

“Programme Notes” Episode 3.

Musical time

Introduction

Kia ora,

You're listening to “Programme Notes”, a podcast about classical music.

From the central figures and ideas—the Hildegards of Bingen, the “[Dies Irae]”s—to the universe of esoteric marginalia, this series is for the curious music lover.

I'm your host, Clarissa Dunn

Referencing time

[PLAY DOCTOR WHO]

What does music have to do with time? Music can relate to time—or reference time—in several different ways. Some music might make us think back to particular *periods* of time. We speak about older music being “of its time.” And some composers write music that intentionally points to past eras.

[PLAY SCHNITKE, STRING QUARTET NO 3, MOVEMENT 1]

Sometimes music aims to depict the *cycles* of time, as in seasons,

[PLAY VIVALDI, “SPRING”, MOVEMENT 1]

or times of day and night.

[PLAY BARTOK, “THE NIGHT'S MUSIC”]

Other music might bring attention to very *specific durations* of time—as in John Cage's piece 4'33”.

[SEVERAL SECONDS SILENCE]

And then there's music that draws on or challenges our very *conceptualisation* of time. And it's those aspects of musical time that we'll focus on in this episode.

[PLAY MORE DOCTOR WHO]

Measuring time

For centuries, philosophers have been asking, *what is time?* Without being able to see time, and without being able to prove that it flows or changes, how do we know it exists? All we *really* know is that *things* and *events* begin, flow, change, and cease to be. Perhaps time is just a framework humans need to make sense of the world.

Let's begin with Leroy Anderson's charming little piece, *The Syncopated Clock*. This is music with distinct beginnings and endings. The clarity and order of the music allows us to easily mark and recognise sonic events as they occur. Marking events like this means we're able to hear the piece as a *clock*, marking time:

[PLAY ANDERSON, *THE SYNCOPATED CLOCK*]

Just as we tend to understand musical time in this piece in terms of the succession of *musical* events, we also tend to understand *time itself* as a succession of events or moments. Imagine trying to make sense of our lives *without* the concept of time: we wouldn't know what was real or imagined; what had happened or was about to happen. We wouldn't be able to distinguish between our memory, our thoughts, and our imagined future! The way we understand time allows us to understand and order our lives.

The common conception of time is the notion that time flows in the same way that events and things in the world flow. Let's assume that time moves. With this assumption, it's clear why music is such an effective art for depicting or challenging notions of time: because music is made up of *sonic events* sounding one after the other—or together—in specific durations. This ordering of sonic events makes music the art *most intimately connected* to time.

[PLAY MORE *THE SYNCOPATED CLOCK*]

But if events *aren't* easily accounted for—if their beginnings and endings are *not* easily and obviously marked—an objective sense of time is diminished. And we are more likely to “lose ourselves” in a subjective realm of temporal perception. Without recurring events marking out time for us—whether they be accents, harmonic changes, or new melodies or sections—we are more likely to enter a state in which we allow ourselves to forget time's passing. Some pieces challenge, stretch, or erase events, and in this way challenge our sense of time.

Consider the opening of Krzysztof Penderecki's *Threnody for the Victims of Hiroshima*. While we hear different groups of instruments enter the texture, their entries are at *unpredictable* moments. And more importantly, the overall impression is of a terrifying cacophony—a discordant mixture of sounds.

Time seems to stand still. In that precise moment of time where you know something devastating is about to happen—or has happened—and is about to change or end your life, a single second seems to expand into eternity...

[PLAY PENDERECKI, *THRENODY FOR THE VICTIMS OF HIROSHIMA*]

The fact that music is often heard as a *series* of events, many of which we *expect* or *await*, can shape our relationship with time in another important way. By delaying an *expected* event—be it a climax, cadence, or chord—composers can create a sense of time expanding. Music might seem longer than it really is if our expectations are carefully delayed. So, attention and expectancy play important roles in our perception of time.

Given the set of cultural norms we have absorbed into our listening, anticipation can create a sense of time stretching. Listen to the beginning of Wagner's *Prelude to Tristan und Isolde*. The music continues with no harmonic resolution. At each point where we might expect some sort of resolution, it's thwarted, and more tension is accrued. The result is a sense of swelling time and space.

[PLAY WAGNER, *TRISTAN UND ISOLDE*, PRELUDE TO ACT 1]

Experiencing time

Let's examine the question of *general* time more closely, so that we can extend our understanding of *musical* time.

Studies in psychology and embodied cognition show that we conceptualise time as something that moves through space, or a series of time points that we move towards and then beyond. Think about the language we routinely use to describe time: we talk of something being “a long time”, or “a short time.” We might describe an event in which “time flew by”. Or we might describe someone as being “behind the times.” Relaxing over a drink in the evening, we might tell our partner that “we are coming up to News time!” Then, over dinner, we might discuss the future, and note that “Christmas is fast approaching.” In all these descriptions of time, we're drawing on our knowledge of space and movement. *Either* we conceptualise time as moving in the same way that we understand things or bodies moving through space. *Or* we conceptualise our own bodies as moving towards and then past a series of static time points pre-existing in “time space.”

Importantly, we think of *musical time* in the same ways. On the one hand, we might conceive of our own bodies as moving *through* a musical landscape of past, current, and future time points. This might involve imagining ourselves playing the music, or imagining ourselves creating the shapes or movements suggested by the music. We might even imagine ourselves as the music. We move *beyond* past musical events, *play* current musical events, and *move towards* future ones. Try listening to the opening of Brahms's Piano Trio No 1 in this way. Imagine yourself moving with the music, or even try imagining yourself *as* the music as you journey past recent musical events and towards future ones. The piece begins with the piano, and we'll move *toward* the cello's entrance, before moving *toward* the violin's entrance—all three players completing our journey:

[PLAY BRAHMS, PIANO TRIO NO 1 IN B, OPENING]

Just as we can understand time itself as moving towards and then past our stationary bodies, we can also understand musical time points as doing the same. Listen to this passage from Chopin's *Berceuse* (or Lullaby). The

decorative, pianistic figurations move at such delicate and yet rapid pace that it's difficult, if not impossible, to fully move *with* every twist and turn. It's easier to simply position our stationary bodies in the middle of a space, and *feel* sounds coming *towards* and then *past* us.

[PLAY Chopin *BERCEUSE*, 39–42]

Marie Jaëll's piano piece "Quelques gouttes de pluie" (A few drops of rain) has a similar effect. Position your body in the middle of this soundscape, and let its watery inflections wash over you:

[PLAY JAËLL, "Quelques gouttes de pluie"]

Often, when we listen to music in this way, with this concept of musical time, time seems to stand still. In fact, time seems to fly by if we are enjoying pleasant stimuli all around us. Businesses, shops, bars, medical centre waiting rooms, and phone lines make use of music in this way—either to make us stay longer, or have us believe that we aren't wasting our time!

Embodied time

Let's talk more about the role of the human body in musical time.

To a certain degree, we measure time by our bodily actions. When we say that we would do something "in a heartbeat", we're drawing on our knowledge of biological rhythms. Similarly, we often feel *musical* time through our inherent knowledge of bodily rhythms. When we listen to music, we mimic along with it—whether to the movements we imagine the musicians making, or to the sonic "shapes" we imagine being created through musical space. Importantly, it's *most* common to mimic real or imagined movements that are *routinely used in our daily lives*. Here, the biological rhythms of breathing and heartbeat become important, as do the daily activities of walking or chatting to a friend.

When the rhythms of music align more or less with the rhythms of our daily lives, and especially when these rhythms involve a regular pulse, it is highly likely that we will engage with the music in a visceral, human way.

For an example, listen to the opening of Mozart's *Eine kleine Nachtmusik*. It's easy to move to this music. The beat is clear, regular, and fits with a human's walking pace. The music is also grouped into twos. Question, answer. Breath in, breath out. It's well suited to the left-right motions we make with our two legs and two arms:

[PLAY MOZART, *EINE KLEINE NACHTMUSIK*, MOVEMENT 1]

Irrespective of whether we're conscious of mimicking or not, our bodies are often *in sync with* this type of music. And since we understand music in terms of human movement and human time, we experience musical time as somehow "human" as well. In such cases, it seems easy to "mark out time", just as our bodies mark out space. And this marking of time helps us stay *in* the flow of time.

[PLAY MORE *EINE KLEINE NACHTMUSIK*]

What about music that emulates speech or song. This kind of music keeps us *in* the moment because it is similar to listening to a friend recount a story. It keeps us *in* real time. Listen to the opening of Mozart's Piano Sonata movement K533. You could almost set lyrics to it:

[PLAY MOZART, PIANO SONATA NO 15 in F]

- CD I understand a lovely little tune like this
from the vocal phrasing it connotes.
Almost like an easy conversations with you, Elliot,
producer of programme notes
- EV I quite agree, Clarissa, with this melody
Mozart wrote a piano anecdote.
- CD Exactly, that's the idea
- EV Wolfgang Amadeus was a master of this type of writing...
- CD Vocally suggestive rhythmic flow!

[PLAY JANÁČEK, "WORDS FAIL!"]

Janáček also uses speech-like music in his piece “Words Fail.” The music alternates between uncertain rhythms and more confident vocal ones

where it knows what to say
and it flows from the page
at a tone and a pace
like van Gogh with his paint
But it...

falters awkwardly. The momentum is lost and the uncertainty returns as the words fail.

You can probably also think of some jingle music that is so speech-like that words automatically spring to mind!

[WHISTLE “THE WAREHOUSE” THEME]

Disembodied time

But what about music that doesn't conform to human biological rhythms or physical movement? Maybe the regular pulse rate is threatened or stretched. Perhaps the human element is reduced. Listen to this passage from Messiaen's *Oraison* for six ondes martenot, where the pulse is so slow, and the human reference so diminished, that it's difficult to physically relate to this music. It seems to exist outside of time:

[PLAY MESSIAEN, ORAISON]

Messiaen re-conceived this music for cello and piano in his *Quartet for the End of Time*. He titled it *Louange à l'Éternité de Jésus* (“praise to the eternity of Jesus”). And the sense of eternity is palpable:

[PLAY MESSIAEN, QUARTET FOR THE END OF TIME, MOVEMENT 5]

Sometimes, this effect of timelessness is achieved through depictions of *nature*. Nature's *constant* activity can produce a paradoxical feeling of *stasis*, and this feeling can be replicated in music with a multi-layered and active texture that is set on repeat.

Scarlatti's beautiful keyboard sonata in B minor is a perfect example. Here's where Scarlatti gets stuck on a section of music, repeating it 7 times! The music involves three layers—a high repeated note, a low repeated note in the bass, and an active chordal figuration in the middle layer:

[PLAY SCARLATTI, KEYBOARD SONATA IN B MINOR, K27]

There's enough *activity* for us to hear nature's joyful movements. But there's enough *repetition* to feel that the music lulls us into a meditative state of calm. So, when the music *finally* moves onwards, with a descending pattern, you can feel like you've been transported into another temporal landscape. It is all the more magical that the eventual descending movement *continues* the original three-layered pattern. It feels as if nature has swept us away:

[PLAY MORE SCARLATTI]

Beethoven uses a similar technique in his *Pastoral* Symphony No 6. This in itself is remarkable, because Beethoven's middle-period works were known for their forward drive and heroic impetus—certainly not for their calming stillness. Beethoven's famous *Fifth* Symphony uses rhythm to create a strong sense of drive and direction. But in the *Sixth* Symphony, his rhythmic *repetition* creates the opposite effect—it lulls us into a happy place of stasis. Here's the beginning of the Symphony:

[PLAY BEETHOVEN, SYMPHONY NO 6 IN F, MOVEMENT 1]

And that rhythmic “motif” (ta—ta-ta-ta—ta) is later treated to an *enormous* expansive section of repetition—94 bars of the same motif!

The music of Beethoven's Sixth Symphony is content in its circularity; in the most serene moments (where rhythmic motifs repeat over a static harmony) time seems to stand still.

This massive amount of repetition creates huge plateaus of sound. The effect elicits that wonderful feeling of being in nature— of movement *within* stasis (just like clouds continually moving, or a waterfall continually falling, with such consistent and hypnotic beauty that the overall feeling is one of calm). This, right here, is the calmest, most serene Beethoven you will ever hear!

[PLAY MORE BEETHOVEN 6]

A *different* way to depict these timeless and static, yet active, characteristics of nature is to hold one musical parameter steady while other musical parameters move above or below it.

Listen to the opening of Bach's famous "Air on a G string." The first melodic note is held high in the air for a very long time. It seems to float in a timeless realm, free of gravity, while the harmonies and pulse move regularly beneath it:

[PLAY BACH, AIR ON THE G STRING]

Modern-day composers have found interesting ways to experiment with music as an expression of nature's forces and rhythms. In Steve Reich's piece, *Pendulum Music*, four microphones are left to swing back and forth over a speaker, and every time a microphone passes the speaker, it creates feedback noise. As the four swinging motions drift out of time with each other, different rhythms arise. Nature's gravity is the conductor in this piece!

Objective time

But musical time isn't always so philosophical! We've been talking about what is commonly called "experienced time" or "psychological time." But a more objective, clock time is also found in music.

In the second movement of Beethoven's Symphony No 8, in the place of a typical slow movement, Beethoven writes an obsessively rhythmic little scherzando. The movement is often thought to be a homage to Johann Nepomuk Maelzel, the inventor of the musical metronome. The mechanical ticking of the metronome is charming in Beethoven's hands and permeates the entire movement. You can hear the metronome in the opening, sharp wind chords:

[PLAY BEETHOVEN, SYMPHONY NO 8 IN F, MOVEMENT 2]

Beethoven's first theme, introduced in the violins, fosters the sense of rhythmic obsession. Hear how the deep double basses repeat the rhythms that the violins have articulated much higher in their register. It's almost like the bass

line—which is often the *harmonic* driver of the orchestra—is turned first and foremost into a *rhythmic* instrument:

[PLAY MORE BEETHOVEN 8]

This rhythmic obsession becomes even more pedantic when Beethoven introduces hemi-demi-semi-quavers in the strings—once again, including the double basses:

[PLAY MORE BEETHOVEN 8]

With the focus clearly on rhythmic precision, Beethoven encourages us to hear this movement as a series of events that come precisely on the grid. This sense of precise placement is heightened through other techniques such as the intrusion of loud dynamics when we least expect them. While we've come to expect loud intrusions in Beethoven's faster movements, they aren't so common in second movements. The sudden onset of events, marked by sudden dynamic changes, brings our attention to a series of ordered events, each beginning and ending precisely at the correct moment in time. Indeed, the orchestra's metronome makes sure of that!

[PLAY MORE BEETHOVEN 8]

Let's time travel forward 150 years, and listen to György Ligeti's more *literal* incorporation of the metronome in *Poème Symphonique* for 100 metronomes. In Ligeti's piece, 10 performers set 100 metronomes ticking on stage. At different speeds, and with different lifespans, these metronomes create a crazy sound. On the one hand, this is an utterly ordered and rational piece of music. On the other hand, it's chaos—a reminder, perhaps, that time is perception, and that we all experience time differently. Interestingly, if you listen to this piece for a long time, you start to hear certain temporal patterns emerge, and then disappear. Again, it's a reminder that our experience of time depends on our attention. In Ligeti's piece, this is made explicit through the attention we pay to *actual instruments of time!*

[PLAY LIGETI, POÈME SYMPHONIQUE]

Time travel

We've looked a lot at how we conceptualise time—and musical time—in relation to human movements, the movements of nature, or the movements of man-made objects like clocks and metronomes. And these are common ways through which composers have sought to shape our perceptions of time. But sometimes composers purposely evoke *non-human*, un-earth-like, or sometimes even alien sounds to evoke *new* experiences of time. Here's the *Doctor Who* music again, which has been running since the 1960s. It's famous for its pioneering use of electronic music in a TV series, and this theme brilliantly evokes the time travel that is the basis of the series' plot. The minor key and the relentless rhythmic pattern set up an ominous, mysterious mood in this chamber music for the sitting room:

[PLAY DOCTOR WHO]

Now turn your attention to the melody. It is both lyrical *and* impossible for a human to sing. (Although it's fun trying). The melodic notes jump more than two octaves—gigantic leaps for a melody. And this—together, with the dramatic swooping between notes, and the overlapping electronic sounds—suggests an *alien* soundscape. Maybe an alien is singing the melody. And the movement of the melody is also alien, both in terms of vocality *and* gestural movement. As humans, we can't get from high to low, or from low to high, very easily or quickly. But, carried by the relentless rhythm underneath, we have the feeling that we *are* nonetheless swept along by the melody. And sensing non-human movement, we sense non-human time:

[PLAY MORE DOCTOR WHO]

Finally, listen to how the theme makes you feel propelled into a different time space. Once it's started, the theme makes you feel like there's nowhere to go but into the temporal void of the music. This is partly because of the relentless rhythm, but also because of the speed and nature of the swoops in the melody, which seem to suck us up into intergalactic *light speed*.

[PLAY MORE DOCTOR WHO]

Speaking of time, my time with you is up. I hope it has flown by, from your perspective. I'll leave the final words of this episode to Doctor Who writer, Steven Moffat:

[PLAY DOCTOR WHO, "WIBBLY WOBBLY TIMEY WIMEY" CLIP]

Outroduction

"Programme Notes" is produced by Elliot Vaughan for Chamber Music New Zealand.

This episode was written by Hamish Robb.

For the transcript and full credits, please visit chambermusic.co.nz/programme-notes

You can get in touch with us about this episode by emailing podcast@chambermusic.co.nz

And finally, if you liked this episode, don't forget to subscribe, rate this podcast, and tell your mates.