THOUGHTS ON METER AND HYPERMETER

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1. Problems with the Concept of Hypermeter.

Hypermetric analysis has come in for some criticism. I plan to offer some additional criticism and raise some questions:

1. A hypermetric chart (such as those in Examples 12 and 13—notice that I prefer charts in which the lower hierarchic levels appear at the bottom, rather than Lerdahl and Jackendoff’s inverted charts) offers a static picture of an apparently fixed metric grid, but in fact meter is a living force in music.

2. It is unclear how deep the metric hierarchy is experientially. Can listeners, for example, actually feel 32-bar units metrically?

3. There are often conflicting factors suggesting different metric interpretations, but a hypermetric chart can show only one metric interpretation.

4. Is regularity necessary for hypermeter to exist?

5. Perceived meter is sometimes ambiguous, yet a hypermetric chart cannot model ambiguity.

6. It is unclear whether a hypermetric chart is trying to show something inherent in the music, or something that a performer brings to the music. In other words, how susceptible are meter and hypermeter to the influence of performance?

The first criticism can, I believe, be dealt with easily. Static, fixed pictures of dynamic, temporal musical processes are quite common. People do not seem to complain that a Schenkerian analysis is frozen whereas music is in motion. People understand that the natures of hearing and seeing are different. So they should be able to accept a frozen hypermetric chart as representing a process that unfolds in time.

2. Regularity and Hypermeter

The problem of hypermetric irregularity (3) is critical to the question of how deeply hierarchic meter is (2). Most theorists believe that metric irregularities introduced into the metric hierarchy remain on all larger levels. But if we define regularity and irregu-
larity in terms of the number of elapsed beats on the next smaller level, the (ir)regularity on one level need have no effect on the (ir)regularity of adjacent levels. Meter can exist on several levels, some of which are regular and some not. Because we perceive several levels simultaneously, we are quite capable of understanding irregularities that are subsumed into larger-level regularities.

Many theories of hypermeter depend on the idea of metric timespans being of equal length. This is true for the traditional metric grids (as in Examples 12 and 13) and also for Hasty’s idea of projection. Hasty spends a lot of time discussing the projection of a metric span equal in length to a previous metric span. But the idea of metric equality remains largely unexamined. Surely theorists who invoke equality of timespans do not mean that the two spans must be exactly equal in absolute time measurement, down to the hundredth of a second or beyond. Such a view would mean that the introduction of rubato, ritardando, or accelerando would destroy the sense of meter, which is clearly false. How much deviation from absolute equality is tolerable before our sense of meter begins to be compromised? Although this question should be answerable by means of experimental cognitive research, it has not to my knowledge attracted the attention of any psychologists.

If we factor in number of elapsed beats on the next lowest hierarchic level, along with absolute length of spans, then we begin to glimpse a more flexible and a more musical sense of equality. But how these two factors interact we can at present only guess. Little enough is known about how people estimate durations in the absence of beats. Add in beats, and the situation becomes quite complex: meter is indeed a complicated matter, and its perception is still far from being completely understood.

We might be tempted to suggest, if metric regularity can be regained on larger levels that subsume metric irregularities on smaller levels, that musical meter is in indefinitely hierarchic. But does meter operate at very large levels? Should graphs of the metric hierarchy continue on to levels E, F, G, etc., rather than stopping at level D (or possibly E)? While we may certainly remember the degree of accentual strength we felt at a particularly strong downbeat, and we may therefore compare that amount of metric strength to a much later metric accent, we should not think that the experience of comparing two accents, one remembered and one experienced, is a metric experience. A measure or hypermeasure is experienced as a whole unit. We not only remember but still feel the first hyperbeat when we hear the subsequent hyperbeats of each hypermeasure.

The distinction between “remembering” and “feeling” in the previous sentence depends on the concept of short-term memory. We experience the present not as an instant, not as a timepoint, but as a timespan. All the events that still feel like the present but have actually already happened are stored in short-term memory. Eventually, our recollections pass into long-term memory, after which they are no longer experienced but are simply remembered. For a measure or hypermeasure to be experienced as a unit, as an entity, it must be sufficiently short to be present in short-term memory all at once.
A few examples may help to clarify the idea of short-term memory. Imagine hearing this sentence spoken: “Rapid righting with his uninjured hand saved from loss the contents of the capsized canoe.”¹ When we hear “capsized canoe,” we revise our understanding of the meaning and context of the entire sentence. “Rapid righting” is still present in our consciousness, so that its meaning can be modified without our having to call it up from long-term memory. The word “righting,” now understood as “writing,” is still present even after the four or five seconds required to say the entire sentence.

The performance of music offers examples of the unity of short-term memory. In reading and playing a rapid piano arpeggio, for example, we take in—we encode—the entire notation as a single unit. We tend not to read the individual notes, unless we notice something unusual about the details (a note not belonging to the overall harmony, for example). We perform the arpeggio as a unit. We do not think of each note, or of each finger motion, as a separate present. And we listen in the same manner: the perceptual unit is the arpeggio, not each individual note, and the arpeggio is present all at one time in our short-term memory.²

Similarly, a skilled sightreader (or secretary taking dictation, or student taking lecture notes, or typist copying a document) reads ahead of where he or she works. The timespan from the place being performed to the spot being read is simultaneously present in the performer’s short-term memory. The music being played and the music being read, though possibly several measures apart, are both part of the player’s present.

One final example: the existence of short-term memory is evident when we are concentrating on some task and someone says something to us. We have not been paying full attention to the speaker, yet we can—if we do so within a brief interval—replay” in our minds what was said (which is still present in short-term memory) and “listen” to it a second time.³

Psychologists do not agree on the length of short-term memory. It is likely to vary in different contexts, depending on the complexity of what stimuli are present. But it is known that short-term memory is not infinitely expandable. Thus, while an eight-bar hypermeasure may be present in short term memory, a 16-bar hypermeasure may or may not be. If the measures are short (i.e., 2/4) and do not contain a lot of notes that need to be encoded into short-term memory, then a 16-bar hypermeasure can be experienced as a unit, meaning that the first beat is still alive in our experience when we hear the cadence in the sixteenth measure. A 32-bar hypermeasure is probably a fiction: it may

² This example is also taken from Lashley, p. 123.
³ All these examples (and others) are used in The Time of Music to exemplify the concept of the “spacious present,” which is the sense of the now as contained in short-term memory. See p. 372.
have some theoretical existence, but it cannot be experienced. Thus, graphs of the metric hierarchy for some music should only very rarely extend to levels larger than Level E.

We should try to feel the ongoing beat on each level of the metric hierarchy. Conducting along with the music may help us do so. Each large metric level requires a slower tempo. Eventually the tempo becomes so slow that the sense of ongoing beat is lost. When this happens, the proposed hypermeasures have exceeded the length of short-term memory, and meter is no longer operative.

How do you know if you are hearing the meter or hypermeter in the way you think you are, or you would like to hear it? It is not sufficient to report on your inner sensations—your mind can fool you about them. But try conducting the hypermeter. If your beats, and in particular your downbeats, feel right, then you are probably conducting the hypermeter as you hear it. If not, then you are feeling something else.

3. Metric Indeterminacy.

The three remaining criticisms (4-6) are interrelated. A hypermetric chart entails a series of binary decisions: a given timepoint either is or is not metrically accented on a given hierarchic level. This is an oversimplification, to be sure: degrees of metric accentuation are modeled by the hierarchic nature of the chart. A timepoint accented on levels A and B is less strongly accented (metrically) than a timepoint accented on levels A, B, and C. But two timepoints that appear in a chart to have equal metric accentuation may, in experience, not.

Although there are often conflicting cues about whether a timepoint is or is not metrically accented on a particular hierarchic level—and these conflicting cues can lead to alternative analyses, hearings, and performances—we do not hear two interpretations at once. We can hear an ambiguous passage differently on different occasions, but on a given hearing we sense it only one way (although we may switch ways during a passage).

This is true even with surface-level meter. Consider Schumann’s Soldier’s March. It can be heard in two different ways metrically (perhaps the two possibilities are not equally comfortable, but I find myself quite able to hear through the entire piece either way).

EXAMPLES 1 and 2.
Schumann’s Soldier’s March, with two different metric contexts.
Recorded performance.

The performer on this recording is reading from the original notation and no doubt intends to project the meter as written. However, if you do not know how this piece is
written, are you sure you can tell the meter from the performance? Even though there are some performer nuances in this recording that suggest the meter as notated by Schumann, if we are hearing in terms of the other meter then it is quite possible to ignore these cues, or to reinterpret them, so that the meter we think is being projected does, in fact, continue.

It has been suggested that meter and hypermeter are inherent in music and therefore cannot be influenced by performance, except in ambiguous cases. But the metric power of performance can be exaggerated, as this Schumann comparison may show. I have had Examples 1 and 2 performed live for groups of musically sophisticated listeners (upper level undergraduate music majors at Columbia University). They regularly disagree about which version of the piece they are hearing. I have also played a commercial recording of this little piece, and I have found that listeners still disagree about which version of the piece they are hearing.

The performers, whether the accomplished pianist\(^4\) on the CD or the less experienced pianists I used in my classes, had the decided intention of playing one version or the other. These two versions would seem to communicate somewhat different ideas on the march genre (more on this in a moment). But, regardless of what the performers intend to communicate (through their performance of the meter) about the nature of this march, the listeners hear what they want to hear (or what they have some predilection, for whatever reason, to hear). What happened to the performer’s communication about the march-like nature of this music? Did it reach only some listeners? Or did it reach none, and was their understanding of the piano piece’s relation to the march genre dependent more on their own habits and previous experiences with march music than on anything the performer or composer did?

In Example 1 tonic harmony begins with the first downbeat and lasts through the first measure. An apparent change of harmony coincides with the downbeat of the second measure, as is normal: harmonic changes do tend to articulate if not create metric downbeats. But it turns out that the harmony returns to tonic on the second beat of m. 2, so that in retrospect the downbeat of m. 2 is not so much a change of harmony as it is an accented neighbor chord within a still prolonged tonic. A similar thing happens at the downbeat of m. 3, where a seemingly new dominant harmony turns out to be passing within a tonic prolongation. The dominant harmony on the downbeat of m. 4, however, is more substantial, because of the skip motion in the bass. This V7 does have harmonic function, driving to the tonic cadence on m. 4's second beat.

Example 2 is more static harmonically. Instead of having the tension of accented dissonances needing to resolve in mm. 2 and 3, we find tonic harmony on the downbeat of every measure in the first phrase. What are accented dissonances requiring resolution in Example 1, mm. 2 and 3, become in Example 2 more neutral, less intense, unaccented neighbor and passing chords. Even the full root-position dominant chord just before the

\(^4\) Luba Edlina
cadence seems less active than in Example 1, because it comes on the weak beat of the measure. The cadence in Example 2, m. 4, is less an arrival, less a resolution, and more simply a continuation of tonic harmony than is its counterpart in m. 4 of Example 1. Similar observations can be made about the tonic prolongation in mm. 11-12 (Example 1, or mm 10-12 in Example 2). The non-tonic chords are incomplete neighbors or passing chords, which are more active because they fall on strong beats in Example 1 than they are as weak beats in Example 2.

The opening rhythmic figure—dotted eighth, sixteenth, eighth—leads forward toward its final impulse. It is a quintessential upbeat figure leading to a downbeat. The meter in Example 2 supports this conventional understanding of this figure, and thereby makes the opening more march-like than the opening of Example 1. In Example 1 there is a tension between the upbeat-downbeat nature of the opening figure and its metric placement as downbeat-upbeat. Similarly, the m. 4 cadence is more straightforward in Example 2, where the cadence chord arrives on a strong beat, than in Example 1, where the arrival chord comes on a weak beat. Similar things can be said about the arrival in m. 8.

Example 2 is the more straightforwardly march-like of the two. Its upbeat-downbeat figures (mm. 0-1, 4-5, 8-9, 12-13, 16-17and 20-21) are all placed in agreement with the meter: upbeat-downbeat. The cadential arrivals (except the final one) are all on strong beats (mm. 4, 8, 12, 16, and 20). The prolonged harmonies are all extended by simple unaccented passing-neighbor chords.

By comparison, Example 1 is more stylized and more sophisticated. It is a commentary on the march, a deconstruction of the march, even a slight distortion of the march. It is full of dissonant chords (accented neighbor and passing) that are more prominent, more tension-laden, than we would expect in an innocent march. The opening figure, with its conventional upbeat-downbeat profile, is consistently placed against the meter, in a downbeat-upbeat position. And all the cadence points arrive on weak beats, until the very end, where finally the rhythmically accented cadential chord falls on a strong beat and thereby offers an overall resolution to the work’s metric tensions.

Schumann’s actual notation is shown in Example 1. But what do listeners hear? A performer reading from Example 1 presumably would want to project the metric structure in that score, and thereby possibly “communicate” a deconstructive reading such as I have outlined. A performer may want to preserve ambiguity over which version is being played, but it is unlikely that a player would read Example 1 and choose to try to project Example 2 (such perversity—deliberately going against the notation—is not impossible, but it is relatively rare among serious performers, who usually try to be faithful to the score’s notation). Schumann probably had some intentions, possibly along the lines described here (but not necessarily), for choosing to notate the piece as in Example 1 rather than Example 2. And a performer probably intends something specific by deciding to (or not to) bring out Example 1 but not Example 2. But what happens to these intentions to communicate ideas about metric structure and about the work’s attitude
toward the march? Are they received and processed by listeners? In my experience, no! It seems not to matter whether the performer is trying to project Example 1 or 2 (unless the performer gives an unnaturally and unmusically exaggerated account of the work’s accentuation). In my experience, people hearing a performer play Example 1 may perceive either Example 1 or Example 2. The difference from listener to listener cannot be accounted for in the score or the performance, which are identical for all listeners. The difference must have something to do with the listener’s abilities, experiences, or attitudes—or possibly the differences are simply coincidental. Similarly, when a performer deliberately performs Example 2, listeners still hear either version.

I do not mean to imply that the interpretive nuances on which performers work diligently make no difference. That would be absurd! But in this one case, where the meter is indeed ambiguous, performer nuance may be less readily accessible to listeners—even to musically trained listeners—than performers might like to believe. This example nicely demonstrates the power of listeners to create their own understanding of a heard performance, even when it flatly contradicts the way the performer thought she or he was projecting the music. Surely this does not happen all the time. Indeed, I had to search hard before finding an appropriate musical example. But this one example does suggest how strong the listener’s powers of interpretation are. In less ambiguous pieces, what the performer does is no doubt more readily understood. In more complex pieces, performers (and composers, and listeners) find a richer layering of possible meanings, which sometimes agree and sometimes do not.

4. Changing Meters and Ambiguity

I have had an instructive experience having to do with meter and its interpretation, specifically of changing meters. I composed the following passages, with frequently changing meters. They are from my composition *Notta Sonata for Two Pianos and Percussion*. I have spliced together three different passages, for a reason that will become clear in a moment. The time signatures as written show the meters as I feel them, and as I want performers (and listeners) to feel them.


I subsequently used the same music, somewhat altered, in an orchestral work, *Cincy in C*. Knowing the difficulties orchestras have with meters such as those in Example 3, I rewrote the passage, simplifying the written meters and changing some of the written downbeats into accented syncopations.

EXAMPLE 4. Cincy excerpt.
When I hear the orchestral version, I still hear the meter as notated in the original version, the way I first conceived the meter. When I watch the conductor, I get confused. The conductor and the orchestra players are performing Example 4, but I still hear Example 3!

5. Can Hypermeter Be Shaped in Performance?

Some theorists seem to believe that even the apparently simplest hypermeter is susceptible to alteration, depending on what the performers do. In his article “Performance and Analysis, Interaction and Interpretation” Joel Lester suggests that even simple hypermeter is subject to performance interpretation.

EXAMPLE 5. Blue Danube in Rothstein’s hypermetric reduction.

Lester questions Rothstein’s idea that the hypermeter here is straightforward and unambiguous. Lester mentions two performances, conducted by Ormandy and Paulik, which he feels project different final hypermetric downbeats. Lester feels that Paulik follows Rothstein’s regular hypermeter, but that Ormandy shifts the hypermeter so that the final cadence (of the section) is accented on the four-bar level.

If hypermeter as straightforward as that in The Blue Danube can be interpreted differently, then there is probably no such thing as unambiguous hypermeter! But does Lester’s disagreement with Rothstein come from a genuine ambiguity in the music, or does it stem from these two theorist’s different understanding of what hypermeter is and how it operates?

Although both of these men are consummate and sensitive performing musicians as well as extremely musical theorists, I do not believe that this disagreement stems from ambiguity or from conflicting cues in the music. Rather, I believe that Lester is not using terminology and concepts the way Rothstein is. Ormandy’s definitive arrival at the end of the section is undeniable, but I would not call it a hypermetric accent. It is a cadential accent, what I have called a rhythmic accent and Lerdahl and Jackendoff have called a structural accent. It is also a stress, or phenomenal, accent, because of its emphasis in performance. But it is not a hypermetric accent on the four-bar level. It arrives on hyperbeat 3. The stepwise motion in the bass—F♯-G-A across the hyperbarline in second part of Example 5, might suggest that the hyperdownbeat at m. 30 is not so strong, but the entrained habit of the four-bar hypermeasure, plus the surface appoggiatura at m. 30, are too strong to allow the sense of hyperdownbeat to be delayed until m. 32.
6. Metric Realignment

Sometimes a composer is deliberately ambiguous, so that a meter apparently heard turns out to be “wrong” according to its eventual reinterpretation.

EXAMPLES 6 and 7.

Beethoven does this in the String Quartet Opus 74, opening of the finale. At first we may think we are hearing Example 7, but by the cadence in the eighth and particularly in the twentieth bars, we know that Example 6 is being played.

EXAMPLES 8 and 9.

And Haydn does this in the slow movement of the Emperor Quartet. At first we may think we are hearing the music as in Example 9, but by the cadences we know otherwise.

If you do not know Beethoven’s Sonata Opus 14, you probably do not perceive the written meter at first. In fact, let us try an experiment. Try to add barlines to Example 10.


But this case seems fundamentally different from that in Examples 1 and 2. Schumann’s piece can be heard either way, because of factors I have discussed. In the Beethoven and Haydn excerpts, however, the written meter is more or less suppressed until the cadence, at which point the listener must reinterpret in memory the music just heard. But the entire Schumann piece can be heard either way. Once again, I am not saying that both interpretations are equally comfortable or equally interesting, but only that both are possible and—according to what I found playing the two for several groups of students—that performance may not reduce the ambiguity.

These examples (Schumann, Beethoven, and Haydn) may seem rather special, but on the higher levels of the metric hierarchy, irregularities, conflicting cues, and ambiguities are more common. Yet a hypermetric chart must make a choice. Or else the analyst must employ two or more different charts to model an ambiguity, as I do for Example 11.

Some music strings such ambiguities along, one after another, and so numerous charts would be necessary to model different paths through the hypermeter of such music. This would be quite cumbersome.
7. A Fuzzy Approach to Hypermeter?

Furthermore, distinct possibilities may not be equally likely to be heard, and alternative charts do not show which hearings are more comfortable. What might be useful is to adapt from fuzzy set theory the idea of fuzzy rather than strictly binary decisions. We might like to be able to say for example, that Example 1 has a 60% (and Example 2 a 40%) likelihood of being heard as the meter.

Now, I do not mean this suggestion too rigidly or too seriously. I have no idea how such percentages could be calculated, and I suspect that different performances and different listeners would feel different weightings among the various viable hypermetric interpretations. But I do think that once binary choices are made in a hypermetric analysis, the analyst should try to retain an awareness of the possibility rejected and how it might, subliminally or given the right kind of performance support, actually be heard—by some of the listeners some of the time—as the hypermeter.

The idea of fuzzy hypermeter is not totally analogous to fuzzy similarity in set theory. There are numerous degrees of similarity between two non-equivalent unordered pitch-class sets. But a given timepoint is either more or less (or possibly equally) accented in comparison to an adjacent timepoint. But the amount of metrical strength can nonetheless be well served by invoking fuzziness. Consider the often analyzed Sonata Opus 13, last movement, by Beethoven.

EXAMPLES 11, 12, and 13.

The points to which I wish to draw attention are mm. 18-19 and 44-45. There are reasons why someone might hear the downbeat of m. 18 as more strongly accented than the downbeat of m. 19, as shown in the chart in Example 12. Conversely, there are reasons why the downbeat of m. 19 is heard as metrically stronger than the downbeat of m. 18, as shown in the chart in Example 13.

The reasons: measures have been paired (except for the metric overlap at m. 12) since the beginning of the movements. In other words, the hypermeter on level B has been consistently duple. Thus we expect m. 18 to be strong on level B. This expectation is reinforced by the discontinuity (the silence in m. 17) and by the change in texture, and by the fp at m. 18. However, despite the many contrasts at m. 18, one thing does not change: the harmonic root C. There is a three-measure prolongation of C-based harmony in mm. 16-18, followed by a harmonic and textural change at m. 19. This initiates a new series of paired measures, as texture unites mm. 19-20, 21-22, and 23-24 as potential level-B hypermeasures. If we hear these hypermeasures as functioning on level B, then in retrospect we must understand m. 19 as stronger than m. 18 metrically, and therefore mm. 16-18 as a three-beat hypermeasure on level B.
This is a moment of hypermetric ambiguity. We can be aware of the factors pulling us toward both of these hearings, but we can actually experience only one or the other at one time. How the performer feels and projects the passage can be persuasive. In this recording Richard Goode clearly feels m. 18 as more strongly accented metrically, which he projects by delaying the attack on m. 18, thereby making it harder to hear m. 18 as part of a three-bar hypermeasure that begins in m. 16.

It would be useful to have an analytic methodology that allowed us to take note of two alternative ways to conceive the metric accentuation at this point, and to show that one way is perhaps more comfortable than the other and that the more comfortable way is the way Goode plays it. In terms of a fuzzy approach, we might say that the m. 18 downbeat is stronger by, say, 60% to 40%, but in Goode’s interpretation the balance is tipped much more in favor of m. 18 as stronger.

In the later passage, there are reasons why we might hear the m. 44 downbeat as stronger than the m. 45 downbeat (Example 12), and reasons to the contrary (Example 13):

The reasons: m. 43 contains a definitive cadence, and hence m. 44 seems to begin a new passage. This new beginning suggests hypermetric strength. The change of texture at m. 44 supports that measure as hypermetrically strong. That would mean that the four-bar hyper measures on levels C—mm. 33-36 and 37-40 are followed not by another expected four-bar hypermeasure but by a truncated three-bar unit, mm. 41-43. Subsequently, on level B, we have paired measures. The subsequent hypermeasures are mm. 44-45, 46-47, and 48-49. The expected two-bar hypermeasure beginning at m. 50 overlaps with a new hypermeasure at m. 51.

These truncations and overlaps disappear in favor of a greater hypermetric regularity, however, if we understand m. 45 as metrically stronger than m. 44. The sustained chord in m. 45 helps support this hearing. This hearing means that the level-C hypermeasure beginning at m. 41 is indeed four bars long, as expected: mm. 41-44. We subsequently hear three two-bar hypermeasures on level B: mm. 45-46, 47-48, and 49-50, which then continue without overlap into m. 51.

Goode’s performance seems more neutral in this instance than it did at m. 18. For whatever reason, he seems not to be projecting one hypermeter unequivocally over the other. The crescendo he takes in m. 44 is not definitive: a crescendo could be from metric strength to metric weakness or the reverse. In this case a fuzzy weighting might be closer to 50-50.

These kinds of ambiguities might seem to be more acute on higher levels of the metric hierarchy. Indeed, on the surface level the written meter is often taken to be the final arbiter. If someone hears meter functioning against what is written, we might say that such a person is hearing wrong. Such an accusation may or may not be justified, but we would be unlikely to say that a disagreement over the hypermetric structure sorts out into one hearing being correct and the other not. We have seen examples of com-
posers deliberately playing against the written meter and then resolving into the written meter. Displacements in much tonal music, particularly that of Schumann and Brahms, often work in this manner. Once again, though, it would be useful to have a way of modeling such ambiguities and of weighting the conflicting factors.

8. Hearing the Wrong Meter

Finally, here is an example in which a hearing seems to be wrong on a basic level.

EXAMPLE 14.

When I was first learning Saint-Saens’ Third Symphony, I misheard the meter—not just where the downbeats are, but where the beats themselves are! As the music goes along, my adolescent hearing becomes less and less tenable, and eventually must be abandoned. When I was 13 years old and listening to this music, I must have been ignoring at first and then later discounting the wind and horn chords. But I got into the habit of hearing this music’s meter wrong, and even today, many years later, I cannot completely shake off that old habit.

I bring this up to show that even a metrically clear performance may not be sufficient to project one particular meter (in this case the written barlines). I also want to demonstrate the power of the listener’s mind actually to hear—to experience—a meter that surely was not in the composer’s mind nor in that of the performers. The factors that support my hearing are few and tenuous—except for the force of habit. The factors supporting the written meter are undeniable.

9. Conclusion

We music theorists have heard calls for paying more attention to music as heard and to focus less on musical scores in our analyses. Questions of meter and hypermeter certainly encourage us to listen to what we analyze, and to analyze what we hear. We also sometimes (but not often enough!) hear pleas to pay attention to what performers do, to treat a performance as a musical text worthy of musical analysis, not just as an interpretation of a musical text. I am suggesting an additional step: to consider the listening process, and along with it the differences in perception and cognition among various listeners, as something worth our analytic attention. Music psychologists have been asking for more emphasis placed on the study of listening. Postmodern theorists, including some new musicologists, are also—from a quite different perspective—calling for more attention to be paid to the listener. What I hope to have shown in this talk is that our theoretical concepts of meter and hypermeter offer an excellent context in which to
study perceptions along with performances and printed scores, in our attempts to understand the art of music.