Article

Harmony and the Oneness of Opposites:

Teaching Music Theory through Aesthetic Realism

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ABSTRACT | With examples from Bach, Chopin, Stravinsky, Ellington, and Monteverdi, this paper provides an answer to the question: "What is the best way to motivate students to learn music theory?" By relating it to the questions people face in life! And the most effective, accurate, exciting way to do so is through the Aesthetic Realism teaching method, created by the great American poet and educator Eli Siegel. According to Aesthetic Realism, art and life have in common the Opposites: the very substance of the world and our emotions, and likewise the technical basis of music. As Siegel explained: "In reality opposites are one; art shows this." Central technical concepts in harmonic theory are considered in the light of this philosophic idea, and the work of various theorists is cited in support of it, including Zuckerkandl, Schönberg, Schenker, and Toch. The essay also addresses two ethical matters inseparable from effective pedagogy: how to bridge the gap between "art and science," famously described by C.P. Snow, and how to recognize the temptation, for student and teacher, alike, to establish our personalities on the basis of contempt rather than respect—a danger Eli Siegel did more to unearth and explicate than any previous educator.

Keywords: Eli Siegel; Music Theory; Music Pedagogy; Aesthetic Realism; Harmony; Art and Life.

1. Harmony and the Primal Opposites

The most primal opposites in harmony are unity and manyness. This is reflected in standard definitions of the term, and also in that other primal term: *chord*. Here are two such definitions. First, William Austin from *Music in the Twentieth Century:*

> *According to the commonest technical use of the term, "harmony" is composed of chords, units of 2,3 (or more) notes heard simultaneously ….But a broader meaning of the term is…agreement, coordination, coherence.*
>
> *(Austin, 1966, p. 10).*

Next, Victor Zuckerkandl from *The Sense of Music*:

> *A chord, then, is the result of a combination, a coming together of a number of different tones—three or four, according to our example; a form of coexistence of these tones, not a sum of tones, no mixture, no tone at all: a tonal event sui*

> *generis, an auditory experience of another order than tone…The individual tones that make up the compound do not disappear in the merger, do not give up their identity altogether; they remain recognizable as individual components and in simple cases can be distinguished even by the untrained ear.*
>
> *(Zuckerkandl, 1971, p. 176).*

What we gather from Austin, and from the somewhat more philosophically-freighted words of Zuckerkandl, is that to have harmony, different things must be felt as one thing. Identical sounds cannot properly be called harmonious any more than sounds that grate, jangle, and refuse to blend. To have harmony, sounds must stand out and be distinct individuals even as they find a way to blend in and agree. And this junction of opposites, while it is something musicians look for as we search for the right chords, is also what people desire in terms of life itself. Who doesn't want to be noticed, and esteemed, simply as oneself? And what sane person doesn't want to be in a good, friendly, mutually-supportive relation to the people around them?

Take one of the most famous chords: the C major chord which begins Bach's *Well-Tempered Clavier.* Were we to play its five pitches simultaneously, the immediate impression would be of unity. But as the theorists indicate, this unity coexists with manyness, for there are five distinct tones present. The word "harmony" accents the unity, but is dependent upon its opposite[1].

Consider how different the opening chords of the "Prelude in C" would sound were we to make their inner diversity less apparent—if, as an experiment, we play instead a series of unbroken chords. While this alternative still illustrates harmony, the way Bach composed his chords—with their constituent tones heard one after the other—has, in this instance, substantially more aesthetic power. (I have, incidentally, never met a student who disagreed with that assessment.)

In this prelude, Bach illustrates the primal meaning of harmony not only in the sense in which the word is most frequently encountered, but also in a more subtle sense. By employing a single pattern—(five rising notes, a repeat of the last three, and then a repeat of the entire design to fill out the measure)—Bach makes a great diversity of chords structurally akin. Chords with tight and wide voicings; chords tonally firm and others that are modulatory; sharply dissonant chords and those resonantly consonant; chords in bright registration and in dark: all this richness of harmonic experience is unified through that single underlying pattern[2].

At this point we can ask: is this merely an abstract "technical" matter, or also something which corresponds to what our students desire—simply as people? Do they struggle with simplicity and complexity, the hope to have lives richly diverse and yet also keep focused and unified? As Aesthetic Realism sees it, the answer is a resounding Yes.

[1] Many theorists have written about harmony as illustrating the co-presence of opposites. Among those influenced by Goethe are Riemann, and more recently Levy and Levarie. Among the "Hegelians" is Moritz Hauptmann. Among the Kantians, Zuckerkandl.

[2] The immediate impact of music is best described in phenomenological terms; the "technical" terms we generally use in the description of harmony are "abstracted" from direct sensory experience. To show students that phenomenologically opposed sensations have an "abstract" structure in common, is to present them with a profound educational opportunity.

Harmony is the technical term in music most frequently to be encountered in ordinary speech; rhythm being the only other contender. They are also the two musical terms which appear most frequently in the various philosophic traditions of the world—from the notion of "pre-existent harmony" that one finds, for example, in Leibniz, to the presentation by Herbert Spencer of rhythm as the key phenomenon not only of cosmology but of sociology. These are samples; the list could be multiplied almost indefinitely.

While "harmony" first entered English (via Chaucer) in a specifically musical context, its etymology is really quite earthy—referring, in the original Greek, to the art of carpentry and the ability to make different pieces of wood join. It is also a term encountered in other aspects of the college curriculum; we find it in texts on sociology, history, ecology, chemistry and economics. For centuries harmony (or a close cognate) has been a technical term in anatomy, optics, theology, philosophy, and mathematics—and through mathematics to electricity and physics (for a quick précis of these meanings, consult Simpson & Weiner, 1991, pp. 1122-1126). This is not at all surprising, for the ability to see unity within diversity, diversity within unity, is a key—perhaps *the* key—power of intellect. We want our minds to work with ease in both a synthetic and analytic manner.

It is false (and also unkind and inefficient) to give students the impression as they study harmony in music that they have entered a field remote from life, remote from other aspects of reality. To do so is to rob musical education of its true philosophic significance: a means of sharpening our students' general ability to perceive beauty in the world[3]. It is far more exciting to have them see that the concepts we raise to their attention as we study harmony in this Bach prelude are related to ideas they likely will meet in their other classes. And not just "artistic" ideas, such as color and harmony. Scientific ideas, as well. Modern genetics, for example. Life on earth in its remarkable diversity—from a hippopotamus to a butterfly, a spider to a kangaroo, an earthworm to an eagle—is at the same time astonishingly unified; the expression of a single molecular pattern: DNA. Bach, thus, resembles Biology. We might also say: Biology resembles Bach!

That the arts and the sciences comment deeply on each other is something educators need to keep in mind if we are not to injure our students' minds by implying that the "factual" aspect of the world (the sciences) and the expressive, "value-laden" aspect (the arts) are fundamentally separate. This is what C.P. Snow famously worried about in his classic text, *The Two Cultures,* first published in 1959(Snow, 1998). It sounded a warning to the academic community. However, it is more than a half century later, and few would seriously argue the situation has fundamentally altered.

What is still needed is an over-arching philosophy of education capable of bridging that gap. My own experience, one shared by educators in many other fields, leads me to believe strongly that Aesthetic Realism can provide the answer. (As a representative sample, see Perey, 1976; Sahasraduhne, 2003). In terms of philosophic principle, Eli Siegel argued: "The world, art and self explain each other; each is the aesthetic oneness of opposites."(Kranz, 1969, p. 1)

[3] This, mutatis mutandis, was the medieval conception of music within the academic curriculum.

2. "The Resolution of Conflict"

Another key principle of Aesthetic Realism is: "The resolution of conflict in self is like the making one of opposites in art."(Kranz, 1969, p. 55) Consider a conflict people feel on the very issue we have been discussing: the relation of unity and manyness. A person can feel stuck in stupefying routine, and can also feel that life is bewilderingly complex. Ask someone "What's happening?" and a likely answer is either: "More than I can handle," or "Same old, same old."A person can also have a conflict about the relation of agreement and disagreement. The same person who can think, "Why don't other people just agree with me? Life would be so much simpler!"—can also feel, "What sort of friends are you? Why didn't you disagree with me, and try to argue me out of that dumb thing I just did?"

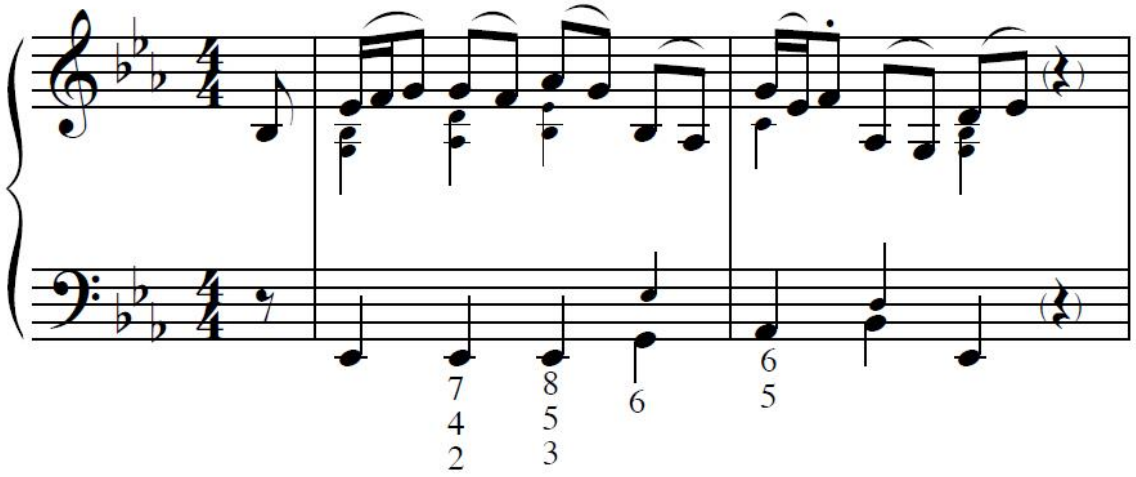
As Bach has been illustrating, in a successful instance of musical harmony opposites are not divided, and they are not at war. They work, instead, as one. And this is true for other aspects of harmonic theory. As we study harmonic rhythm, for example, we encounter speed and slowness; security and surprise—and when music is beautiful, these opposites also are coordinated. Mark DeVoto, writing for *The New Harvard Dictionary of Music,* implies as much as he notes in his definition of "Harmony":

> *The tension between tonal prolongation and tonal progression, between maintaining the established key and disturbing it, is the energy source for all larger aspects of form in tonal music. Establishing and reinforcing tonic function…is as much a necessity in tonal music as is departing from the established tonic.*
>
> *(Randall, 1986, p. 367).*

The thrill we get from art is that through a symbolic language (in music it is a language compounded of sound and time) we sense in outline a solution to the questions we face in life. We want integrity and diversity; stability and adventure; to be unmistakable individuals and yet get along with others—and all this happens in a well-thought-through harmonic design. We also want to be emotionally coherent as we agree and disagree with other people. This too is something which characterizes good harmony.

As an example of this last matter, consider the opening of the fourth movement of Bach's *Cantata 140,* "Wachet auf, ruft uns die Stimme." Its voice-leading is astonishingly bold. At end of the first full measure the interval from the bass to the melody is a (compound) minor 9th—G to Ab. One would certainly expect some kind of immediate resolution. But what happens? On the downbeat of the next measure another collision, now with Ab in the bass and G above. Taken by itself, this is a remarkably grating succession of intervals; and yet the bass has resolved quite logically, as has the upper voice—once we take into account octave displacement.

Ex. 1



In this two-bar opening phrase Bach seems to take every opportunity he can to highlight dissonance. If we direct our students' attention to bar two, they will observe that directly on each of its first three beats there is an unprepared dissonance. More subtly, between beats two and three of bar one, there is a "fall-off" in the melody from G to F, implying a resolution to Eb. But instead Bach moves to Ab. As a result, we hear a dissonant 9th moving to a dissonant 11thwhich does indeed resolve to a consonance, but not to the Eb over an Eb bass we had been expecting! The resolution to the "pure octave" is withheld until the very last moment of the phrase.

What Bach is doing is making a complex and dramatic unity out of the primal fact that sounds disagree and agree. He is showing that intervals with harmonic "bite"—edgy and critical—are friendly to intervals of a sweet and joyous character. He is, through an artful and strikingly imaginative use of chord and non-chord tones, literally "composing" the relation of concord and discord. This is something, the "life parallel" of which people long for. We long for true "composure" as life offers up the equivalent of concord and discord. (And it is not accidental that we use the term "composer" for a person capable of achieving this kind of sonic "composure.") We long to be able to agree and disagree with someone (especially someone close to us) in a way that seems beautiful to us. We also long to feel that our sweetness and edginess are emotionally coherent—and, undoubtedly, so do the people who know us!

Bach's musical procedures are, in fact, a vivid contradiction of a very common notion: that happiness depends on everything going "smoothly." For from a harmonic perspective, these measures are anything but smooth! They are bumpy, dissonant, and critical. And yet the music flows, and is full of joy.

Meanwhile, one doesn't need an undoubted masterpiece, such as this movement by Bach surely is, to see that the art of voice-leading depends on a lively interaction of agreement and disagreement. Whether we are using Fux's *Gradus* or a more "up-to-date" text, it is plain that there must be a wise mingling of motions—similar, contrary, and oblique—for music to have a fully satisfying texture. And why is that? Is it because we also want, for our lives to be happy, an honest relation of agreeing with other people (i.e. similar motion), disagreement (i.e. contrary), and also the judicious sense, every now

and then, of simply "standing one's ground," and refusing to be shaken from it, no matter what happens around us? (That is: oblique motion.)

Whatever else, these are lively questions! And students always profit from thinking about them—including about the ethical and aesthetic implications of some of the more interesting combinations. That is to say, we can move in a similar direction to another person—but in a very dissonant way; and so can notes. And we can do entirely contrary things—and yet find, moment by moment, our separate activities put us in a warmly harmonious relation to another person. And, of course, the same can be true of notes. In fact, as every teacher of counterpoint knows, often the *only* way to maintain consonance between two independent voices is by setting them in contrary motion!

The opposites, in other words, are very engaging things; hardly to be summed up swiftly. For in music, one parameter may express one thing (say, a rough rhythm), and another its opposite (say, a smoothly ascending melody), and we hear them simultaneously. The net effect of the musical experience, then, is of opposites made one.

3. Some Words from Schenker, Schönberg, and Toch

In a moment, I will look at three of the 20th century's most notable theorists, all of whom shared a conception of harmony in which the "life" principle was crucial. But I'd like to preface this part of my essay with a short statement by a fine scholar working in quite a different field: namely, Conrad Myers. Early on, in his classic text, *Zen and the Comic Spirit*, he issues this cautionary note to any scholar in any field. They are words, I think, which are particularly important for the study and teaching of harmony:

> *…analysis has a way of failing to participate in the very spirit which it would analyze, and therefore not only involving itself in an ironic self-contradiction, but in a violation and negation of that to which it is attempting to do justice*
>
> *(Hyers, 1973, p. 18).*

Why do people fall in love with music? Isn't it, 99.99% of the time, because of the emotions music stirs in us? And yet, what is to be found in harmony textbooks—if not 99.99% of the time, then something painfully approaching it—but a coldly abstract, dry, nearly lifeless analysis of musical sounds? No wonder students who love music, upon taking their first course in harmony, nearly always have the disorienting feeling: "What on earth do these numbers have to do with what I feel listening to music?" Instead of the study of music theory being "in the spirit" of the art they love, it seems alien to it.

And now to Schenker, Schönberg, and Toch—each a theorist of remarkable clarity and depth, and each impelled to find a way to make the analysis of harmony true to the emotional experience which music is, and has always been. Schenker, for example, takes frequent pains in his 1906 text, *Harmony* to insist that music should never be heard in an "inanimate" way. This is from the very first page of its "Preface":

> *I should like to stress in particular the biological factor in the life of tones. We should get used to the idea that tones have lives of their own, more independent of the artist's pen in their vitality than one would dare to believe.*
>
> *(Schenker, 1973, p. xxv).*

As Matthew Brown points out in *Explaining Tonality: Schenkerian Theory and Beyond,* the conception of an inherent "life" within tones remained with Schenker in his later work—for even in his 1922 *Kontrapunkt* Schenker is writing of musical tones as "living beings with their own social laws."(Brown, 2005, p. 99)

Different as he was from Schenker (and in combat as to the aesthetic potential of atonal harmony) Schönberg nevertheless agreed with his Viennese compatriot and near-contemporary [4]on the imperative of conceiving harmony in organic, living terms. In his 1911 *Harmonielehre*, he insisted that if a student is to gain a true grasp of the subject, he must understand:

> *that harmony— balance — does not mean fixity of inactive factors, but equilibrium of the most intense energies. Into life itself, where there are such energies, such struggles — that is the direction instruction should take.*
>
> *(Schönberg, 1983, p. 66).*

The forceful "hint" to the "instructor" cannot be missed: the technical issues we deal with in musical harmony have "life" implications, and a teacher should be prepared to lead his students there. A vivid instance (there are many in the book) comes as Schönberg writes about the "social life" of the tones in a 6/4 inversion. So lively is this passage, I quote it at length:

In the six-four chord two tones struggle for pre-eminence, the bass tone and its fourth (the actual root). The following chord is a concession either to the bass or to the root. If the bass tone is victorious, then I goes to V. Sometimes, however, the concession does not go so far, but chooses rather a middle course. Then it can even happen that the third (*Terz*) becomes the root (*wenn Zwei sich streiten, freut sich der Dritte*—when two parties quarrel, the third rejoices), that one goes to III. And something similar takes place if the fourth (the root) does not give in. Then after I comes IV or VI. In these three cases both of the struggling chord tones in fact succumb. In III *g* is only the third, in IV and VI *c* is the fifth and the third respectively. Each has the satisfaction, however, that the rival did not win; and the chord tones seem to become very nearly as spiteful as people the moment they come into contact with the latter(Schönberg, 1983, p. 77).

Cool Positivists, and even cooler Post-Modernists, might easily have a field-day sniping at such writing. Yet Schönberg was arguably the most effective teacher of harmony in the 20th century. We should go slow before we reject what clearly was a crucial factor in that pedagogical success.

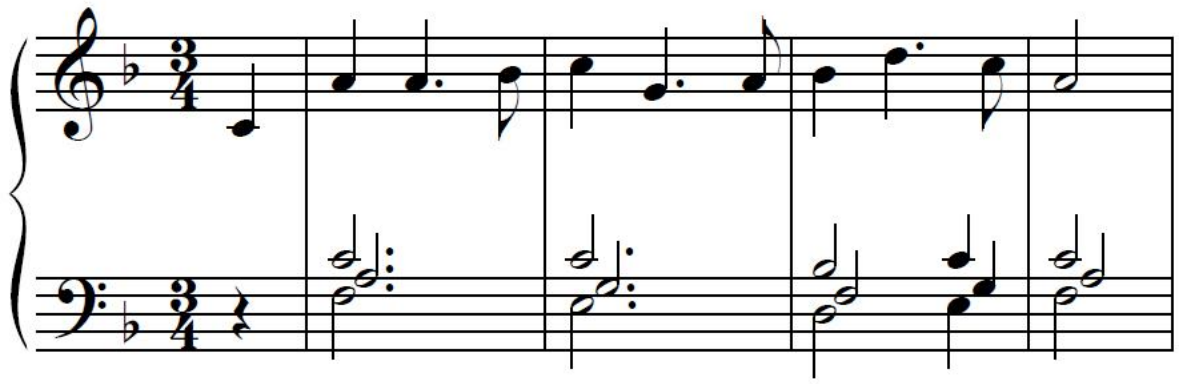
In fact, if one takes a look at a major text which he sketched in the mid-1930s, *Der Musikalische Gedanke und die Logik, Technik, und Kunst seiner Darstellung*, which was translated and published with commentary by Patricia Carpenter and Severine Neff in 1995, one encounters a kaleidoscope of "extra-musical" references—all for the purpose of clarifying what happens "technically" in the relation of sound to sound, chord to chord. Analogies are made to cats, emperors, soldiers, the activities of revolutionary parties as they attempt to overthrow established governments, the journeys of Columbus, the work of a postman, the military expeditions of Hannibal, and people crowding themselves by a theater coatroom. Schönberg contrasts bold swimmers and those so timid that they hug the shore. (This, interestingly, *not*—as one might expect—in terms of harmonic adventurousness, but in terms of

[4] Schenker was six years older, being born in 1868.

metric accentuation.) And—oh yes—there are references, too, to cannibals, butchers, and the stupidity of the Nazi laws of "racism purity." Meanwhile, God gets in—as the "higher commissioner."(Schönberg, 1995)

Ernest Toch, the youngest of the three Viennese theorists considered here[5], appears to have been the most "good-natured." Certainly, the least argumentative. So it comes as no surprise that his teaching of harmony makes greater use of "ameliorative" analogies. And analogies there are aplenty throughout *The Shaping Forces of Music*— a text first published in 1948.Consider the engaging way he teaches chord inversion. After first showing how an Austrian folk-tune by Joseph Kreipl might sound were its implicit tonic, dominant and sub-dominant harmonies presented "bluntly" in parallel root positions, he then presents a more gracious alternative:

Ex. 2



And explains:

> *Here the harmonies are the same, yet they partly exhibit an inverted chordal structure (6-chords in bars 2 and 3). In [the previous] example the harmonies…are wholly unconcerned with one another. They rigidly face their allotted melody portions and nothing else; among themselves they are poor neighbors…With the use of the chord-inversion…this rudeness disappears instantly. The poor neighbors become good neighbors; that is, though still conscious of their primary task, at the same time they obligingly extend their hands, as it were, to their neighbors.*
>
> *(Toch, 1977, p. 5).*

The warmth of feeling we see in Schenker, Schönberg and Toch challenges the dryness of nearly all current harmony texts—a dryness too often reflected in classroom teaching. Nor are musical theorists who have endorsed the "life" implications of harmony alone in that belief. Literary figures have agreed—among them Balzac, Browning, Dryden and Wordsworth. Washington Irving, for example, said in the first volume of his *Sketchbook* (1820): "The very difference in their characters produced an harmonious combination." And Shakespeare, two centuries earlier, wrote in *The Merchant of Venice:*

> *The man that hath no music in himself,*
> *Nor is not mov'd with concord of sweet sounds,*
> *Is fit for treasons, stratagems, and spoils;*

[5] Born in 1887, he was 13 years younger than Schönberg, 19 years younger than Schenker.

The motions of his spirit are dull as night,
And his affections dark as Erebus:
Let no such man be trusted. — Mark the music.

The belief shared by these (and other) important literary and musical thinkers is that the technical procedures which make for musical success are intimately related to what makes for success in life—for social harmony and harmony within oneself. As Aesthetic Realism sees it, these connections are inevitable—for art and life explain each other, and each depends on the concept of *relation,* a concept implicitly "harmonious." Relation means finding unity amid diversity. In his essay "Art as Life," Eli Siegel writes:

> *What does an artist do as he looks at objects? He finds a relation among them. This relation brings them to life. The changing of a number of objects into a composition, is the making of them one thing. And the changing of the many or general into one vivid thing, is like birth….The fact that the word creation is so much used in art, points to the fact that art is seen as life itself. Creation is in life, but it is the life part of life. Every living thing in a way is as alive as any other living thing, but it is clear that there is, also, more life in some living things than in others; indeed, that there is more life in a living thing at one time than at another. It is this kind of life that art goes after: that which is the affirmation, increase of life.*
>
> *(Siegel, 1969, pp. 114, 116).*

The creativity of art should be reflected in the creativity of a classroom. What is needed, therefore, as a music educator makes relations between art and life is exactly that faculty of mind which is so central to art: imagination. The true pedagogic imagination is one that is grounded in fact, and is used with precision, freedom, and humanity.

Before we leave the music of Bach, there is one further point to be made concerning the "Prelude in C major."The Greeks understood "harmony" as implying any junction of elements which are opposed. In terms of music this included not only tonal, but rhythmic phenomena. Thus, writes Nicholas Slominsky in his *Lectionary of Music*. "In Plato's writings *harmonia* is a balanced sequence of slow and fast musical phrases."(Slonimsky, 1989, p. 207).

The "tonal logic" of Bach's chord progression would be exactly the same were each of its measures to last only two beats. Yet the composer repeats, on the third and fourth beats of every measure, what sounded forth in the previous beats. Why? In order to achieve rhythmic harmony—a proper relation of speed and slowness.

Were we to play the prelude without those repeats, the result would be a bit frantic and jangling—as if too much information were coming in too rapidly. For this prelude on the surface is merely a series of speedy sixteenth notes. Without those repeats, it would be aesthetically imbalanced; would convey too much "activity." Yet once we observe the repeats, we add, literally, a sense of the "reflective." So now *both* elemental rhythmic possibilities of mind are represented: mind as speedy and mind as lingering.

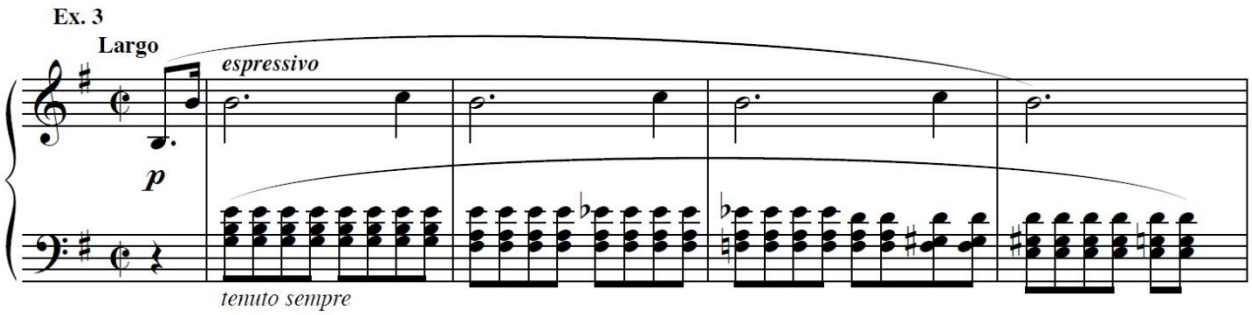
Harmony is thus related to the concept of wholeness: the presence of our whole selves—*all* we are, not just one side of whom we are. And without wholeness, we cannot be sincere. Is there any person (who values their sanity) who wouldn't want their mind to be "quick" and yet equally capable of depth and thoughtfulness?

4. Chopin Illustrates the Relation of Harmony and Melody

In the hands of a true composer, harmony is far more than a simple accompaniment to melody. It provides a new dimension to the experience of melody, and—as Victor Zuckerkandl put it—"a tonal depth."(Zuckerkandl, 1971, p. 222) Elsewhere he wrote: "[harmony] bring[s] to light the hidden facets of melodies."(Zuckerkandl, 1976, p. 249)It is therefore quite natural for us to speak about harmony and melody as representing, respectively, the depth and surface of music. Most typically, melody rises to the foreground, with the harmonic accompaniment seeming more in the background. Nevertheless, we should guard against too neat a separation of these primal elements, for harmony and melody are, in fact, in a dynamic relation. As Robert Erikson writes in *The Structure of Music*:

> *there is a web of interrelation, and a rich interplay between melody and [harmony.] They influence each other, they are involved with each other and share each other's destinies.*
>
> *(Erickson, 1960, p. 107).*

A piece of music which grandly illustrates this vital interaction is Chopin's *Prelude in E minor,* a piece which Mark DeVoto called "an archetype for the [harmony of] the later 19th century."(Randall, 1986, p. 368)Students can see clearly as the piece begins how exceedingly simple, even austere, the melody is—made up only of B and C. Musical meaning is here, but how much more meaning is present, how much more emotion is generated, when the harmony Chopin adds is present as well:

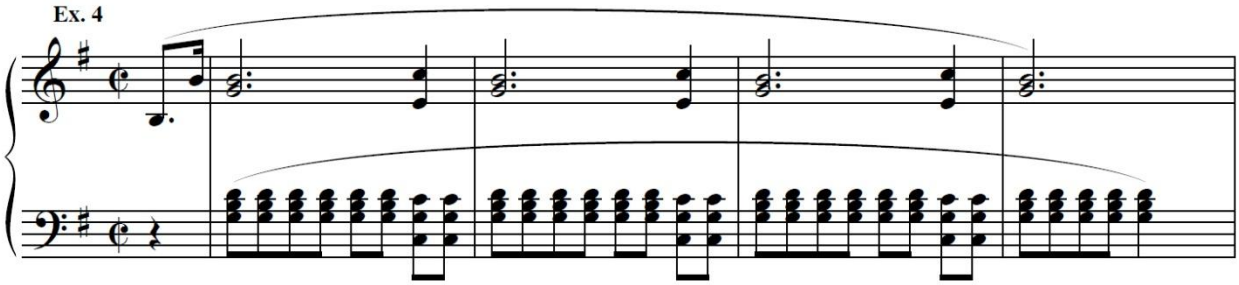


In an essay in the form of fifteen questions—"Is Beauty the Making One of Opposites"—which appeared in *The Journal of Aesthetics and Art Criticism* in 1955, Eli Siegel asked about "Depth and Surface."(Siegel, 1955)

> *Is painting, like art itself, a presentation of the "on top," obvious, immediate?—and is it also a presentation of what is implied, deep, "below?"—and is painting, consequently, an interplay of surface and sensation as "this" and depth and thought as "all that?"*

For that publication, he wrote in terms of the visual arts, but the question is clearly relevant to the understanding of music. And a parallel to life can easily be surmised; for a good deal of pain in this world is the result of a division between what people show and what goes on privately in the depths of their minds.

This prelude is a study in the immediacy and pointedness of melody—as "this," and of the waveringness, subtlety of harmony—as "all that." Clearly, the opening melody is insistent, even as it has an element of uncertainty and pain. Had the harmony "agreed" too easily with the melody, the effect would have been banal.



Of course, with its shift of modality and tonal center, this "rewrite" is purposefully "shallow"—almost laughably so. By contrast, Chopin chose a harmony that is complex, ruminating, melting—almost luxuriant. The simplicity of the melody gives that ever-sliding harmony a "backbone," a point-of-reference. And the rich harmonization makes one hear the repetitions of the melody from a fresh, new angle each time. This, quite literally, is an embodiment and expression of a crucial *ethical* concept—that of *respect*. As the etymology indicates, we respect something (or someone) when we "look again," and don't assume we've already seen all the meaning that might be found there. Respect means a desire to be aware of what is "right in front of you"—the surface of things—but also their unseen depths.

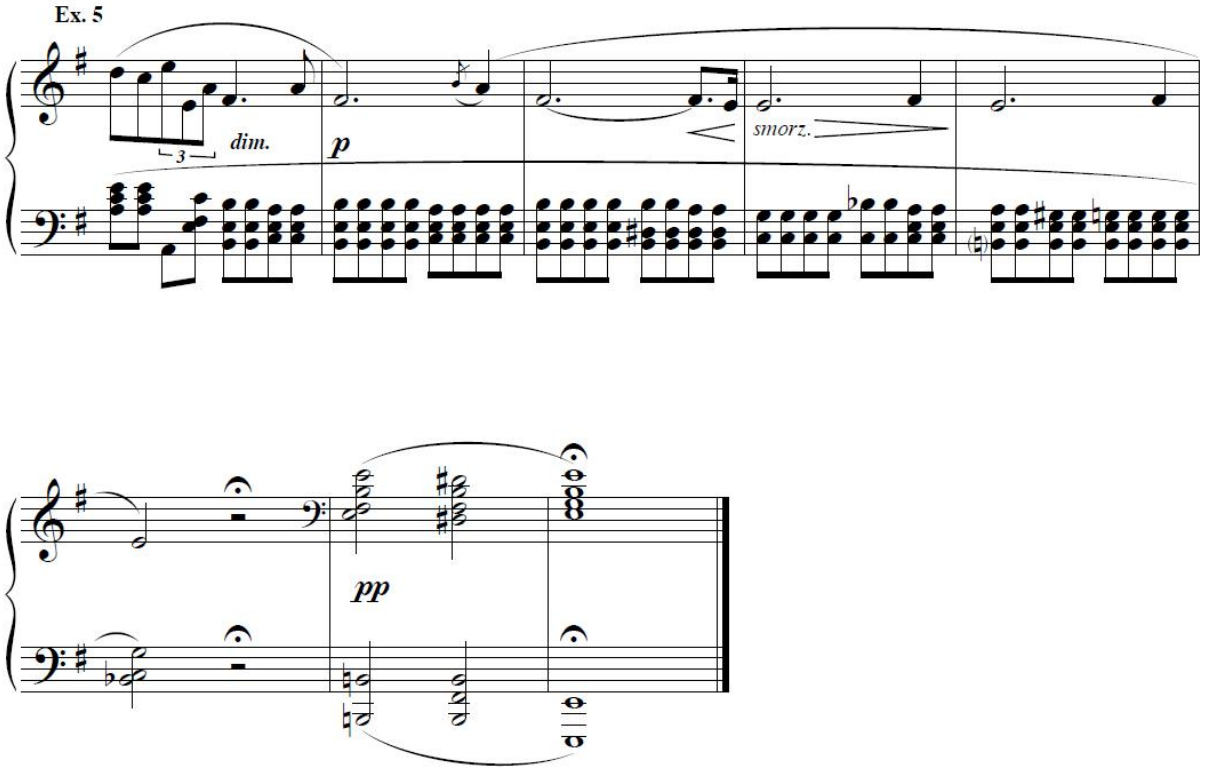
The fight between contempt and respect, I learned from Aesthetic Realism, is the central ethical fight in all people. Certainly it is a fight raging in the lives of the college-age students we meet[6]. And when they see how much the beauty of music is based on the principle of respect, this knowledge encourages them to reconsider a great deal: about art and, more importantly, about life.

That music itself arises from respect can be illustrated by every aspect of its technique. Consider—and here we move away from "harmonic" theory—the concept of "variation" form. Is it not based on the idea that no matter how familiar something is, one can always find new meaning in it? The most common chord progression in popular music (the music our students likely know best) is, of course, the 12-bar blues. How many hundreds of thousands of variations have been built on that? And its potential is hardly exhausted. Yet in social life it is so easy to think we already know everything we need to know about someone; we have—as it is arrogantly said—"their number."

[6] For cross-cultural perspective on this universal ethical issue, see the doctoral dissertation of Arnold Perey(Perey, 1973), and also his (Perey, 2005). For a detailed study of how it was present in the life of a specific musician, see my "Biography as Ethics: The Battle between Contempt and Respect in the Mind of Felix Mendelssohn," (Green, 2006). For a study of how unconscious contempt interferes with one's ability to grasp the value of unfamiliar music, see my "Meeting the New: What 21st-Century Educators Can Learn from the Earliest 'Ethnomusicologists' about the Appreciation of Music," (Green, 2007).

Shortly, I will comment more about the conjunction of ethics and aesthetics. However, I would like first to indicate another way in which Chopin's prelude can introduce our students to a core concept of harmonic theory: namely, the power of harmony to persist in our minds even when there are no chords physically sounding. In the middle of the prelude, the bass register chords suddenly break off, and the right-hand plays its melodic line in a solitary fashion, recitativo. Yet the force of that dominant harmony continues, binding what came before, and what comes after. Harmony here is like gravity, showing its power across space. At the end of the composition something similar, but even greater, happens as harmony appears to work over silence itself:

Ex. 5



We are dealing here with presence and absence, with tangibility and intangibility. Without wishing to draw out all the implications for human feeling that might be found here, it is enough to say that in life every person has been concerned about the degree to which meaning can persist when there is physical separation. It is a subject that affects people in love; it also affects people profoundly as they think of the meaning of death—is it only emptiness and division? Or is there also, in some way, continuity?

5. Stravinsky, Ellington, and the Oneness of Art and Life

One of the most difficult jobs we face is to show students how the concept of harmony remains valid even when the language of music advances into dissonant, and perhaps atonal, territory. To do this, and in the process make even clearer the possible "life" implications of "technical" matters, we need to return to bedrock principles.

Harmony depends on the sincere perception of relation. If we can't feel a true connection between things, we cannot feel their harmony. There would simply be diversity without unity; separation without kinship. The ability to feel harmony in life is equally dependent on this principle; that

is why, as Eli Siegel explained in a 1975 lecture, "whenever you show the relations among things, you add to the harmony of the world[7].

What might interfere with a person using their imagination in a fresh way to find the connectedness, the deep kinship of things? Centrally this: the unconscious hope to have "ego-importance" by feeling sneeringly superior to a world one considers a disjointed "mess." This dreary yet secretly "triumphant" state of mind is a primal form of contempt, and is far more common than we generally realize(See "Contempt Causes Insanity", Preface to: Siegel, 1981).

From a philosophical point-of-view, it would be very difficult to prove that anything in reality was *utterly* unrelated to any other thing. Yet the seeing of relation implies the active, creative use of our imagination, and lacking the aesthetic impulse, even "educated" people might find it hard to relate their last family argument to the principles of French grammar, or their political convictions to the structure of an Algebraic equation, or their (possible) prayer life to the understanding of sedimentary, igneous and metamorphic geology.

As Aesthetic Realism sees it, every aspect of reality comments on every other aspect, with art definitely—and multitudinously—commenting on life. In 1975, at a time when I was a young man, just graduated from college, Eli Siegel taught me about this. As I quote from a discussion with me, I think the relevance to our students' lives will be apparent. For art and life were very separate in my mind at that time.

I saw music as an exciting and beautiful thing, a field for deep self-expression. By comparison, "ordinary" life seemed dull, depressing, and full of emotional confusion. I would, for example, study ear-training for hours in order to hear music more deeply, but at a family dinner I barely listened—assuming (with barely disguised contempt) that I already knew everything my parents and sisters had to say.

Aware of this painful emotional and ethical schism, Mr. Siegel kindly asked:

> *Do you think that when you see something well you are trying to have your life in harmony?*

"I think so, but I'm not sure," I answered. And he continued:

> *Do you think music is an attempt to take different things and show that they can work together? If you could say, "I like the way I see my parents," would you be in harmony with yourself more than if you say, "I don't want to think about them?" The basis of Aesthetic Realism is that harmony and knowledge are continuous.*

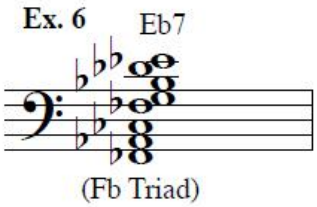
And then he added:

> *The whole history of music is to get to something uncomfortable, and show that there is something harmonious there—and especially modern music*[8]

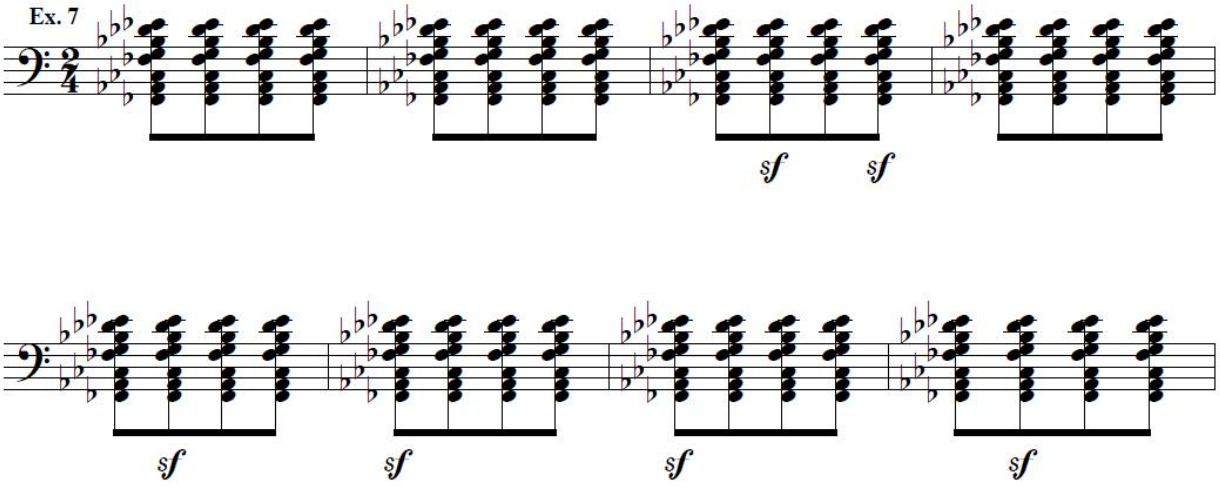
[7] From the author's notes.
[8] This discussion was transcribed by the author from a tape-recording.

I have found this discussion of great use—personally, and also in teaching the harmony; and, as was indicated, especially for the teaching of modern harmony.

Let's look at that touchstone of modernism, *The Rite of Spring*. When, after some preludial minutes, the curtain rises for "The Augurs of Spring," we meet one of music's most famous polychords: Eb7 over an Fb triad—a harmony that is quite literally "uncomfortable." Shorn of its rhythm, articulation, and instrumentation, this polychord seems the aural equivalent of mud. Very uninviting:



What Stravinsky uses to oppose this disagreeable sound is the power of rhythm. A sharply etched asymmetry of accent criticizes the dull thickness of that chord, and sparks the music into life:



Without that constant rhythmic (or, to be precise, *metric*) surprise, the implacable repetition of that polychord would be ugly and terrifying. With the irregularity, that same chord proves exhilarating. Imagine if that "muddy" polychord were played in a rhythm that *also* accented agreement: a rhythm that was symmetrical, with the downbeat of each 2/4 measure being accented. Try it in the classroom; the result is clearly less musical than the design Stravinsky created. Again—I have never met a student who disagreed.

Just as with our earlier Chopin example, through which students could see how melody and harmony might interact to mutual benefit, here they can observe a similarly beneficial interaction of rhythm and harmony. And we can create still another "alternative," and ask: what would be the emotional impact were we to hear Stravinsky's vibrant metric asymmetry played out against a harmony that was "easy"—say a pure E major chord? The effect surely would be interesting, but hardly as musical as what Stravinsky actually composed. And why is that? Perhaps because Stravinsky's rhythm, in its very edginess, embodies an ethical principle: the principle of *criticism*.

That an honest "disagreement" enhances life more than an oily, falsely comfortable "agreement," is something everyone can vouch for through their own life experience; much as a true use of dissonance adds to the "musicality" of a composition—as we saw earlier with Bach. When an aggressive rhythm fights a "muddy" harmony, the combined texture can be seen symbolically as "critical." The implication is that an ugly situation is being energetically countered—and that does seem an ethical activity; far more ethical than a fierce rhythmic attack on a "lovely" aural situation, such as would be embodied in that last "alternative example" with its unsullied E major chord[9].

Now let us turn to Ellington and yet another "modern" presentation of harmony as the oneness of unity and diversity. *The Mooche* of 1940 opens with this 8-bar phrase:

The phrase begins and ends securely in C minor, yet what adventures it has in the process. As that clarinet trio slithers chromatically downward, it soon arrives a tritone away from where it began: F# minor. A tremendous change in harmonic color. Meanwhile, though our attention is caught first by that tritonal shift in the clarinets, we also notice that the bass has moved from C to B. Thus, along with the motion from C minor to F# minor, we become aware of a new over-all harmonic sonority: B9, implying E major. Meanwhile, the answering phrase on solo trumpet (Bubber Miley), taken by itself, is in C# minor. (This is quite clear if we imagine its final D# resolving down a step to the implied tonic. In fact, the bass provides that resolution, moving to C# (Db) exactly on the downbeat of bar five.)

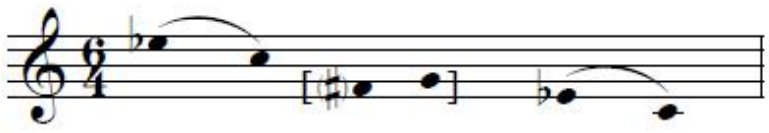
[9] I take for granted the listener has a basic grasp of the emotional symbolism of western harmony as it has evolved over the last millennia. See (Cooke, 1959) and (van der Merwe, 2004).

Within four short measures, we have already encountered several different tonal centers—and the harmonic diversity continues to grow in the second half of Ellington's inspired opening. At bar five the clarinets are voiced in an augmented chord, with a resultant "whole-tone" effect over that Db bass. This cannot be said to be clearly in any key at all, especially as the composer now asks his clarinet trio slip downward in parallel augmented chords. It is only at the very last moment that the parallelism returns to one made up of "minor chords," as D minor "slips" to C minor. We find ourselves—surprisingly yet satisfyingly—back to the key center with which we began.

This is Ellington, master of harmony. And specifically of "modern" harmony with its revolutionary relation of comfort and discomfort.

While looking at these famous eight measures of classic Jazz, it would be a pity not to mention the technical tour-de-force which Ellington and Bubber Miley "pull off" at the end of the phrase—bars seven and eight. For what is Miley's "two-bar" interjection here, but a compact summary, at three times the speed, of the essential melodic line that the lead clarinet took in the preceding six measures?

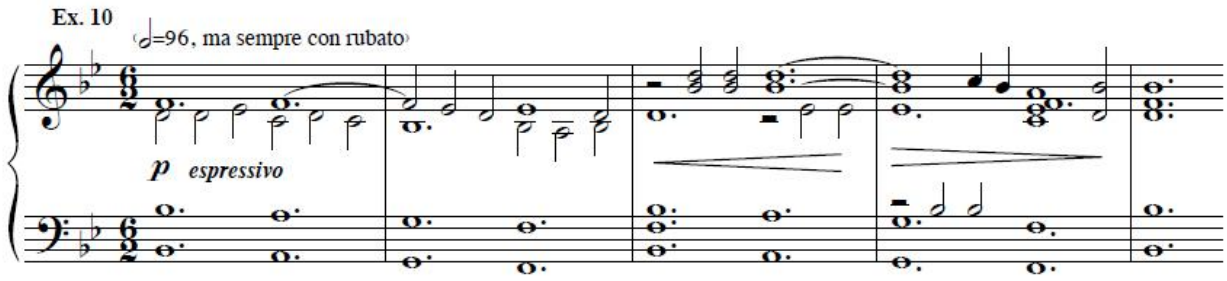
Ex. 9 **Fundamental Outline**



Slowness and speed are here being made one; and as we implied earlier, these are opposites crucial to human happiness. Eli Siegel explained in his seminal text from the early 1940s, *Self and World*, that happiness can be described as a state of "dynamic tranquility."(Siegel, 1981, p. 165) Nor would it be too much to suggest that this particular reconciliation of opposites may be a core reason music appeals so deeply to people—for no one likes to be frantic, and no one likes to be bored. And music is, perhaps, the art which most deeply engages this issue: joining the speed and slowness of things, the dynamism and serenity of human emotion, in a manner both pleasing and dramatic. Each of the pieces discussed in this article, in fact, illustrates the point. If we return to the Bach prelude once again we note in it a constant sixteenth note motion: *dynamism*. And yet the very steadiness of that motion, combined with the fact that the over-all pattern established in the first bar is retained throughout, shows that *tranquility* is not forsaken. Speed and slowness are one.

6. Concluding with Monteverdi

My final example comes from Monteverdi: the love-duet which concludes his great opera The Coronation of Poppea of 1642. It, too, at one time was "modern" music, and like Stravinsky and Ellington (and Bach and Chopin) has "something uncomfortable which gets to something harmonious."The duet is largely structured around the fact that a repeating bass figure can take on multiple sets of harmonies. We hear this right from the start. The initial harmonic progression accents sweetness and roundedness of sound; it is immediately contrasted with a progression which, having suspended 9ths and 11ths, is aching and sharp. Yet the bass figure is unchanged:



What Monteverdi does here is, from one point-of-view, sheerly "abstract." It is something we all teach; for we want students to be aware of how many strikingly different ways a single bass line may be "figured." Yet this is hardly an "abstract" piece of music; it has a very tangible subject matter: love. And the choice of harmonies Monteverdi makes is not only "technically" satisfying, it also comments valuably on the subject of love, and what people hope for from love.

Said Eli Siegel in a lecture of July 17, 1976, "All music is a lesson in love. As one note follows another, it asserts itself against it and blends with it." In Monteverdi's music we hear that beautiful equipoise of self-assertion and yielding—a relation that (as our students very likely feel in their own life's experience) is often difficult to achieve in social life. We sense that pleasure and pain have found an arrangement that is honest; a relation which, literally, "composes" them.

Harmony—along with melody, timbre and rhythm—is one the central elements of music. Through the Aesthetic Realism teaching method, students can see that it is also a means of understanding their own lives, and finding fresh meaning in the world. As Victor Zuckerkandl asked, in the "Foreword" to his *Sound and Symbol: Music and the External World:*

> *What must the world be like, what must I be like, if between me and the world the phenomenon of music can occur? How must I consider the world, how must I consider myself, if I am to understand the reality of music?.*
>
> *(Zuckerkandl, 1973, p. 7)*

These are important questions, and it is my passionate belief, which I have been illustrating in this paper, that through the great philosophic method Eli Siegel developed, the art and science of musical harmony is a means of getting to clear and profoundly encouraging answers.

What an educational breakthrough!

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