

NEW TIME *for* PHONETIC COMPOSITION

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In college while I was interested in Harry Partch and this modal path I ended up taking, I was also fascinated with serialism. Not in the compose by numbers aspect, but because the reason I first really wanted to become a “serious” composer was the work and theories of Schoenberg, and when I was a late teenager I discovered Babbitt in the process of devouring all material on dodecaphony. Around that time I was heavily interested in “complex” music for the compositional methodology. I had innate melodic talent—it was the only reason I was able to secure lessons in the first place—yet, for years I saw intuition and sincerity as deficient, so I sought models and methods of organizing my raw material: dodecaphony, serialism, rhythmic modality, isorhythm, etc. I saw all of these as complementary, and I did write a few mildly successful twelve tone isorhythmic studies, though I doubt I had the experience and stamina to really write anything truly good that was longer than 2 minutes—an eternal dilemma for me it seems.

Because serialism aligned with the use of rhythmic modality and isorhythmic technique in medieval music, I wanted to take a step forward theoretically and, instead of serializing rhythmic values themselves, serialize the modes. I thought that rhythmic serialization was incredibly incoherent. Outside of Stockhausen, the Europeans made the most boring music imaginable with it, and in some of Babbitt's works it just did not work; however, it had potential as a process because the use of four durational rows in *Composition for Four Instruments* was genius in scope and execution.

Inspired, I took all six of the rhythmic modes, wrote a very simple program with Ruby where I inserted a set of modes,

numbered 1-6, and it provided me with a set of permutations. Essentially, I was attempting to get a serialized set of orders, like that in *Composition for Four Instruments*, that would allow me to use all of these 3/8 forms without repeating a mode until all were used. In addition to this, I also was interested in combinatorial situations for 6/8 bars, where the modes that had true pairs: eighth, quarter, dotted quarter would be used in those situations where no rhythm would repeat, yet still yield a full 6/8 bar. If this were 1950, it might have been an interesting pursuit, but it was 2014 or so and I did not have the compositional experience at the time to make it sound as if it was not just a random number generator juggling around modes.

I was miffed by this experiment. It was just a massive failure, and I decided at this point to stop working serially. I did not have the ability to think this way, and very few really did write good dodecaphonic music, so I could not really fault myself too much here. However, I was still deeply interested and invested in rhythmic modes and isorhythms. It was around this time that Partch fully occupied my thinking, and I shook off the vestiges of twelve tone thought, though I still made use of serial techniques modally. Becoming interested in this equally complex and misunderstood world of microtonal and phonetic composition, I realized that the six rhythmic modes were, if compared to their source in greek poetics, only a small portion of what could be done with text setting was put into practice. I was always interested in music as a primary vocal form, despite my training and practice as a jazz guitarist who played the changes. I believed that, if given a direct link between the poetic foot and a musical meter, we could create truly phonetic music, and each language would have a unique rhythmic stamp.

So, I wrote my first theoretical treatise as a college junior. An expansion of rhythmic modes according to greek poetic feet, I sketched three varying levels, based upon the meters 3/8, 6/8, and 9/8 for disyllabic, trisyllabic, and tetrasyllabic feet. The rules were arbitrary, but I attempted to make them as logical as possible:

1) each set of modes would fit whatever time signature was best proportionally; 2) note length was often contextual based on the signature, e.g. the molossus made use of three quarter notes, with the middle being built with two eighth notes tied together; 3) tied rhythms cannot be untied, nor can they be broken by rests, and if a rest is used it must fit a full section of a note value, e.g. the molossus' tied eighth notes can only be made into rests if both are made into eighth note rests; 4) In order to maintain "rhythmic consonance" on the strong beat, rhythmic patterns cannot spill over into other bars, but you may tie a pattern to another to sustain a pitch.

The inherent value of syllable length in poetic foot made it an

essential tool for what was, at the time, still a somewhat serial conception of using meter, metric stress, and what I described as “rhythmic dissonance,” a notion that, like harmonic dissonance, a certain degree of aural rhythmic complexity can be allowed on weak beats of the meter as long as it is prepared and resolved on strong beats. Because I worked exclusively in triple meter at the time, wherein only one in three beats was strong, it meant that every bar would require an initial consonant rhythmic harmony at a rate of three beats, in practice that, unless all the rhythms come into alignment on the strong beat, I had to make heavy use of suspensions and rests. This tended to shatter the music, so much so that it was not really polyphony, but rather multiple layers of sound overlapping with each other, only sometimes being consonant, harmonically and rhythmically. There are a few comparisons with this and my work with the earliest pieces of my current era, e.g. *Mesonycicon*, in which the lines move independently outside of points where they are meant to line up, usually to start another line on a consonance, but those were influenced by my later experiences of the music of Burkhard Schlothauer.

My roommate remarked that I was either onto something big or just a crackpot—I enjoyed it because I thought it was very Partchian—and several of my teachers complained about having to read the tetrasyllabic feet in practice. Despite the very clear limitations of this expressively, I was obsessed with this for a while. In fact, prior to my “Wandelweiser shock” I was still using it in counterpoint studies, though the results were always weak and, to be honest, musically uninteresting.

The first issue with this mode of thinking was that I had yet to devise my tetrachordal system. I was still working with synthetic modes, mostly highly chromatic hexachords and septachords, and I had not yet developed a theory of modulation, so an entire piece would be filled with 6 pitches for up to 6 minutes. The piece might start out interesting, but there was so much rhythmic and harmonic dissonance that it just became unbearably boring.

As an example, I had a series of pieces designed as rounds over two grounds, a complex and difficult compositional scheme in the first place, but when composed with even more limitations harmonically and melodically—using synthetic modes serially with a matrix—and with little finesse other than writing counterpoint for the sake of counterpoint, comes out as awkward and boring.

The second problem, and a fatal flaw, had to do with what my teachers initially complained about when I showed them my rhythmic sketches: in order to fit all possible combinations of poetic

feet into a bar, you have to deal with the fact that, logically, if a 6/8 meter is short-long-long, and it must be proportional to the bar, AND it must also have positions of strong and weak beats to account for this theory of rhythmic dissonance, when you're sketching out the tetrasyllabic rhythms, the second epitrite has to exist as a series of tuplets with weird 16th note ties and dotted rhythms, because 9/8 cannot naturally fit that long-short-long-long rhythm if you want the long rhythms to have a sense of actual parity while maintaining a sense of rhythmic regularity.

The results of a lot of this work was a very facile form of complexist music, one without inspiration or specialization, and the result of not attempting to write that kind of music usually just ends up being involuntarily incoherent.

Despite shifting my interests to the other side of the complexity spectrum, this topic has still been stuck in the back of my head. It helps that I was always conceiving of music in terms of speech and human expression, even before I found Partch. My interests in the medieval and Partch seemed to coalesce around this point in my life, so I was fertile ground for these theories, which focused on rhythms and non-equal tempered methodology in a way I thought I could morph into my own musical language, albeit with some time.

So, the reason why I have returned to this topic is to rethink my initial approach. Focusing on meter as a parallel for metric rhythm and stress was far too limiting. From the beginning this sort of blind focus on triple meter was going to bear no fruit. At the time I was totally focused on standard notation. I was still performing regularly, and, being in the company of performers all the time, you tend to attempt to facilitate their mindsets, which can be a massive blow to truly creative thought because you need to think about how best to describe your ideas according to methods they already understand; however, I really believe that in standard notation this theory simply can not work.

My current musical studies and practice have me returning to, and really focusing on, the rhythms, contours, and textures of the human voice. All of my music now is no longer coming from the meaning of the text, but rather how the text sounds when recited. I believe I can get away with this because meaning and pathos are inherently embedded within our voice as we speak, it colors our recitation very subtly. A good performer can express the power of the text without me having to direct them musically, it should naturally influence their experience.

Like Harry Partch and Arvo Pärt, I have atomized my rhythmic language to the point of the voice itself, so the length and quality of

the rhythms fall upon these short-long stresses inherent in latin, greek, and esperanto. English is the only language that I have an interest in phonetically that is not stressed according to the syllabic length, but this allows for coloring the text and creating contrast.

However, the problem with this is that you only have one rate of speed: the recitation of the text itself. You cannot really lengthen a vowel according to this system, Partch and Part often work at one level of rhythmic complexity because a phonetic music simply works that way: the material is derived from the word, so the rhythmic rate is directly tied to it.

Consequently, meter, and really even standardized notation as we know it, doesn't really have a place in this system. The reason why I began to throw out barlines and metric stress at some point was because I could not really rectify this distinction. Like two musical worlds colliding, modern western musical practice and one that recalls the past cannot really be unified. I eventually found myself coming to this more graphic form of notation, not out of a desire to make graphic scores, but because it seemed the most useful way to conceptualize my ideas. Even the 4 line staff and square neumes of plainchant were more useful for me in situations where conceiving it in conventional notation would psychologically induce a more rigid musical performance or simply be much more unwieldy.

It is a bit funny that, conceptually, performers do not want to pick the easier form of notation because it appears, on the surface, much harder to comprehend, when in truth the conventional notation would be significantly more complex. I, of course, am no virtuoso, and I am a bit out of practice, but if I were given a rhythm in a visual manner, say a piece of proportional time notation by Earle Brown, vs one written out with literal rhythmic exactitude, I would prefer the former. Aurally, both return the same results, but one requires less counting!

When we think about notation, we need to think more about the best possible way to organize the material as it is intended to be, rather than have to think about how we are to retrofit it to our strict, and somewhat limiting notational standards; paradoxically, our standards are so loose we might as well not have them: you could write whatever you want on the five line staff, and as long as you explain what it is the orchestra will play it... yet, they won't play a graphic score?

This has been a bit tangential, but it comes back to my original point about the flaw of my first systemization: it was far too complex to really be useful in any meaningful way. Good notation is exactly what it must be, with neither more nor less, regardless of how

different it is from standardized forms.

With that being said, what can I really do to reconcile this problem? What can solve these issues of the phonetic as a seemingly static, inflexible form of musical composition? To seek this answer, I want to look at how rhythmic values in syllabic musical composition work, because this will be essential to any solution.

We will align everything to a natural tactus, the beat of the heart. In comparing the rate of speech I believe the best is a resting heart rate between 65-80. Too slow and the recitation is unnatural, but too fast and the nuances of the syllabic length are lost.

Let us take a look at the words "agō," an iamb, and "spīritus," a dactyl. These two words can show how stress and rhythmic rate act against a natural tactus. One will inherently be a bit more lopsided because, unlike our modern metric systems, the short syllable, even if it comes first where we expect stress to occur, inherently possesses the stress of an offbeat, and the stress we expect from the start of a rhythm comes what we would consider the offbeat. This is a quirk that we find in medieval music with a lot of "spiky" rhythms.

1 &2	1& 2 &
a gō	spī ri tus

Often, the rate is pretty much static. A word is a word, if spoken it really only comes out at one rate, because there is no sustain. Decay is inherent to speaking. It really does not matter what the word is or where it is from, as long as it follows these short/long stress patterns, the results always align to a certain grid based on the rate of speech. Thus, the metric stress of the phonetic inherently fits a rhythmic grid. This is nothing new, it is the basis for how rhythmic modes were first used in medieval musical thought, and it is how Partch and Pärt made use of syllabic composition. As a baseline though, it can be used to conceptualize several levels of phonetic length.

So with this notion of a syllabic grid in mind, I want to start thinking about this "phonetic" music in these three tiers.

First, at the lowest level, we have the purely phonetic, the literal rate of speech. Every single aspect of this music falls down to short/long stress, at one speed. The words we used above all work at this level inherently, it is their root nature that determines the flow of the music. Partch and Pärt both used this at some basic level, but in general it is very limited as a compositional technique in itself. Generally I would consider this to not be superimposed over a tactus, it is outside of time, because recitation and speaking is irregular and

does not always fall upon the strong beat due to lingering, pausing, and other affectations we often place upon our speech to convey emotion. If you want to understand why this distinction matters, go listen to text-to-speech, which is much more bound to a metronomic grid than humans are in how it vocalizes words.

Second, there is the melodically phonetic, where the rate of speech determines the length of pitches, but not necessarily the speed at which they unfold. Thus, it is music that is short-long at a more conceptual level, as in plainchant. The length is a bit more free, based upon the rate taken, and instead of being based directly on the rate of the word as spoken, it is based on the length of it in comparison to other notes. Long is longer than short, and short is shorter than long. Chant as a rhythmic form is one of push and pull, there is a guiding tactus, but generally the rate it beats at and the rate that the line unfolds at is an amalgamation of all the voices coming together. Depending on the forces, genre, form, and text, it could be strict and brisk or it could have a bit more of an interpretive rubato to it. That it is generally more melismatic is irrelevant, as at the basic level in liturgy the celebrant's recitation formulas and rubrics follow a more phonetic style of music, with a few sections of stepwise melisma, though arguably the melodic content of this is no different than how vowel phonemes can have downward or upward drift in speech.



Third then would be the artificially, or artistically, phonetic. This is where the length of the words remain true, short or long, but the rate at which short and long are interpreted flows differently than others. Generally, phonetic music is hard to write beyond the standard short-long scenario because the rates of short and long must be proportional to effectively express the sounds of the words. If you extend it, as in polyphony, you are no longer working with the word, the text is being supplanted by the music. Early Monody and Monteverdian recitative sought to reign back in the music in service of the text, but then you find yourself back at the phonetic problem: you have emotive power in declamation, but lack melodic and harmonic variety, so you still end up composing arias with the

melodic line in mind first, then subjecting the word to the music.

This is where the theories of mensural notation could be of use. I know it might seem strange because I am using the past, an obsolete methodology, to argue for the future, but I think that as long as the intended results cannot be properly expressed through our current systems while still retaining the aesthetics inherent to the musical expression, then any method, old or new, could work instead. I am a firm believer in the argument made in the 20th century that transcription and arrangement of music from a foreign notational system into western standardized notation serves to alter, and even destroy, the unwritten performance practice. Couperin's unmeasured preludes always come to my mind as an incredibly important example of the type of performance practice that is destroyed when we attempt to create some sort of arrangement or transcription of them. They have to be read in the way they were first composed because that is fundamental to understanding how to perform them.

So, in the case of phonetic composition, a mensural notation can allow for artificial lengthening of these pitches by taking this notion of fluid rhythmic rate according to a *tactus* seen in chant, and expanding time. Essentially, instead of altering the rhythmic value of the music, you are working at the conceptual level of time, and I do not mean time as in the rate of the *tactus*, which should never change, but the length of the note values. Time is still a rarely thought about parameter in music versus rhythm, because we tend to take it for granted as just existing. We tend to identify it with tempo, but this is not necessarily a perfect comparison. Time, tempo, and rhythm all tend to flow at different rates, they are really three different aspects of what identify as one. In late medieval polyphonic music all three of these things are understood as different. Tempo is the *tactus*, the beat by which everything is measured, rhythm is the value of the pitch at a categorical level, but time is how those things pass in performance.

See, *tactus* is strict, it beats the same no matter what. *Rubato* is an affectation placed upon the *tactus*, conceptually pulling it out of time, but the core quality remains unchanged in the process because we gauge the expansion and contraction against the *tactus* as a perfect, unchanging entity. It is akin to identifying your resting heart rate, that is the standard by which your body functions, because you spend more than half of your life at rest, the agitation of the heartbeat is a phenomenon exterior to it, like *rubato* on the *tactus*.

Rhythms are much more ideas and concepts, they represent patterns that we notice against the *tactus*, and we thus categorize these things mnemonically, so we can gauge the rate of a pitch based on certain patterns we know to be true. However, the distinction is

that the rate of a rhythm is actually only known based upon mensuration, based upon time. See rhythms are stagnant ideas, perhaps better compared to Platonic Forms, they only represent one conceptual level, an unchanging object being coupled with an eternal constant in the tactus. Because rhythmic values are locked, and the beating of the tactus cannot be altered—there are many metaphysical, philosophical, and theological reasons for this in western musical history—rate represents the only possible way of altering these things in practice.

So what rate then represents is an interpretation of a rhythm to make it move at a slower rate than you naturally do according to the tactus by taking the rhythmic demarcations and expanding them at consistently logical levels. See while these rhythms as they are written cannot be changed, and the beat at which they are written cannot be changed, what can be changed is our interpretation of them. Each rhythm exists as a logical, proportional representation of it within an experience of the tactus: a brevis is x beats of the tactus, a longa is double that, a maxima is double that; likewise, a semi-brevis is half of it, and so on. So the rate of the brevis determines the rate of everything else, without changing what the rhythm actually means, and without changing the speed at which the tactus beats. Time is equivalent to this, you are counting the value of the rhythm based on the mensuration, against the constancy of the tactus. It is like life in the universe: our time is simply counted against it.

Consequently, if the tempus is perfectus, then the rate is three for the brevis, but if it is imperfectus, then the rate is two. The actual value could be anything, because it is just our interpretation of what the rhythms might mean, this one happens to have theological meaning. See, since time and tempo and rhythm are totally unconnected, it allows for one note to mean different things depending on the context provided by the composer. And you can sort of see where this system eventually evolves, as the tempus imperfectum prolatio minor, the half circle, is theoretically equivalent to $4/4$ to some degree, but it is not really the same as if a metric symbol, because meter as we know it is more a question of stress due to how barlines function. Elliot Carter made use of metric modulation to sort of get close to this, but his music was still tied to the notion of metric pulse existing at some fundamental level. I would wager that Christian Wolff's exercises come closest to this idea, because in providing only black note values and the direction to play at any speed, the resulting canon has a fluidity based upon not multiple rhythmic values, but time dilation of a single rhythmic value.

If we place rate and speed at this conceptual level, then we do not have to worry about metric stress working against the rhythmic stress of the word. In the text, the short-short-long pattern of a poem is its own stress, its own measure, so to write music in 4/4 and use melisma and suspensions that work according to rhythmic stress at a different conceptual level serves to destroy the rhythmic essence of the word itself, the vitality that Partch knew very well.

So in mensural modulation, the tempus, the circle, modifies the breve, and the prolatio, the dot, modifies the semibreve. The Brevis/semi-brevis distinction can align with the long/short in phonetic stress, so we can use this to define an analogous situation with phonetic long and short and, without changing the stress, change the rate at which the stress occurs, thus allowing music that moves at a different rate than phonetic or plainchant composition, and allowing more complex and interesting polyphonic moments while still retaining the traits of phonetic composition.

This might appear as artificial, after all the pure phonetic moves at a very specific rate, but the key distinction is that when we read poetry, there is always a certain artistic, emotional inflection that can cause it to flow slower than standard dictation. Even if a poem is built upon metric stress, we do not read and read and read without pausing, without stopping. Perhaps a more wistful poem would flow at a different rate, and even certain sections of the poem might benefit from different rates of movement. Artful declamation never kills metric stress, it accents it. Thinking about this, every modification must occur at a rate of exponential time, because if you were to read slower, you would want to keep all of your syllabic rates proportional to one another. The standard mensural guidelines work with this quite well: tempus perfectus thus runs the long syllable at a rate three times slower, and imperfectus two times slower. The same is true of the prolatio, minor as double, major as triple.

So if we took agō at *tempus perfectus prolatio minor*, and at the *tempus imperfectus prolatio maior*, we can see how the rate of the syllables can be modified to lengthen the recitation of the word

1&	2&3&4&
a	gō
1&2	&3&4

The key distinction then is that these artificially lengthened notations do not represent the core phonetic unit, but modulations of them. If you wished to represent the rhythmic rate of the purely phonetic,

then you would cancel out this by removing the five line staff and providing only the word; likewise, if you wanted to cancel out the rate modification, but retain a freely flowing line, then you would switch to the four line staff with square notation to represent a chant section.

Thus, what was initially equivalent to a beat and a half stretches to a longer length because the rate at which it was counted was altered. The actual rhythms did not change, they still represent the same stresses proportional, but the rate they are spoken changes. It is as if you read a poem at half the speed. All standard rhythmic forms flow at a rate unmeasured: when you read meter you are subdividing syllables across a period of time, creating a moment out of time, a tactus, and in the process creating the perception of time.

So here is my current suggestion: a larger circle, a half circle, or no circle, representing triple, double, and normal speed for the long (white) notes; and a smaller circle, half circle, or no half circle inside the larger one, filled in, representing triple, double, and normal speed for the short (black) notes.

What could be incredibly helpful too is to “cross out” signs, as to remove them and make the rate move at normal phonetic speed. Thus, the phonetic polyphony section can have three possible rates of speed: normal, double, triple. Additionally, perhaps we could make use of only the dot, which isn’t really found in mensural music, so that the white notes retain their standard phonetic length.



If this is possible—and I know it is performable because it is a lot more simple in practice than it appears on paper if I of all people can conceptualize it and actually count it—then it can allow my music to take advantage of this discussion of the concept of time in music, which is an incredibly important topic for me myself, since I am always trying to play with a sense where music has no time, i.e. not past or future, memory or anticipation, only the presence of the present.

The notion of mensuration as a means of working with music as time is something not often discussed, but it aligns with some contemporary thoughts about music as composing time, something Klaus Lang mused about: musical material is time perceived through sound.

As I said: Time is the genuine material of the composer and at the same time also the fundamental content of music. I am trying to compose music which turns sound into the breathing of time made audible. I think that this is only possible when sound is just sound because only then it is perceivable [sic] as that what it really is: a temporal phenomenon – audible time.

But again at this point yet another seemingly paradoxical discontinuity shows: When we enter through listening a state of pure presence, in which music becomes pure duration, we are leaving temporality. When time becomes pure presence it dissolves. Through listening time becomes eternity

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Grisey remarked that as composers our object is sound, and I do not disagree, I have slowly made my compositional language reflect the sound and potential of the human voice, but I also see that our object is also time in musical experience. We choose our object of time and we compose around it, either trying to affirm it or deny it.

And this is why the removal of barlines and metric stress in favor of an eternally constant beating tactus creates music that is much more without past or future, but instead filled with the eternally beating now. The tactus holds the universe up by virtue of being the eternal constant by which all experience becomes measured. Metaphysically, it is organized around a very Augustinian sense of time, it is always a present force, a grid by which we frame our life via memory and expectation, it is created in the moment in the act of us perceiving it, conceptualizing it.

The reason why I returned to this topic all these years later, why it still held value in the back of my mind, was because it directly relates to the many problems we have with the perception of music that I wanted to think about in *Eleatic Conceptions of Musical Experience*. The reason why I originally drafted that work was because

I wanted to deny this notion of music having any sense of time or direction or movement, that music itself is always what it is, as it is, abiding in itself. There is no beginning or end to music because there was no beginning or end to any other physical phenomenon. The universe, truth itself, either existed, or it simply did not. There can be no conceptual understanding of any time before existence because even conceptualizing comprehending non-existence is incomprehensible, we have to have a perceptual, and thus conceptual, basis for understanding it, but if it does not exist then it is beyond our facilities as human beings. The Eleatic truth is so powerful because it is THE essential. Truth is a positive thing, if truth was NOT something, then that something could NOT exist, and thus we would not be able to perceive, comprehend, or conceptualize it.

Music is without time because music IS one highly complex waveform filtered through sensation, perception, and aesthetics. There is no situation in which there is no experience of sound, you can desensitize yourself to it, remove your hearing, but it is still there. Sensory deprivation is simply solipsism.

The essential legacy of Cage and the musical developments is no different than the legacy of Helmholtz's *On the Sensations of Tone*. Both lead us to the same expression. Lang himself agrees

Oszillating [sic] air can be caught by our ears and percieved [sic] as sound, our skin can feel them as vibrations or as warmth etc.. Even when we concentrate on the field of acoustics we experience remarkable fractures in our perception: Sound waves are perceived either as periodic impulses or as pitch, depending on the speed of oszillation. The most fundamental difference between these phenomena is their temporality. It depends on time only which sense organ is used for a specific oszillation and to which kind of perception this leads. (rhythm or pitch) Thus we could say that when we use our ears to perceive something acoustically as sound, what we perceive is nothing else but time made audible. And exactly here my understanding of music starts: musical material is time perceived through sound, the object of music is the experience of time through listening.

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