152, mm.1-6).

The image shows three systems of piano music. Each system consists of a right-hand staff and a left-hand staff. The music is written in a key with two flats (B-flat and E-flat) and a 3/4 time signature. The right-hand part features arpeggiated chords, while the left-hand part features repeated configurations of these chords. Fingering numbers (1-5) are indicated above and below the notes throughout the piece.

Following the systematic examination of these arpeggio and arpeggio-based broken chord configurations in single note passages through all the keys in the intervals of thirds, fourths, fifths, sixths and sevenths, the possibilities of these configurations in octaves follows in an exercise which also features an altogether different technical pattern, namely, repeated octaves.

Example 5a. Octave arpeggios with repeated configurations, No.55
(II: 168, mm.1-12).

The image shows two systems of piano music. The first system is labeled "C-Dur / C major" and the second is labeled "C-Moll / C minor". Both systems consist of a right-hand staff and a left-hand staff. The music is written in a 3/4 time signature. The right-hand part features octave arpeggios, while the left-hand part features repeated configurations of these arpeggios. Fingering numbers (1-5) are indicated above and below the notes throughout the piece.



Liszt's inclusion of this repeated configuration provides an opportunity to point out that in the study of pianistic technique, the various operations of the joints; being the fingers, wrist, elbow and shoulders, are not separate but interdependent. In respect to the above example, the octave arpeggios can only be executed with mechanical actions from the elbows and shoulders, yet, the repeated octaves, according to Liszt,¹⁷ must be achieved primarily through the bouncing of the wrist; in other words, the fact that the said elbow and shoulder action requires digital accuracy, while the digital accuracy of the repeated chords can only be achieved with the muscular support of the forearm and shoulders is proof of their interdependence. Another possible reason for the inclusion of these repeated patterns is that they allow the hands to vertically prepare for the horizontal motion of the ensuing arpeggio.

The structural design of this exercise is the template that Liszt uses to examine arpeggios in both four- and five-note chords. So that these structures may be exhausted of their technical possibilities and all possible technical gains made, this investigation runs through all the major and minor keys and includes the diminished and dominant seventh chords of each of the twelve major and minor tonalities.

17. Boissier, *The Liszt Studies*, xvii.

Example 5b. Octave arpeggios in four and five-note chords with repeated configurations, No.56 (II: 178-179, mm.1-12).

The image displays a musical score for piano, consisting of six systems of music. Each system contains a grand staff with a treble and bass clef. The music features a series of chords, each with an arpeggiated octave figure. The chords are primarily four-note and five-note structures. The first system is marked 'C-Dur / C-maj' and begins with a treble clef. The second system starts with a treble clef and a '4' above the first measure. The third system starts with a treble clef and a '6' above the first measure. The fourth system starts with a treble clef and a '9' above the first measure. The fifth system starts with a treble clef and a '11' above the first measure. The sixth system starts with a treble clef and a '13' above the first measure. The key signature changes from C major to C minor (one flat) in the second system and remains there for the rest of the piece. The time signature is common time (C). The notation includes various articulation marks such as slurs and accents, and some measures have fingerings indicated by numbers 1-5.

The exercises in arpeggio-based techniques that follow come from Book III of the *Technical Studies*. This book contains twelve exercises, nos. 57a-69, titled *12 große etüden* (12 Grand Studies) by Liszt. Four of these are dedicated to the possibilities of arpeggio figures in open position. Exercise no. 64 examines digital stretch taken to the intervals of a tenth and an eleventh and therefore extends the digital possibility of arpeggio figures to include the “mechanism” of swivel movement that involves the lateral rotation of the wrist from side-to-side. Beginning from c, this configuration is examined within the same structural framework as no. 48. It is then transformed rhythmically into a triplet configuration in the next exercise, which in this instance, slows the digital articulation down.

Example 6a. Open broken-chord configuration in simple time, No.64
(III: 53-54, mm.1-8).

The musical score for Example 6a, No. 64, is presented in four systems. The first system is in C major (C-Dur / C major) and the second system is in C minor (C-Moll / C minor). The music features a complex, broken-chord texture with rapid sixteenth-note passages in both hands. The first system is in C major and the second system is in C minor. The music is in simple time and consists of four systems of piano accompaniment.

Example 6b. Open broken-chord configuration in compound time, No.65
(III: 64, mm.1-8).

The musical score for Example 6b, No. 65, is presented in two systems. The first system is in C major (C-Dur / C major) and the second system is in C minor (C-Moll / C minor). The music features a complex, broken-chord texture with rapid sixteenth-note passages in both hands. The first system is in C major and the second system is in C minor. The music is in compound time and consists of two systems of piano accompaniment.



The last two *Etudes* in the *Technical Studies* that detail arpeggiated figures take “the mechanism” of digital stretch and swivel movement to their mechanical limits. When these are considered from a harmonic perspective, they best demonstrate that part of Liszt’s methodology where he suggests to the pianist to be creative and “invent”¹⁸ unusual, if not hidden¹⁹ technical possibilities. Although these configurations are unlikely to be encountered in many scores, a conscientious study of them with patience²⁰ will nevertheless be conducive to virtuosic gain.

Example 7a. Inventive open broken-chord configurations, no. 66
(III: 64, mm. 1-4).



18. Boissier, *The Liszt Studies*, xxiii.

19. Walker, *Reflections on Liszt*, 203-204.

20. “Be patient with yourself.” Liszt in: Boissier, *The Liszt Studies*, xix.

Example 7b. Inventive open broken-chord configurations, no. 67
(III: 75, mm. 1-4).



Conclusion

A comparison between specific technical commentaries given by Liszt himself and recorded by Boissier with the technical details set out in the *Technical Studies* make it possible to propose that Liszt's methodology for the attainment of virtuosic technique was based on six fundamental principles, namely; the mechanical actions of the fingers and arms, the mechanical principles that arise from both diatonic and chromatic scales, the principle of the nuance, rhythmic principles that arise from simple and compound rhythmic structures and the intellectual principle. While it is beyond the scope of this paper to show that the systematic way in which Liszt addresses other fundamental techniques of piano playing in the *Technical Studies* is no different to that given to arpeggio and the related broken-chord configurations, an examination of these reveals that they also contain a similar unfolding methodology designed to lead the pianist to greater facility and virtuosity. Because Liszt's technical details exemplify the fundamental mechanical and artistic aspects of piano playing up to, including and arguably beyond his time, it is feasible to propose that they can be consulted and studied by piano students today when they find that in their own respective endeavors to achieve greater pianistic virtuosity, they are blocked by technical impasse.

About the Author

Originally from Newcastle, composer/pianist/musicologist Neil Goodchild was educated in piano in the Convent tradition and in theory with renowned Novacastrian Philip Sketchley at the Newcastle Conservatorium of Music. Tertiary studies followed with Larry Sitsky at the Canberra School of Music and later with Beryl Sedivka at the Tasmanian Conservatorium of Music (BMus). He recently completed musicological studies with Christine Logan at the University of New South Wales (MMus). His many compositions and an extensive treatise on piano playing are yet to be published.

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