

NEW INTRODUCTION

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Flow down and down in always widening rings of being.

—Rumi, from Coleman Barks, “The Community of the Spirit”

In the Hindu teachings of Advaita Vedanta/Non-Duality, everything is one. “Brahman” describes the ultimate reality, the background if you like, to all experience. The seer and the seen are different. The movie cannot exist without the screen; turn the movie off and the screen is still present. This understanding is referred to today as “I,” “I am,” “consciousness,” or “awareness.” Consciousness shines by itself and has nothing in it but itself. Like the sun, it is a self-illuminating, undivided wholeness. If we were to use words to describe Non-Duality, each word would be a step away from the truth. Teachers of this understanding may need to say only a few words before the student feels this awareness. As a Zen master once said, “If I speak, I tell a lie, if I remain silent I am a coward.” It requires a loosening of what has been learned, a removal of the veil of experience toward what ultimately is seeking you: coming from the generator outward, not from endless concepts inward. Some people refer to these teachings as “the Greatest Secret.”

For me, this book resonates closely with this understanding. Ernst Levy may just have shared here harmony’s greatest secrets.

It was an early morning in Leeds about twenty-five years ago. I had just left my piano lesson with William Kinghorn. My head was all in a spin as it was after every meeting with him. Each lesson softened the doors of perception. He would open the gate and show me a pathway. Many different paths were illuminated, but Bill had a mantra: “Teaching isn’t telling.” I would ask him to show me something

at the piano and he would reply, “That is telling, not teaching.” Lao Tzu wrote in the opening lines of the *Tao Te Ching*:

The way that can be spoken of
 Is not the constant way;
 The name that can be named
 Is not the constant name.
 The nameless was the beginning of heaven and earth;
 The named was the mother of the myriad creatures.
 Hence always rid yourself of desires in order to observe
 its secrets;
 But always allow yourself to have desires in order to
 observe its manifestations.
 These two are the same
 But diverge in name as they issue forth.
 Being the same they are called mysteries,
 Mystery upon mystery -
 The gateway of the manifold secrets.

Fast forward to the year 2013 and I was watching Jacob Collier’s arrangement of “Pure Imagination” from *Willy Wonka & the Chocolate Factory*. He was singing all the vocals in multi-part harmony and playing a wonderful melodica solo. He released a number of these videos on YouTube, all of which contained fascinating harmonic content. I followed Jacob’s social media platforms so I could keep up to date with his musical output. In 2016, Jacob wrote a post in which he was photographed with the jazz legend Herbie Hancock. He mentioned he was having a discussion with Herbie about negative harmony. The hashtag featured Ernst Levy’s *A Theory of Harmony*.

I went over to my bookcase and sure enough I had the book. I couldn’t remember why I had a copy, but I assumed my teacher Bill must have recommended it to me all those years ago. I read the book and could see the relationship to the topic, but Ernst Levy didn’t use the words “negative harmony.” As far as I understand it, the nomenclature is credited to American saxophonist, composer, bandleader, and music theorist Steve Coleman. A year later I watched a video in which

Jacob was asked to explain what negative harmony is. He talked about how any chord in any key has a polar opposite, a reflective negative version in a given key center, just as a tree has roots.

Levy writes on page 53: "Pitch change may first be considered as a continuum. The howling of a siren, the glissando on a string, are examples embodying that concept. Now, the human mind is so structured that it apprehends the continuum by starting from discrete quantities, and not vice versa." For me, and perhaps for Levy too, this means being aware that everything is generated from a fundamental tone, pointing toward an undivided sonic wholeness. It can be perceived as two things, but ultimately it's all one. It was (and still is) this approach that was so fundamental in my exploration of Levy's harmonic concepts.

After I finished studying with Bill, we formed a strong friendship, which lasted until he passed away. I would ring him up most weeks to talk about various topics, including music, new CDs we had purchased, and our shared love of the jazz pianist and composer Bill Evans. I had been reluctant to mention the term negative harmony to him as I assumed he would have found it rather gimmicky. However, in one of our conversations he brought up the term, as another ex-student of his had mentioned it. He asked me to explain what it was. The theory immediately resonated with him, although he did not refer to it as negative harmony. He told me how much he loved Ernst Levy's harmonic theory and that he taught this concept on occasion in his harmony and piano lessons, sometimes recommending the book. Bill's teachings were full of this kind of harmonic polarity, which was also evident in his compositions. Although he didn't assign a name to this theory, we spent many hours reharmonizing jazz standards that employed this harmonic concept, particularly reflecting chords across the Circle of Fifths (more on this a bit later). I believe that's why this topic resonated with me so much, illuminating my compositions and improvisations. I really like the challenge of reharmonizing a jazz standard in real time, even if it is not always successful! I think it's fair to say that many other people felt the same about this theory; hence why the concept among musicians went viral after Jacob talked about it. It was certainly a hot topic at the music college where I lectured. My sense is it is as relevant today as it was when the book was written.

To utilize the tools in this book to their full potential, I would suggest some work in the area of loosening the constraints of your own musical education/learned concepts, however they were prescribed to you. The quality of the world that comes to our attention is dependent upon the quality of attention we bring. One of the most utilized cognitive moves in modern times is the Hegel dialectic (named after the German philosopher Georg Wilhelm Friedrich Hegel). This meta-theory involves an original idea (thesis), and then an unpicking of your idea from a different architecture of thinking (antithesis), concluding by synthesizing both perspectives at a deeper level of understanding (synthesis). Every concept contains its own opposite that may have been hidden away.

An alternative metatheory rooted in Eastern traditions is often referred to as a deconstructive move, in which the layers of experience are removed in order to build a new understanding or viewpoint. So, the Hegel dialectic adds more complexity, and this second metatheory ultimately helps detach your illusory self from your thoughts, concepts, feelings, sensations, and perceptions. Why not utilize these or other metatheories while exploring this range of techniques, both in and stemming from this book, and other theories closely linked to the topic?

Axis/Centrifugal Point

Generating new chords over an axis or centrifugal point was an early concept online that caught the interest of musicians and music theorists. It certainly fascinated me, and hearing the perspective of other musicians helped to further illuminate this concept. A side note here: the words *invert*, *reflect*, *flip*, and *mirror* are often used interchangeably, in different sources, when describing these concepts and ideas; it may be helpful to assign a name or label of your own choosing to each one separately in order to enhance your understanding and clarity.

The axis point for reflecting chords is between the root and the fifth of the key center. For Ernst Levy, the fifth and the third were very important notes. The fifth being the third and the sixth overtone

from the fundamental sound, and the major third being the fifth in the harmonic series. The fifth note of the major scale—the dominant—points back to the tonic and functions as a resting place. The subdominant also shares the same qualities. For Levy, dominants and subdominants are *both* dominants.

If we are in the key of C major, our axis is exactly halfway between the tonic (C) and the fifth (G) above. The axis point is then between E and E \flat . I would recommend using a piano keyboard for visualization or writing it out as I have below. Begin by playing an ascending chromatic scale with your right hand, starting from the note E, and in your left hand, a descending chromatic scale from the E \flat in contrary motion. (This sequence could be spelled differently enharmonically.)

Ascending chromatic scale

E F G \flat G A \flat A

Descending chromatic scale

E \flat D D \flat C B B \flat

Be mindful regarding the note spellings as it can make chords a little harder to find. I have written the first six notes out chromatically, after which the chromatic scale starts duplicating. Another nice way of generating this would be to plot these notes opposite each other like the Circle of Fifths but with your axis running down the middle. In fact this could be drawn horizontally or vertically, depending on what resonates with you.

I personally find it helpful to have a drawing of the Circle of Fifths turned sideways with the sharp keys at the top and the flat keys at the bottom. A horizontal line splits the circle down the middle, and I have a drawing of the visual parts of a tree with the sky, leaves, and branches in the top semicircle. The lower semicircle contains the roots and soil to represent the flat keys. This is to remind me that what is below is above: deep roots feeding from the soil, simultaneously rising

into the air we breathe: the lithosphere, hydrosphere, and atmosphere (the biosphere). This is a reminder that our localized, finite mind divides objects into a multiplicity and diversity of “things.” Some “thing” is only observed when we observe it; we don’t know what we see, and we see what we know. In the words of Protagoras, “Man is the measure of all things.”¹ I would suggest that music for Ernst Levy sprang from two fundamental sources: the internal experience, and the knowing of something via human concepts—the collective representations explored again from an inner and outer movement.

Here is the dominant seven chord (G7) *reflected* or *rotated* over our axis/centrifugal point (remember this is between the root and the fifth, so in this case it is between E and E♭), and its “polar opposite”:

| | | | | |
|----------------|---|----|---|-----------------|
| Original chord | G | B | D | F - G7 |
| New chord | C | A♭ | F | D - Dm7♭5 (Fm6) |

We now have a Dm7♭5, which might be better named Fm6. This is a sound many are familiar with, a minor four chord. For Ernst Levy the new chord has the same gravitational pull as the original one but from the opposite side of the Circle of Fifths. Intervals seem to have a destination to resolve to a certain pitch, which we might call “home.” In the original dominant seven (G7) chord our ears most likely want the B to rise to the C tonic, and the F to resolve to the major third, E. In the Fm6 there is the same kind of gravitational pull. The A♭ (from our aural perspective) wants to fall to the G, and the F (as with the original chord) wants to arrive at the major third. The A♭ is the flattened sixth (or augmented fifth) in the scale of C major. This kind of terminology, however, can be misleading regarding its functionality. Does a flat six sound like a note that wants to resolve? If so, where to? Try it and I think you will agree that, in this setting, the A♭ (G#) is functioning in a similar way to a suspended four-three resolution and therefore “wants” to resolve to the G.

¹J. O. Urmson and Jonathan Rée, *The Concise Encyclopedia of Western Philosophy & Philosophers* (London: Unwin Hyman, 1991), 267.

Béla Bartók utilized the power of sensitive intervals with the Bartókean Pseudo-Cadence. He interchanged the functionality of the fourth and seventh notes without changing the interval. So, let's swap around the fourth (F) and seventh (B) in C major. The F (enharmonically E# leading tone) is the seventh of F# major. The B, which was the seventh of C major, is now functioning as a suspended fourth. It can then cadence to an F# major chord as the perceived functionality of those two original notes has changed. Jazz musicians often change the dominant seven chord using a technique called tritone substitution, also known as diminished fifth or even minor fifth. They invert the functionality of the third and seventh. In G7, the seventh is F and the third is B. If we tritone (three tones) substitute this chord, we then have a Db7 chord in which the F is now the third and the B (Cb) has become the seventh. This can be used as a substitution or as a portal to change key.

Generating New Harmony

Let's explore seven chords in a major key before and after employing the axis point technique:

| Chords in a major key | | New chords |
|-----------------------|--------|------------|
| I | maj7 | bVI maj 7 |
| ii | min7 | v min 7 |
| iii | min7 | iv min 7 |
| IV | maj7 | bIII maj 7 |
| V | 7 | ii min 7b5 |
| vi | min7 | i min 7 |
| vii | min7b5 | bVII 7 |

Here they are in chord symbols for the key of C major before and after:

| Chords in C major | New chords |
|-------------------|------------------|
| C maj7 | A \flat maj7 |
| D min7 | G min7 |
| E min7 | F min7 |
| F maj7 | E \flat maj7 |
| G 7 | D min7 \flat 5 |
| A min7 | C min7 |
| B min7 \flat 5 | B \flat 7 |

Now let's take a look at the following chord progression, using the same axis point between E and E \flat , keeping the tonic chord the same:

Original progression

A7 D7 G7 C maj7

New chords

E \flat min6 B \flat min6 F min6 C maj7

It is interesting to observe that in the new chord progression we now have a plagal approach to the tonic chord: a very beautiful chord sequence. For Ernst Levy, both progressions have the same amount of gravitational pull to the tonic. I sometimes like to transform the minor six chords into minor seven chords and even begin this approach from D \flat minor on the Circle of Fifths. On the front cover of the book we

see a chord progression beginning from the sharp side of the circle of fifths before returning via the flat side, a minor plagal progression.

Having now explored new harmony generated from the centrifugal point, there is a new pallet of colors to utilize. If you play jazz or pop music, this is invaluable for generating new progressions and chord substitutions. It's fabulous to try on a jazz standard; very useful for harmonic expansion. If you are playing a jazz standard with a harmonic rhythm of two chords per bar, you can work out the negative version and, depending on the melodic content, you may be able to keep the original harmony and have four chords per measure.

The axis/centrifugal concept can also be applied melodically, flipping melodies over the axis point and keeping the interval relationships the same. There are many negative polarity versions of well-known songs on YouTube.

Telluric Adaptation

As explored by Levy in chapter 2, "Polarity," let's now investigate flipping intervals in chords to generate new harmony.

Observing the construction of a major chord: there is a major third (C-E), then a minor third (E-G). If the sounds are *flipped* or *inverted* from/over the tonic (*descending* in pitch) in a C major chord but retain the same intervallic relationship and therefore build a new chord, we end up with F minor. See the diagram below detailing this, with the minor chord being formed on the left side and the major—original—chord on the right, as in the way of a piano keyboard:

F A \flat C E G

The major third E becomes A \flat and the G changes to an F. If we flip a C minor triad we would have an F major chord:

F A C E \flat G

If we apply the same theory to a ii-V-I chord progression in C major we create the following:

| | | |
|-----|---------------|----------------|
| ii | V | I |
| Dm7 | G7 | Cmaj7 |
| Em7 | Am7 \flat 5 | D \flat maj7 |

I would suggest this new progression would still cadence if the D \flat major 7 chord is followed with C major as the notes D \flat , F, and A \flat create a satisfying cadence when they fall by a semitone to the tonic chord. Apart from C, these are the same notes that would be found in a Neapolitan sixth chord.

Flipping certain chords at the root is often referred to as “mirror writing.” It is interesting to observe that major chords become minor and minor become major when flipping triads. Major seven chords keep the same chord quality, as seen in the example, as do minor seven chords. A chord built on fourths (C-F-B \flat) keeps the same structure once mirrored (D-G-C). Chord inversions are wonderful to explore, as is the creation of complex polychords and chord clusters. You could even mirror your mirror chord!

Another beautiful mirror method would be to build chords from an initial intervallic structure. For example, a chord built on the intervals of a 5th from B \flat : B \flat -F-C-G-D. This could be taken a step further by raising the top note by a tone and then reflecting this by lowering the bottom note by a tone. (If the D moved to an E the lower note would then reflect this when changed to the note A \flat .) This could be explored with mirroring the inner voices as well. It’s a rather nice way to develop chords via voice leading horizontally instead of just thinking vertically.

Generating New Scales

Reflecting scales in the same manner as in the previous section can also be an excellent tool for generating new sounds.

If we look at the tonal structure of a major scale (T-T-ST-T-T-T-ST) (e.g., C major), and then build a new scale *descending* from

the fifth of the key using the *original* tonal structure from the major scale, we end up with the following scale: G-F-E \flat -D-C-B \flat -A \flat -G (see the T-T-ST-T-T-T-ST structure in this new scale). We could name this the following: a G Phrygian, C Aeolian, or C natural minor. The name that has been attributed to this scale in recent times is “negative major.” An example of the use of this tool would be to retain the tonality of C major (in the left hand) but your melodic material (in the right hand) could be derived from this new scale.

Here is a list of alternative reflected scales, the difference here is that these are reflected or constructed (descending) starting from the tonic. I would recommend playing them in contrary motion from the tonic:

| | | | | | | |
|----------------|--------|----------|---------|------------|------------|---------|
| Original scale | | | | | | |
| Ionian | Dorian | Phrygian | Lydian | Mixolydian | Aeolian | Locrian |
| New scale | | | | | | |
| Phrygian | Dorian | Ionian | Locrian | Aeolian | Mixolydian | Lydian |

Synthetic scales also may be of interest. These are derived from diatonic scales by altering a note by a semitone; this changes depending on which scale is being mirrored.

Overtone Scale

Let’s now explore the overtone scale. It has an augmented fourth and a minor seventh. It goes by many names: Acoustic, Lydian dominant, Lydian flat seven, and even Pontikonisian scale. Some of these pitches are from the fundamental note (the first note of the overtone series, as covered in chapter 1, “Tone Structure”), the exception being the F, which is almost exactly halfway between F and F sharp. B \flat is flatter in comparison to equal temperament. Having said that, some musicians often liken this scale to notes we find in nature; it really depends on how they are heard. This scale and the harmony it generated appeared

in the nineteenth and twentieth century from composers such as Claude Debussy, Igor Stravinsky, Béla Bartók, Alexander Scriabin, and Cyril Scott, to name but a few. Scriabin also explored building chords on fourths.

The overtone scale reflected from the tonic produces the Locrian natural two, also called a half-diminished scale. It's the sixth mode of the melodic minor ascending.

Levy explores chords constructed with fourths toward the end of the book. For a jazz musician this scale is essential to practice in all twelve keys. If we remove the note G from the scale, the remaining pitches form a chord called the Prometheus or Mystic chord (C F# B \flat E A D).

Polytonality and Superimposition

Polytonality, in which scales or chords are stacked atop one another, can be a very rewarding tool for generating a new tonal palette. A great example of this can be seen in the first piano etude "Désordre," by György Ligeti. It is written in two keys. The right hand is in C major and the left in B major. If you are a pianist who improvises, try playing in two different key centers. You could even explore more than two! Another topic related to this area is the "tetrachord" from Greek, meaning literally "four strings." This is where a scale is split into two four-note structures (CDEF-GABC) and the quality of the note is changed by a semitone. These could be referred to as "mixed modes." There are eight tetrachord permutations on the lower notes and four on the top pitches.

Stacking chords on top of one another creates more complex chord structures. Jazz musicians refer to these polychords as "upper structures." If you have a C7 chord in the bass clef and a D major triad in the treble, a chord with richer extensions is created: more toppings on the pizza. D is the ninth of C, and F# and A are the sharp eleventh and thirteenth. These chords can be employed in triads, but jazz upper structures generally have the third to seventh tritone interval present, often removing the root and the fifth. The tritone gives these chords

their strength and stability. The most utilized upper structures are major chords two, six, flat six, and minor sharp four. This is also explored in a technique referred to in jazz as “superimposition.” It involves playing superimposed chords and arpeggios, which are unrelated to the key center. For example, we could have a ii-V-I chord progression in C, which would be Dm-G7-Cmaj7. Over the chord progression musicians might overlay some different chords while improvising, such as Dm7, Eb7, Ab, B7, E, G7, C. In jazz we refer to this as “playing outside.” This was richly explored in the classical tradition by composers such as Benjamin Britten, Franz Liszt, Igor Stravinsky, and Samuel Barber.

All of these innovative and explorative ideas open up a new realm of composing and improvising by *deconstructing* or *undoing* original ideas and concepts in order to find a new, deeper understanding and freedom to roam.

Interpretation of Sound

On a more philosophical note, and in a natural progression from this wealth of ideas, I personally was driven to question how the human *interprets* sound and how prior “conditioning” of our interpretation of sound affects our creative processes. In the words of William Wordsworth:

From this green earth; of all the mighty world
Of eye, and ear, - both what they half create,
And what perceive; well pleased to recognize
In nature and the language of the sense,
The anchor of my purest thoughts, the nurse,
The guide, the guardian of my heart, and soul
Of all my moral being.²

²William Wordsworth, *William Wordsworth: Selected Poems* (Middlesex: Penguin, 1994), 68.

First, our ears perceive sound, which is then often conceptualized by the learned intellect. It is pure perception transforming into theoretical concepts. For me, this reexperiencing is the key to transcending objective limitations, a two-way process yet ultimately generated from the one. The rational mind creates order, but a musician's imagination processes the potential transformational quality to create sounds from a higher cosmic consciousness: the life force that animates it. Great music is not limited by ideas and concepts. The calling of an artist is to create, in this creation, like hovering between the polarities of a magnet, the intermediary. I don't *work* the piano; I *play* the piano. This creative act of play reflects back and forth between form and formless. The intellect has to possess the power to read without the translation.

The British philosopher Owen Barfield (who was a great friend of C. S. Lewis and J. R. R. Tolkien) called our learned intellect "dashboard knowledge." The dashboard is useful, but it is not really telling us what is happening, yet it forms the way we attend to, and view, the world. "Thinking" and "I think" are two very different presuppositions. One is alive with possibilities; the other is running dead concepts of others. Barfield called this the "Residue of Unresolved Positivism": the gulf between our inner experience and the objective world. William Blake wrote, "How do you know but ev'ry Bird that cuts the airy way, Is an immense world of delight, clos'd by your senses five?"³

So, are the sounds that we hear already *preconditioned* by learned concepts of others? Is there then a way that we can hear sounds with *unconditioned* ears?

The origin of the word *recognition* (from the Latin *recognitionem*) comes from "to acknowledge," to "know again." The word in Vedic Sanskrit for *ignorance* is *Avidyā*. In Advaita Vedanta, the *Avidyā* refers to our limited subject-object human thinking. This ignorance then veils the true self. This reexperiencing can bring into being something new that can be shared via the language of the intellect. If we can let go of the things we've learned, a conflict is removed and there is a possibility to see (or hear) something again for the first time.

³William Blake and David Bindman, *William Blake: The Complete Illuminated Books* (London: Thames & Hudson, 2019), 113.

Tracing Origins

There are a number of musical theorists and composers who more than likely helped shape and influence the work of Ernst Levy in one way or another. These theorists were interested in using our learned conceptual “dashboard” knowledge without detaching it from nature and the origins of sound. They were mindful of just (pure) intonation and equal temperament, moving between percepts, words, and concepts: a lived intuition. They were very aware of our learned limitations and were trying to reconnect experientially, exploring the infinite before the finite. They incorporated methodology, mathematics, and Cartesian modes of thought to illuminate harmony. The map is very useful, but it’s not the land. Music theory could be seen as objectification, compared to the history of music, which is music actualized. We all know what happens to the wine glass if it is sympathetically resonated. The fundamental note can be heard, but increase the intensity and the glass will smash.

The French composer and music theorist Jean-Phillippe Rameau explored musical polarity in his *Génération harmonique*, first published in 1737. Some say that he instigated a revolution in music theory. It is still a popular work to this day. In this, he explores the fifth being the sum of two thirds (C-E, E-G in C major), building harmonically in thirds as a fundamental rule, the results of generating notes from ascending and descending fifths, creating two Circles of Fifths, and generating both an upper and lower series of partials. He was trying to find the natural causes of harmony. In France, he was even named “the Isaac Newton of music.” The Belgian musicologist François-Joseph Fétis also explored this architecture of thinking. Influenced by the German idealists such as Kant, Fichte, Schelling, and Hegel, he was interested in the metaphysical affinities of sound. This is explored in his four orders of tonality: Unitonic, Transitonic, Pluritonic, and Omnitonic. Another musicologist influenced by the German idealists was Moritz Hauptmann. In 1853, he wrote a book titled *The Nature of Harmony and Meter* in which he conceived the idea that minor and major triads were opposites. Others that investigated these concepts were music theorists such as Alexandre-Étienne Choron, Johann Philipp

Kirnberger, Mathurin Auguste Balthasar Barbereau, Charles-Simon Catel, François-Auguste Gevaert, Hugo Riemann, Hans Kayser, and more recently Joseph Yasser and Harry Partch.

Riemannian theory—named after the musicologist Hugo Riemann—has a strong following among musicians today. There is a lot of online content on this theory, which is rooted in the dualistic tradition. His work, like Ernst Levy's, explored the polarity between minor and major chords. This later evolved to Neo-Riemannian theory, involving basic voice leading transformations. These are named parallel, relative, and leading-tone. In a parallel transformation a G major chord would become G minor, the relative would be E minor, and the leading-tone would transform to B minor.

Modern music theorists such as David Lewin and a number of others employed a Tonnetz (German for “tone network”) using equal temperament. The Tonnetz first appeared in the work of Leonhard Euler in 1739. The modern Tonnetz is an infinitely expanding grid, showing the transformations of the three moves in a lattice diagram.

Otonality and Utonality introduced by composer and music theorist Harry Partch are explored in his 1949 book, *Genesis of a Music*.

The Man and his Music

We live in a digital age. Young musicians work on crafting their art yet simultaneously face pressure to promote themselves on social media platforms. In private, they know how much work they need to do yet on social media platforms they post how great they are. This wouldn't have been an issue for Ernst Levy; he composed music out of necessity, using his energy to work on his craft. Many of his compositions have remained unperformed or recorded. Music illuminated his whole being. At the age of six he gave his first public performance.

Levy was born in the northwest of Switzerland in Basel on November 18, 1895, and died in Morges, Switzerland, in 1981. He studied in Basel—the cultural capital—under Hans Huber and Ego Petri. Between 1917 and 1921, Levy became head of the piano master classes at the same institute. Four years after, he moved to Paris and earned a living

as a pianist and teacher. He even became the founding conductor of *Choeur Philharmonique*.

Levy journeyed to the United States in 1941, where he taught at a number of institutions: New England Conservatory of Music in Boston from 1941 to 1945 and Bennington College in Vermont from 1946 to 1951. Levy was a good skier and enjoyed skiing to his classes while living in Vermont. He moved to the University of Chicago from 1951 to 1954, then Massachusetts Institute of Technology from 1954 to 1959, and Brooklyn College of the City University of New York from 1959 to 1966. He taught piano and composition and regarded himself primarily as a composer. A very gifted pianist with a formidable technique, he performed pieces such as the late Beethoven piano sonatas, Schumann's "Carnaval" and *Symphonic Études*, Liszt's piano sonata, and Brahms's *Haydn Variations*, among many others. Recordings are available for both the Beethoven sonatas and Liszt's B minor sonata. His Beethoven recordings are a personal favorite.

Levy was a very prolific composer, writing for every kind of occasion and instrumentation. He composed symphonies, sonatas, and chamber and choral works as well as various solo pieces. In 1966 he returned to Switzerland where he spent the remainder of his life. His last fifteen years were very active: composing, recording, and conducting some special teaching seminars.

Levy's music is a perfect accompaniment to this book. In his works, you can hear the musical outcome of his thinking such as the shifting of melodic and harmonic passages and the use of centrifugal orchestral textures. It is fascinating to hear his free-flowing use of meter in combination with the harmonic content. The music has bar lines but is unmetered and without a strict metric beat, involving free-flowing, complex polyrhythms. Ernst Levy explored the many colors and different parameters of tonality. He wanted to expand the tonal field, and he was fascinated with developing tonal relationships. The symphonies are particularly attractive works; the third movement from the 10th symphony is beautiful. These orchestral works are available to listen online: "Orchestral Suite No. 3," symphonies 7, 10, and 12; and Levy's last symphony, 15. There is also a CD recording of his cello concerto alongside his son Frank Levy's cello concerto.

Along with this text, Levy wrote a number of academic papers and other texts, including books. With his close friend Siegmund Levarie, he cowrote *Tone: A Study in Musical Acoustics*; the two also wrote *Musical Morphology: A Discourse and a Dictionary*. *Morphology* is a word utilized by Goethe. In this book Levy and Levarie don't describe musical forms but explore the phenomena that *makes* musical forms, the bearers of the properties. The book describes how the phenomenon of sound is the result of sound waves; whatever sounds are, they are either events or processes. Goethe believed that the scientific method, which came into being, was not the only way of looking at the phenomena. These metaphysics are still dominant today. He maintained that there was an inside to nature, which could not be measured or weighed: a distinction between the potential and the actual. Levy also wrote a book of aphorisms dealing with music, philosophy, and sociology entitled *Rapports entre la musique et la société*, which was published in France. He was also, apparently, a very fine cook.

Levy was a great thinker and philosopher. The quotations that illuminate each chapter shine with his knowing. Included are writings from Philolaos who was part of the Greek pre-Socratic school and a prominent figure in the Pythagorean tradition, a philosophy dominated by mathematics and mysticism. He believed that the foundation of everything was in the finite and the infinite. This is the great gift of Levy's work.

This way of transcending knowledge requires the power of the imagination, a quality that Levy was obviously very adept at utilizing. William Blake wrote, "What is now proved was only imagin'd."⁴ What Levy imagined, he left to us in this beautiful book. He took the harmonic traditions of old and showed us a new way of seeing them. Tonality isn't an accidental feature of sound. When we hear a sound, is that sound located in or outside of us? Levy transcended knowledge by simply following his own experience. They weren't just beliefs but truths generated by the nature of sound and all that it illuminated for him. Notes are a manifestation from and in the Logos, the very nature of tonality, and the "idea of ideas" perhaps.

⁴William Blake and David Bindman, *William Blake: The Complete Illuminated Books* (London: Thames & Hudson, 2019), 413.

In this introduction, I have shared with you different ways of perceiving this book in the language of today's musicians in the hope that every reader can continue to drink from its infinite well. I have explored different architectures of thinking. These have been at times conceptual, constructing new ways of viewing the work. I have also been mindful of the mind's hunger for concepts and have tried to deconstruct the contents of experience in a way that I hope will provide a new viewpoint in which this text can be read from.

Whether your genre of music is classical, jazz, pop, hip-hop, or rap, there's something here for us all. Every time I read it more secrets are revealed.