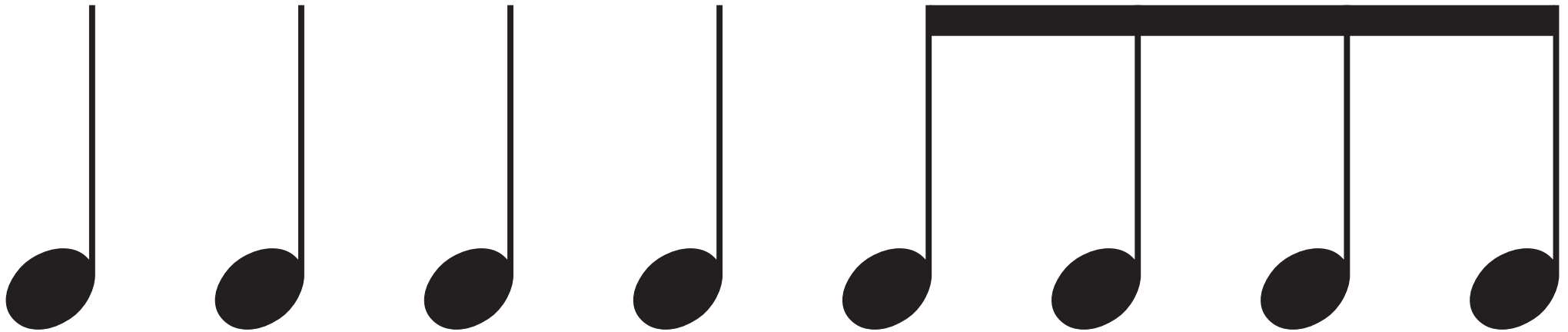


The Incas built at least 23,000 km of roads throughout their empire but missed to invent the wheel.



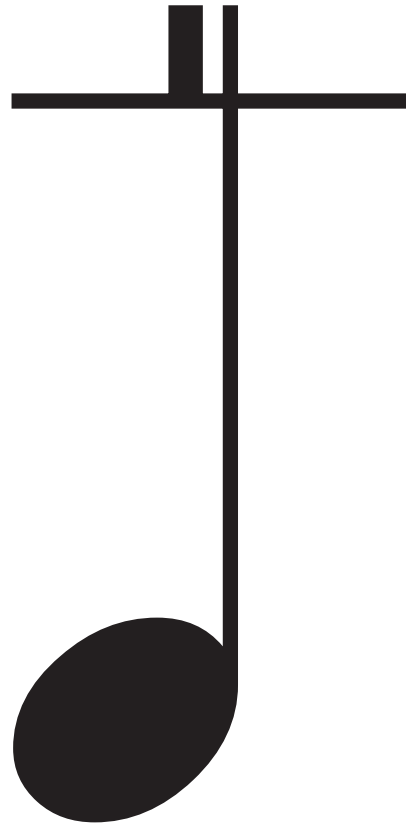
**Let us imagine that in musical time
theory we missed to discover
that we can use durational ratios...**



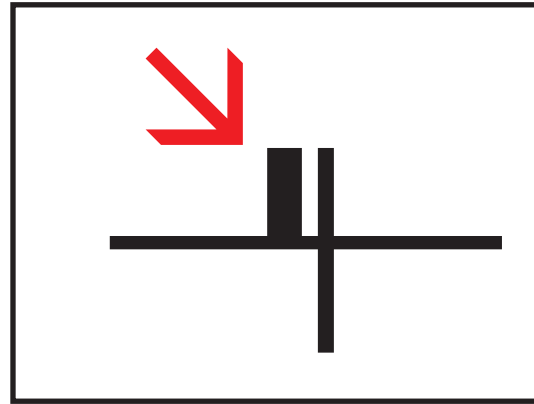
$$2 \times \text{eighth note} = \text{quarter note} \quad \text{quarter note} \div 2 = \text{eighth note}$$

**...while still being able to notate
time-discrete musical structures...**

Explicit symbols for THESIS and ARSIS values

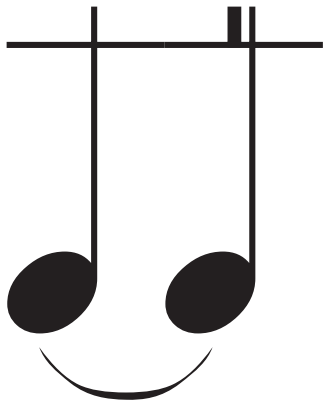


THESIS

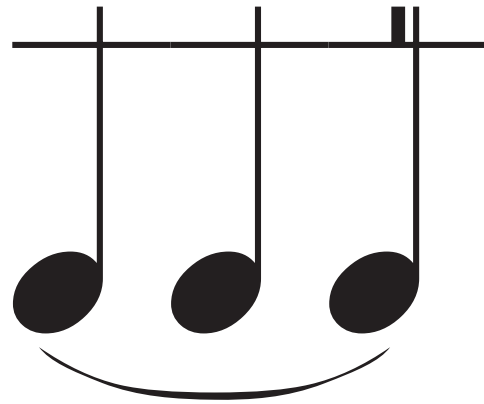


ARSIS

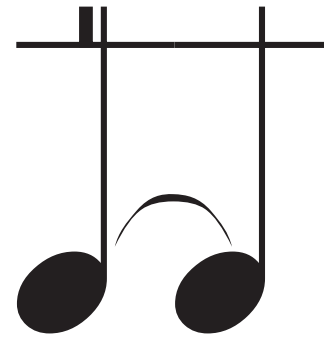
„UPBEAT“ and „AFTERBEAT“ relationships (anacrusal vs. metacrusal)



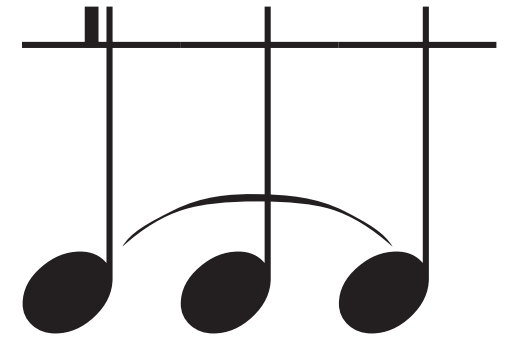
A



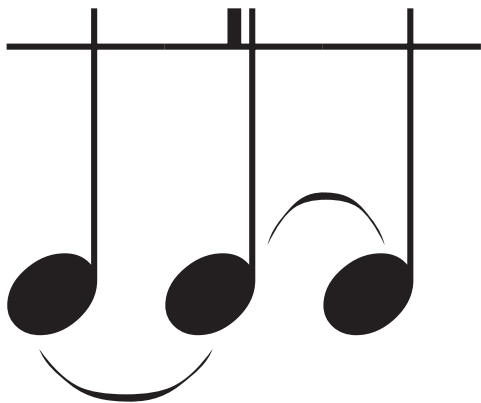
B



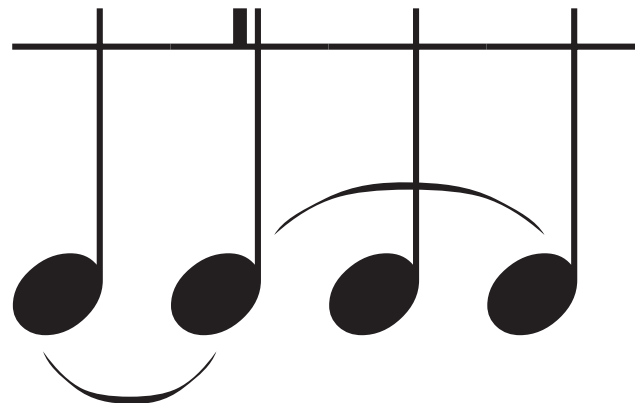
C



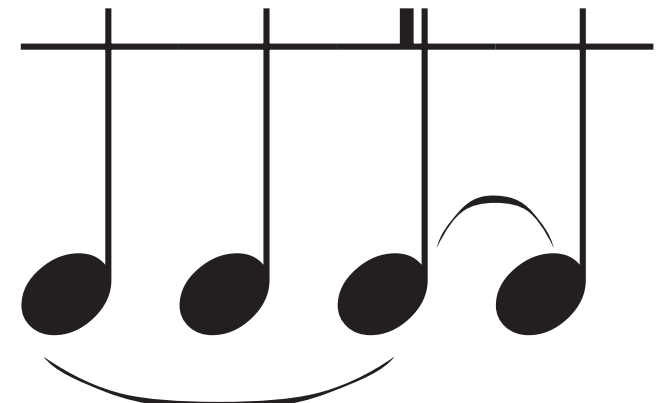
D



E



F



G

Prerequisites for writing / reading perceptual notation:

- **knowing all the IOI-related perceptual thresholds**
- **telling which IOI belongs/relates to which threshold**
- **relational and then absolute memory for a whole range of IOI sequences**
- **knowing how to notate different IOI sequences upon hearing them**
- **performing and/or mentally imagining (elozizing) notated IOI sequences**

**A certain IOI triggers certain perceptual experiences,
leading to...**



...an experimentally-defined perceptual phenomenon.



Hence, recognition of experience = recognition of IOI.



Recognition of IOI makes possible its graphical notation.



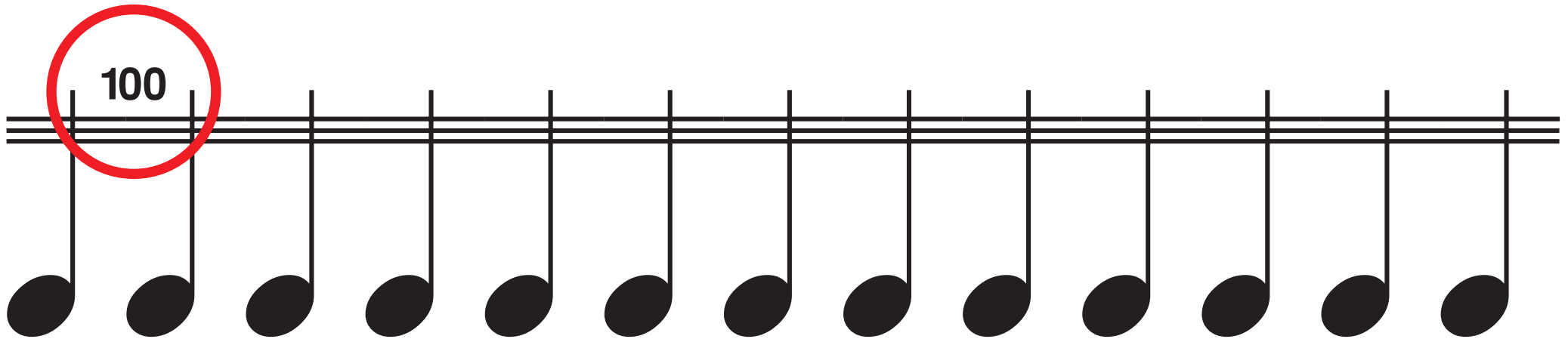
Graphical notation makes possible first-sight production.



**And: apperception / educated perception for the
recognition/production of a wide range of IOIs needed.**

Perceptually-defined isochronal tempi – I

IOI \approx 100ms (MM \approx 600)

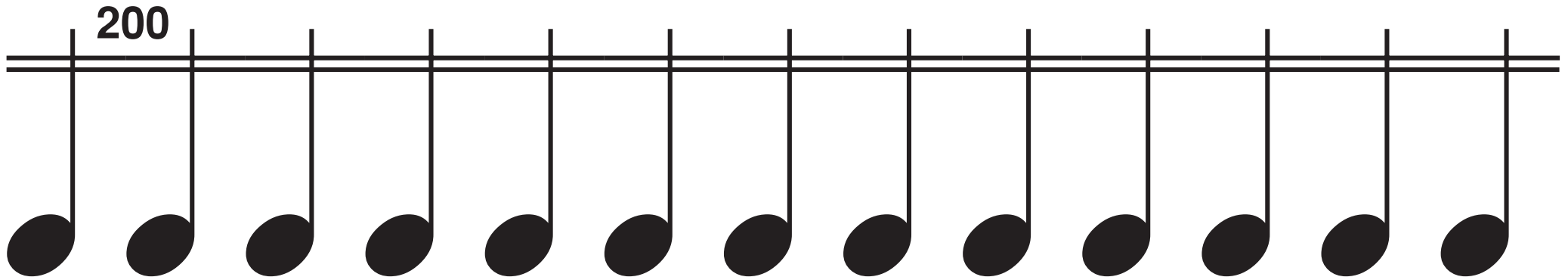


Related perceptual phenomena:

- the beginning of the IOI range for the „central tendency for habitually perceived durations“ (*Fraisse, 1964*)
- **the beginning of the „macro-temporal region that allows for the recognition of temporal features“** (*Roederer, 1975*)
- the threshold of subjective rhythmization (*Bolton, 1894*)
- the fastest compound tempo (i.e. when grouped in three) (*London, 2004*)

Perceptually-defined isochronal tempi – II

IOI \approx 200ms (MM \approx 300)

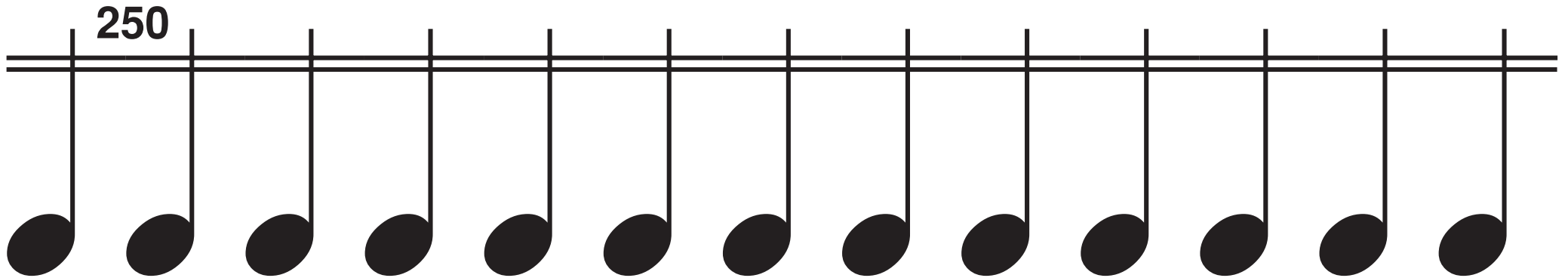


Related perceptual phenomena:

- **the minimum duration of a „present moment“** (*Clynes, 1989*)
- **the minimum acton** (*Clynes, 1989*)
- **the minimum duration of the perceptual present** (*Pöppel, 1988*)
- **the minimum interval between two stimuli for subjects to have enough time to transfer their attention from one stimulus to the other** (*Feilgenhauer, 1912*)
- **threshold of (note-to-note) synchronization** (*Fraisse, 1982*)

Perceptually-defined isochronal tempi – III

IOI \approx 250ms (MM \approx 240)

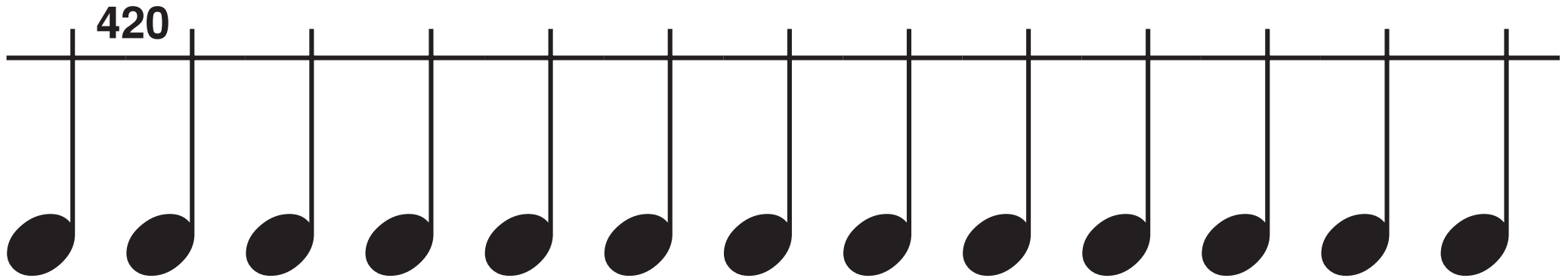


Related perceptual phenomenon:

- the threshold between the holistic vs. analytical processing of durations
(Michon, 1964)

Perceptually-defined isochronal tempi – IV

IOI \approx 420ms (MM \approx 143)

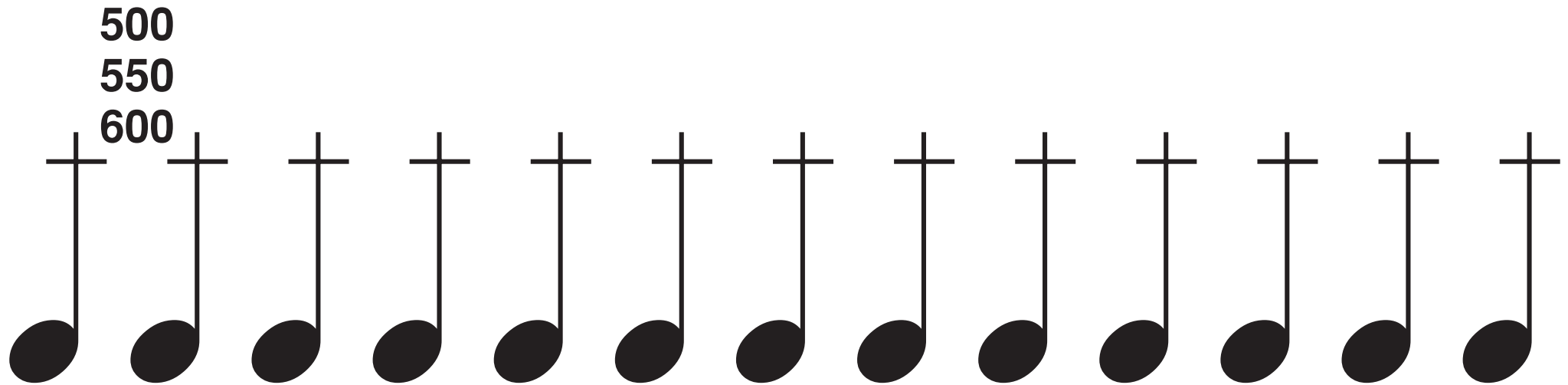


Related perceptual phenomenon:

- **sustainable rate of (continuous) attention shift** (*Fraisse, 1964; Feilgenhauer, 1912*)

Perceptually-defined isochronal tempi – V

IOI \approx 500, 550, 600ms (MM \approx 120, 109, 100)

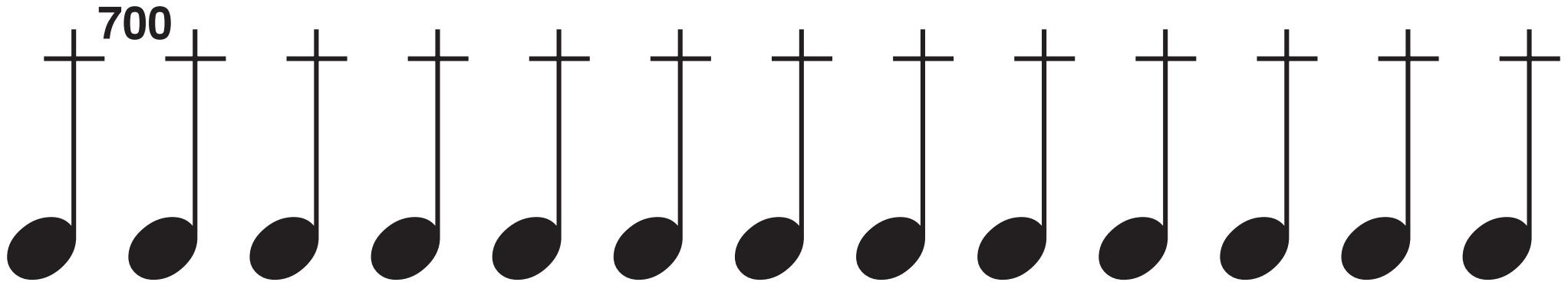


Related perceptual phenomenon:

- (central nervous system) resonance-specific IOIs (*van Noorden & Moelants, 1999*)
- **IOI 600ms – optimal rate of attention shift** (*Mager, 1925*)

Perceptually-defined isochronal tempi – VI

IOI \approx 700ms (MM \approx 86)

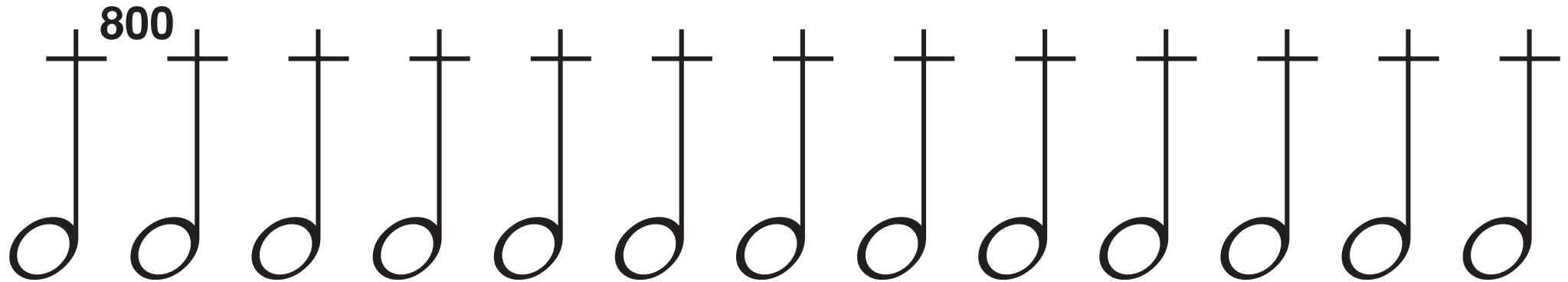


Related perceptual phenomenon:

- **the last non-gap defined IOI (ideal unit of perceptual present)** (*Fraisse, 1964*)
- **the optimum interval for immediate succession** (*Oléron, 1952*)

Perceptually-defined isochronal tempi – VII

IOI \approx 800ms (MM \approx 75)

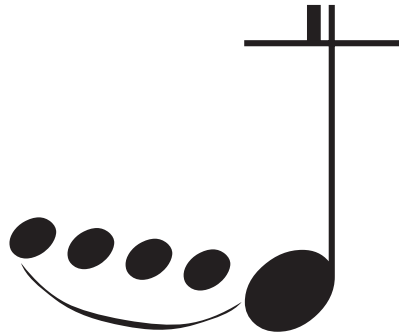


Related perceptual phenomenon:

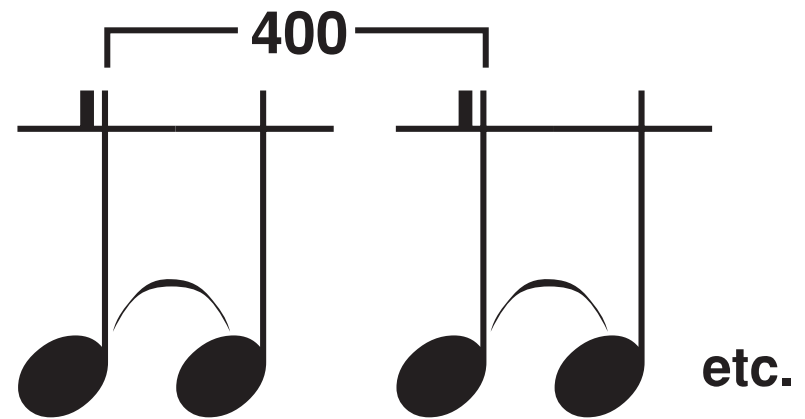
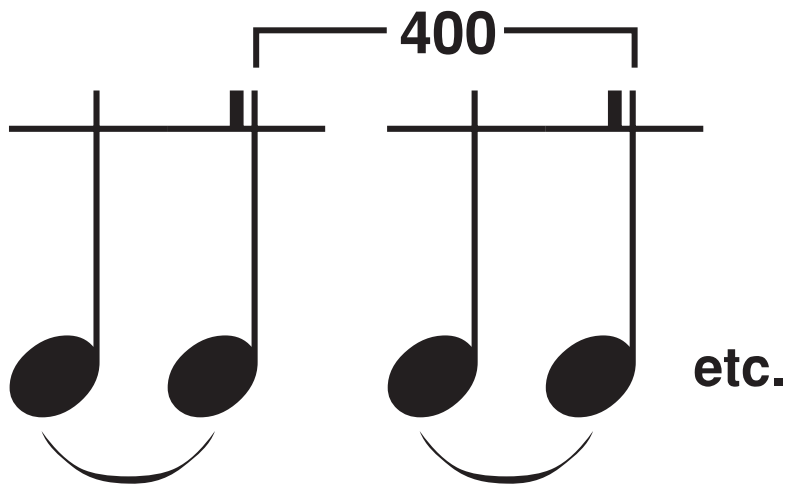
- **the first gap defined IOI** (*cf. Fraise, 1964*)

Other types of pulsatory structures – I

Crushing notes:

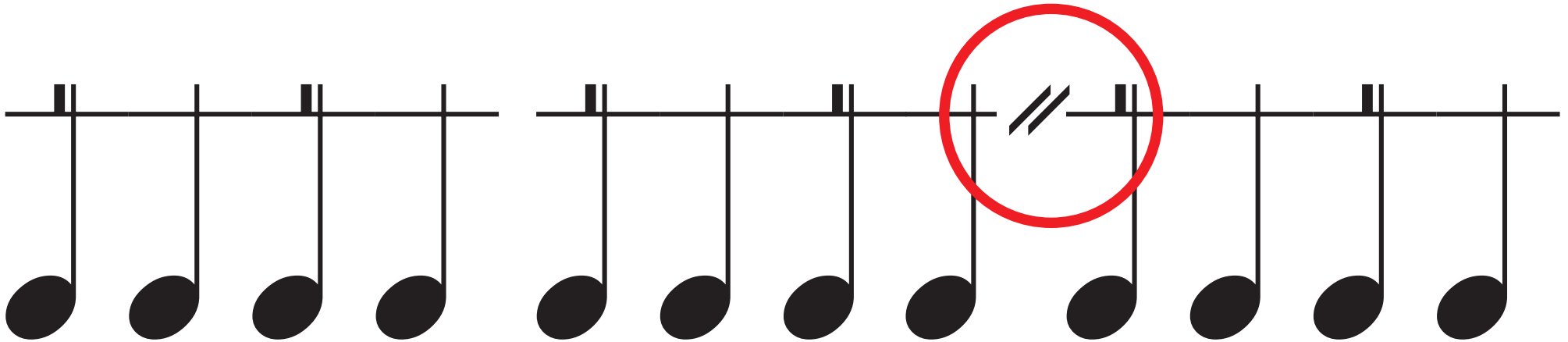


„Dotted“ structures:



Other types of pulsatory structures – II

Sudden shifts of temporal windows



Implications:

Do you speak „Time-ish“?

- **the promise of a perception-based musico-temporal language with a corresponding notational system**
- **creative exploration of our *overall* discrete-temporal competence**
- **less feet-tapping and duration-relating,**
- **more cognition,**
- **more educated temporal perception.**

The perceptual notation is **open-source**.
Feel free to use, modify and enhance it.

e-mail for help at
pogo@mailbox.ro

2 more detailed papers on this topic
downloadable at:

www.zeuxilogy.home.ro

