

Music Analysis: Purposes, Paradigms, and Problems

Allen Winold

Music analysis is at the core of everything we do as music theorists. When we speculate about the nature of musical elements such as melody, harmony, texture, or form, we formulate hypotheses based on formal or informal analysis of works, and then test these hypotheses by analyzing other works. When we elucidate the structure and meaning of a single work or explore the commonalities of a given musical style, we gather our data through analysis. When we teach sight singing or ear training, we base our pedagogical principles on insights gained from analysis.

Music analysis is a process that involves seeking answers to four fundamental types of questions.

Segmentation questions: What principles should guide us in dividing a musical structure into smaller units and sub-units? What makes a beginning? What makes an ending?

Similarity questions: How do smaller units and sub-units relate to each other in terms of their characteristic features? How does one work relate to other compositions by the same composer, by different composers, or to works from other cultures?

Structural questions: How do the units of a work relate to each other in terms of syntactic function? How do they combine to form larger units, up to and including the entire work?

Semantic questions: What does a work of music, as a whole or in terms of its constituent units, mean? Is this meaning fixed or does it change from time to time, culture to culture, or person to person? How does a work relate to extra-musical aspects, such as emotions, physical motion, other arts, or other disciplines?

Though there is general agreement on the importance of music analysis and on the basic nature of its central issues, there is less agreement on the specific methods to be used. In this paper I consider ana-

lytical methods by focusing upon the purposes that lead us to analyze, the paradigms that guide us, and the problems that beset us.

Pragmatic concepts of purposes

A brief review of the contributions of two of the most important American thinkers—Charles Sanders Peirce (1839-1914) and William James (1842-1910)—will provide a philosophical frame for our discussion. Peirce lived in relative obscurity without a permanent teaching position to use as a platform for the presentation of his ideas, and he was known to only a small group of intellectuals. He never completed a full-length book that would record the complete working out of his ideas, possibly because they were constantly developing and changing. Still, he is regarded by many as the most original, versatile, and influential of all American philosophers. In 1878, in an article entitled "How To Make Our Ideas Clear," he set forth what has come to be known as the pragmatic maxim. "Consider what effects, that might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object."¹ For a pragmatist the meaning of concepts like "soft" or "hard" would be that when a soft object is scratched it would show scratches but a hard object would not. The pragmatic definition of consonance and dissonance would be that when we hear a consonant or a dissonant chord there is some measurable difference in the physiological or psychological response each evokes. If there is no difference, then the concept may be essentially meaningless.

This approach is based upon the idea of *abduction*, which Peirce argued should be included with induction and deduction as the three co-equal, co-operative modes of inference. Induction involves deriving general principles from specific cases; deduction involves deriving specific cases from general propositions; and abduction involves formulating, testing, and accepting or rejecting hypotheses. Abduction is roughly synonymous with the scientific or experimental method, but Peirce urged that it could be applied not just to physical experiments but also to ideas.

William James was trained as a medical doctor and is regarded as one of the founders of experimental psychology. A dedicated humanist and moralist, his approach to pragmatism was adopted to a

¹Charles Sanders Peirce, *Collected Papers of Charles Sanders Peirce*, ed. Charles Hartshorne and Paul Weiss (Cambridge, MA: Harvard University Press, 1934), vol. 5, 258.

large extent as a defense against the attacks upon religion presented by Darwinism and other scientific developments at the end of the nineteenth century. Though he was a student, friend, and benefactor of Peirce, James carried the notion of pragmatism into nominalist, positivist, and radical empiricist directions never anticipated nor intended by Peirce. In his essay, "What Pragmatism Means," he defined pragmatism as "the attitude of looking away from first things, principles, 'categories,' supposed necessities; and of looking towards last things, fruits, consequences, facts."² He further said that a pragmatist "turns away from abstraction and insufficiency, from verbal solutions, from bad a priori reasons, from fixed principles, closed systems, and pretended absolutes and origins."³

James spoke of truth in a way that led many Europeans to regard pragmatism as nothing more than a pseudo-philosophical rationale for the American business ethos.

Grant an idea or belief to be true, what concrete difference will its being true make in any one's actual life? How will the truth be realized? What experiences will be different from those which would obtain if the belief were false? What, in short, is the truth's cash value in experiential terms? . . . The truth of an idea is not a stagnant property inherent in it. Truth happens to an idea. It becomes true, is made true by events.⁴

His view of the role of theory is especially pertinent for our profession. "Theories thus become instruments, not answers to enigmas, in which we can rest."⁵

Peirce was strongly opposed to James's reinterpretations of pragmatism, so much so that he proposed changing "pragmatism" to "pragmaticism," a name Peirce believed to be so ugly no one would ever steal it. Peirce was a brilliant thinker, who had limited influence on his own generation, but lasting influence upon later generations. James was an effective popularizer of ideas, who had enormous influence upon his own time, but less direct influence upon succeeding generations.

²William James, *Pragmatism: A New Name for Some Old Ways of Thinking* (New York: Longmans, Green and Co., 1907), 54-55.

³*Ibid.*, 51.

⁴*Ibid.*, 200-201.

⁵*Ibid.*, 53.

Purposes of music analysis

With this philosophical background, we may describe the purposes of music analysis in terms of at least four areas.

Composition: We analyze in order to discover compositional processes in a work or group of works, which may be helpful in writing other compositions.

Style: We analyze in order to enumerate and describe the stylistic characteristics of a group of works, a single composer, or a period.

Performance: We analyze in order to make performance and teaching more appropriate, insightful, effective, and meaningful, and to assist memorization.

Musicianship: We analyze in order to make skills such as sight reading, keyboard realization, improvisation, and ear training more accurate, efficient, and artistic.

In light of pragmatic principles, we could say that the significance of any analytical observation ultimately rests on the practical effect that it has in fulfilling the purposes listed above. Analytical significance thus lies in applications: a variation technique discovered in one composition can generate another work; a textural type described in one work of a composer can help identify other works by the composer; a harmonic analysis can make a performance more effective; and the recognition of a common rhythmic pattern can make sight reading more accurate.

Many of our students and our colleagues in performance study, composition, conducting, and musicology might applaud increased emphasis on "last things, fruits, and consequences." A pragmatic approach to music analysis should lead to greater instructional effectiveness and efficiency, since studies in educational psychology and experience in the classroom clearly demonstrate that students learn best when they apply their knowledge to solving meaningful problems.

Should we, however, reject any analytical endeavor that does not have immediate, practical consequences? I do not believe so. Some of the most brilliant and influential analytical work has been done with little obvious concern for practical applicability, and our field is the richer for it. Music analysis is often undertaken for other appropriate purposes:

- to discover the essence, the true nature, or the organic unity of a work;
- to arrive at an appreciation or evaluation of a work;

- to understand the relation of the work to its socio-cultural context;
- to enhance our listening enjoyment and understanding;
- to convey our experiences and ideas of a work to others.

Are these purposes totally devoid of pragmatic significance? Probably not. Any of them could be redefined in pragmatic terms: listening enjoyment, for example, might be measured in terms of observable psychological or even physiological response. Even if analysis entails no direct pragmatic significance, however, it can contribute indirectly to the pragmatically-oriented purposes discussed earlier. An analysis of the organic unity of a work could lead to a correct performance of the work. Schenker said,

A performance, in serving background, middleground, and foreground, can employ the greatest variety of color. Even the richest and most varied resources of performance can be taught—and learned—with great exactness. On the other hand, commitment to background, middleground, and foreground *excludes all arbitrary personal interpretation*.⁶ (emphasis added)

As a Schenkerian agnostic, I would argue that no analysis of a work, not even the most effective, does more than provide possibilities. I would stress the “greatest variety of color” portion of this quote, but true Schenkerians would probably stress the rest of the quote. They would insist, as did my Schenker mentor, Franz Eibner, that the performance must be guided by the analysis.

We analyze music to internalize it, to achieve a more effective and meaningful relationship with it, to make it our own. Even if it could be proven conclusively that a particular analysis of a work was wrong, whatever that might mean, we could still argue that the analysis helped to internalize the work for the analyst. A creative analysis is a “co-creation,” in the same sense that a creative performance is a “re-creation.”

Paradigms

Analytical methods can be considered in terms of two paradigms that are currently quite influential in educational research and instructional technology, the *objectivist* paradigm and the *constructivist* para-

⁶Heinrich Schenker, *Free Composition: Volume III of New Musical Theories and Fantasies*, trans. and ed. Ernst Oster (New York: Longmans, 1979), xxiii.

digm. After presenting these two approaches, I will briefly consider their implications for analyzing music and for the teaching of music analysis. The following chart suggests the main differences in these two paradigms.

<i>objectivist</i>	<i>constructivist</i>
positivistic experimentation	naturalistic inquiry
nomothetic	ethnographic
quantitative	qualitative
derived from psychology	derived from anthropology
meaning exists in the world	meaning is imposed on the world
single, correct meaning	multiple meaning, indexed in experience

Scientific research guided by the objectivist paradigm relies on laboratory experimentation, with strict control of variables and concern for issues of reliability. This research is nomothetic, in that it seeks to establish laws with general validity going beyond individual cases. It is generally quantitative, and its assumptions and methodology are derived to a large extent from experimental psychology.

Research guided by the constructivist paradigm substitutes naturalistic inquiry or field study for controlled laboratory experimentation. Though reliability is important, it is not sought in strict control of experimental variables but rather in thick description or detailed ethnographic reports of observations, in triangulation or correlation of three or more independent observers, and in other methods. It does not seek to establish universally valid laws but rather to give complete details of the products and processes of the given situation under investigation. Extrapolation to other situations is subject to the judgment of individuals. These methods of research tend to be qualitative rather than quantitative, as they are in at least some branches of the parent disciplines of anthropology and sociology.

Epistemological considerations sharply differentiate the two paradigms. For the objectivist, meaning exists in the world; for the constructivist, meaning is imposed upon the world. For the objectivist there is a reality "out there" that consists of entities and actions, each of which has a single, correct meaning, label or description. Different persons may perceive or label things differently, but the objectivist would claim that this difference comes from developmental factors, such as a child calling every animal a "doggy," or that it is simply the result of perceptual error.

For the constructivist there is also a reality, but it is not "out there"; rather, each person is an active participant in constructing re-

ality. Differences in perception are not ascribed cavalierly to developmental delay or error. Multiple meanings are indexed to experience, a concept perhaps best understood in a linguistic context. Special words like "now" and "my" have meaning indexed to, or dependent on, a particular instant in time or a particular person. For the constructivist every word, and indeed everything we can perceive or conceive, is indexed to experience. Mark Johnson⁷ has carried this idea one step further by asserting that all meaning is indexed to our individual experiences with our own bodies.

It is tempting to assign current methodologies of music analysis to one of these two paradigms, but it is more reasonable to find influences of both paradigms in each methodology. If we are engaged in labeling chords, constructing bass-line reductions, identifying pitch-class sets, or performing other similar analytical operations, we operate in the implicit framework of the objectivist paradigm. The constructivist might begin by questioning the very existence of such musical entities as chords, scales, or even notes. Mary Louise Serafine⁸ has shown convincingly that these are not pre-existing entities in the music, nor even in a posited musical universe that surrounds the given composition, but are instead the products of individual analysts.

In the analysis of musical form, both objectivists and constructivists would probably begin by insisting that musical forms are not fixed molds into which composers pour their material. Following this obligatory disclaimer, however, the objectivist would probably provide students with the clearest possible guidelines for determining the degree of fidelity that a given work shows to an assumed formal norm. The constructivist would start with a much smaller set of assumptions and leave the door open to novel analyses that might differ radically from existing analytical models.

These two paradigms represent opposing tendencies and directions rather than a sharp dichotomy. Neither paradigm is clearly superior, especially when we turn to the teaching of music analysis. Objectivist approaches to analysis may be more effective with beginning students and constructivist approaches with more advanced students, though this is not an iron-clad rule. Acquainting students with commonly accepted formal norms and textural stereotypes is an important part of their education; learning to challenge these when ap-

⁷Mark Johnson, *The Body in the Mind: The Bodily Basis of Meaning, Imagination, and Reason* (Chicago: University of Chicago Press, 1987).

⁸Mary Louise Serafine, *Music as Cognition: the Development of Thought in Sound* (New York: Columbia University Press, 1988).

propriate is equally important.

Most of us are probably more familiar and comfortable with objectivist methods. I would urge consideration of the rich possibilities for motivating students afforded by the constructivist methods, but this approach involves rethinking certain basic assumptions about teaching. The objectivist paradigm regards knowledge as something "out there," which is somehow to be gotten "in here," that is, into the mind of the student. Therefore teachers often adopt a "systems approach" to instruction: breaking the subject into small units, discovering behavioral objectives for each unit, and carefully structuring these units into a logically organized curriculum. Instruction in the objectivist paradigm involves carefully monitored drill and practice, and testing relies on clearly spelled out, right-or-wrong criteria.

Substituting the constructivist paradigm leads to a totally different set of implications for instruction in a field like music analysis. If learners are active participants in the construction of reality and meaning, then there is no attempt to get material from "out there" to "in here." Instead the constructivist looks for ways to help students construct plans in response to given specific situations, and to carry out these plans. The dominant model of instruction is thus not the systems approach, but rather "cognitive apprenticeship"; learners are put into situations that provide effective "real-world" problems, and teachers present possible tools for solving them. Instead of drill and practice, the dominant method of achieving solutions is exploration and emulation. Often, the roles of problem-giving teachers and solution-providing students are reversed and the students present novel problems to the teachers. The teachers then demonstrate how they go about solving, or in some cases just *trying* to solve, the problem presented by the students.

I recently took this problem-solving approach in a graduate seminar, when a student brought in the little-known *Adagio and Rondo Concertante* for Piano Quartet by Franz Schubert (1816). I began with the glib assertion that the rondo portion of the work should present no problem; the composer had clearly labelled its form and the only task for the analyst was to seek the location of the A B A C A, etc. sections. I was wrong. The movement bears little or no resemblance to classical rondo design. The students had the opportunity of watching a perplexed professor struggling at first to make the movement "fit" into rondo form, and then coming to the realization that the movement was really in a free sectional form. They and I learned something from this experience that we could not have learned in a more structured situation. They had the opportunity to observe the order of questions

I posed to myself and the way I went about answering them. I learned that I should take to heart my own constructivist advice about starting with a small set of assumptions and leaving the door open to a novel analysis, even when it might fly in the face of the composer's own form label.

Problems

Having considered some of the purposes and paradigms of music analysis, I turn to some of its problems. I shall discuss three general types of problems, those of analytical terminology, those of ambiguity and multiple interpretations, and those of matching analytical purposes and paradigms.

Analytical terminology

One problem that concerns me, perhaps more than other theorists, is confusing the description of musical features with the description of syntactical functions or affective characteristics, thus mixing the purposes listed at the beginning of the paper. Sometimes one term tries to describe aspects of similarity, structure, and semantics. An infamous historical instance illustrates a confusion of structure and semantics. Until recently we designated a cadence ending on a strong beat as a *masculine* cadence and a cadence ending on a weak beat as a *feminine* cadence. We no longer use these terms, because we realize the lack of sense and sensitivity they imply.

There are other instances where description and significance are confused. I became aware of one example when I taught for a year at the Hochschule für Musik in Vienna and had to use Riemann symbols instead of Roman numerals for harmonic analysis. I am reasonably comfortable with most of the concepts of Riemann theory, but I cannot accept all of them. For example, I find it problematic to label the iii chord as a parallel or substitute chord for the V chord. Sometimes the iii chord does function like a V chord, but sometimes it does not. In the Riemann system, however, the iii chord is always labelled "Dp," even when it is not functioning as a dominant.⁹

⁹Dp stands for Dominant-parallel. The word "parallel" in German has the meaning of "relative" in English. G major and E minor are called parallel keys. The G major chord and the E minor chord in the key of C major are called parallel chords in the Riemann system.

Another problem occurs when we attempt to make a single analytical term or symbol express both similarity and structural relations. For example, in a sonata form we may designate the first theme of the second key area as "S" (second theme), even though it is similar in melodic characteristics to "P" (the opening theme of the movement). Though there are ways of getting around this problem in most analytical labelling systems, I find it most helpful to provide two concurrent analyses, one devoted to similarity relations and the other devoted to structural relations.

As a final example of a terminological problem, let me cite the analysis of texture as an area in which music analysts do not have a sufficiently rich set of terms to capture the significant features of a composition. Interesting attempts, such as the graphic system recommended by Monte Tubb¹⁰ in the pages of this journal, suggest possible solutions, but there is no widely adopted set of terms beyond the highly inadequate "monophonic, homophonic, polyphonic" descriptions that appear in most textbooks.

Ambiguity and Multiple Interpretation

As teachers, I believe we should encourage students to make the intellectual odyssey from doxology to dogma to doctrine to doubt to delight in diversity. I understand the forces that lead in the opposite direction, toward assertions of the inevitable rightness of a particular analysis. Most of us have gone through years of private study of an instrument or voice with teachers who insisted that their methods of performance and their interpretations of music were the only right ones. It is natural that these experiences, and similarly rigid views found in core works in our own field, should lead us to adopt an authoritarian stance ourselves. I believe, however, that in our own analysis and teaching we should resist this tendency and learn to cherish the possibility, indeed the necessity, of alternate ways of looking and listening to musical works.

I am advocating a *legitimization of ambiguity*, the realization that a musical entity can be heard in two or more different ways simultaneously. For example, a passage of Mozart can be both thematic and transitional at the same time. I am advocating an *acceptance of multiple interpretations*, the realization that a musical entity may be heard in

¹⁰Monte Tubb, "Textural Constructions in Music," *Journal of Music Theory Pedagogy* 1/2 (1987): 201-224.

one way at one time and in another way at another time, depending on the assumptions or conditions we posit. For example, the location of the return of the opening section of a movement may be heard as being at one point if we attend primarily to factors of texture and tonality, and at another point if we attend primarily to melodic factors. I would even go so far as to say, as have others, that the possibility of evoking ambiguity and multiple interpretation is one of the valid criteria for establishing the worth of a musical work. I would temper this by reference to the intellectual or the musical worth of a work, recognizing the possibility that a simpler, less ambiguous work might still have enormous cultural, sociological, or personal value.

Matching purpose and paradigm

For my final problem I shall paraphrase a song from *The Mikado* and recommend, not to "let the punishment fit the crime," for I hope our analyses are neither punishments nor crimes, but rather to let the paradigms of our analysis fit the purpose. Determining the percentage of time a given composer uses augmented sixth chords may be helpful for the analysis of style, but contributes little to the effectiveness of performance. Completing a sophisticated, mathematically-based analysis of pitch structure in a composition may be fascinating for a composer, but be of no practical interest or value for a sight reader.

Not everyone agrees with this notion. Ian Bent claims that "the distinction often drawn between formal analysis and stylistic analysis is a pragmatic one, but is unnecessary in theoretical terms."¹¹ Some theorists believe that analysis should be primarily an intellectual exercise, unsullied by pragmatic considerations of application. I would argue that considerations of the purpose of analysis can guide and inspire us, making our analyses more effective. I would urge us to give greater consideration to possible audiences for our analyses, and greater primacy to our purposes and goals in making the analysis. I would encourage us to broaden our conception of the appropriate ways for reporting analytical results to include not just our written reports, graphs, and charts, but also our compositions, improvisations, and performances.

If we do not constantly re-examine analytical premises and methods, we run the danger of meriting the harsh criticism leveled at analy-

¹¹Ian Bent, "Analysis," *The New Grove Dictionary of Music and Musicians*, ed. Stanley Sadie (London: MacMillan, 1980), vol. 1, 340.

sis by Pierre Boulez, a criticism that would probably have delighted the pragmatists, whose words I quoted at the beginning of this paper.

Analysis is only of real interest when it is active, and it can only be fruitful in terms of its deductions and consequences for the future. . . .We are swamped with vast tables of ridiculous symbols, reflections of a void, time-tables of trains which will never leave.¹²

Boulez has said that he regards his compositions as "works in progress." We should regard our analytical efforts as "analyses in progress," subject to revision or re-interpretation as our experiences and perspectives change. We should regard our meta-theoretical speculations, such as those I have shared in this paper, as "essays in progress," subject to correction and improvement as we exchange ideas with our students and colleagues. This is the great joy of our profession.

¹²Pierre Boulez, *Boulez on Music Today*, trans. Susan Bradshaw and Richard Rodney Bennett (London: Faber and Faber, 1971), 16-17.