

Sofia Dahl

Performers' Expressive Movements



After today you should be able to....

- Give examples of different kinds of expressive and communicative movements appearing in a music performance.
- Discuss the perception of these movements.
- Discuss what may influence what expressive or communicative movements that a performer uses.



Functional categorization of players' movement gestures

1. Sound-producing movements:

- Primarily for the production or modification of notes
(Conveying intention and expression through the resulting sound events)

2. Communicative movements:

- Directly expressing intentions of the performer to observers and co-performers.

3. Sound-facilitating movements

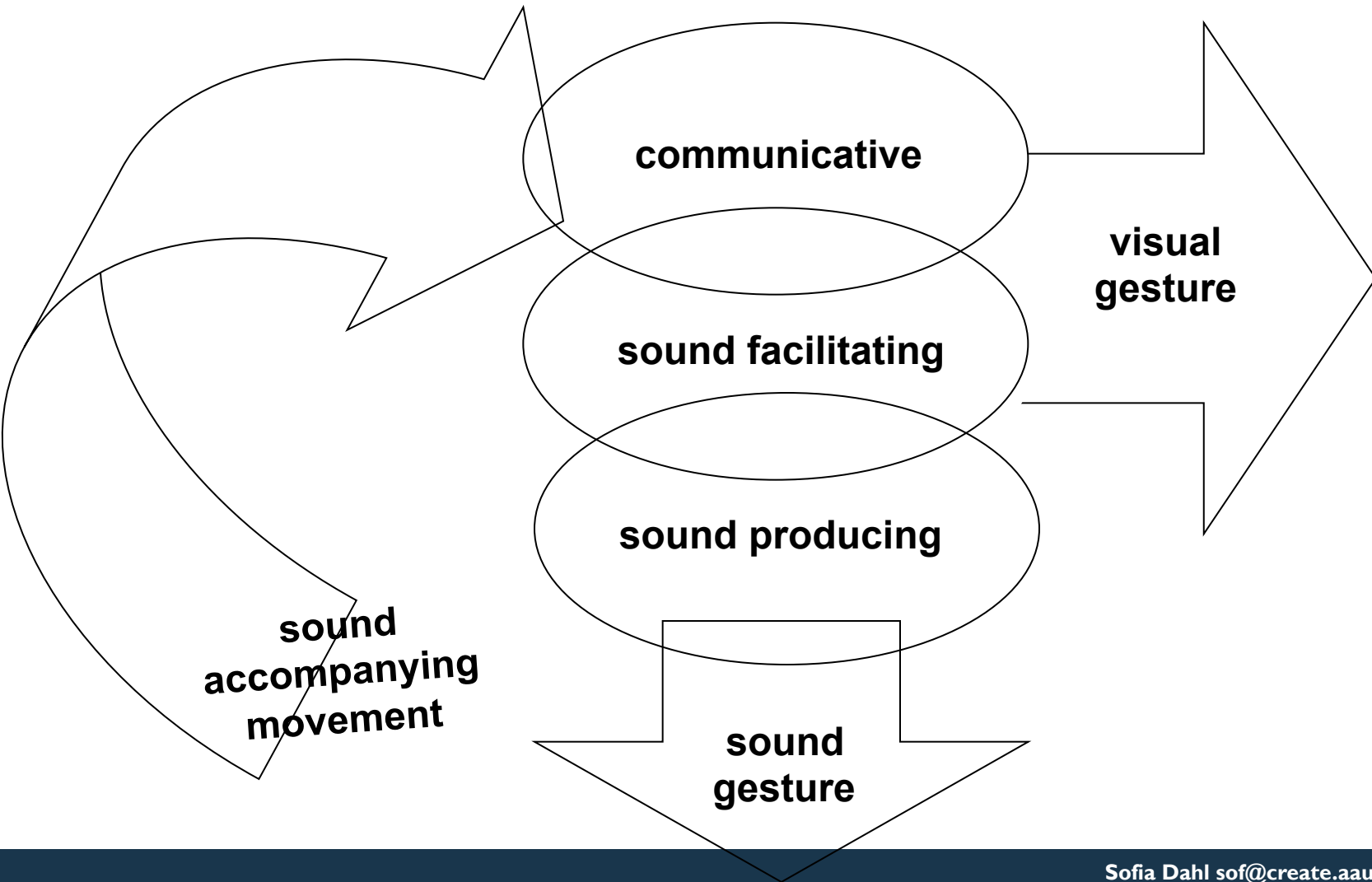
- Movements not directly related to, but *supporting* the production of notes,

4. Sound-accompanying movements

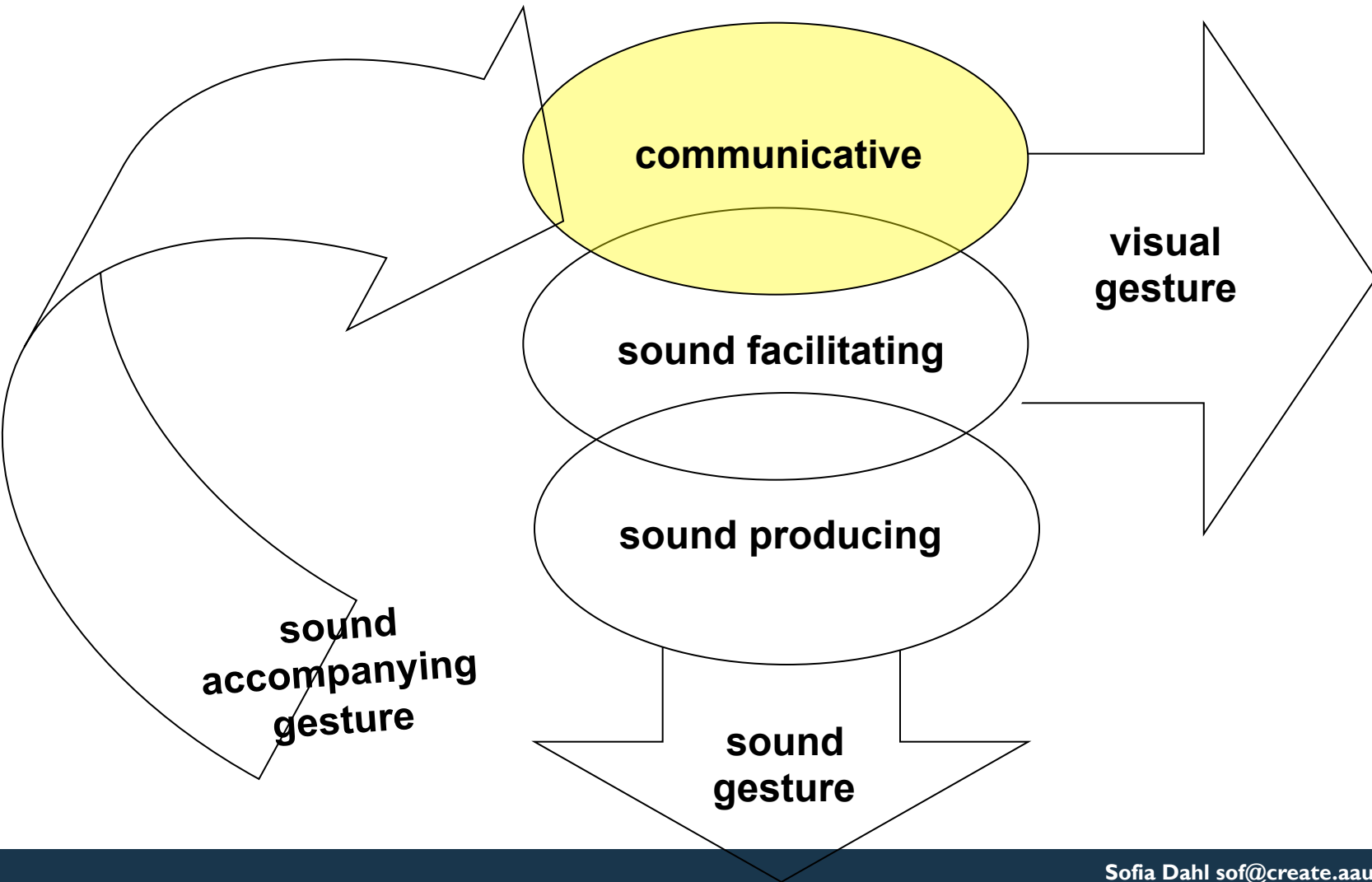
- Movements not involved in sound production but follow the music or made in the response to sound.

(See Godøy & Leman, 2009)

Categories overlap and interact!



COMMUNICATIVE MOVEMENTS



Musicians' movements compared with other specialized movements (e.g. sport).

- Hand and arm movements primarily intended for the production of musical notes.
- Typically also under strict time constraint.
- That is: non-verbal communication through musical sounds.
- During practice, focus is on sound (rather than movement per se).

ÁPRIL 6. 1873.

BORSSZEM JANKÓ.

5



Hamleti tépelődés. Fausti vívódás. Mély esend. A köhögés
sohajja lesz.



Chopin. George Sand. Visszaemlékezés. Édes ifjuság. Illat,
hóldsugár és szerelem.



Dante. A pokol. Az elkárhozottak (körtük a zongora is)
jajgatnak. Lázas izgatottság. A pokol kapuit bevágja a szélvész. Bum!



Csak játszott. Nemi csak nekünk, de velünk is. Imponáló
szerénységgel hajtja meg magát. Csattogó taps, kábító éjjen.



Expressive gestures in music performance

Several aspects suggested to influence performers' movements:

- Communication with co-performers
- Individual interpretations of the music
- Own experiences and behaviors
- The aim to interact and entertain an audience

(Davidson & Correia 2002)

A few examples

MERU Concert live - Kaushiki Chakrabarty with Soumik Datta and Vija

<http://www.youtube.com/watch?v=hAlcD8ffv3k>

Genesis - The Musical Box

<https://www.youtube.com/watch?v=W35wtfcBylY>

Keith Jarrett Solo Concert

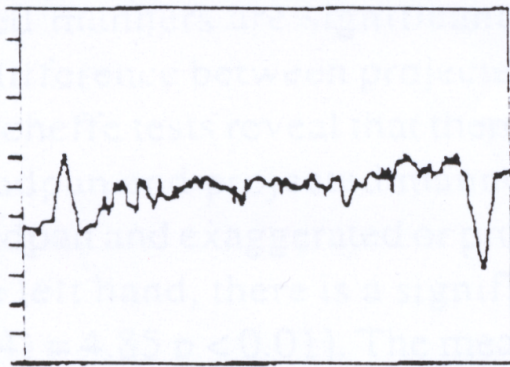
<https://www.youtube.com/watch?v=HPqK1JJOFxw>

- Emblems – a specific gesture with defined meaning
- Movements to regulate performance
 - Only made by the musicians?

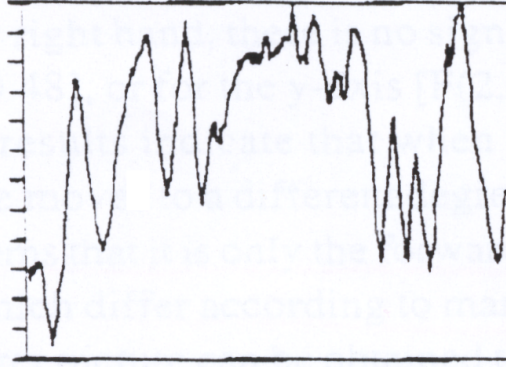
Visual perception of expression

- Observers are able to recognize expressive intent from musicians' movements (e.g. Davidson 1993, 1994).
 - Violinists and pianists
 - Deadpan, projected, exaggerated
 - Audio, visual, audio-visual modes (point-light)
- **Also emotional intent recognized** (Dahl & Friberg, 2004; 2007; Sörgjerd, 2000).
 - Different instrument types (violin, marimba and woodwind)

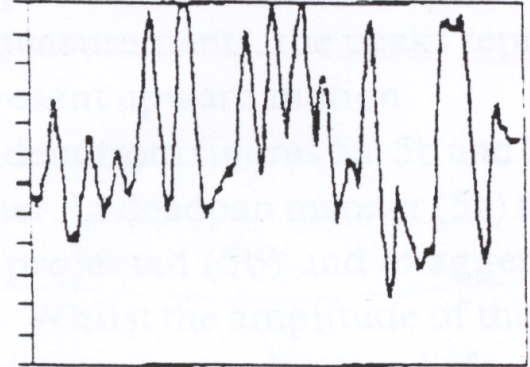
Examples of expressive "rocking motion" in a pianist's head movements



deadpan



projected



exaggerated

Displacement of head towards and away from the piano (Davidson 1994)

Which parts of the body important for this communication?

- Head movements more important for discriminating between expressive intentions than hand movements
- "I expect I'm rating this wrist performance as highly expressive just because there is plenty of action"

(Davidson 1994)

Exercise: What types of movements?

- For the video you pre-selected
- Write down
 - List some expressive/ communicative movements made by the musician(s)
 - What role/purpose does the movement serve?
 - What part of the body is used?

Movement cues used in emotional expression

- Frequency of upward arm movements
- Amount of time arms kept close to body
- Amount of time leaned forward
- Amount of muscle tension
- Number of directional changes in face and torso
- Number of tempo changes in given action sequence (De Meijer 1989, 1991; Boone & Cunningham, 1999)

Many of these movement cues involve the arms and hands!

Viewing conditions



full



no-hands

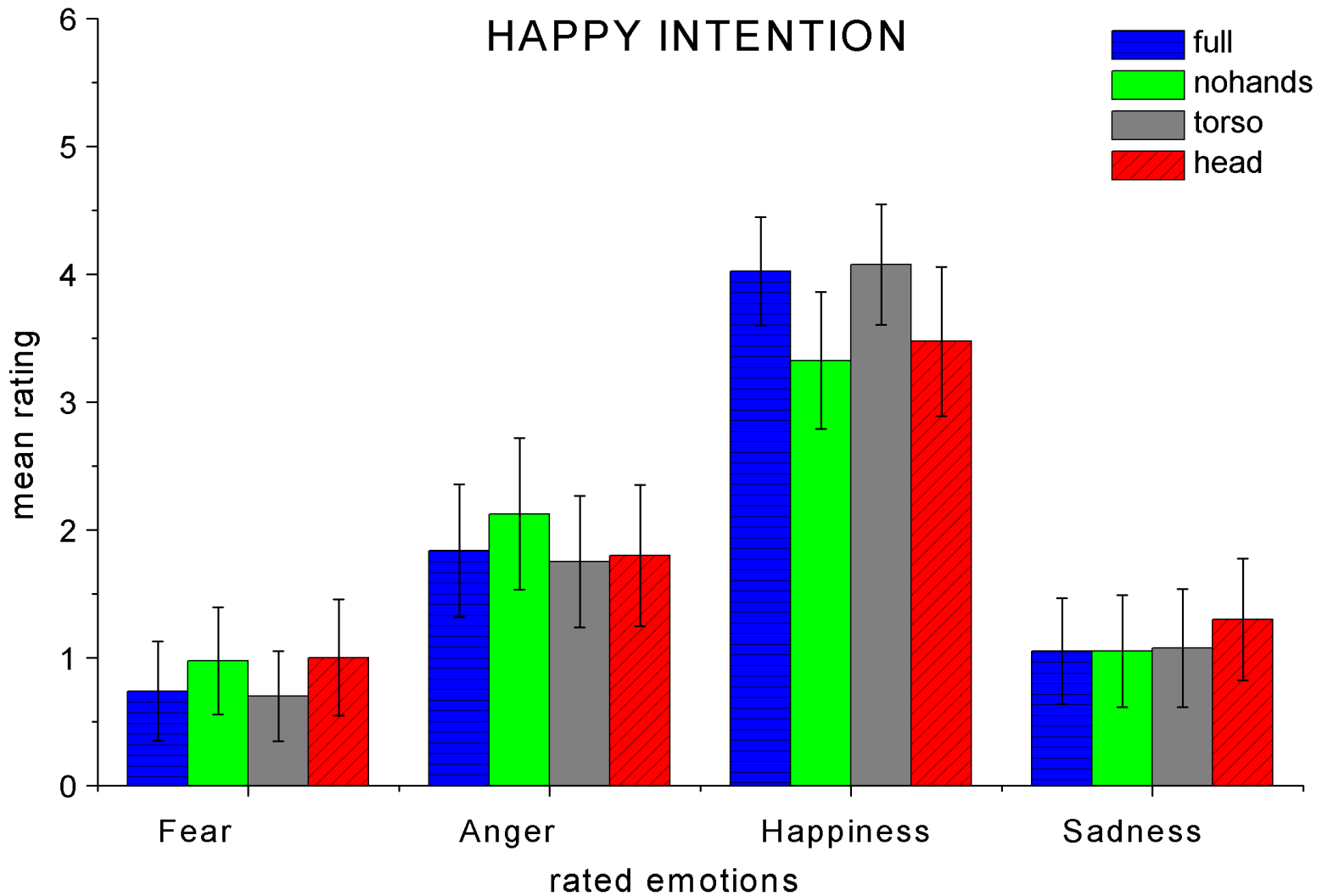


torso

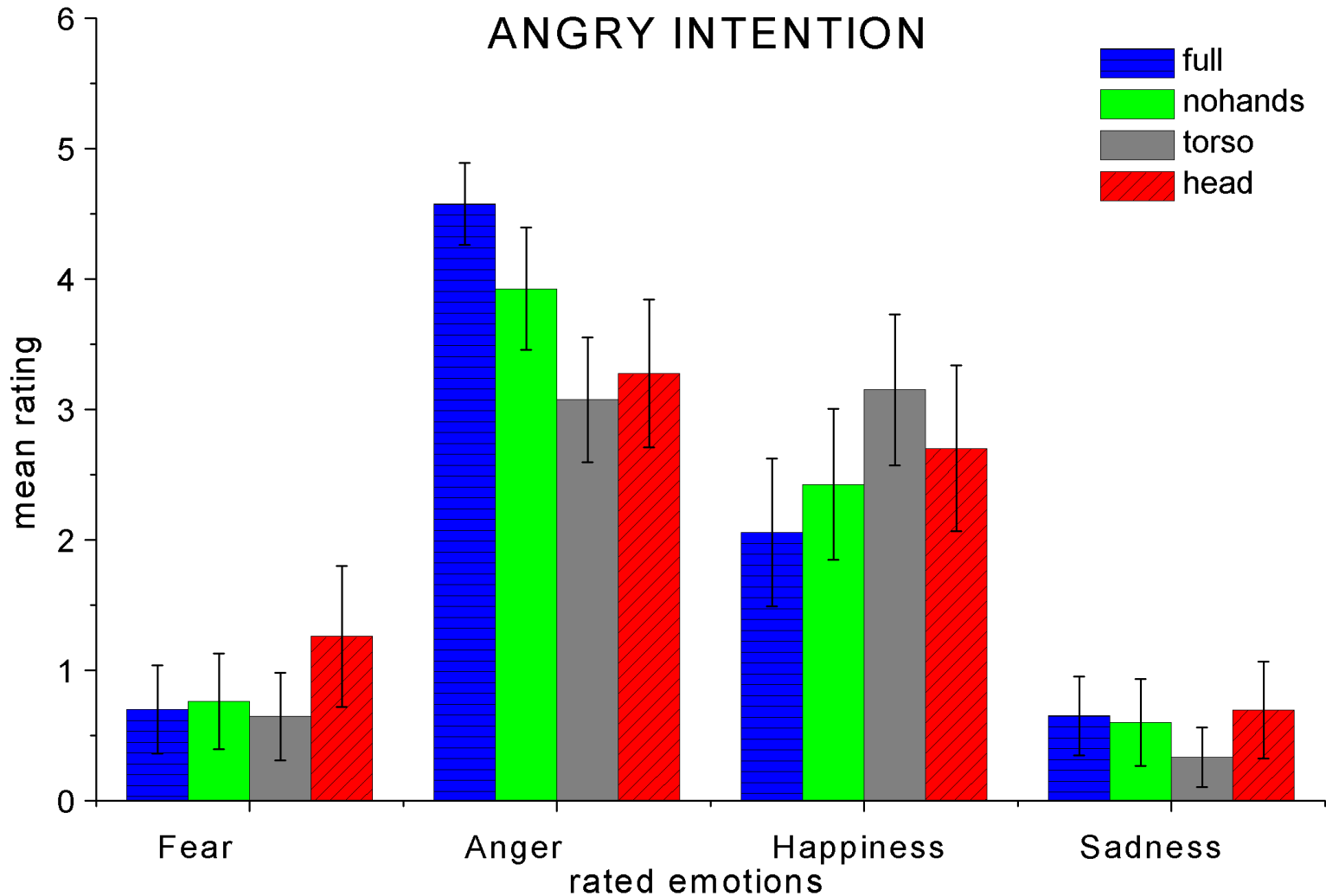


head

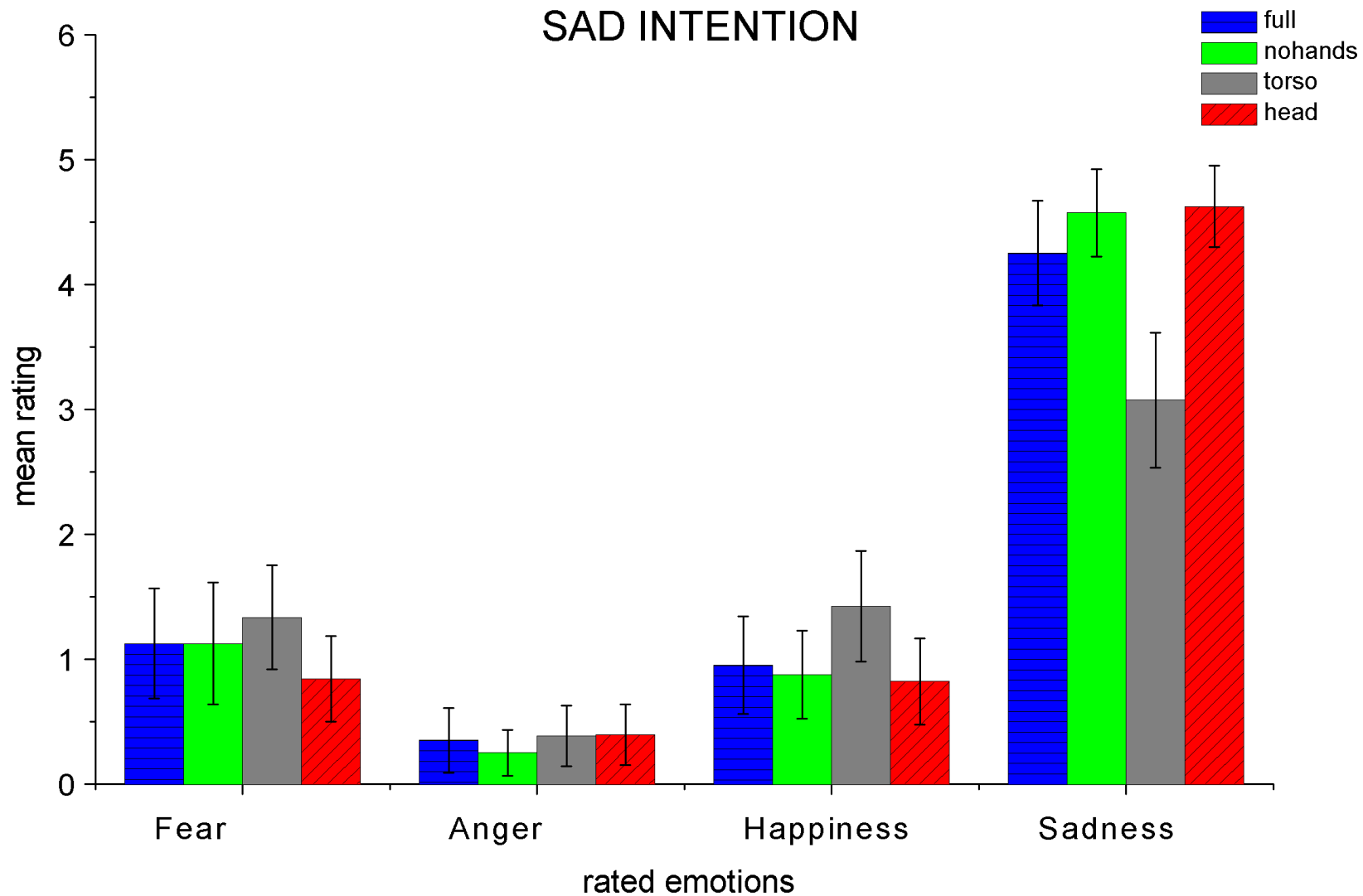
(Dahl & Friberg, 2004; 2007)



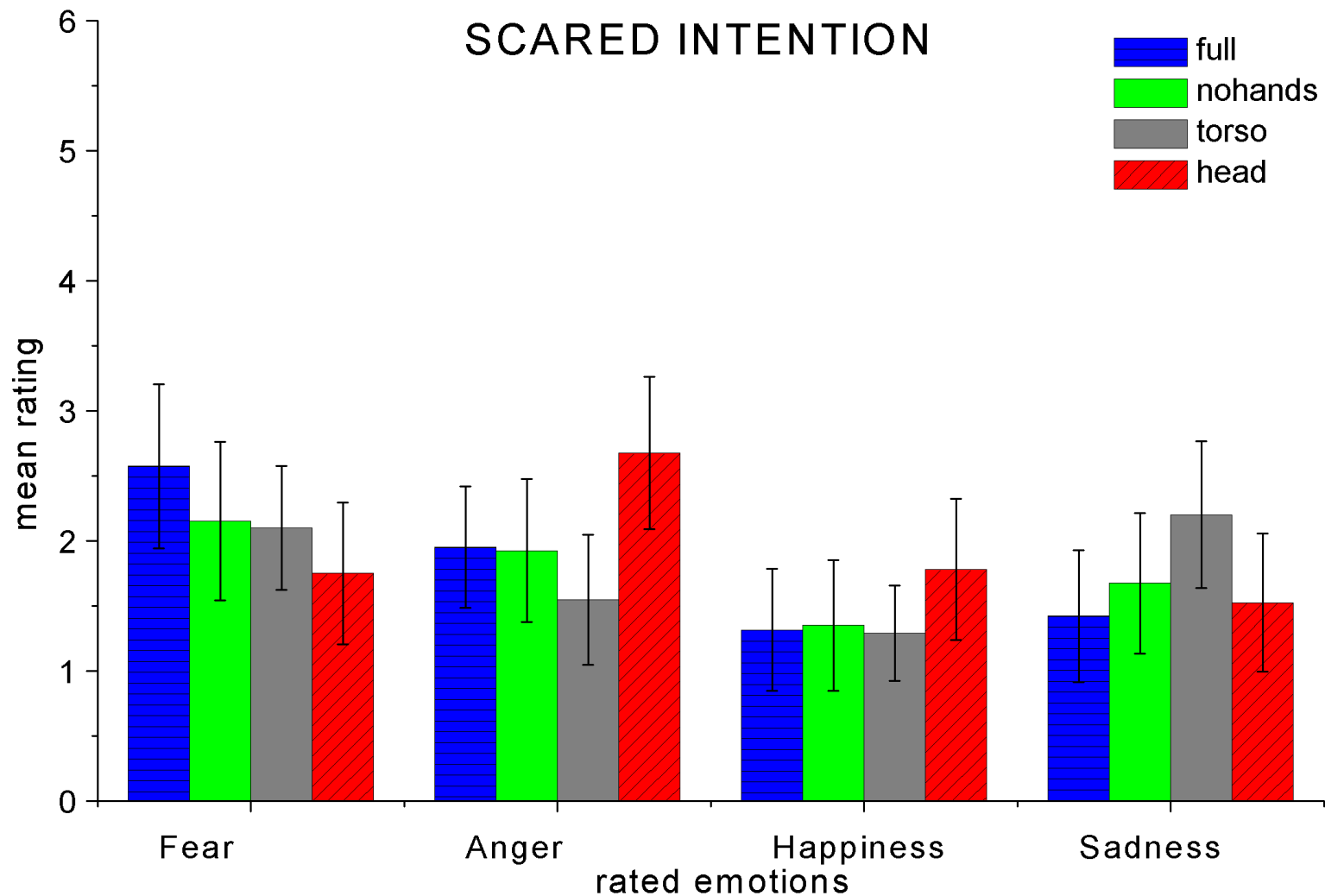
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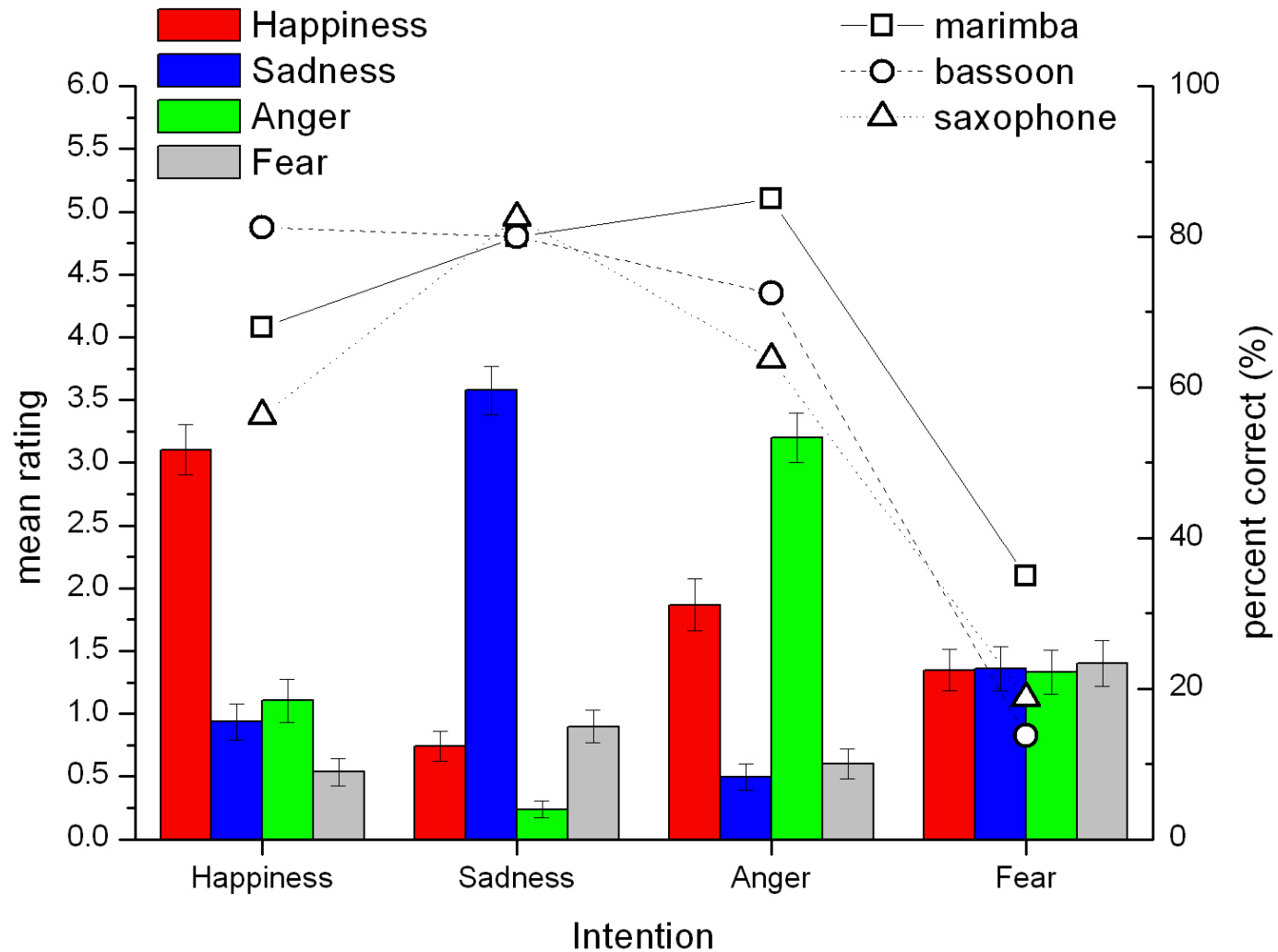
Movement ratings characterizing...

- **ANGER**
 - large, fast, uneven and jerky movements
- **HAPPINESS**
 - large, somewhat fast movements
- **SADNESS**
 - small, slow, even, smooth movements

Movement and **audio** cues

	amount <i>sound level</i>	speed <i>tempo</i>	fluency <i>articulation</i>	regularity <i>tempo var.</i>
Happiness	large <i>high</i>	fast <i>fast</i>	<i>staccato</i>	<i>small</i>
Sadness	small <i>low</i>	slow <i>slow</i>	smooth <i>legato</i>	regular <i>final ritard</i>
Anger	large <i>high</i>	fast <i>fast</i>	jerky <i>staccato</i>	irregular <i>small</i>
Fear	small <i>low</i>	<i>fast</i>	jerky <i>staccato</i>	irregular <i>large</i>

Overall results (all three performers)



Failing communication

- Confusion between Anger and Happiness also found in other studies (e.g. Dittrich et al 1996; Sörgjerd, 2000)
- Fear was not recognized for any of the performers
- Despite auditory cues demonstrated
- Sörgjerd (2000) found no significant differences (possibly w. facial expressions).
- Observers regard certain emotions less plausibly expressed “on stage”?
- Movements repressed?

Expressive movements in clarinet performances

(by Wanderley and colleagues)

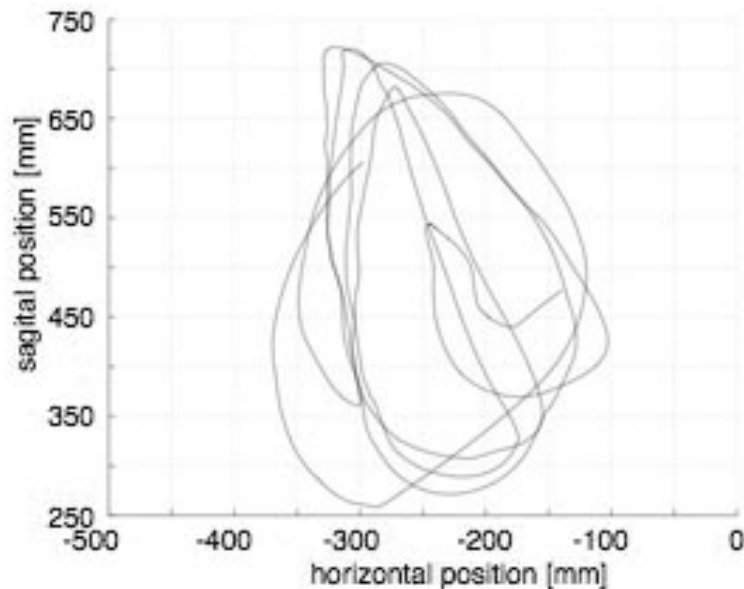


Fig.6 Circular movements of the bell, Brahms first clarinet sonata.

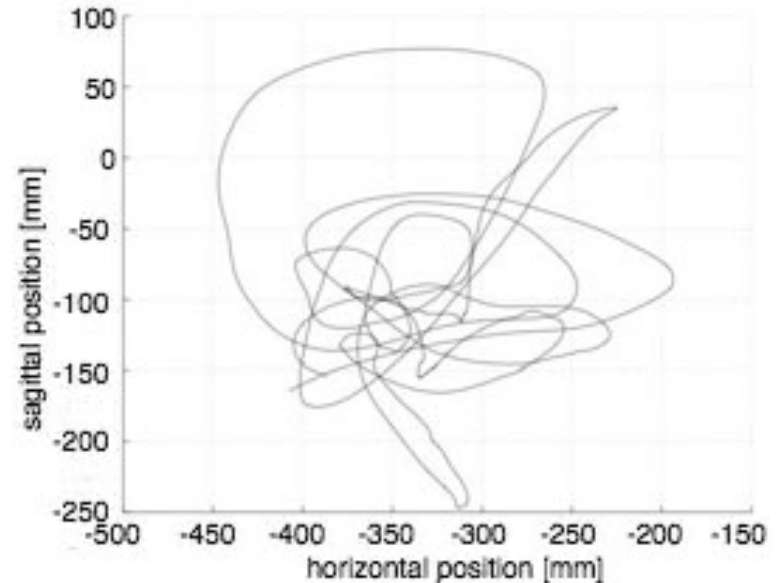
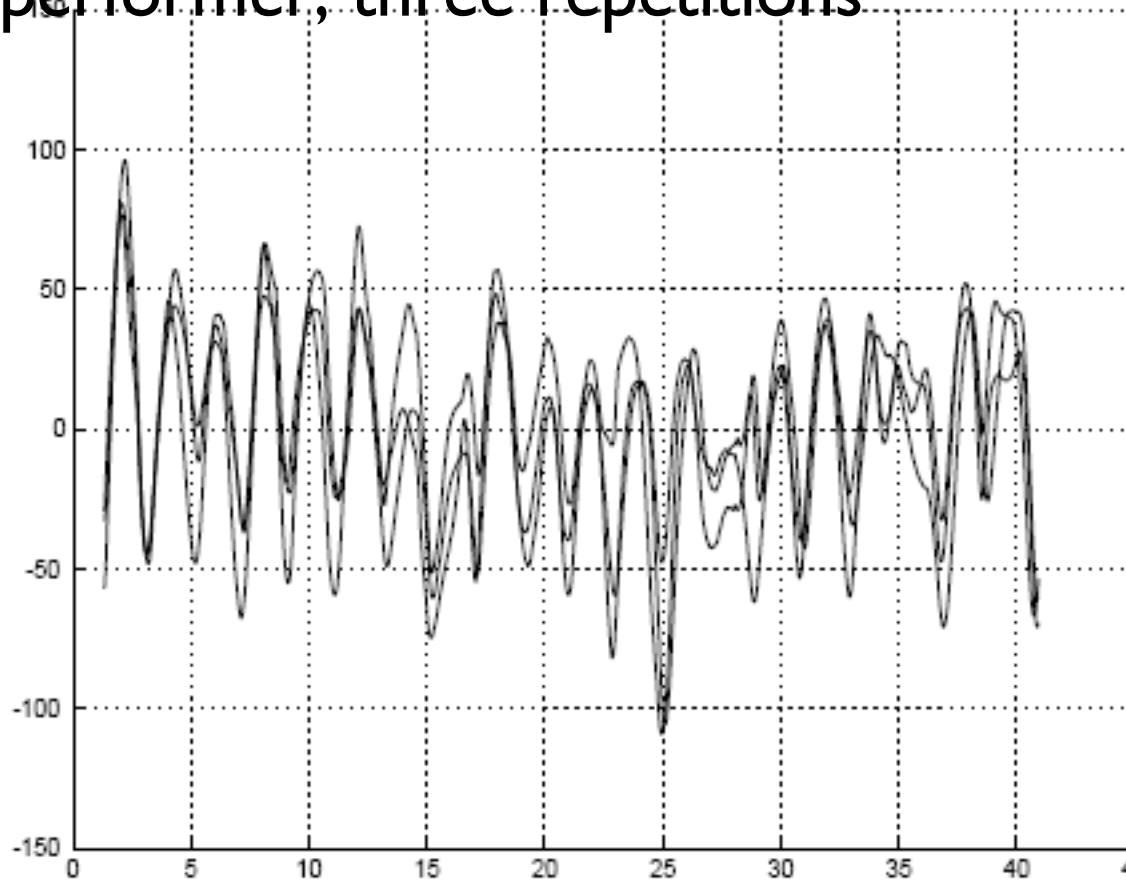


Fig.7 Circular movements of the bell, another player.

Expressive gestures reproducible

Vertical movement of clarinet bell.

Same performer, three repetitions



(Wanderley PhDthesis)

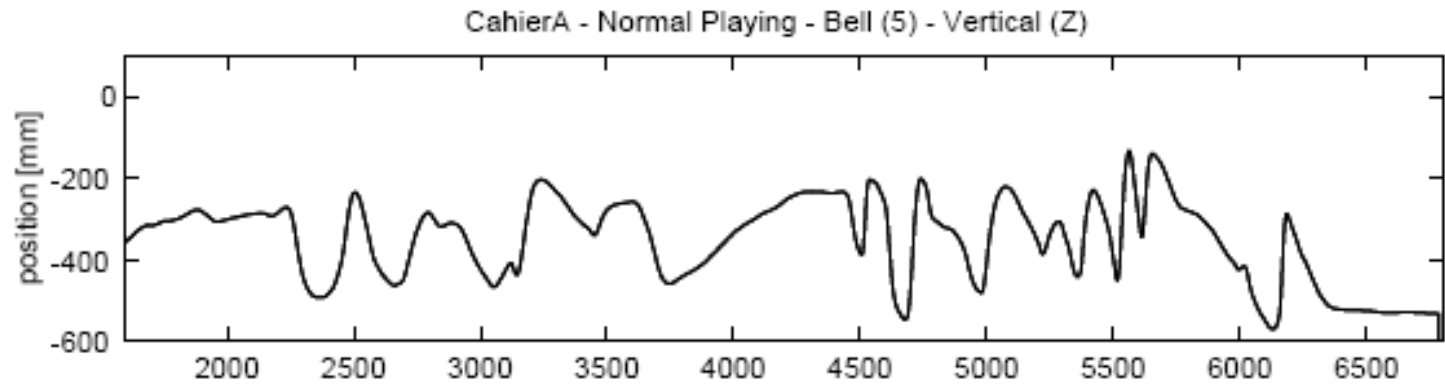
HOW NEEDED FOR PLAYING ARE THESE “EXTRA” MOVEMENTS?



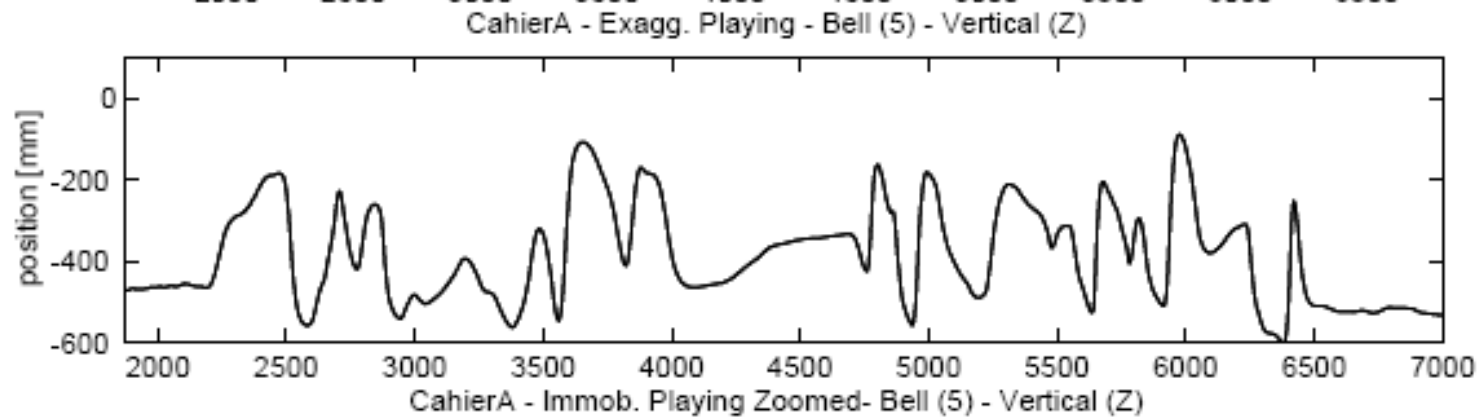
<http://www.youtube.com/watch?v=HnY7UH6z72w>



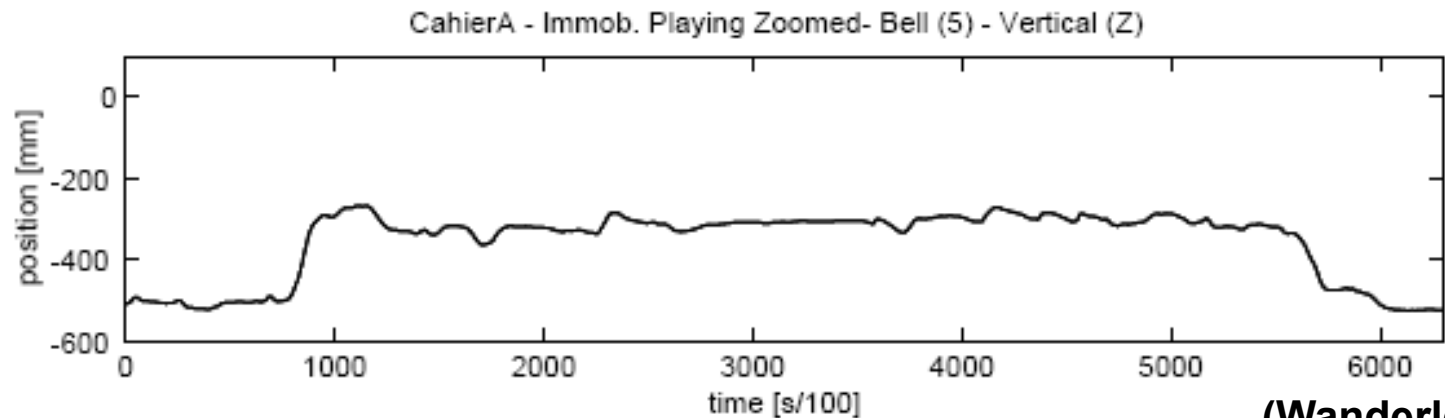
<http://www.youtube.com/watch?v=ltZyaOlr7E>



standard



exaggerated



immobilized

(Wanderley PhDthesis)

immobilized

immobile



standard

standard

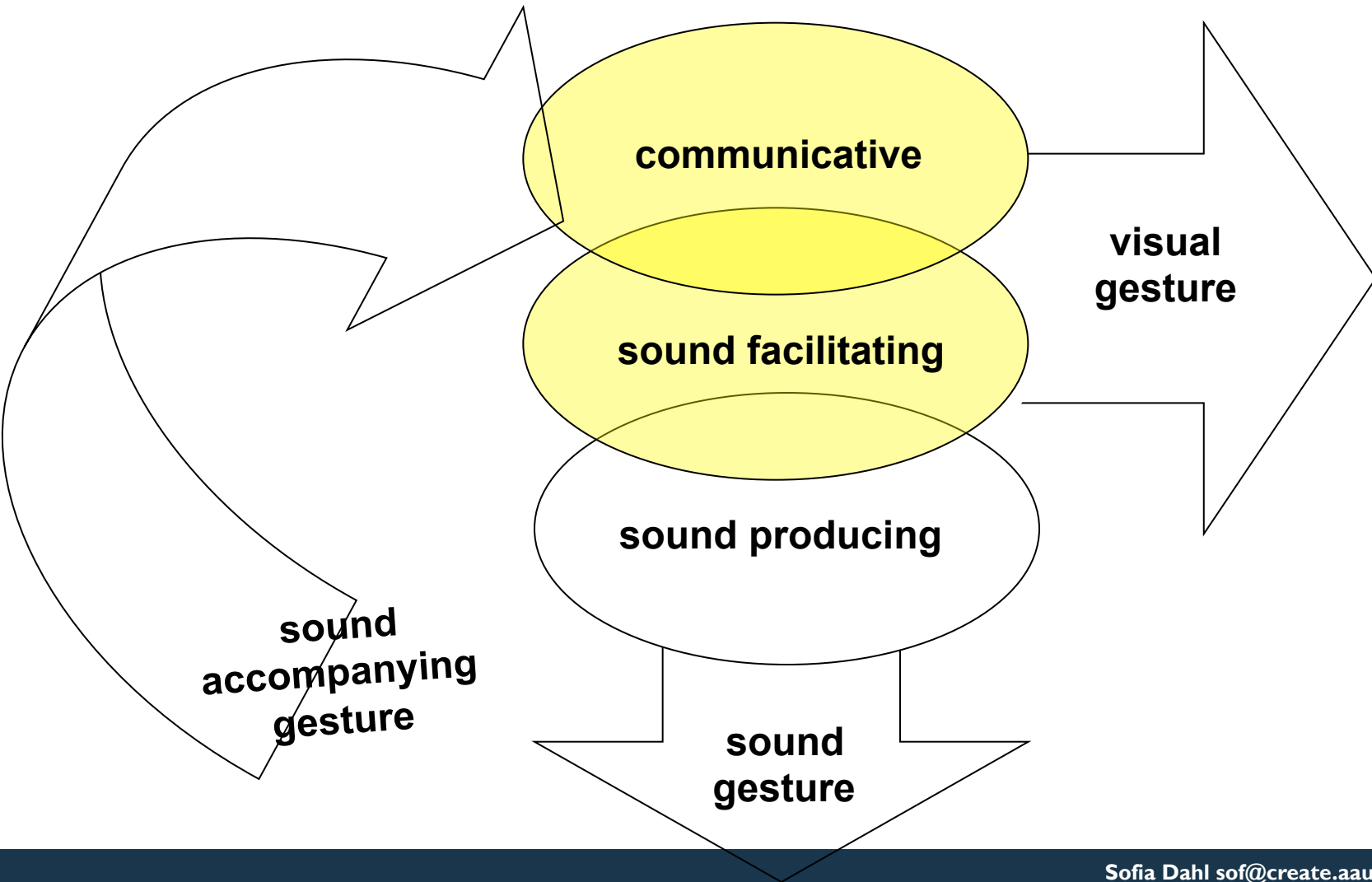


(Wanderley PhDthesis)

So these expressive movements are not necessary for playing

- ...But frequent and reproducible
- What does that tell us about their purpose?
- Do musicians somehow benefit from using them?
- Put it another way: Is the “gesturing player” more successful than the “immobilized”?

SOUND-FACILITATING MOVEMENTS



Visual information influence ratings of expression and interest (Broughton & Stevens, 2008)

- Expressive and interest ratings of marimba performances (“projected” or “deadpan”) higher for audio-visual stimuli than audio
- *When congruent*, expressive gestures can help performer communicate intent to audience

Visual information affect visual ratings on musical structure (Wanderley et al, 2005)

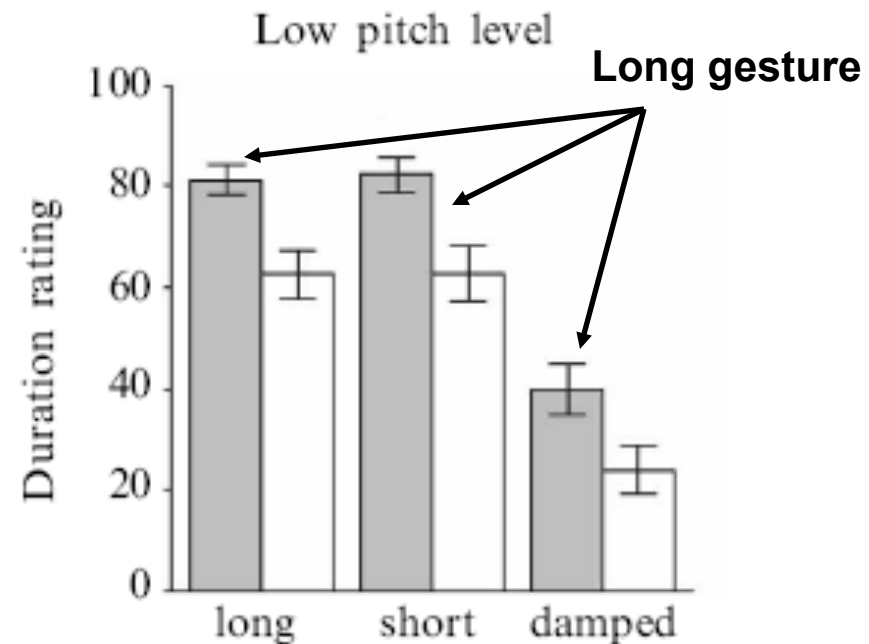
- Clarinet players shifted movement onset with respect to score.
- Anticipating or following.
- Phase shifts between audio and visual affected rated phrasing.
- Phrases rated longer if movements extended into silence.

The visual gesture affects auditory perception

(Schutz & Lipscomb, 2007)



“Long” and “short” strokes played on marimba shown to affect listeners rating of the duration of the tone.



Summary expressive gestures

- Expressive gestures provide extra information that affect how the audience perceive a music performance
- Similar to co-expressive gestures in speech?
- The mind doing the same thing in two ways, not two separate things” (McNeill, 2005)
- Keith Jarret's body movements “melodies acted out physically” (Eldson, 2006)
- Gestures can possibly also help the player control the acoustical properties.