

# Polyrhythmic Textures

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Based on and developed from the appendix in the thesis *Algorithm and Decision in Musical Composition* (Gato, 2016, pp.178–9).

## I Regarding Metre

Justin London says the following while trying to define metre:

*More generally, the temporal hierarchy of subdivisions, beats and bars that is maintained by performers and inferred by listeners which functions as a dynamic temporal framework for the production and comprehension of musical durations. In this sense, metre is more an aspect of the behaviour of performers and listeners than an aspect of the music itself.* (London, n.d.)

This points to a perceptual definition of metre. It is the resulting aural effect of playing a given musical passage that creates different rhythmic phenomena, and this is what shall prompt us to our classification efforts.

### **Unimetric Texture<sup>1</sup>**

- In-phase – onset of common metres between two or more voices is temporally coincident, simultaneous.
- Out-of-phase – the onsets of common metres is not coincident; they are phased out.

### **Polymetric Texture**

It is a superimposition of different metres. Each voice exhibits a defined metre, which is different from the others.

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<sup>1</sup> Using John F. Link's nomenclature (Link, 1994)

## Irregular Metre

Irregular metre is the juxtaposition of different metres: we listen to metric groupings of different sizes consecutively and, therefore, cannot sense a unique and stable metre.<sup>2</sup>

## Ametric Music

This means the absence of metre in listening. Perceived *ametry* can occur on two different situations:

- when a voice is notated ametrically, that is, without resorting to a referential pulse, so that note onsets and durations can't be calculated precisely (indeterminism).
- when a voice, despite being metrically notated, does not convey an aural sense of metre.

## Partially Ametric Texture

This implies texture stratification.

- Simultaneous with polymetric: some voices are ametric, while others have a defined metre.
- Simultaneous with unimetric: some voices are ametric, while others form a unimetric texture.

In general, metre is **trivial** if it is of the same size as the pulse.

## II Regarding Pulse

Justin London's words are again very elegant and clarifying. This is what he writes about pulse:

*Used synonymously with beat to refer to regularly recurring articulations in the flow of musical time. (...) A clear sense of pulse is a necessary condition for musical metre, as it forms the temporal anchor for higher levels of metric*

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<sup>2</sup> Note that this situation is different from the one comprised of repeating patterns of changing meters. If one repeats a 3/8 followed by a 2/4 time signature, and properly accentuates the strong beats, what one creates is the perception of a defined metre, even though it is a compound one.

*structure (measures or bars marked by downbeats) as well as smaller levels of metric subdivision.* (London, n.d.)

### **Unipulsional Texture**

- In-phase – pulses of different voices are temporally coincident.
- Out-of-phase – pulses of different voices are of the same size, but they are not temporally coincident.

### **Polypulsional Texture**

Each voice has a defined pulse (a crotchet or a quintuplet semicrotchet, for instance) but the texture is a superimposition of different pulses.

### **Apulsional Texture**

A defined pulsation does not exist throughout each voice's individual rhythm.

### **Partially Apulsional**

This implies texture stratification. In this case, some of the voices do not have a defined pulse.

## **III Conclusion**

Given the above, it is now clear that merely using the term *polyrhythm* is imprecise (it can mean very different kinds of textures), as is the use of the term *polymeter*. If a texture is polymetric, what can be said about its pulse content? By contrast, if we classify a texture as being **in-phase unipulsional polymetric**, we can better describe the nature of its internal structure.

## **IV Bibliography**

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