One Performance, Multiple Scripts: The Peculiar Case of the Fifth Bar of Brahms's "Double" Concerto

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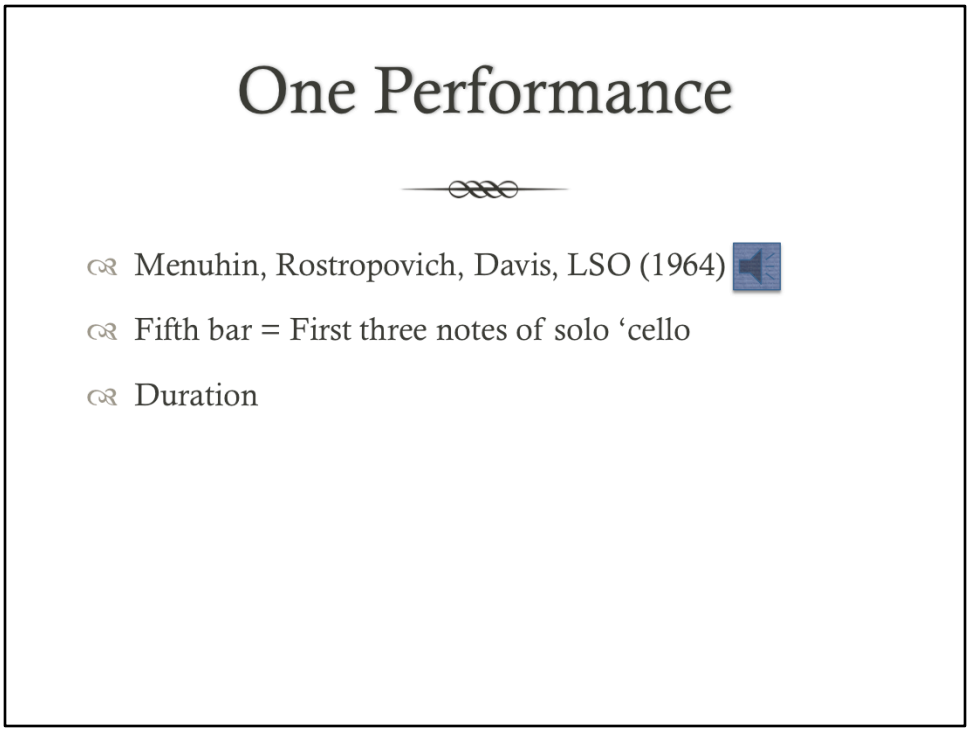
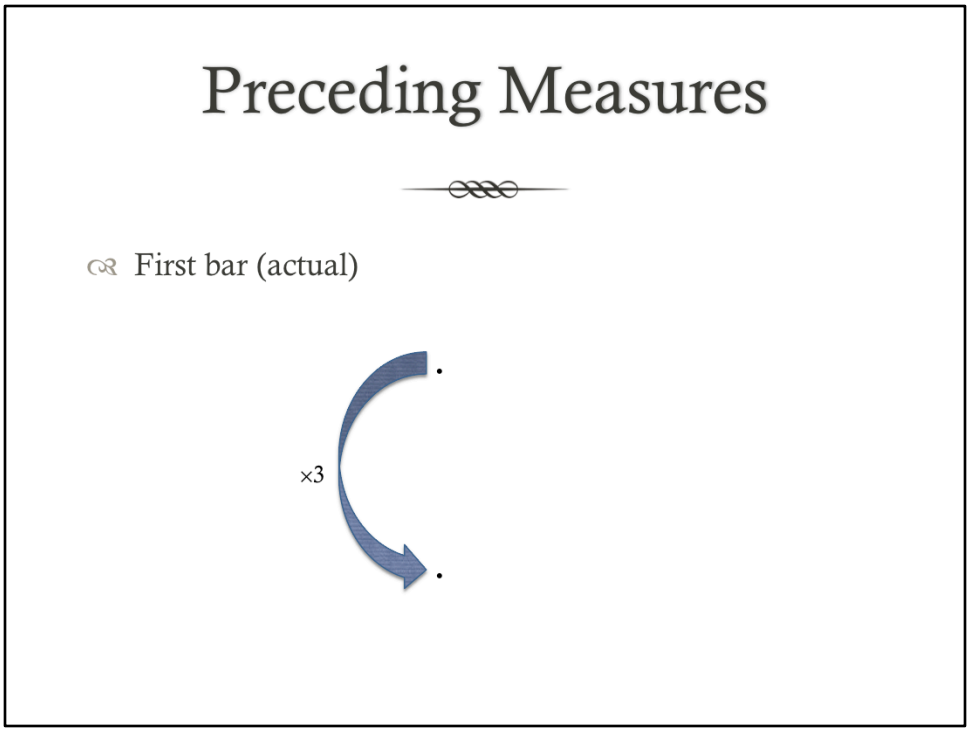
AHRC Research Centre for Musical Performance as Creative Practice
Performance Studies Network International Conference, 14-17 July 2011



It is entirely fitting for self-evident reasons to begin my talk today with one performance, or at least the beginning of one performance, of the Concerto for Violin and ‘Cello, the so-called “Double Concerto,” of Brahms. This is a 1964 performance of the Double Concerto with Menuhin, Rostropovich and Davis leading the London Symphony Orchestra. For the purposes of my talk today, [advance] I ask you to focus your attentional energy particularly on the first three notes of the ‘cello entrance—the titular fifth bar—which, in this recording, will occur about ten seconds after the start. I would further invite you to attend particularly to the durations of the fifth bar. Here we go. [play] So what durations did you experience? What kind of experience did those durations elicit? Those of you who know this work well—or who have read my abstract—may have a preconceived *notion* of these durations’ *notation*, but I ask you to adopt what Edward T. Cone referred to as a *third* kind of hearing. Let us hear it again: it is, after all, the double concerto.

What guides our identification of the durations in this fifth bar? Our identification is guided by, among other things, the measures that precede the ‘cello’s three notes. By “measures,” I’m not reverting to the American synonym for “bars”; rather, I mean those standard units of time measurement, especially those that are supported through periodicity and thus become metrical, which listeners use to gauge succeeding timespans.

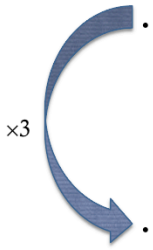


I want to take this short orchestral introduction bar by bar: a metrical analogue, if you will, to Gottfried Weber's analysis of the opening bars of Mozart's Dissonance Quartet (this was the work Zelia was referring to in her talk earlier this session); yes, it will be equally deliberate. However, I have ulterior motives for this unhurried exposition. One of those motives I'll disclose now: I will be initially replacing conventional durational and metrical notation with a combination of animated and geometric approaches. By keeping, at least at the outset, the trappings of time signatures and traditional timespan symbols at bay, I'm cutting very close to the heart of my point today, as I hope you'll see later.

The first bar displays the triple ratio between the two inter-onset intervals in the first bar; I am therefore arranging the two pulses vertically. [show a few times and sing] [remember to arrow back to replay the animation]

Preceding Measures

- First bar (potential)

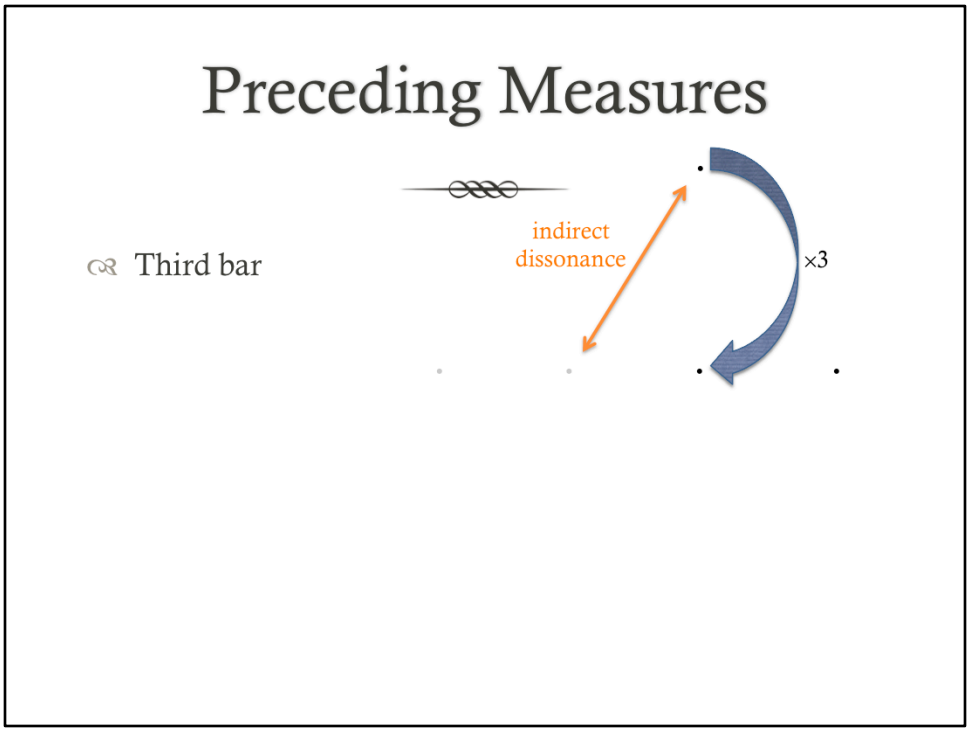


Again, for those who know this work, pretend you do not: this first bar and this triple ratio could well be establishing a component for the primary meter of the work. [play recomposition]

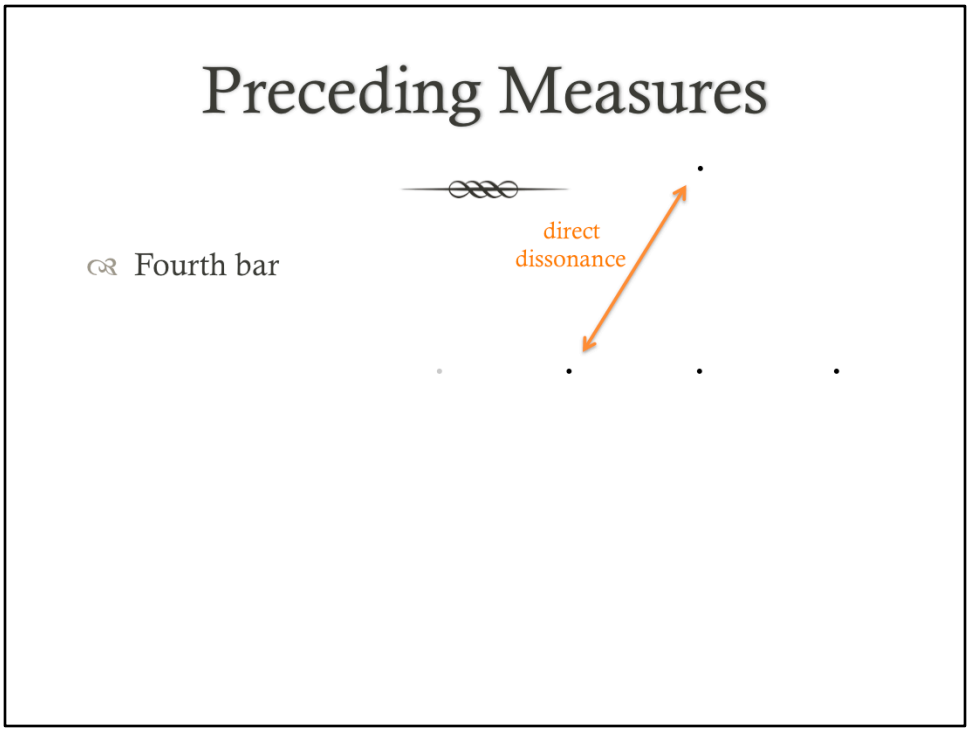
Preceding Measures

- First and second bars

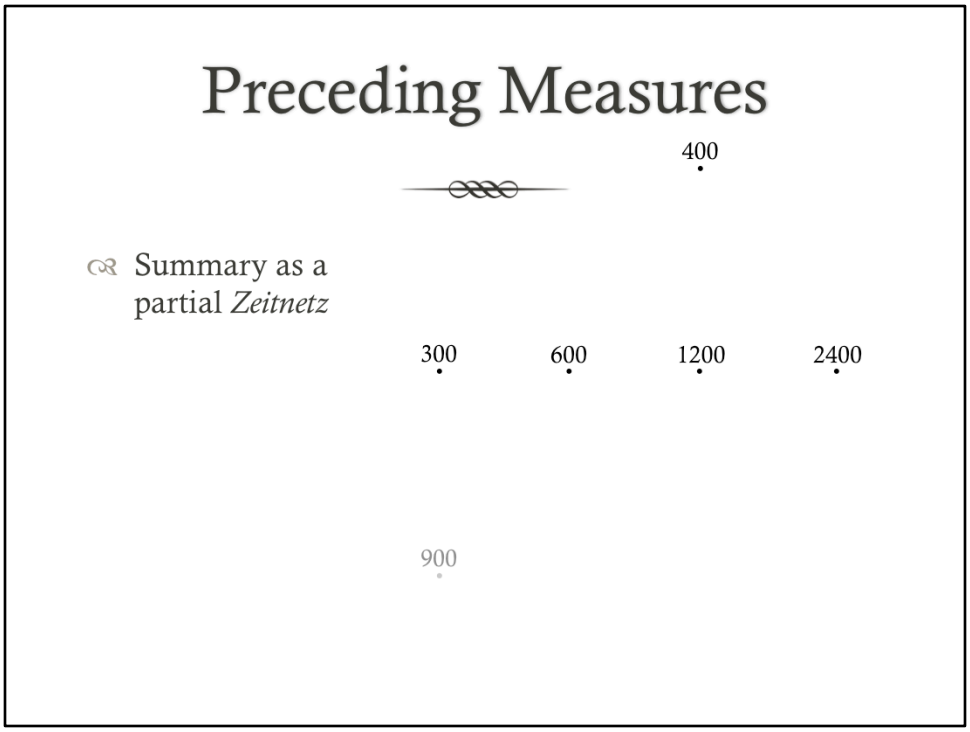
This triple ratio does not become periodic; however, instead, the smaller span groups into twos, which group into twos, which groups into twos. [sing while starting] However, I have left a ghost image of the pulse that created the triple ratio in the first bar.



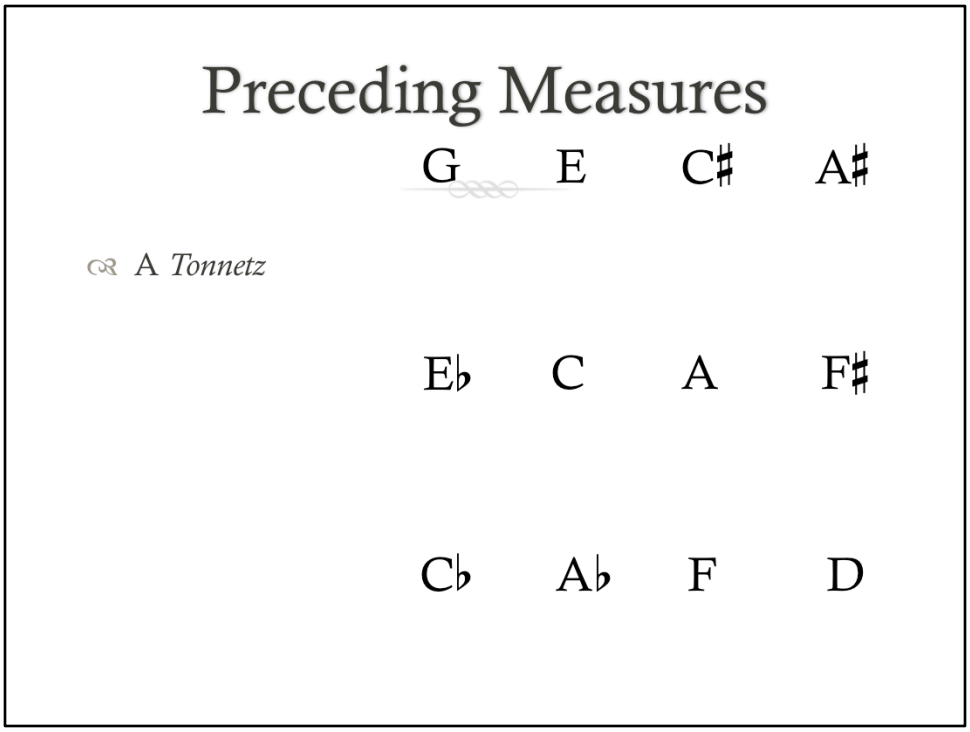
The third bar introduces another periodicity, while the two quicker periodicities lose support. (They are grayed out to show a lingering presence, creating what Harald Krebs calls an “indirect dissonance.”)



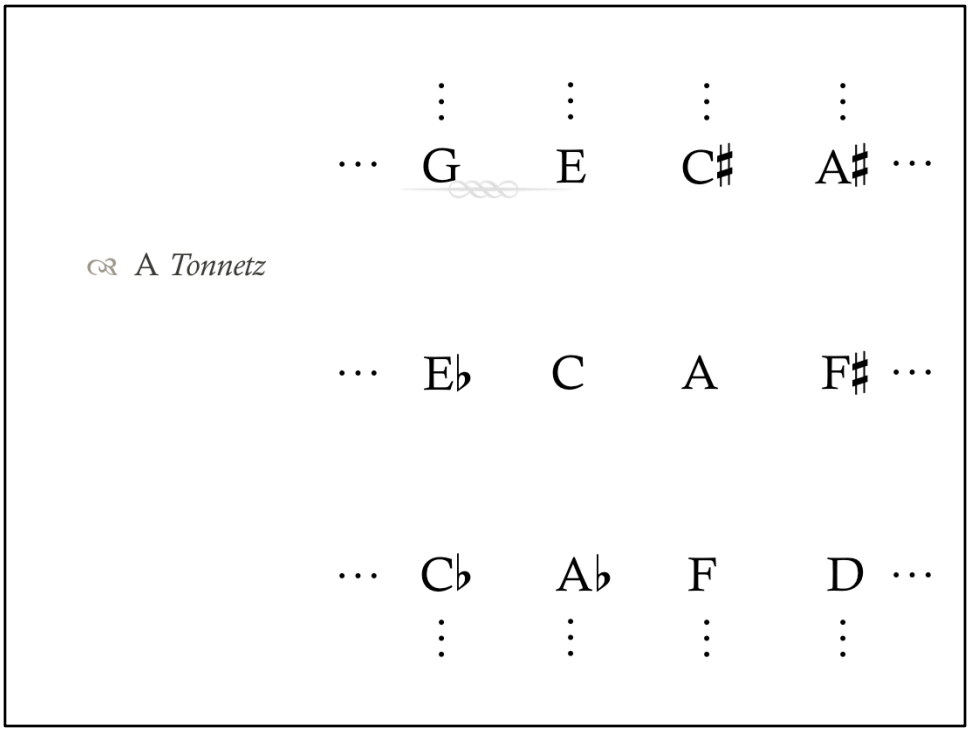
In the fourth bar, a slower periodicity returns in the bass, making the indirect dissonance direct.



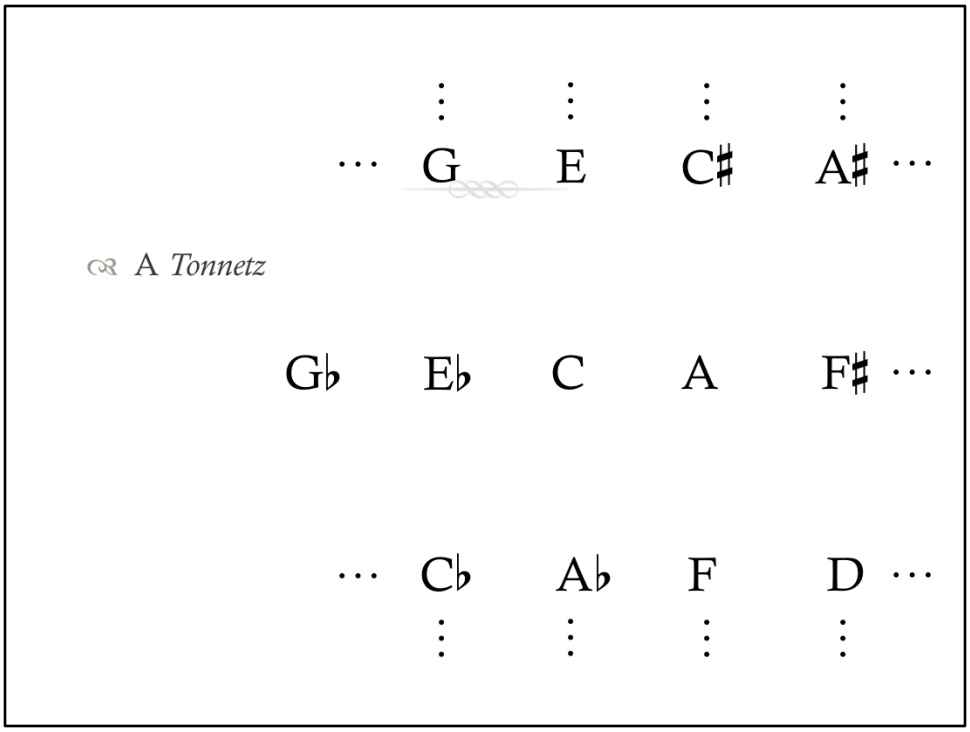
We'll stop the bouncing dots, and indicate their periodicities with the wavelength in milliseconds rounded to the nearest hundred (rest assured that this rounding is but a serendipitous 2% change from the average periodicities of the LSO recording). This method of visualizing the mensural content of Brahms's introduction enjoys a kinship with *Zeitnetzen*, Justin London's name for recent geometrizations of musical meter that resemble *Tonnetzen* in their two dimensionality.



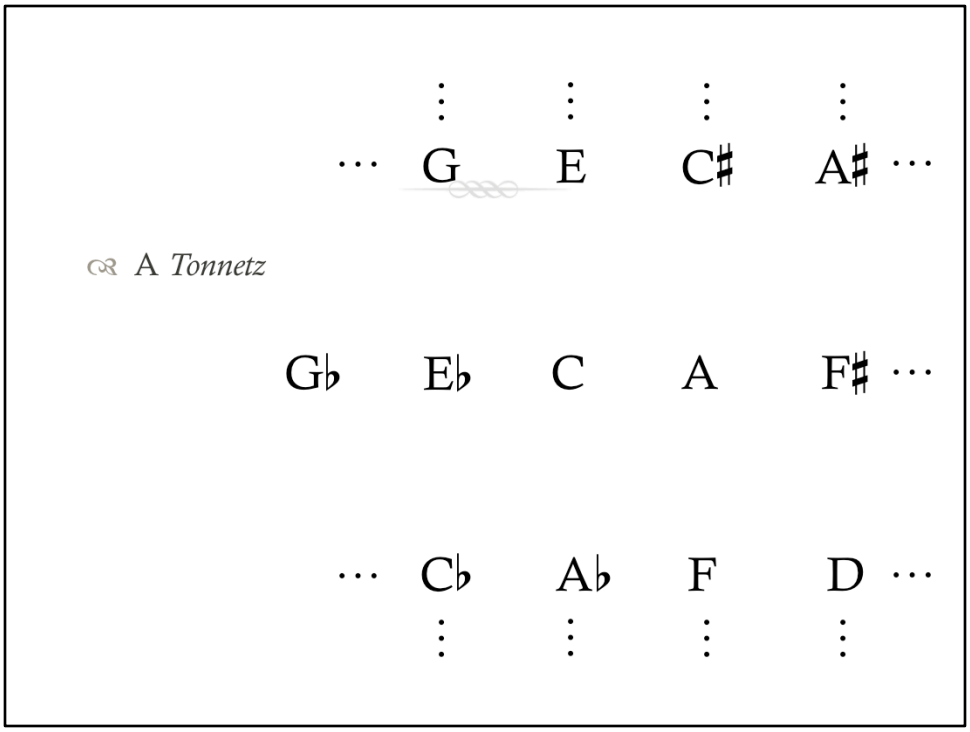
First, a refresher on the *Tonnetz*. Here is one example that arranges pitch classes by minor thirds in the horizontal direction, and major thirds in the vertical dimension.



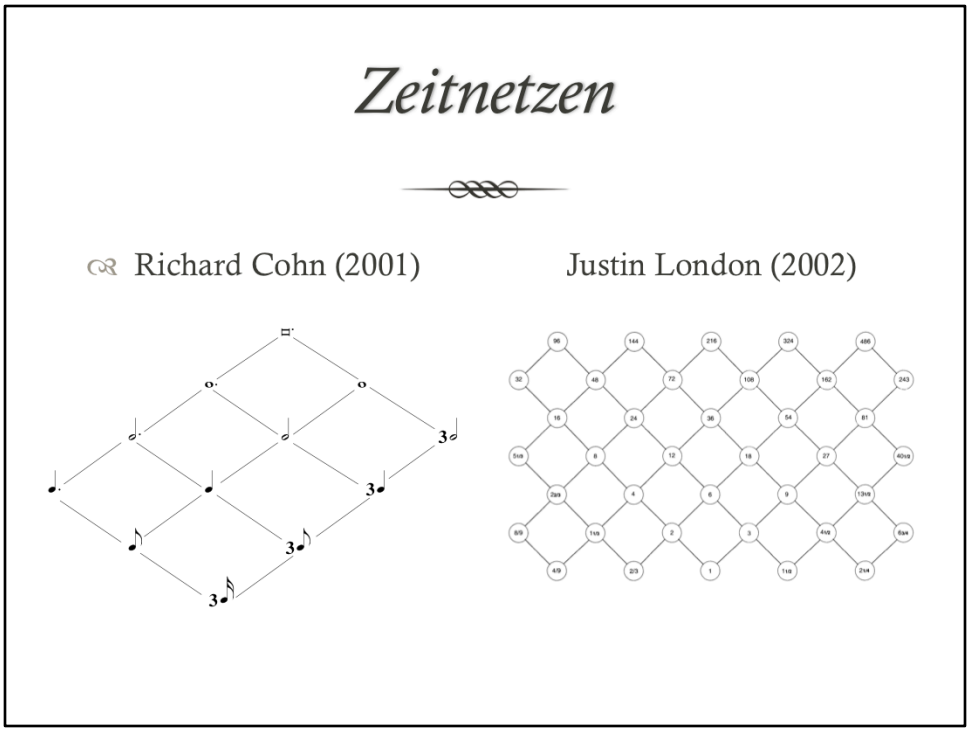
I will initially conceive of this pitch space as those in the nineteenth century did who espoused just intonation, resulting in an infinite plane where…



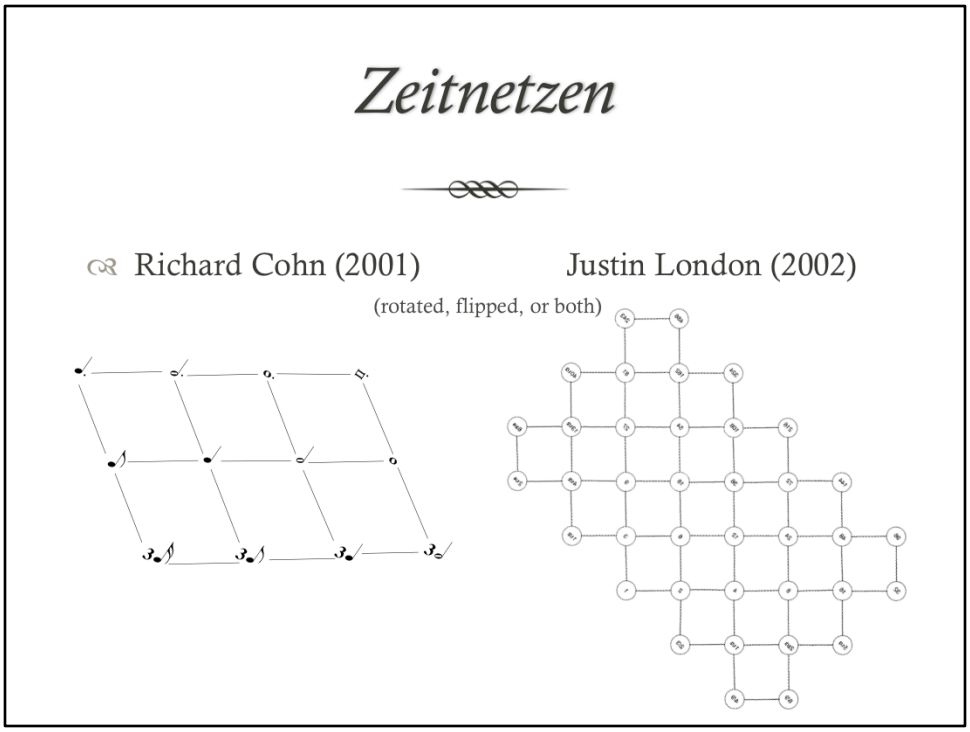
…for example, this enharmonic difference [use pen] between this Gb and this F# also reflects a difference of frequency modulo the octave.



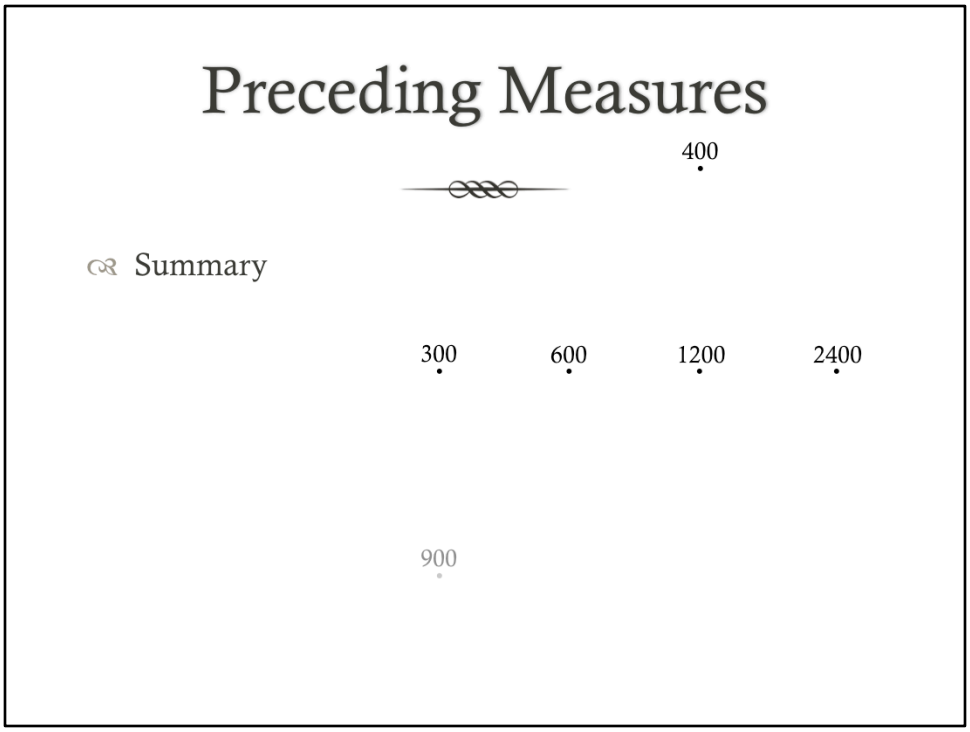
…for example, this enharmonic difference [use pen] between this Gb and this F# also reflects a difference of frequency modulo the octave.



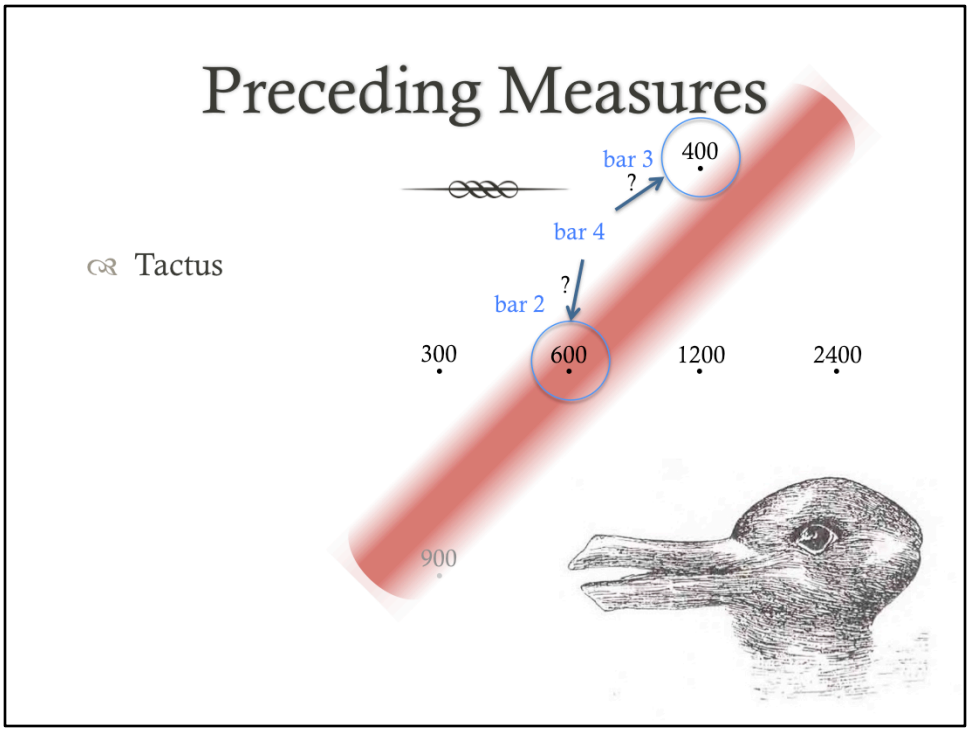
Both Richard Cohn and London have published graphs one could call *Zeitnetzen*. (These were developed simultaneously, without knowledge of the other.) The orientations are different from one another and with mine (comparable to the differences among various *Tonnetzen*)…let's try to fix that…



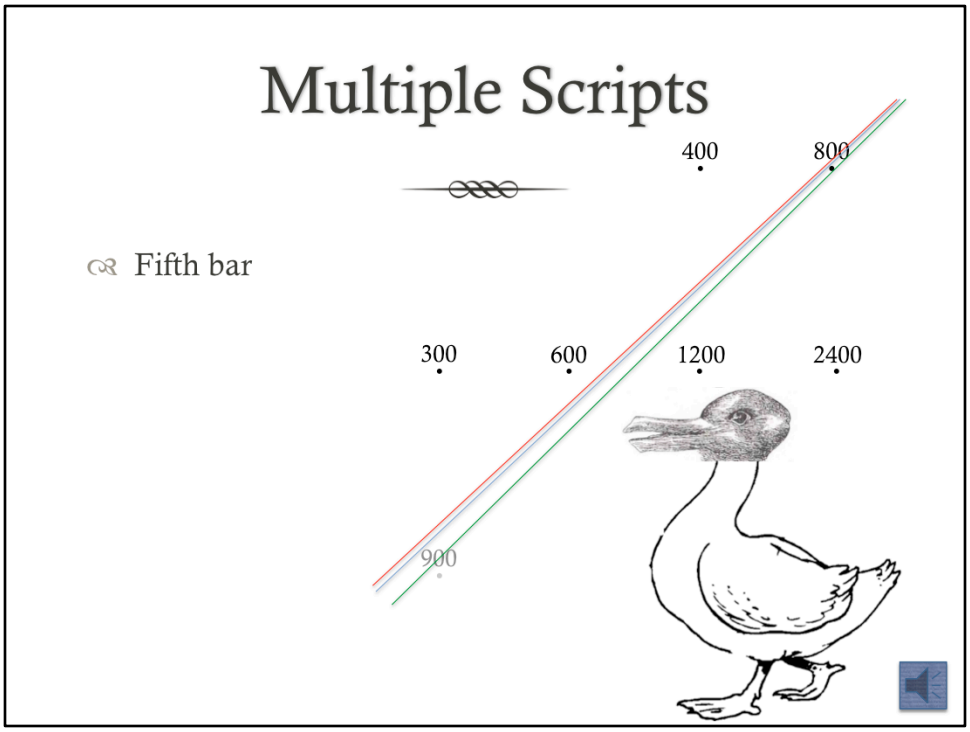
…but the general idea of arranging durations by duple ratios along one axis and triple ratios along another axis remains the same. (The graph of Cohn's shown here uses traditional notation, but we won't go there just yet…)



The fifth bar is peculiar, as I will discuss shortly—I promise!—but there is something peculiar about this introduction as well: its surfeit of conflicting metrical options. Seldom does one find in music by even such a notoriously metrically dense composer as Brahms such a wide array of metrically-potential durations in such a short span of time, especially a beginning, of all times!

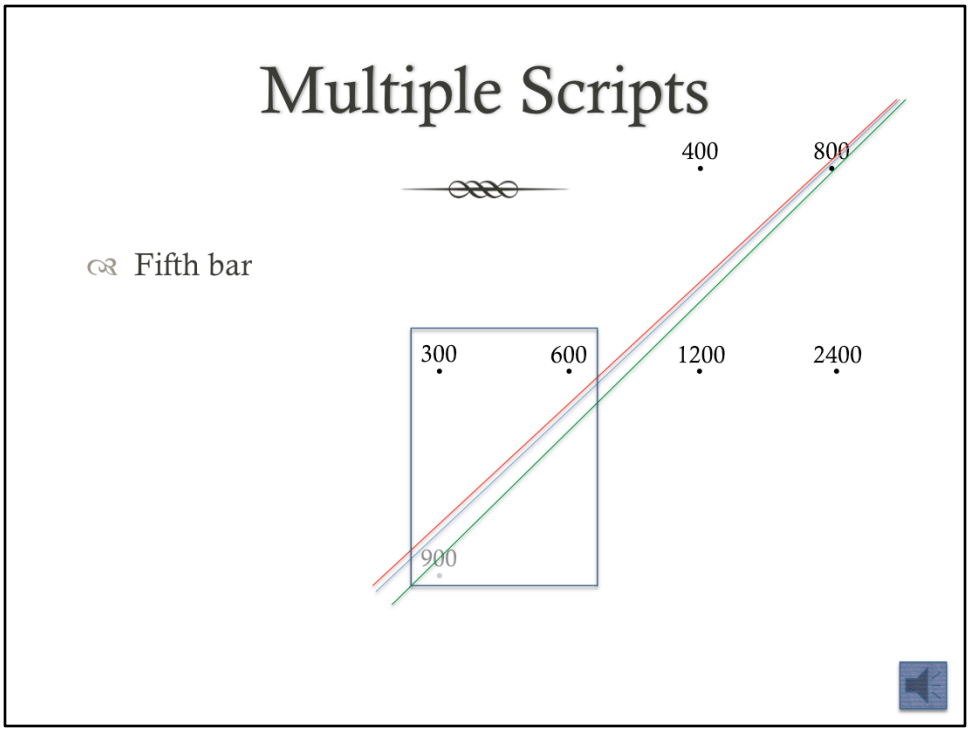


In particular, the listener's identification of a tactus, the important referential pulse that ideally falls between 500 and 700 ms, is caught up in the equivocation. In the 1964 recording played earlier (and 31 of the other 37 recordings I surveyed in this research), the two pulses creating the conflict and the extent of the Zeitnetz along the triple dimension—the 400 and 900 ms pulses—are the next two best candidates for the tactus after the 600-ms pulse. This competition for tactus is especially heated between the 400 and 600 ms pulses, as they are both periodicities and each is successively presented [step through animations] as a uncontested tactus before being pitted together head-to-head in the direct dissonance of bar 4. This makes measure 4's experience of a tactus, and, by extension, the entire experience of meter extremely convertible, as if it were almost designed to make the two possible tactus periodicities *almost equally* optional, while not *simultaneously* optional, not unlike a familiar visual stimulus: the rabbit-duck picture.



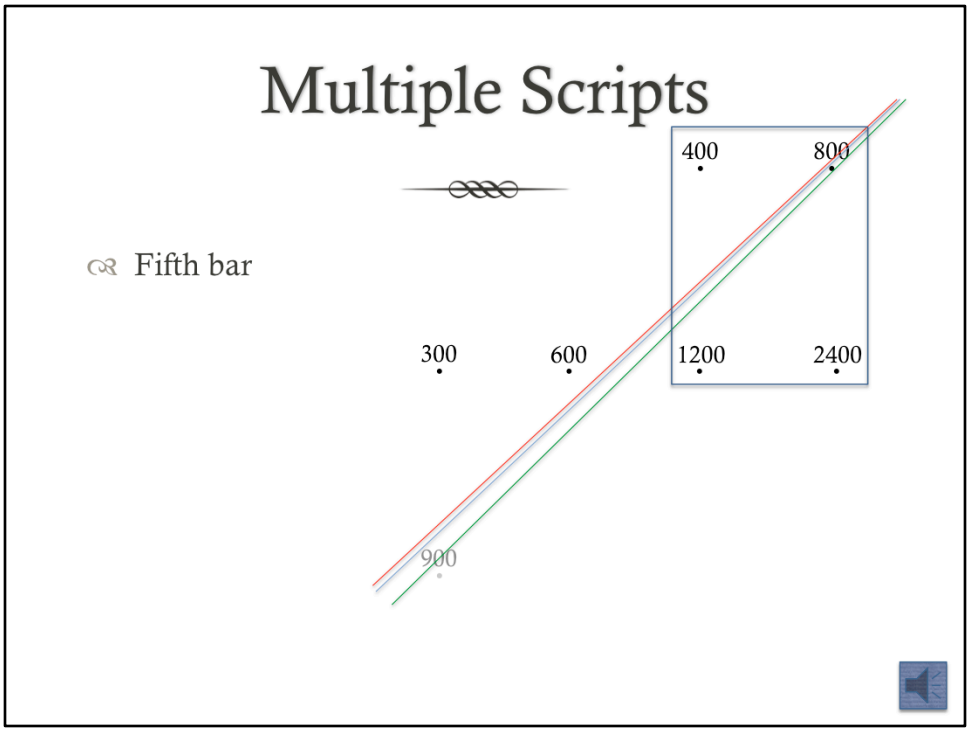
All of this leads us to the fifth bar. Here are geometric approximations of the three durations from the fifth bar to the downbeat of the sixth bar. [play again, animate one line after the other] The durations are represented as lines instead of points because they represent a collection of metric possibilities. The point on the line that comes closest to a point on the Zeitnetz or an extension of the Zeitnetz represents its most probable metric interpretation: its metrical categorical perception. In this case, the lines appear to come closest to the 900 ms duration—the first span of the music; hence, in this recording, the first duration in orchestra and 'cello is essentially, prototypically, the same. However, the cello's durations come even closer to a duration that has not been heard yet, let alone been made metrical, and yet this duration is but one vertex away on the current Zeitnetz. I imagine you can easily infer it visually, can't you? This reflects the fact that it can be readily measured in terms of what has already been heard, even though it has not been heard itself. There it is: 800 ms. I would like to invite you to hear the fifth bar's durations in these two considerably different ways, although one (or both!) may be different than the experience you had when I began this talk. The fact that Brahms's introduction is so metrically rich, and the tactus so flexible, allows us to push this precariously balanced duration one way or another off the fence, similar to how I can take our rabbit-duck picture and encourage one of the two readings.

As an aside, you'll notice that the three durations are not exactly the same, as

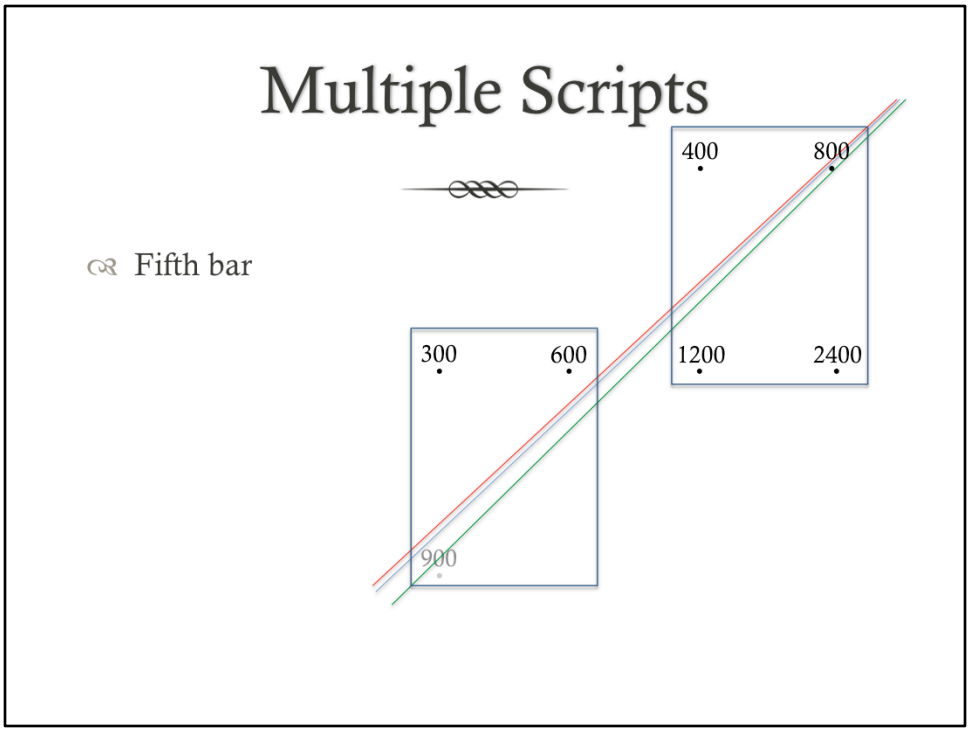


[As an aside, you'll notice that the three durations are not exactly the same, as represented by the slight separation between the lines. Surely we have come to expect and appreciate changes in microtiming in an expert performance. But, allowing for such flexibility, one may still infer the basic instructions, or script, to use a word coined by our esteemed session chair, that has been prescribed to the performer. The close proximity of these durations to one another suggests a high feasibility of inferring the performer's script.]

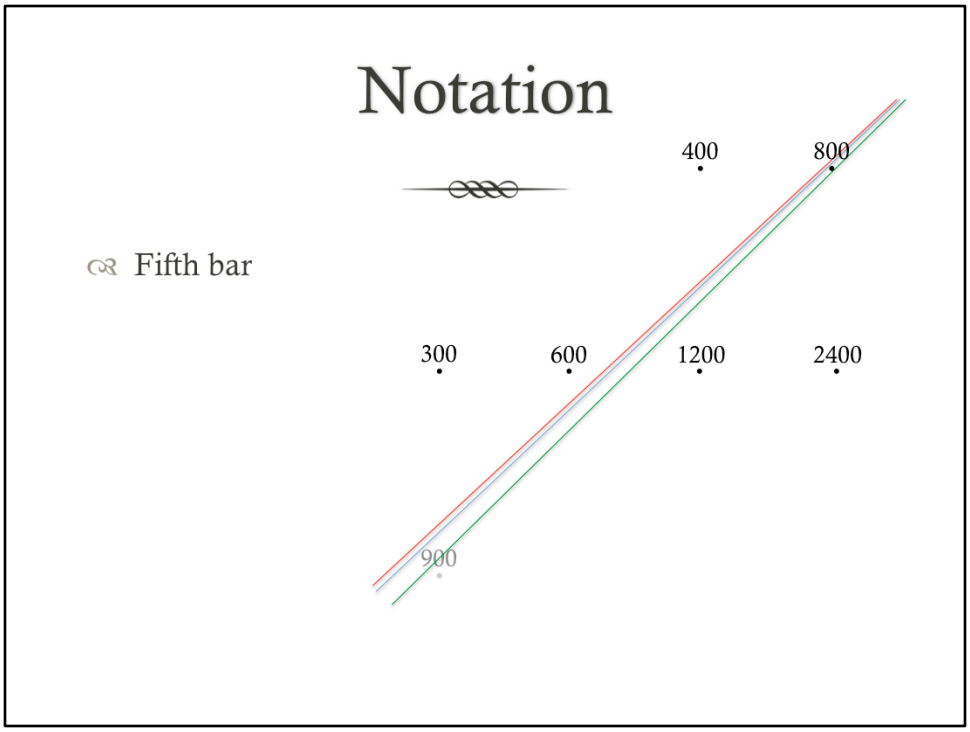
Let us begin with the 900 ms duration. This perception is facilitated by what Andrew Imbrie would call a "conservative" hearing: maintaining the 600 ms pulse as tactus, and perhaps even maintaining the subtactus 300 ms duration, hearing the 'cello notes as three times longer than this subtactus timespan.



Now the 800 ms option. This perception is facilitated by what Imbrie would call a "radical" hearing: switching to the 400 ms tactus in m. 3, maintaining it into m. 4 (I suppose one is conserving one's radical hearing then), and hearing the 'cello notes as twice as long as the tactus timespan.



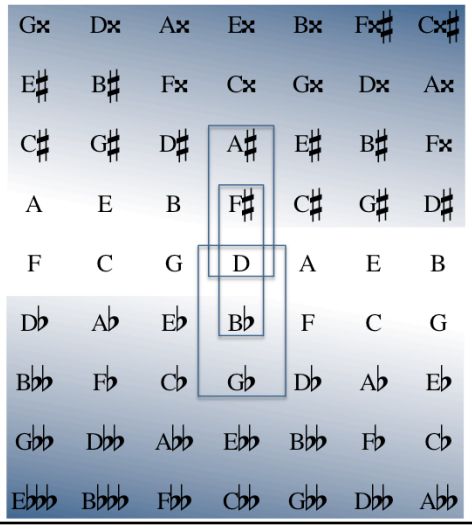
Both interpretations have advantages and corresponding disadvantages. The 900 ms duration was at least heard in the first two measures, although it did not become periodic; as aforementioned, the 800 ms duration does not appear at all in the introduction. Yet the 800 ms pulse establishes a simple 2:1 ratio with a periodicity heard immediately before it: for the 900 ms to do the same, one must work to maintain the 300 ms that receives no support in bars 3 and 4. By tying together bars four and five, the 800 ms interpretation supports Brahms's beloved "linkage technique"—the same rising three notes end one formal unit and begin the next [sing]. Yet the 900 ms interpretation, by relating bars one and five, connects their uses of the unordered D-E dyad [sing: maybe the 'cello will be in inversion?] But these advantages and disadvantages can essentially be placed aside: for my fundamental point is this—this particular duration of bar five, in the metric context of the preceding four bars, can be perceived rather easily in one of two very different but each equally plausible ways, and this, *this* is peculiar.



Before going much further with this idea, it behooves me to bring Brahms's notation into the conversation. However, I am willing to wager that, if you do not know how the concerto's durations are notated, you can made an extremely good guess about it. My confidence in your abilities is perhaps best explained with an analogy between pitch and time. Outside of any tonal context, say, in a twelve-tone work, pitches tend to be notated as close to white notes (and particularly D) on what David Temperley called the "line of fifths," although one can apply the same principle to a two-dimensional arrangement like the *Tonnetz*. Take this set: it's the only augmented triad [arpeggiate it: lots of notes] with only two black notes, pitch classes 2, 6, and 10. How do you conceive of this in terms of letter names? We might say its labeling is delimited by something like what Daniel Harrison has called "pressure zones," which come into play when one moves notated pitches too far in the flat or sharp directions.

Notation

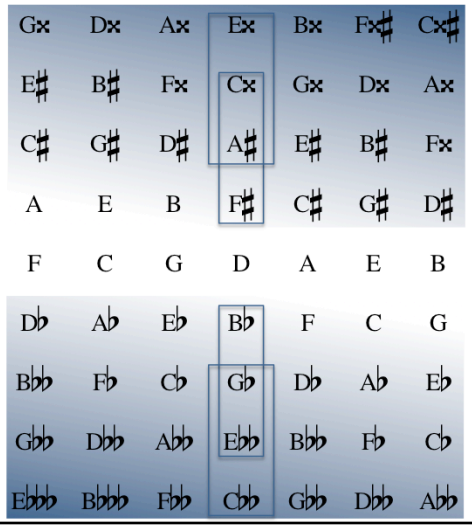
- Harrison's "pressure zones"



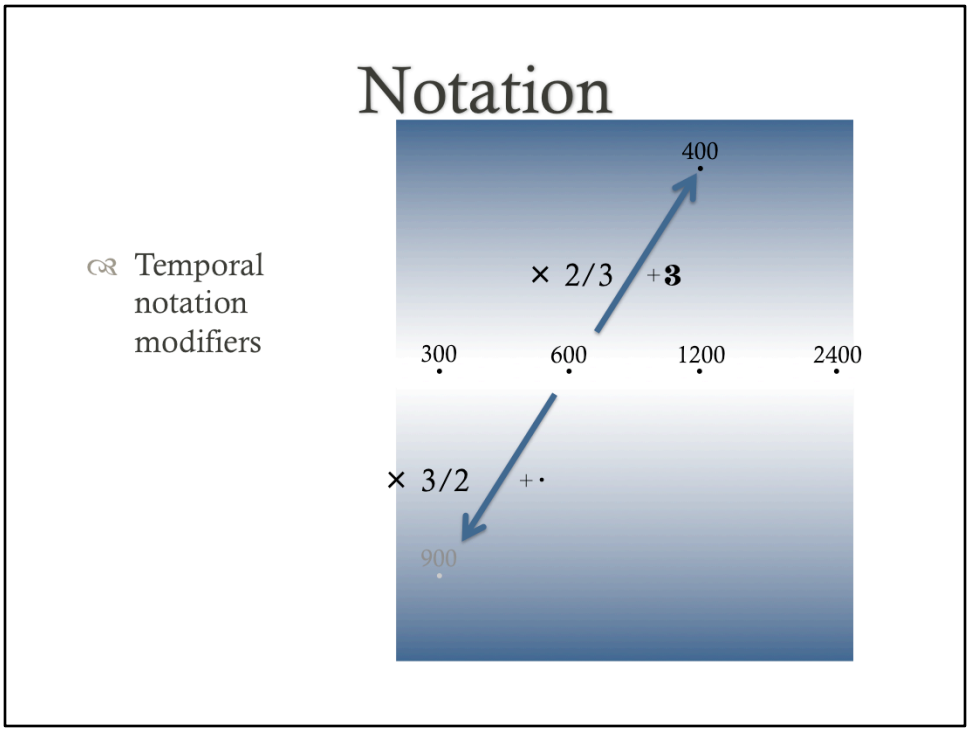
The pressure zones are the shaded portions: the more shaded, the higher pressure to conform to an enharmonic pitch in an area of less shading. I suspect for our augmented triad with two black notes you came up with something like this…

Notation

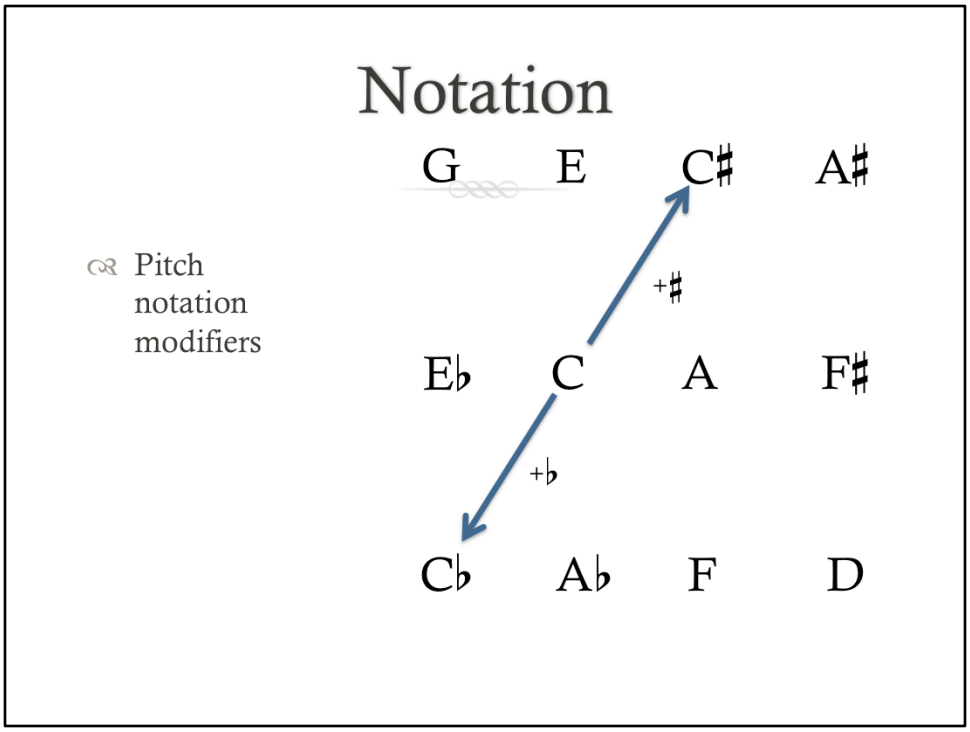
- Harrison's "pressure zones"



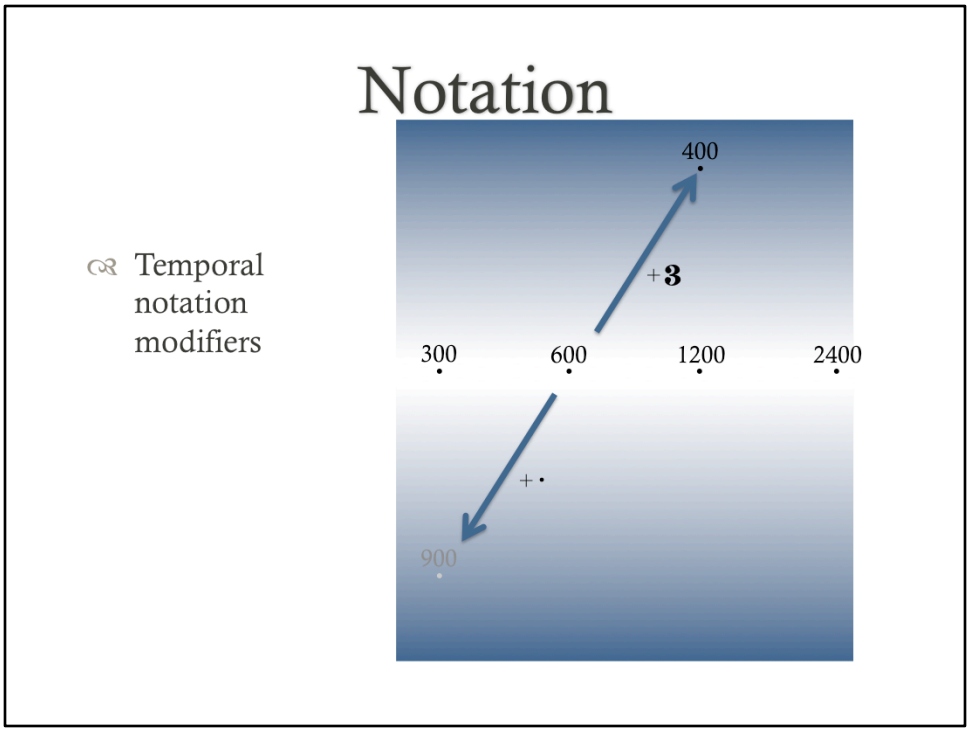
…rather than one of these. Now consider the "pressure zones" wrought by durational notation.



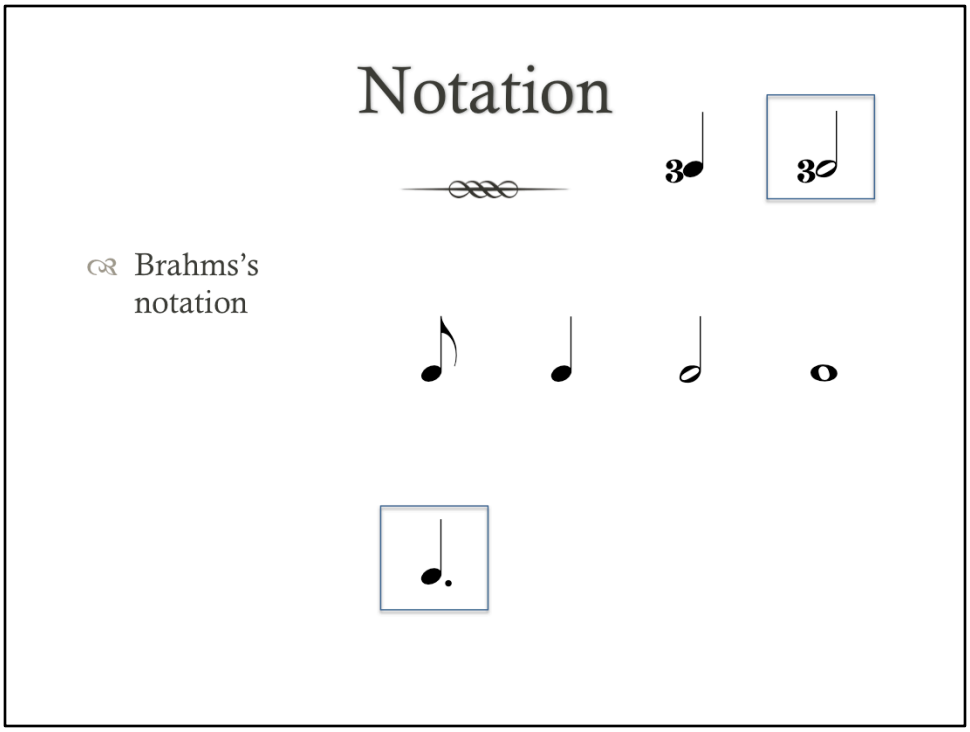
As we know, the addition of a triplet three decreases a duration by a factor of 2/3, while the addition of a dot increases a duration by a factor of 3/2. Actually, the analogy between the sharp:flat pair and the triplet:dot pair is rather thought provoking, at least for me. Both elements in each pair are inverses of one another, and both modify a basic set of notation values, around 7 in each, which represent quantities that are themselves generated by a single ratio.



So, again, comparing the space-generating properties of the notational contraries of sharp and flat…



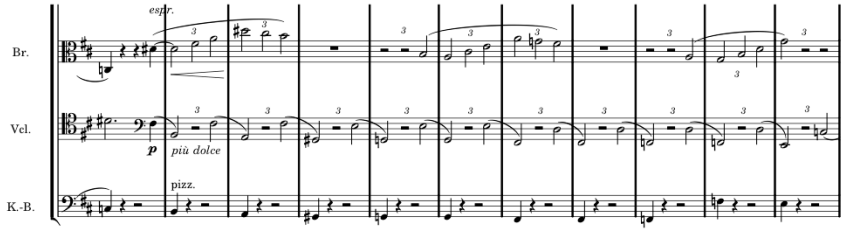
…to the space-generating properties of the notational contraries of triplet and dot. Like double sharps and double flats but even more so, nested triplets and nested dots (not multiple dots—mind you!) are extremely rare. When Brahms's arrangement of durations takes up so much room in the vertical or triple-time dimension, one can be very confident that the middle row will take on those basic values, and the 400 ms duration will be a triplet value, while the 900 ms duration will be a dotted value. Moreover, if one assumes—with good reason—that the tactus is a crotchet, then…



…these are the resulting durational symbols, which match Brahms's notation in the Concerto movement. So there is at least a notational answer: Brahms notates the fifth bar with minims in triplets. [click] As much sense as this makes given the durations in the first four bars and notational pressure zones, we need to keep in mind two things though. First, we experienced the dotted crotchet, previously described as the 900 ms duration, as a feasible interpretation of this recording's fifth-bar durations. [click] Second, minims in triplets, in of themselves, are peculiar, or at least unusual, as this durational division is rare in Brahms's own scores as well as in those of his contemporaries and predecessors. Here are the examples of which I am aware in Brahms's music.

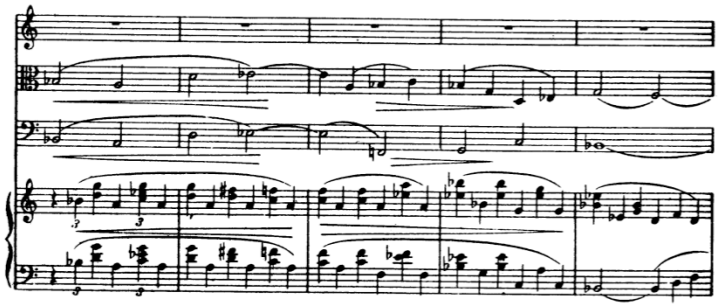
Minims in Triplets in Brahms's Music

- Serenade No. 1, op. 11, I (partial score)



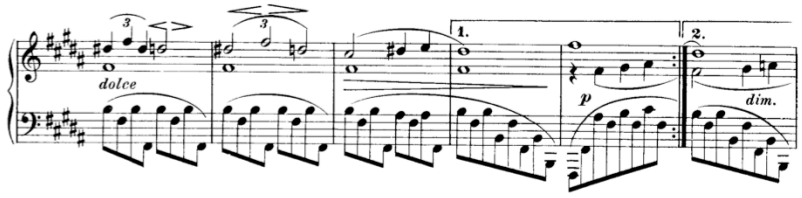
Minims in Triplets in Brahms's Music

- Piano Quartet No. 3, op. 60, IV



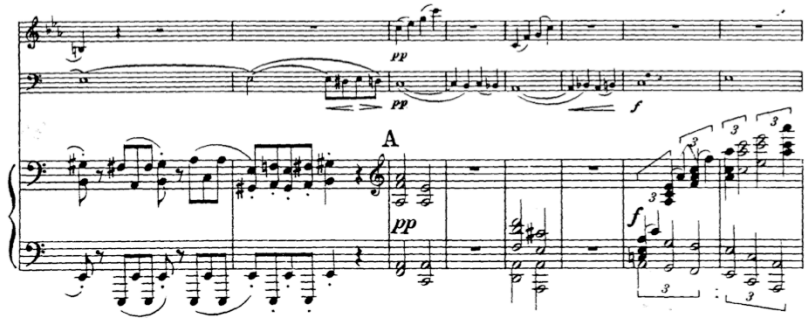
Minims in Triplets in Brahms's Music

- Rhapsody, op. 79/1



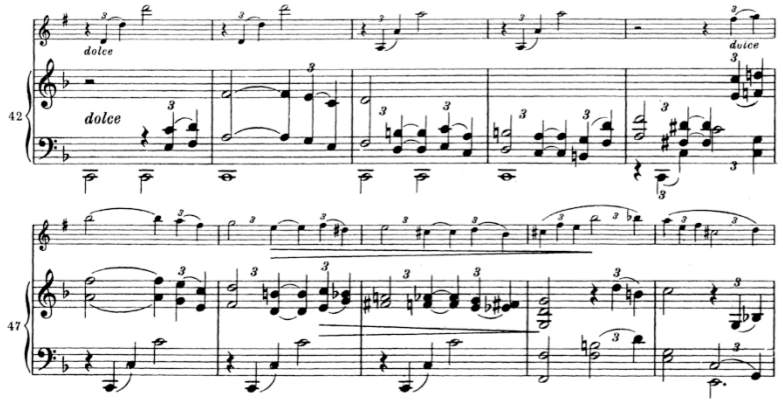
Minims in Triplets in Brahms's Music

- Clarinet Trio, op. 114, I

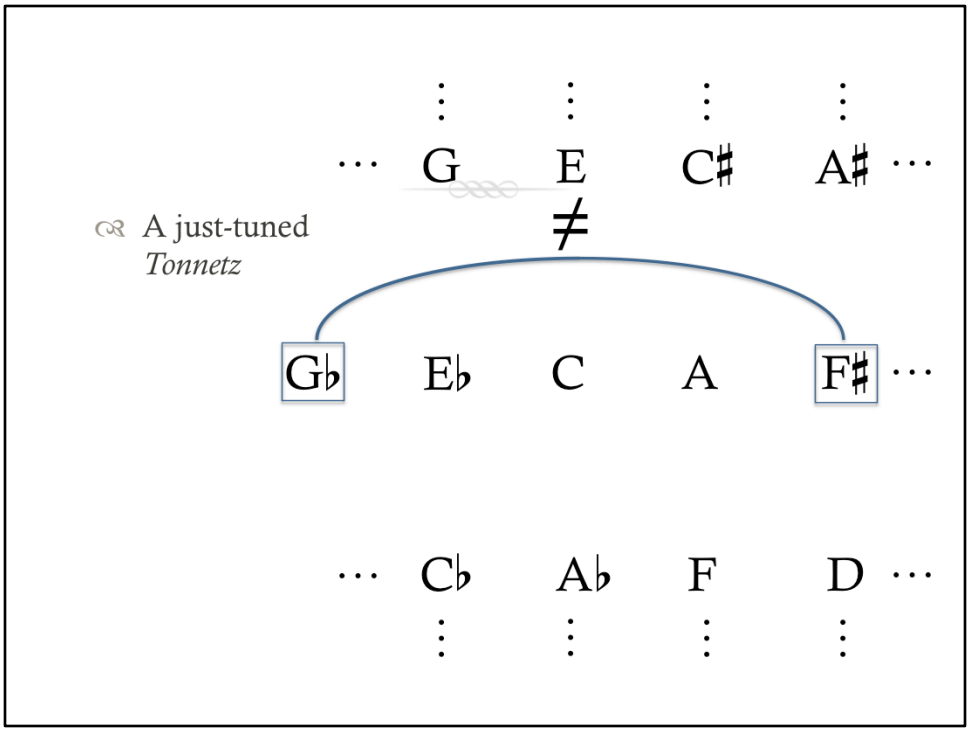


Minims in Triplets in Brahms's Music

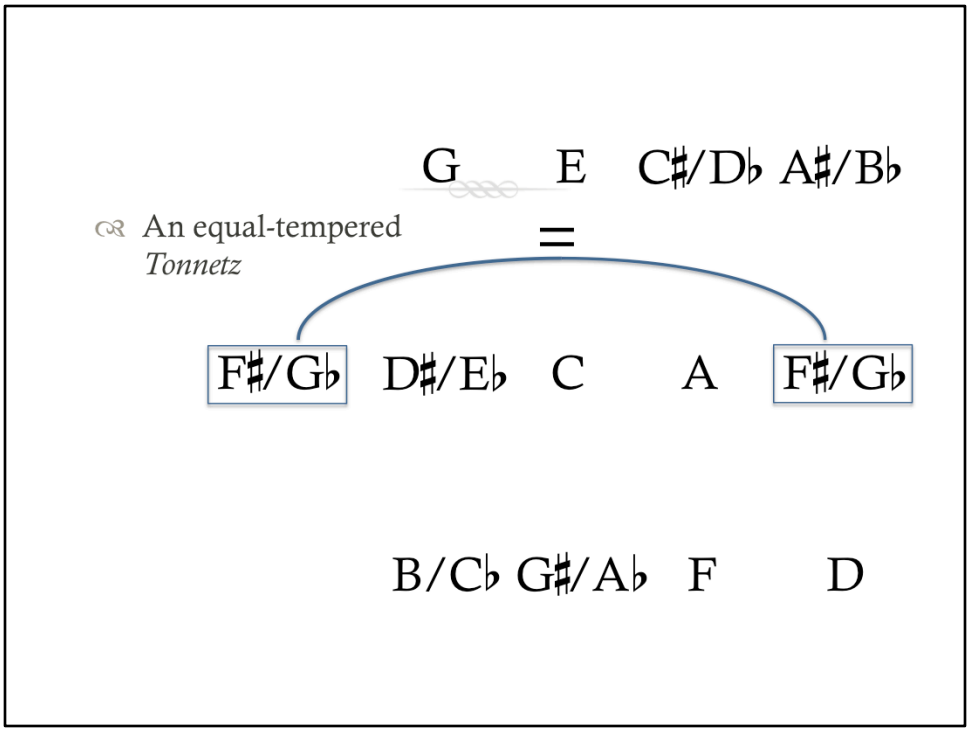
- Clarinet Sonata, op. 120/1, IV



It is important to recognize that the triplet in minims is both notationally and experientially rare. As with the Concerto opening, as I painstakingly tried to demonstrate earlier, the triplets in minims among these other assorted works is also more than just a symbolic artifact: each work establishes a broad extent of durations along the Zeitnetz's vertical or triplet-time dimension. This plus the common use of the crotchet as the tactus and a common tempo fixes the minims in triplets. However, among these isolated uses, the Concerto's minims in triplets are particularly unusual since they are unaccompanied: no other line or even any isolated downbeat attacks are present to make the decision for us whether the duration is in fact minims in triplets or perhaps dotted crotchets. So, once again, I am going to hold notation at arm's length, and suggest that, while Brahms may have notated it as a minim in triplets, its perception, or even its significance and function, could be one of two things, depending upon the metrical context. I imagine the analogy with enharmonicism in pitch is now clear.

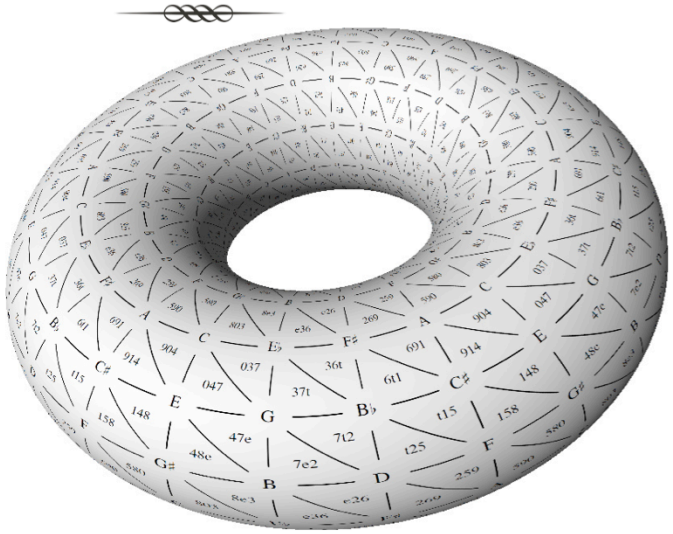


Just as an equal-tempered pitch may be notated and experienced equally in multiple ways, given a certain tonal or harmonic context…

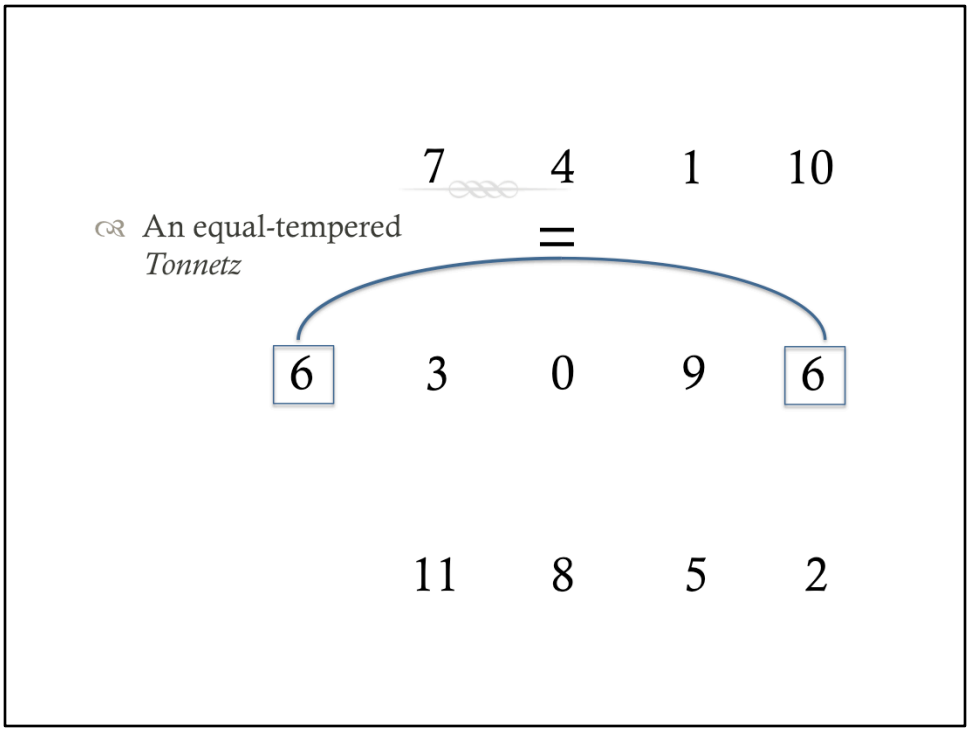


…or just as two differently notated pitches may be considered as equivalent…

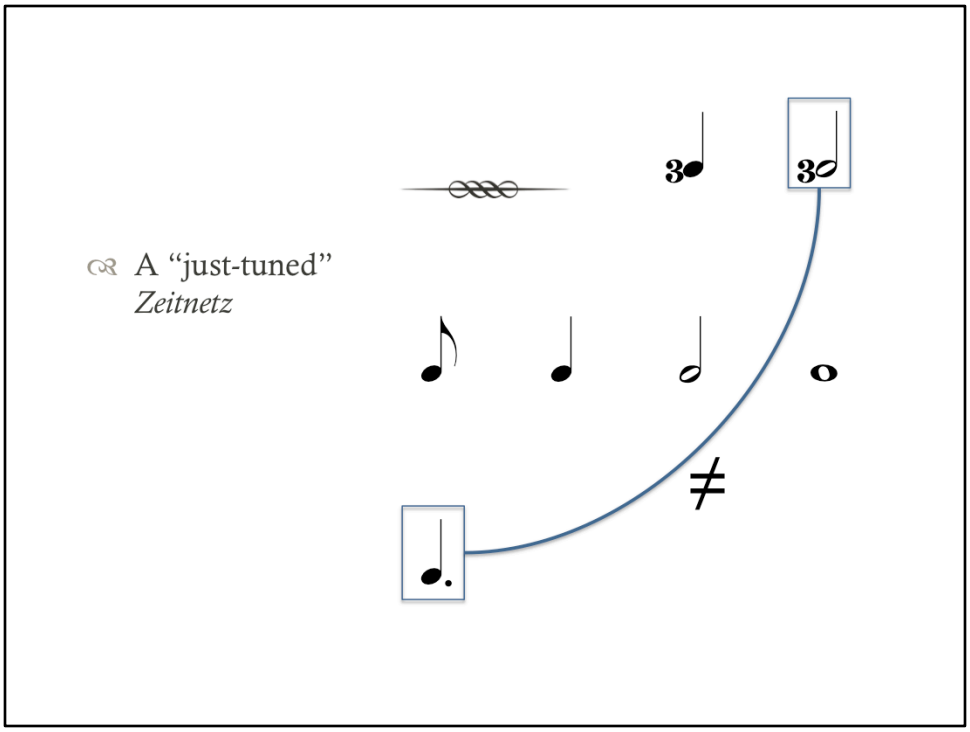
A *Tonnetz*



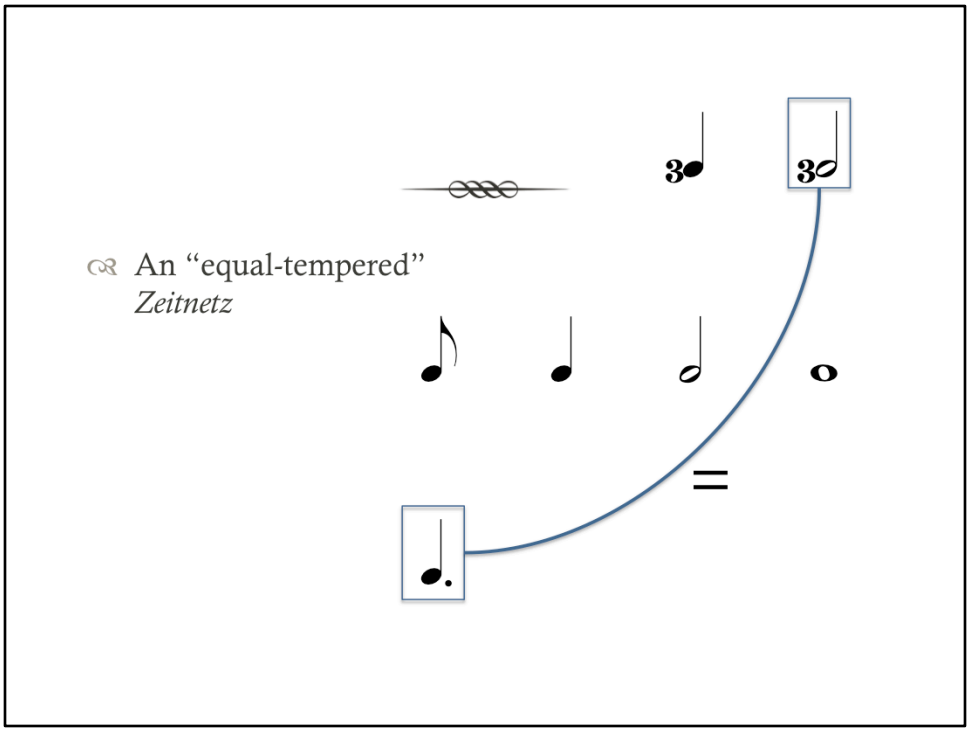
…thus changing the topography of the pitch space…



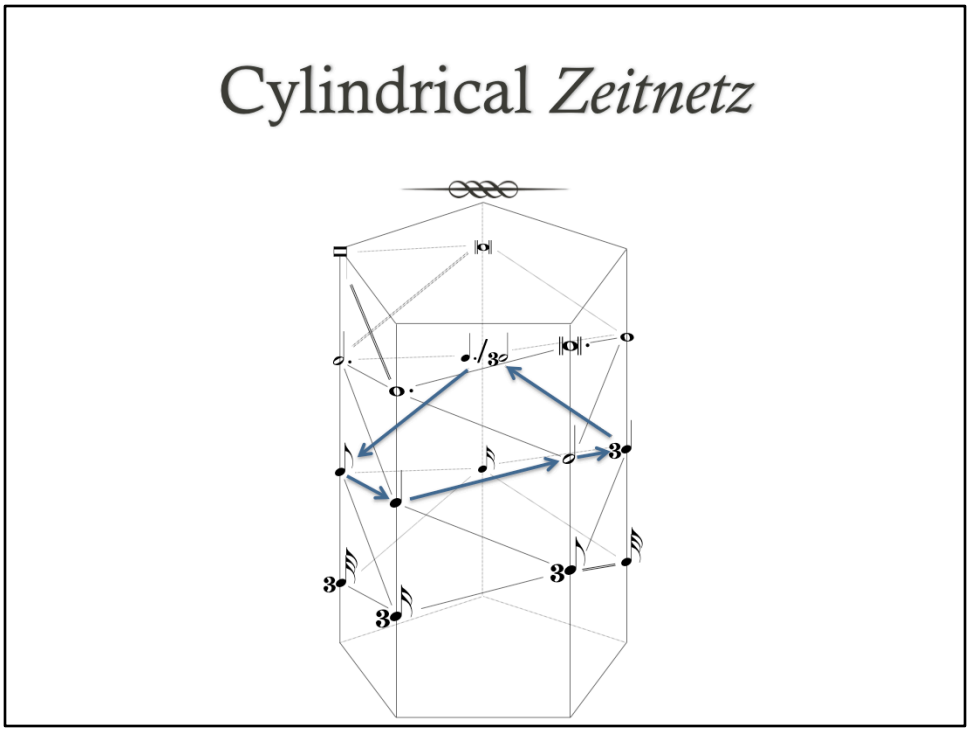
…and perhaps even what symbols we use to represent such events…



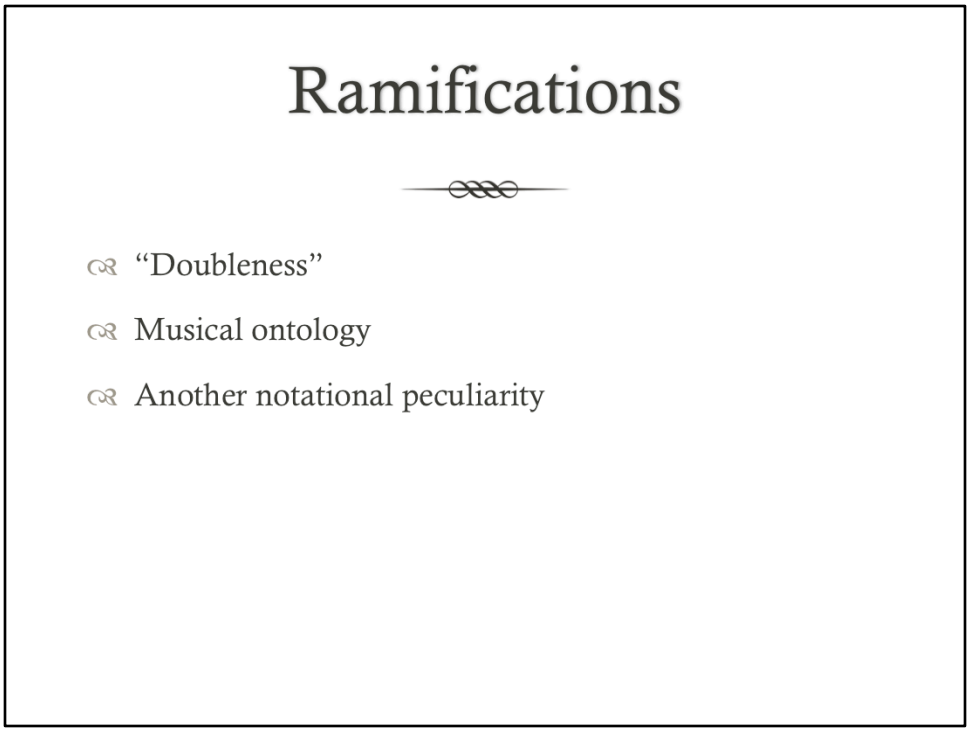
…this fifth-bar duration may be notated and experienced equally in multiple ways, given a certain metric context, which, in this peculiar case, the listener has an unusual degree of freedom in determining…



…or these two differently notated durations may be considered as equivalent…



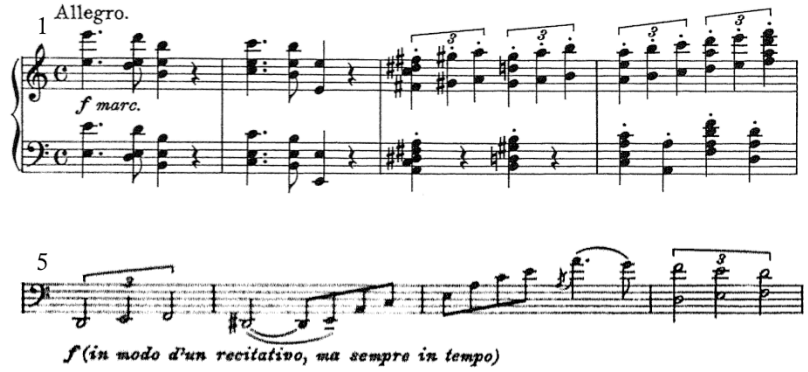
…thus changing the topography of the duration space. The Zeitnetz appropriate for my reading of the Double Concerto may not have the four dimensions of a torus, but it does have the three dimensions of a cylinder. In fact, a full rotation around the cylinder can be used [demonstrate: subdivide last triplet minim in threes and treat as eighth notes] to navigate the opening four bars of the 'cello cadenza. This complicates, but also refreshes, a strictly two-dimensional model of time. In 2002, Justin London has argued that pitch-time analogies are inherently suspect, since *Zeitnetzen* do not exceed two dimensions but equal-tempered *Tonnetzen* achieve three or more dimensions. What you see here musters at least one counterexample to his argument.



[remember to step along in outline on slide] But having two plausible options for perceiving and interpreting the duration of the metric pulse in the fifth bar has several other ramifications, which particularly dialogue with certain hermeneutical angles on the concerto. First, In his 2004 dissertation, Roger Moseley unpacks the common title pf the work: "The self-proclaimed doubleness of Brahms's concerto throws identity into question by raising pairs of concepts or objects that are neither opposed nor identical: the violin and the cello, the first and second subjects, the concerto and the symphony, and even the past and present seem to blur together." The triplet minim and the dotted crotchet would certainly seem to qualify as another such pair. The more precise notion of one thing receiving two interpretations, or two seemingly separate things actually being one, connects well in potentially multiple ways with the autobiographical elements of this work of so-called *Versöhnungswerk or* "reconciliation" with Joachim after an unfortunate falling out. Second, this counters the conventional view from musical ontology that, if there is any many-to-one mapping between scripts and performances, it is that there can be multiple performances corresponding to one script, like the "one type/many tokens" approach used by Julian Dodd. Nicholas Cook, in an article from ten years ago, proposes turning "ninety degrees" the traditional hierarchical stemma that places scores "above" performances, focusing instead on the "horizontal" connections between score and performance when grappling with a definition of a musical work. However, my reading of Brahms's fifth bar turns things 180 degrees, standing on its

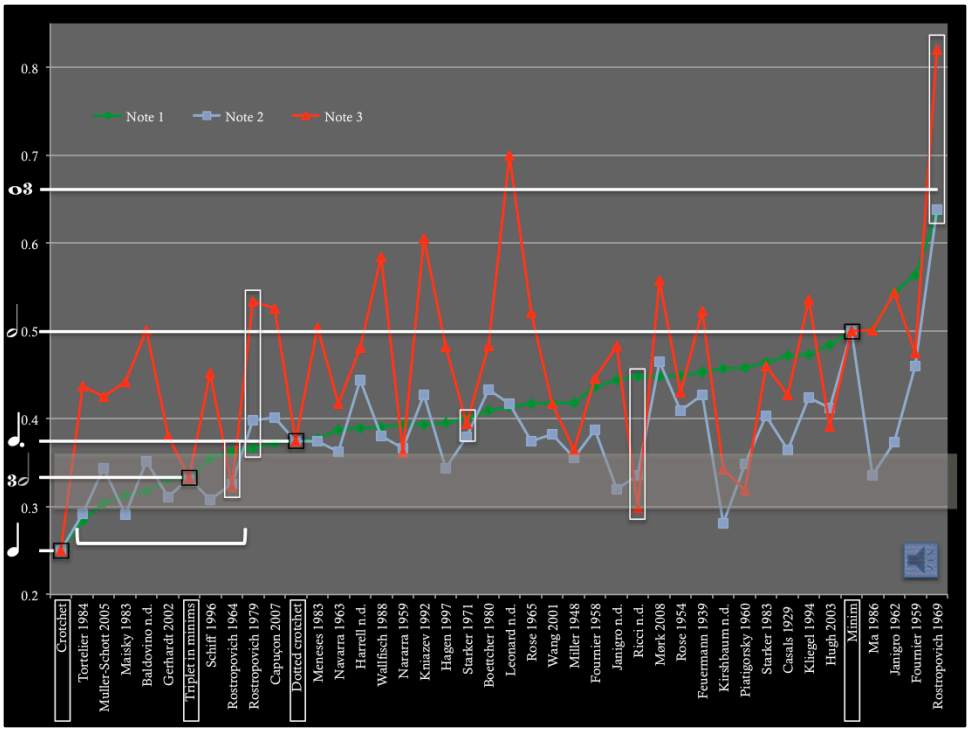
Contradictory Instruction?

- Brahms's score (in reduction)



[However, my reading of Brahms's fifth bar turns things 180 degrees, standing on its head the traditional "one score, many performances" situation and instead offering a situation where one performance can suggest multiple scripts. Third and last, there is yet another peculiarity in the opening five bars of Brahms's concerto, one that this metrical analogue to enharmonicism may illumine, and it starts with an apology. I haven't revealed all aspects of Brahms's script.]

Here is a reduction of the first five measures. [read performance indication] If, by "in tempo", this instruction refers to the tempo established by the four-bar orchestral introduction, and allows for up to a ten-percent divergence from this *tempo primo*, then thirty-two of thirty-eight commercial recordings of this concerto released over an eighty-year period include a 'cello cadenza that, right at its outset, contravenes the second half of Brahms's directive.



I'll make this claim with the following graph, which summarizes the fifth bars of 38 different performances ranging over 80 years from Casals in 1929 [third to left from minim] to Mork in 2008 [a little farther to left] ordered by the length of time of the first note.

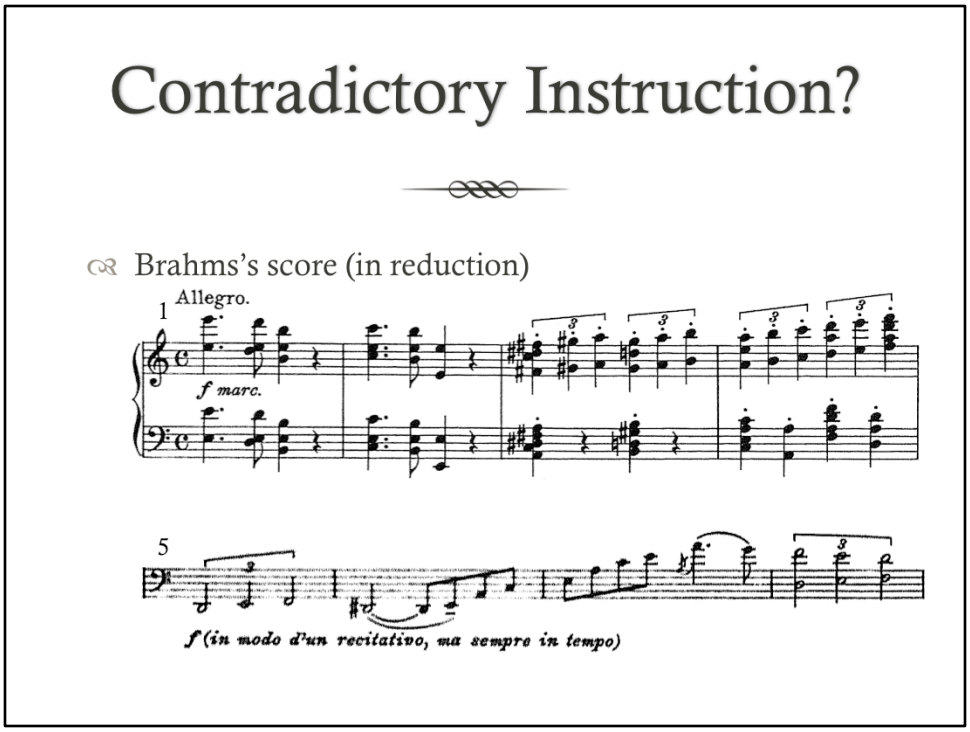
As before, the green line is the first duration, the blue the second, and the red the third.

These values are not absolute durations; rather, they are relative to the opening tempos. [put in durations]

There are several items one can well observe here: for example, the fact that the red line is generally higher than the other two shows that 'cellists generally take a little more time on this third note, in a delayed anticipation of the downbeat of the sixth bar.

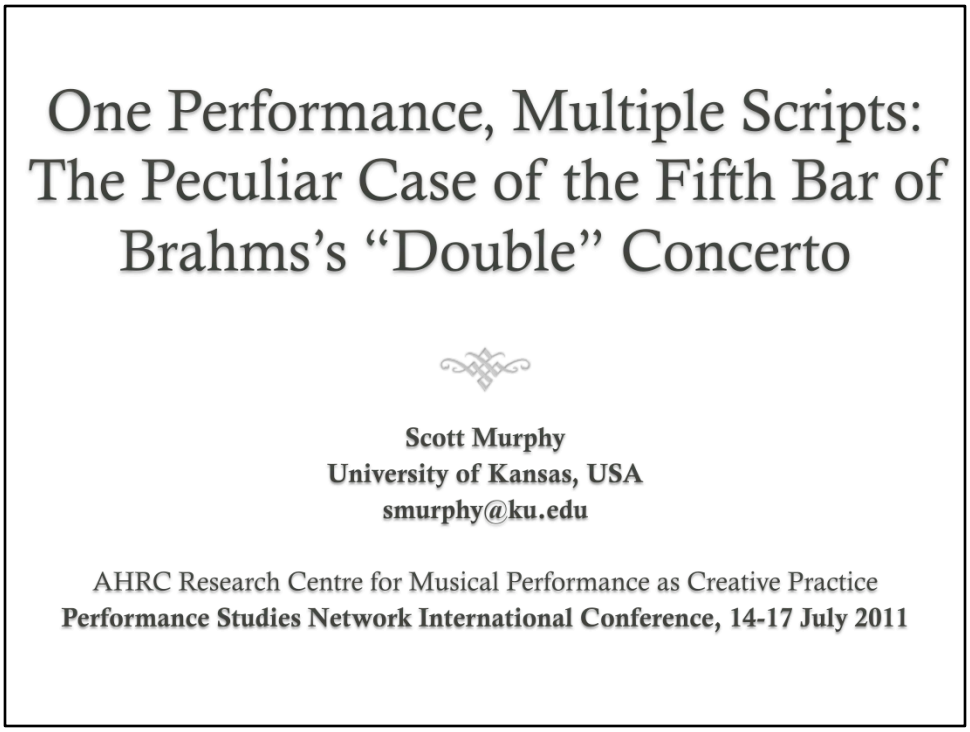
You will notice that, allowing for this ritard, many performances do not seems to be even periodic, since the three points are quite distant from one another vertically, while others are much closer to periodic.

I played Rostropovich's 1964 recording earlier: his other two recordings make for interesting comparisons. The 1979 recording with Haitink and the Concertgebouw is quite similar, but with more of a ritard on the third note. The 1969 recording with Szell and Cleveland is quite an outlier, as the first two notes are nearly twice as long as prescribed, and in fact can be heard rather easily as a breve in triplets, or dotted minims! [play]



[Most important, for my purposes today, however, is the fact that so few of these durations, especially the first two that are primary in establishing any periodicity, fall within the gray band, which shows a rather generous 10% just noticeable difference from the minim in triplets: only this much.]

This supermajority does not surprise, for, as Paul Mies has observed, Brahms's instruction is quixotic and seemingly contradictory between the two mutually exclusive prescriptions of "in the style of a recitative" and "but always in tempo." These performances, therefore, collectively appear to choose a more normative interpretation befitting an instrumental recitative, with the personalized fluidities and felicitous indeterminacies that a listener would expect. Or the choice to use longer or less even durations may create other experiences for the listener: Rostropovich's 1969 recording is just one case in point. In work from just a couple of years ago that studies how some twentieth-century cellists approach, sometimes rather extravagantly, other choice moments in Brahms, Roger Moseley concludes that there lie in wait "inexhaustible riches of his music by 'playing Brahms' in ways that the venerable composer could not have anticipated." (159) But, if the set of 38 recordings I have surveyed for this research may serve as representative of a general twentieth-century performance practice of this fifth bar (which I realize is far from ideal), then I believe that lying in wait are some relatively untapped riches that come from playing Brahms in a way that the venerable composer actually prescribed. On



[On the one hand, this is well-worn and oft-repeated advice when it comes to Brahms: *his scores control aspects of temporal flow that typically fall in the hands of the performer*. But, on the other hand, my assessment of the fifth bar of the Double Concerto this is a peculiar case of this dictum. My interpretation of the durations of the fifth bar as straddling the metric analog of an enharmonic divide arguably correlates with the indeterminacies and variability called for in a recitative, imparting some degree of reconciliation between the two parts of Brahms's instruction.

Lydia Goehr, in her summary of modern and postmodern approaches to performance practice, unsurprisingly sets up an opposition between the ideal of correct or authentic interpretation (*Texttreue*) and the reality of multiple and diverse interpretations. Contrary to this conventional dialectical wisdom, here may be one example where *Texttreue* actually creates diversity and plurality. Thank you.]