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Music and Dance

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Correspondences Between Music and Dance

1. Terminology and concepts used to describe sound and motion correspondences, is also relevant when analyzing correspondences between music and dance.
2. Dance is often understood as a response to features in the musical sound. That is not always the case.

References

Syllabus

Music Moves

Godøy, Rolf Inge and Leman, Marc. (2010). *Musical gestures: sound, movement, and meaning*. New York: Routledge

Haugen, M.R. (2016). *Music–Dance. Investigating rhythm structures in Brazilian samba and Norwegian telespringar performance*. Ph.D. Thesis, University of Oslo.

Examples

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Haslinger, Bernhard, Erhard, Peter, Altenmüller, Eckart, Schroeder, Ulrike, Boecker, Henning, & Ceballos-Baumann, Andres O. (2005). Transmodal sensorimotor networks during action observation in professional pianists. *Cognitive Neuroscience, Journal of*, 17(2), 282 -- 293.

Haugen, M.R, & Godøy, R.I. (2014). *Rhythmical Structures in Music and Body Movement in Samba Performance*. Paper presented at the Proceedings of the ICMPC-APSCOM 2014 Joint Conference: 13th Biennial International Conference for Music Perception and Cognition and 5th Triennial Conference of the Asia Pacific Society for the Cognitive Sciences of Music, Seoul, South Korea.

Kubik, Gerhard. (1990). Drum Patterns in the "Batuque" of Benedito Caxias. *Latin American Music Review / Revista de Música Latinoamericana*, 11(2), 115 -- 181.

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Dance



Dancers

- Performers
- Perceivers
- Social event



Dance motion

- Choreographed
- Improvised/Free dance
- Spontaneous
- Music style/culture



Music-Related Motion

1. Sound-producing actions
 - Excitation (direct or indirect) and modification.
2. Ancillary motion and/or Sound-facilitating motion
 - Support, phrasing, and entrained.
3. Sound-accompanying motion
 - Sound-tracing and mimic.
4. Communicative motion
 - Performer–performer or performer–perceiver.

(Jensenius et al. 2010, Godøy 2010)

Dance motion

- Sound-accompanying motion: All kinds of body motions that are not necessary to produce the sound (for example, dancing).
- Usually, but not always, some kind of synchrony between events in the music and the sound-accompanying body motions.
- *Gestural affordances of musical sound*
 - ♦ Musical sound affords many sound-accompanying gestures.
 - ♦ Many choreographies to the one and same musical excerpt.

(Godøy 2010, pp. 110–111)





WSJ.com

Gestural Affordances of Musical Sound

Action–Sound Types

1. Impulsive
2. Sustained
3. Iterative



The barber scene from Charlie Chaplin's *The Great Dictator* (Godøy 2010)

Dance motion

- Dancers often follow or contrast with the musical sound (Jensenius et al. 2010, p. 13).



Correspondences between dance motions and musical sound

Examples:

- Rhythm patterns.
- Pitch: Up/down contours.
- Loud, soft, gentle, heavy, smooth, punchy... (Music Moves: 2.14 How do we analyse sound?).
- Emotions.
- Event density (event: perceptible change in an acoustical environment).

Laban's Movement Analysis (LMA)

Space:	Direct	————	Indirect
Time:	Sustained	————	Sudden
Weight:	Light	————	Strong
Flow:	Free	————	Bound

Relationships between body motion and musical structural features

Body Motion			Musical Structural Features			LMA		
<i>Amount of motion</i>	Few	Much	<i>Loudness</i>	Soft	Hard (Loud)	<i>Weight (Force)</i>	Light	Strong
<i>Motion articulation</i>	Jerky	Smooth	<i>Articulation</i>	Staccato	Legato	<i>Space (Displacement)</i>	Direct	Indirect
<i>Motion speed</i>	Slow	Fast	<i>Tempo</i>	Slow	Fast	<i>Time (Velocity)</i>	Sustained	Sudden (Quick)

Leman (2008, p. 205)

Music and dance correspondences

*How do aspects of music and motion work together
so that they are perceived as corresponding?*

(Haga 2008)

Free Dance to Music

- Non-periodic, twentieth-century Western music in the classical tradition.
- Video recordings.
- Three trained dancers (students at the National Academy for Ballet)
- Improvise motions that they felt matched the music.

(Haga 2008)



Ligeti's *Ten Pieces for Wind Quintet* (20 seconds)

Free Dance to Music

- Low density of onsets: the dancer in a slow and smooth motion.
- Four observed sequences: For example, (1) one chunk, (2) subtle jerk, (3) change in direction, and (4) weak emphasis when the hands meet.
- Smooth articulations: gradual transitions between sequences, changes in direction, and speed (low level of activation).

(Haga 2008)

Entrainment

The process where two or more independent rhythmic processes interact and synchronize.

Entrainment in a musical context:

- Entraining with the metrical levels in the music; for example, moving the feet in synchrony with the pulse level or subdivision levels.

Exercise

“Chose an excerpt (10–30 sec) from a video where you experience that the correspondence between the music and the dance is particularly good”.

1. Explain, in your own words, why you chose this excerpt.
2. Discuss whether the music and dance correspondences that you experience in the videos can be described using one or more of the following theories:
 - Sound-accompanying (sound tracing).
 - Action–Sound.
 - Musical features–Features of dance (Laban, Leman, Haga).
 - Entrainment.

Music-Related Motion

1. Sound-producing
2. Ancillary and/or Sound-facilitating
3. Sound-accompanying
4. Communicative



Dance motion

- Dancing people synchronize to *the pulse* of the music (van Noorden 2010, p. 172).

The pulse

- Can be represented by sonic events, but not necessarily.
- *Beat induction*: the pulse does not need to be sounded in order to be experienced.



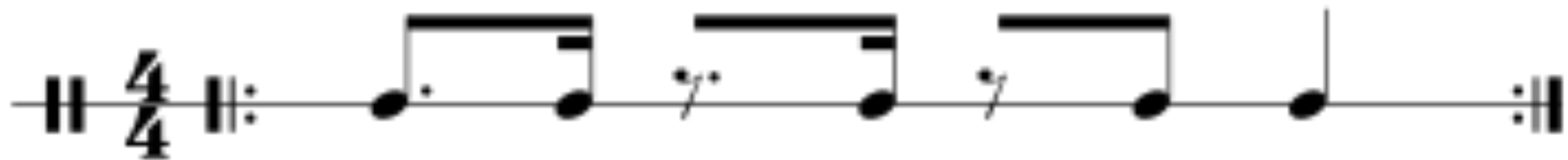
“Standard Rhythms”/ “Time lines” and Dance

Standard rhythms: a genre-specific recurring rhythm patterns that identifies the pulse, though is aligned with it.

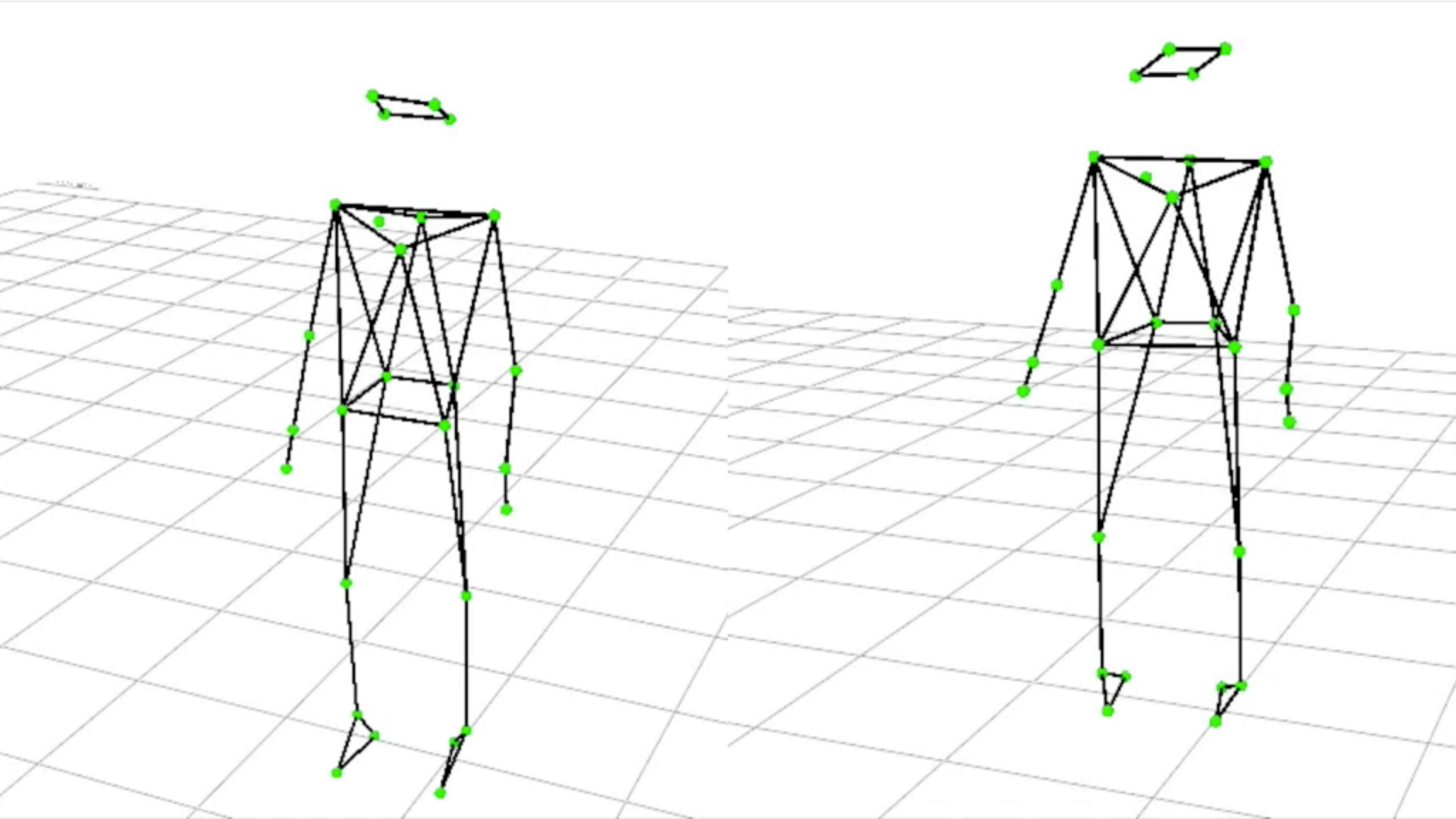
- West and Central African dances: The pulse is indicated by “time lines,” but visible in the corresponding dance (Agawu 2003).
- Brazilian drum patterns: The pulse is not in the musical sound, but in the ,musicians’ and the dancers’ body motion (Kubik 1990).

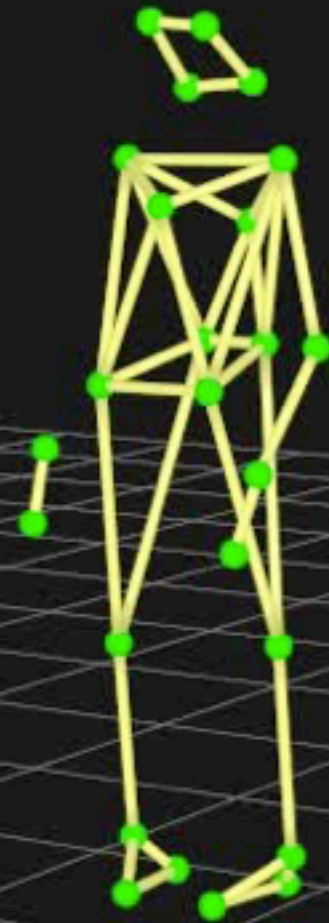
Afro-Cuban Rumba

Standard rhythm in Afro-Cuban Rumba: clave pattern









Musical Experience

- Personal musical experience.





Aserejé ja de jé de jebe tu de jebere seibiunouva

Musical Experience

- Personal musical experience.
- *Music culture*: when a group of people shares the same musical experiences, conceptions, ideals, and norms.

Music culture and dance

- Music cultures where there is no word for “music” that does not also encompass dance, playing, singing, and the social event:
 - Tanzania: *Ngoma*, which means drum, dance, and play/party, *Kucheza*, which includes playing and dancing (Nielsen 1985).
 - Tiwi people in northern Australia: *yoi* - dance, songs, and rhythms (Grau 1983).

Music–Dance

Music styles

- where the music and the dance have developed together under mutual influence.
- with an intrinsic relationship to a corresponding dance.

Music–Dance does not only refer to musical styles where music is *only* performed with the corresponding dance, but where the music should be understood in relation to the corresponding dance.

(Haugen 2016)

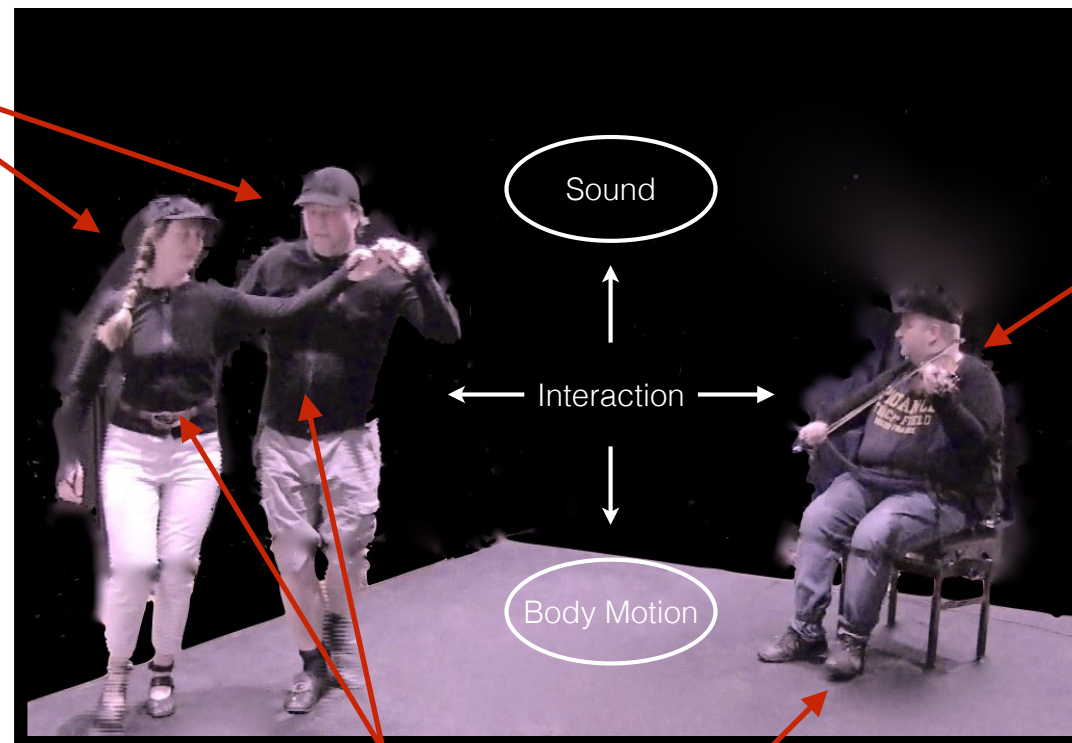
Music–Dance Performance



Music–Dance Performance

Common understanding:
Shared experiential knowledge
of the music culture.

Dance motion



Sound-producing
action

Periodic Non-Sound-Producing
Body Motion

Gestural renderings of musical sound

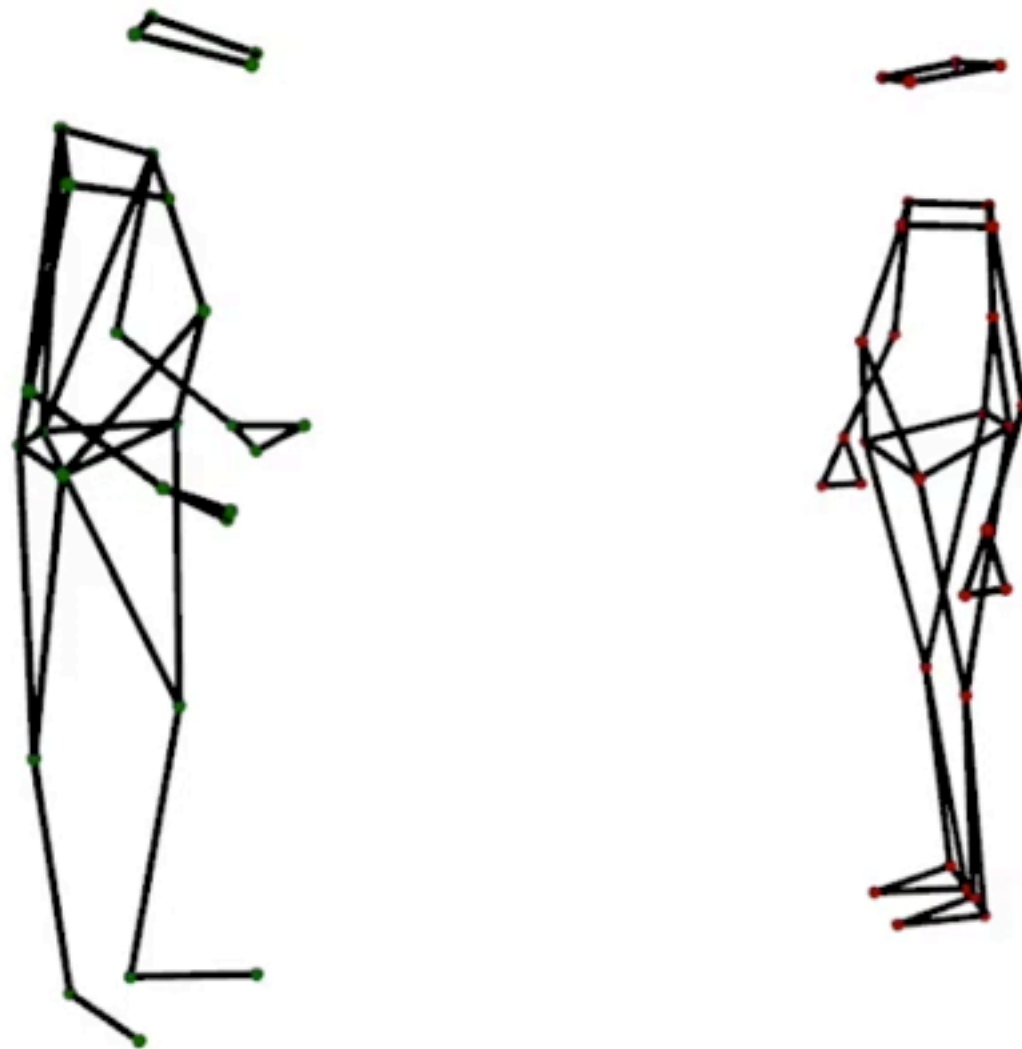
- *A motor-mimetic perspective on music: a relationship between simulated sound-producing actions and musical sound (Godøy 2010).*
- Musical sound activate motor areas in performers' brains (Wilson and Knoblich 2005).
- Observation of silent “sound-producing” actions activate auditory areas in performers' brains (Haslinger et al. 2005).

Gestural renderings in Music–Dance

In music–dance:

- *A motor-mimetic perspective*: images of the motion patterns in the dance may inform the musician's playing, even when dancers are not present.
- Musicians, dancers, and perceivers may share an understanding of the underlying reference structures through commonly shaped mental images.

Samba

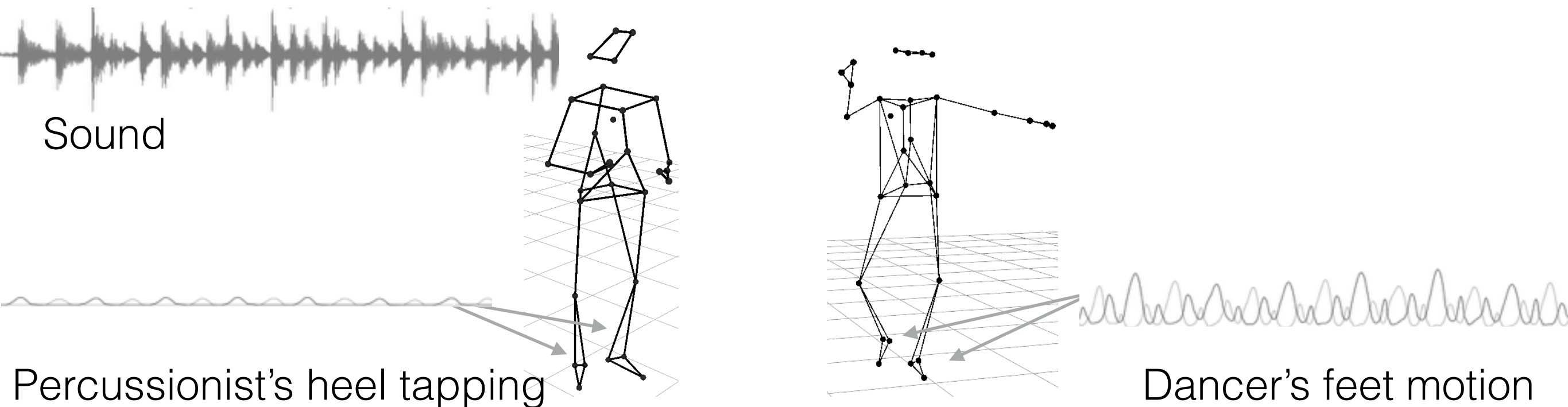


(Haugen & Godøy 2014)

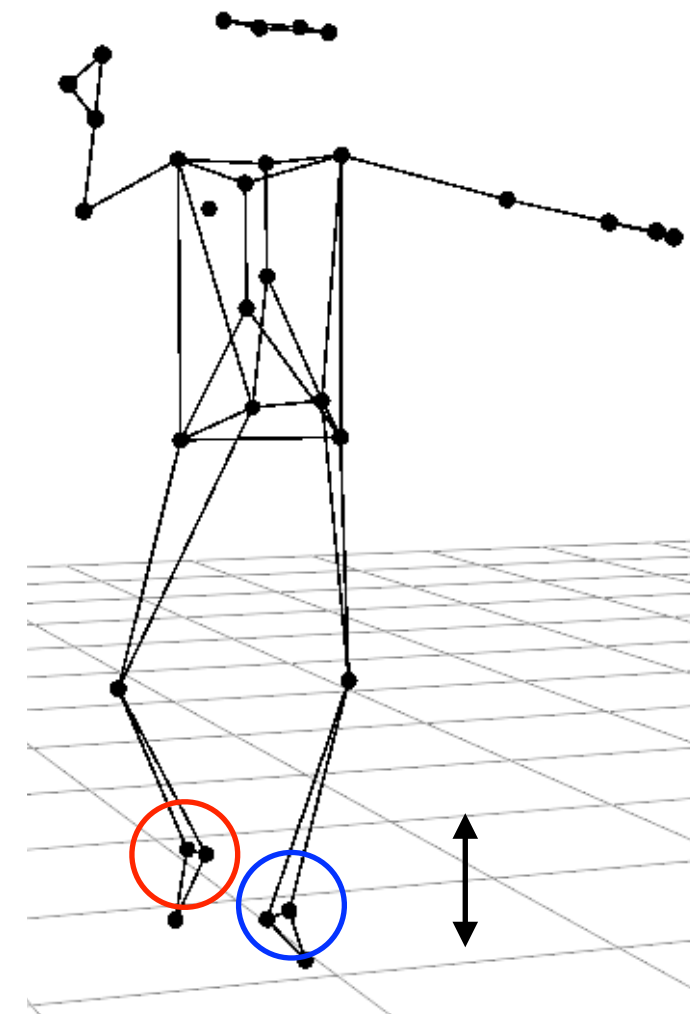
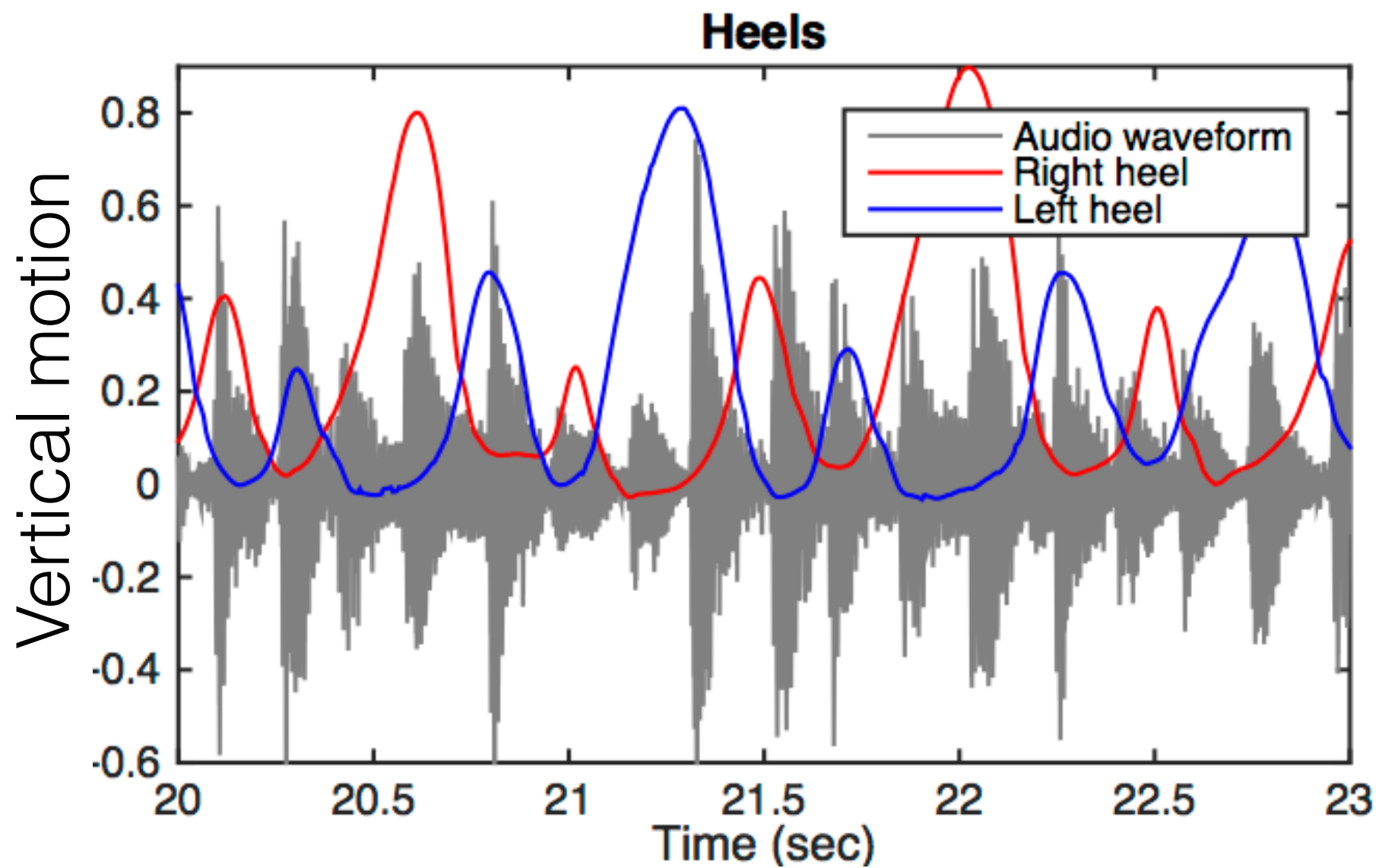
Samba

Systematic microtiming:

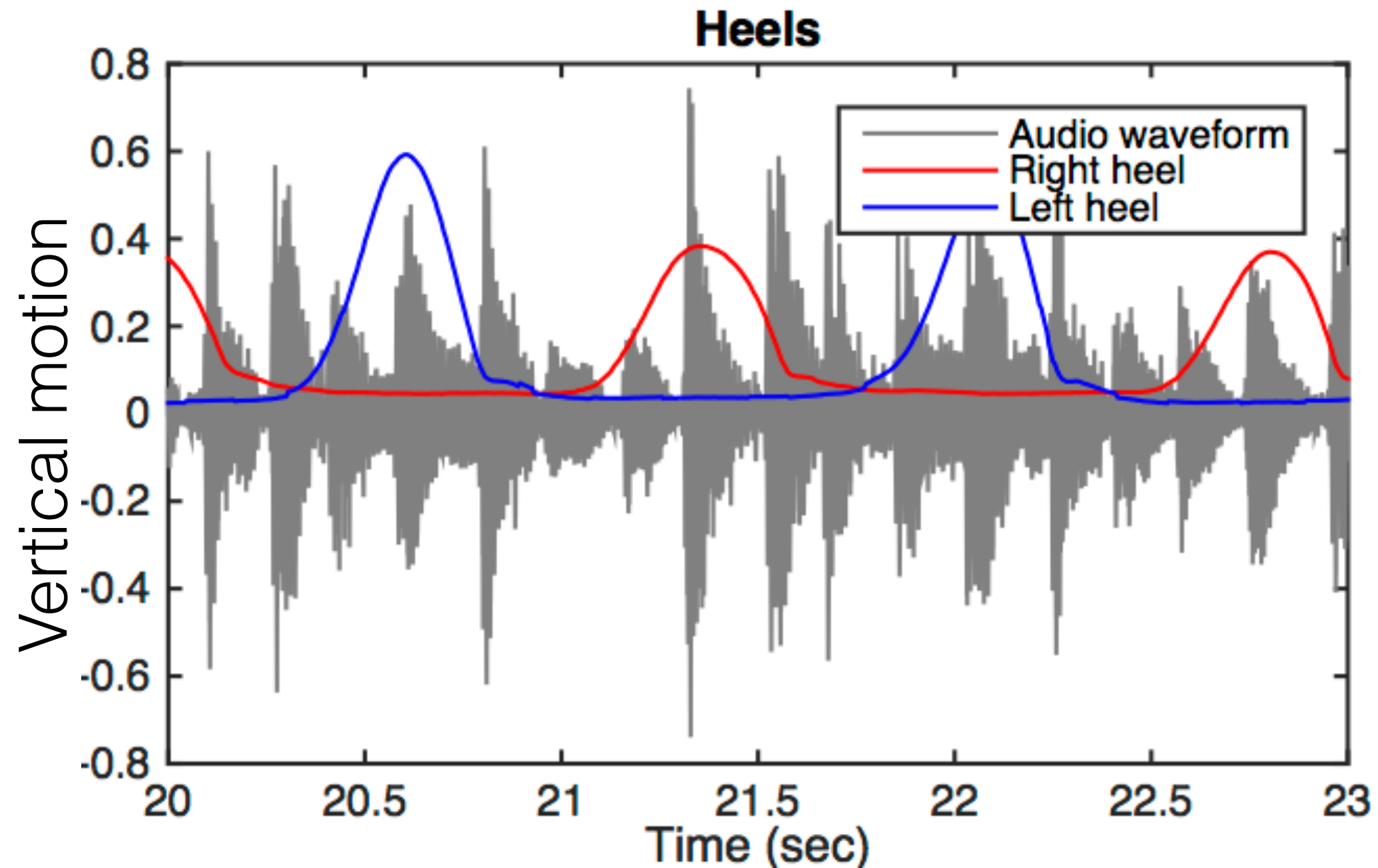
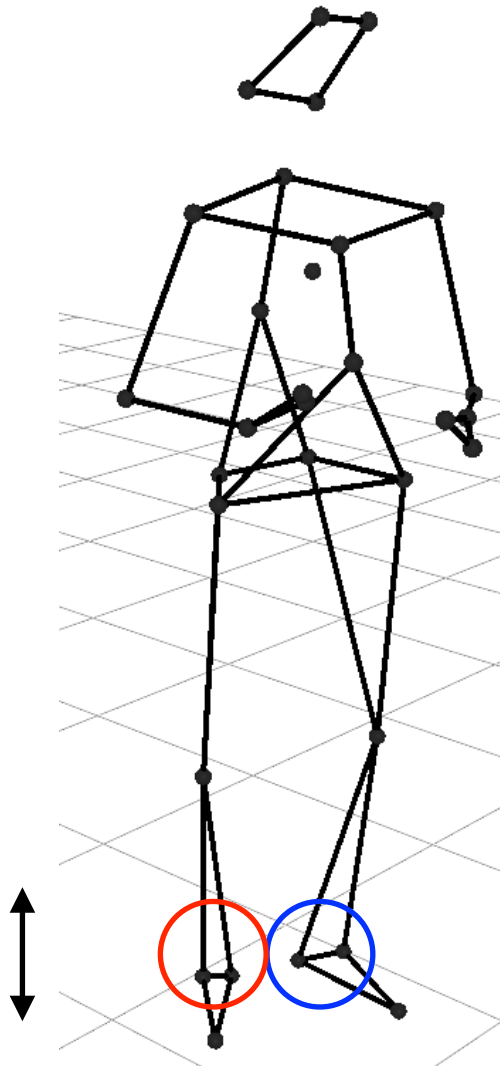
Medium–short–medium–long duration pattern on 16th-note level.



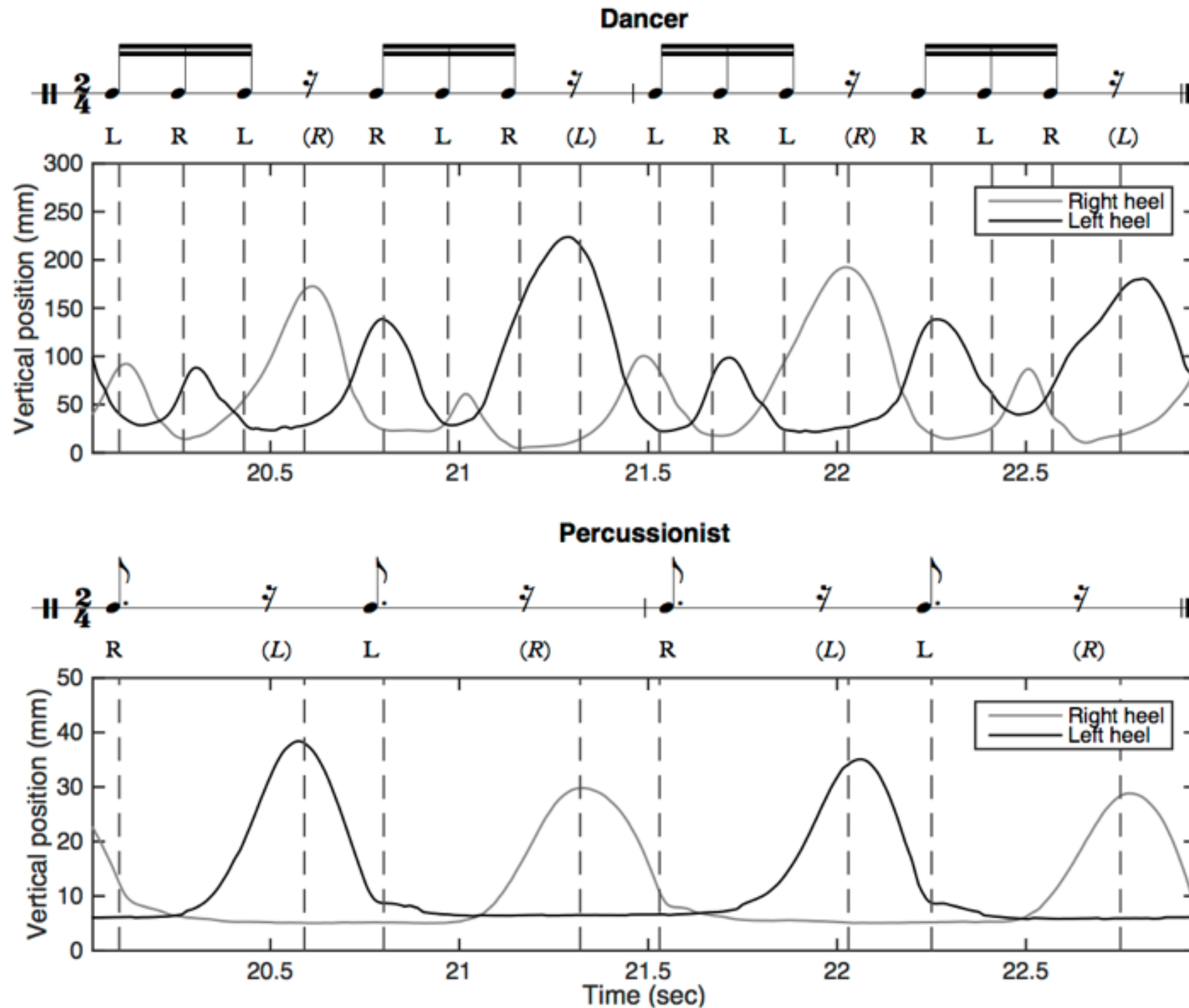
Samba dancer



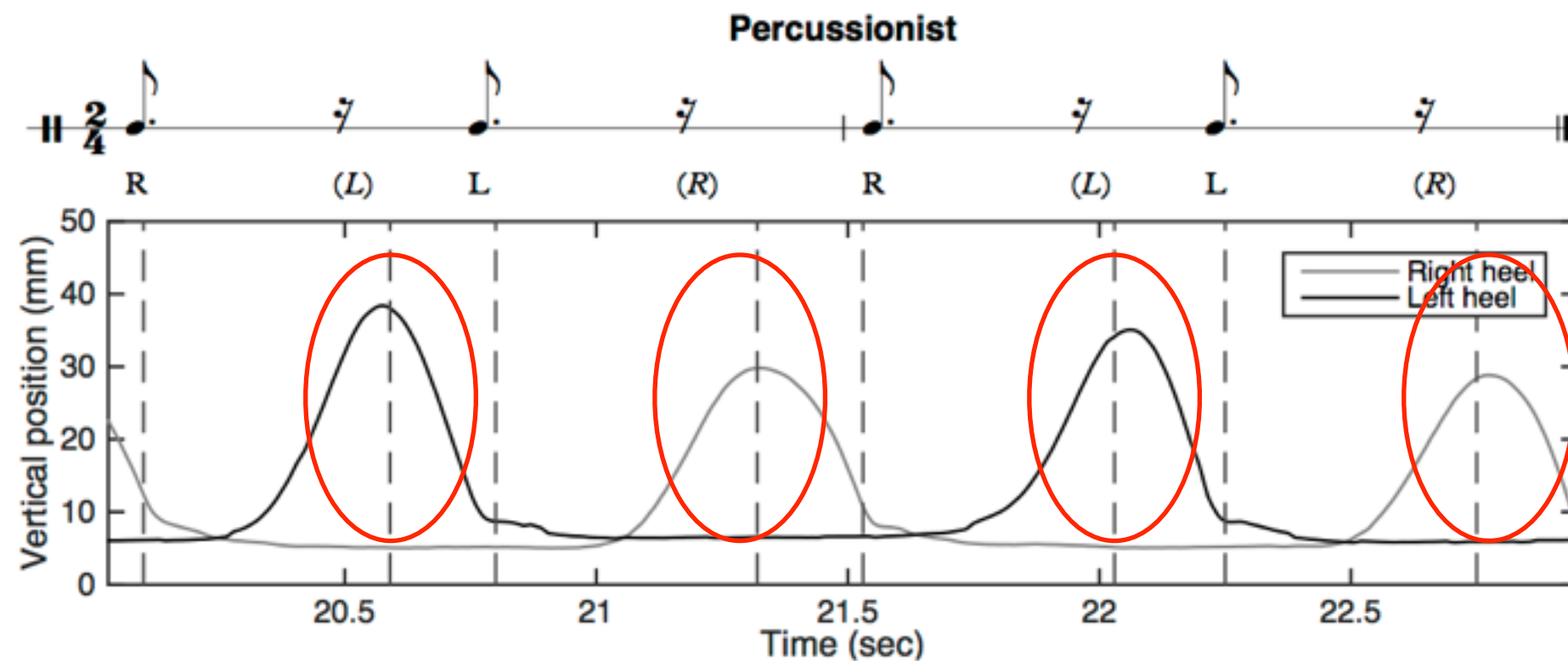
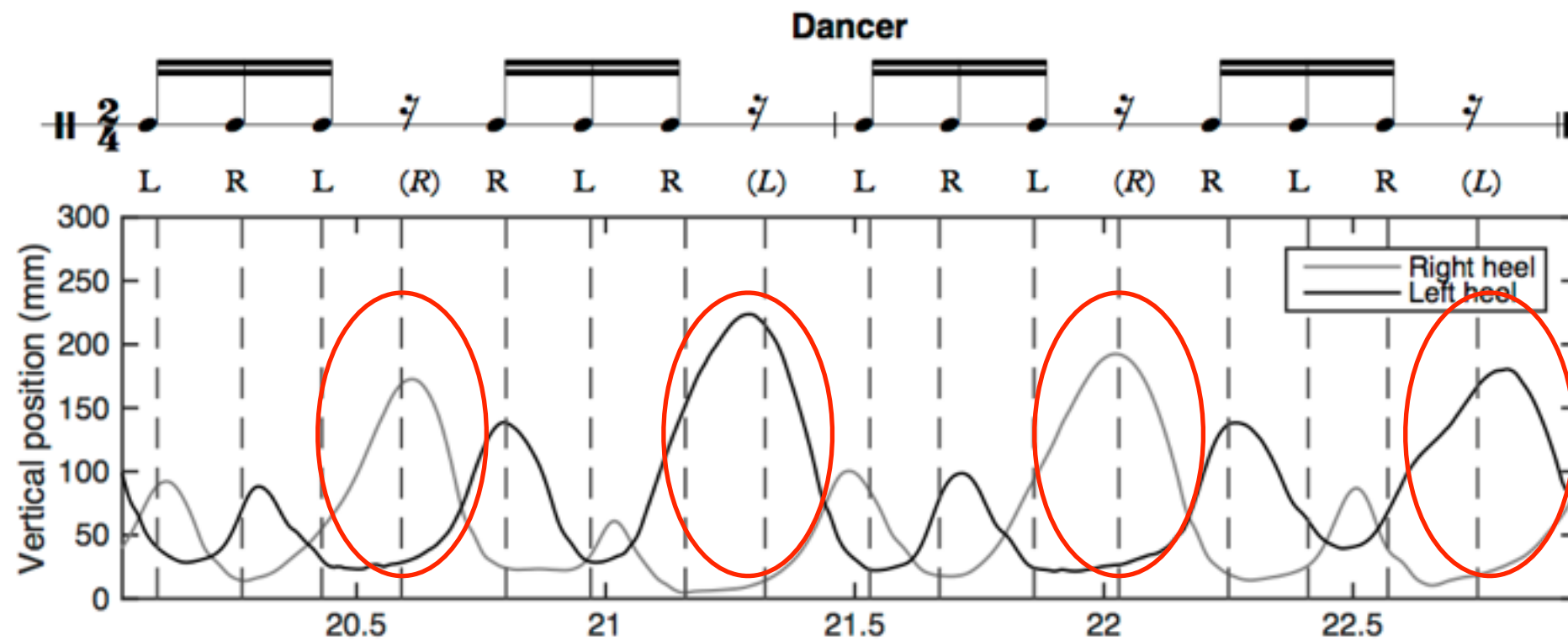
Samba percussionist



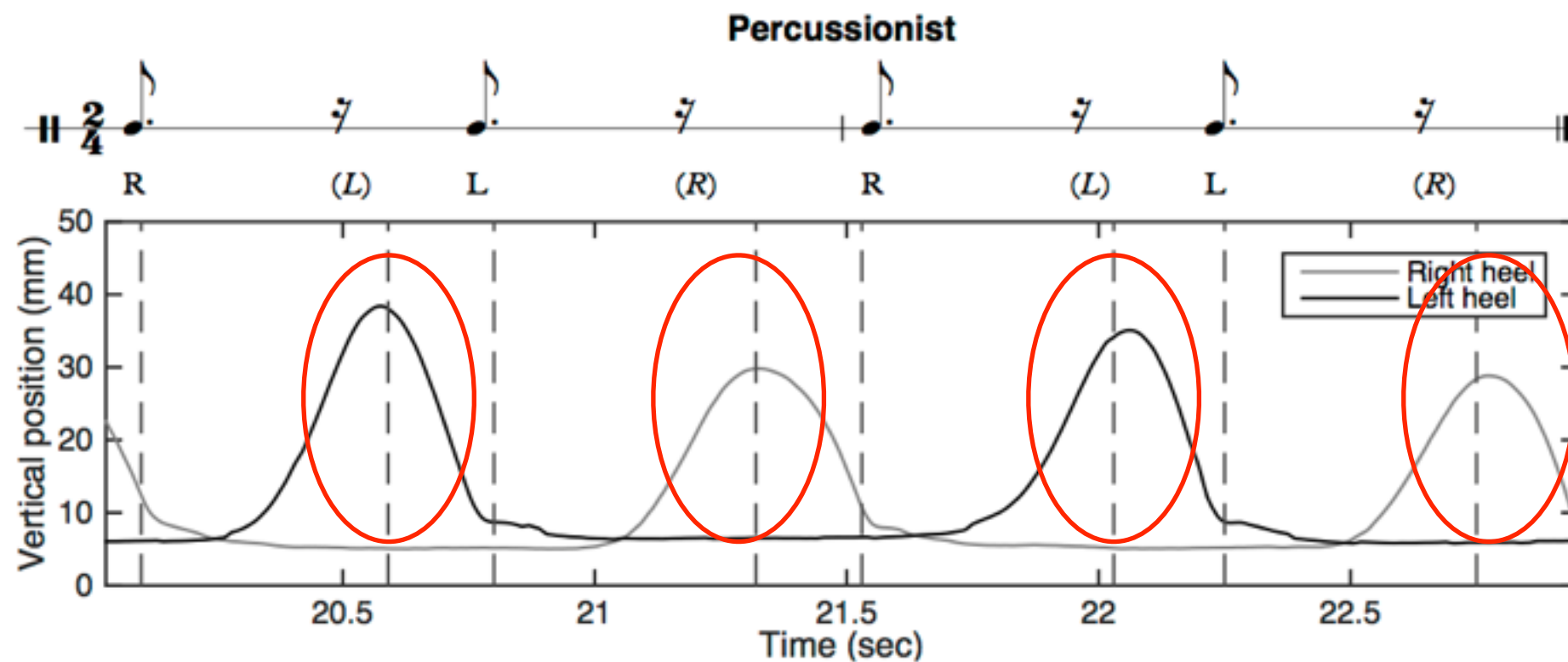
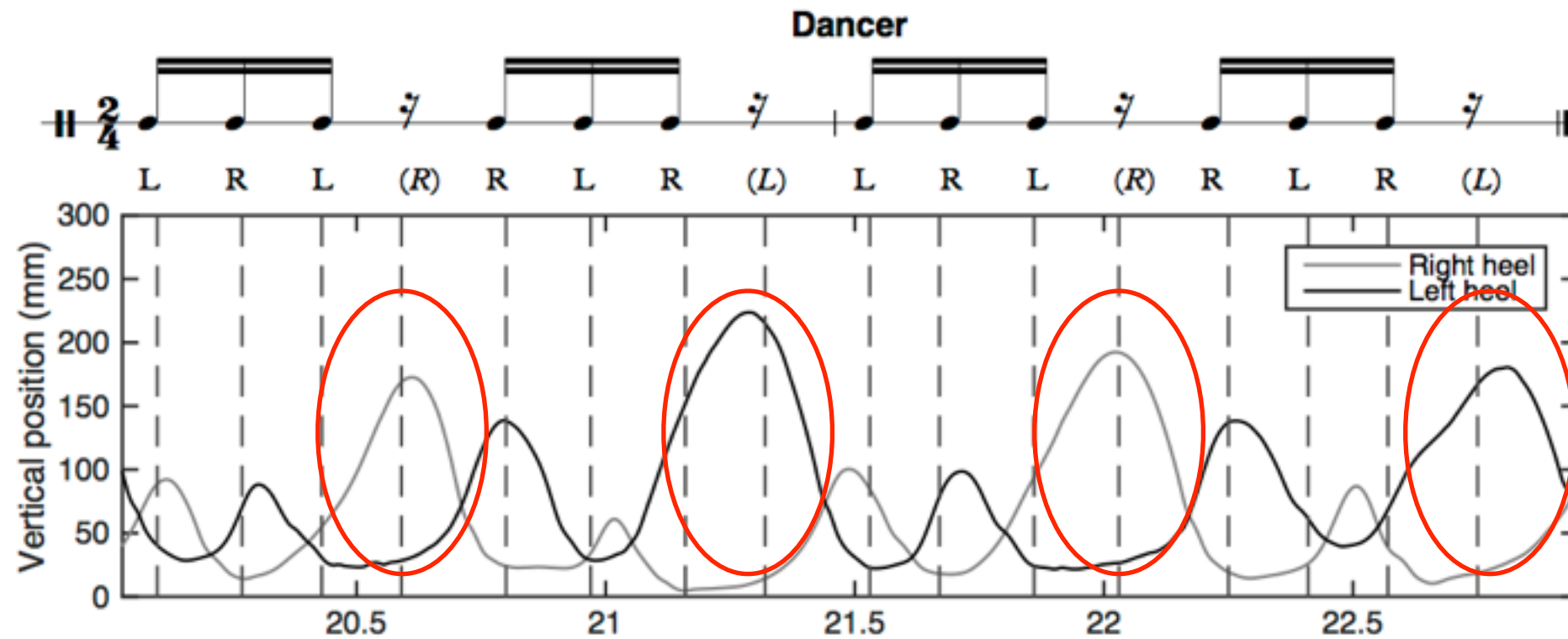
Samba



Samba



Samba



Let's try!

Samba

Images of the motion patterns in samba dance may inform the percussionist's playing.

Music–Dance

“Participants without the tacit knowledge of how movements are related to sonic patterns will listen, move and understand it differently.”

–Naveda 2011, p. 51

Summary

- Correspondences between features in the musical and dance motion.
 - Action–Sound types, entrainment, sound-tracing.
- Synchrony between metrical levels in the music and dance motion.
- Sound-producing.
- Personal experience.
- Music culture. In some music cultures music and dance are intrinsically related.
- Dance motion is not necessarily a response to features in the musical sound. Intrinsic part of the music.

Next Friday...

Student presentations

- Upload your poster to Fronter (“Student presentations”) no later than November 2 (Wednesday).
- Prepare a short oral presentation of your poster (1–2 minutes).