

# Stand-up Gestures – Annotation for Communication Management

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# Structure of the Talk

1. Motivation
2. Stand-up Gestures
  - Definition
  - Examples
3. Multifunctionality of gestures
4. MUMIN Annotation
5. Conclusions

# Stand-up gestures

**Omid Djalili (Comic Aid)**



# Functions of Gestures

- Complement the speech
  - *That is very good*
- Illustrate the speech
  - *The increase is small*
- Give rhythm to the speech
  - *And another important point is the amount of tax cuts*
- Repair management
  - *The one that I played*
- Information management
  - *Now he has started a bit later than before*

# Stand-up Gestures

- Coordinate the communication
- Independent means for communication management, not only to accompany or to complement the spoken content
  - Not deictic – don't locate objects
  - More than beats – index more than discourse-pragmatic content
- Single out one word or phrase from the utterance as important (stand up from the context)

# Pointing in Repairing



Mikä pata? .hhhh Ai se minkä **mä**: sakkaasin  
*Which spade? .hhh Oh the one that **!::** did sakata*

# Pointing in Managing Information



nyt se on alottanu vähä **myöhemmin** siitä niinku,  
*now he has started a bit **later** than before like,*  
Data from Peräkylä & Ruusuvuori: Emotions and facial displays. TAY

# Multifunctionality of gestures

## Content and context

### Motivation of the hand shape

- Utterance content
- Local meaning and context

### Motivation of the palm orientation

- Discourse-pragmatic content
- Own communication management
- Interaction management

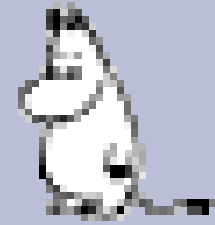
### Motivation of the location and trajectory

- Common ground
- Social-interactive context

# Annotation questions

- Relation and interdependence of non-verbal expressions and communicative functions
- What are the minimal units
- Identification of gestures
- Different contexts in which the gestures are analysed
- Automate annotation (bootstrap with manual annotation)

# MUMIN Coding Scheme



- Nordic Multimodal Interaction Network:  
<http://cst.dk/mumin>
- For studying of gestures and facial displays in interpersonal multimodal communication
  - the role played by multimodal expressions for feedback, turn management and sequencing
- Annotations on short video clips in Swedish, Finnish, Danish, Estonian
  - Allwood, Jokinen, Navarretta, Paggio (2007) A Coding Scheme for the Annotation of Feedback, Turn Management and Sequencing Phenomena. In Martin, J.C. et al (eds) *Multimodal Corpora for Modelling Human Multimodal Behaviour. Special Issue of the International Journal of Language Resources and Evaluation*, 41(3-4), 273-287, Springer.



# MUMIN Coding Scheme

- Each gesture and facial expression has analysis tags concerning
  - Form
    - Face-head displays
    - Hand gestures
    - Posture
  - Semantic-pragmatic function
    - Semiotic type (indexical-deictic, indexical-beat, iconic, symbolic)
    - Communicative function (feedback, turn-taking)
  - Emotion-attitude
    - neutral, happy, sad, surprised, disgusted, angry, frightened, certain, uncertain, interested, uninterested, disappointed, satisfied, other

# MUMIN – Hand gestures

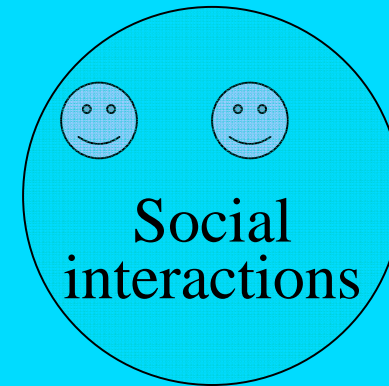
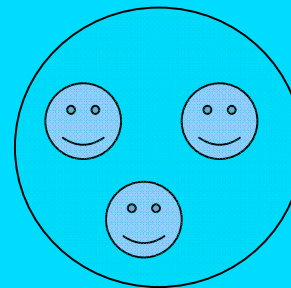
- Cf. Kendon (2004), Duncan (2004)
- **Handedness** both, single
- **PalmType** open, closed
- **PalmOrientation** prone (down), supine (up), horizontal, vertical
- **FingerType** thumb/index extended
- **Amplitude** periphery
- **Trajectory** up, down, sideways, complex, addressed, other
- **Semiotic type** symbolic, iconic  
indexical deictic (pointing)  
indexical non-deictic (beats)  
indexical non-deictic (standup)
- **Comm.functions** feedback (give / elicit), turn management
- **Emotion-attitude** neutral, happy, sad, surprised, ....



# Role of context

Culture  
Activity type  
Social  
interaction  
Dialogue  
Local utterance

Activity type



DIALOGUE CONTEXT

- I thought the spade be signal card
- *which spade? Oh the one that I played*

# Summary and Conclusion

- Stand-up gestures
  - Indicate the partner how the conversation is to be understood and divided into communicatively important segments
  - Catch the partner's attention
  - Control the dialogue flow
  - Are sensitive to content and context
- Interpretation in context
  - Construction of shared context
  - Social interaction and familiarity
  - Activity type and roles
  - Culture and language community

# Thank you!



# MUMIN – Feedback

- **Basic** CP (= ContactPerception, backchannel), CPU (= CP+Understanding, acknowledge)
- **Acceptance** Accept, Non-accept (commitment)
- **Elicit** Elicit



# MUMIN – Turn Management

- **Turn-gain**
  - Turn-accept, Turn-take
- **Turn-end**
  - Turn-yield, Turn-elicite, Turn-complete
- **Turn-hold**
  - Turn-continue



# Communication management

- Allwood (2002)
- Own communication management
  - speaker's on-line planning: monitoring and correcting one's contributions while communicating
- Interaction management
  - turn taking (distribution of the right to speak)
  - sequencing (structuring the dialogue into sequences, sub-activities, topics etc.)
  - feedback (elicitation and giving of information about the four basic communicative requirements)