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REGULATIONS ON USE

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7. Recommendations for Data Collection for Gesture Studies

Sotaro Kita in consultation with the members of Gesture Project (especially Jan Peter de Ruiter, Eric Pederson, David Wilkins, Steve Levinson, Elizabeth Keating, and Adam Kendon)

INTRODUCTION

This document is written on the basis of on-going discussions in the Gesture Project. Thus, the description of theoretical points are kept short, and it is assumed that the readers are familiar with some technical terms of gesture studies (e.g. iconic gestures).

The purpose of this document is to list the kinds of data that would be useful for cross-cultural studies of gestures, along with theoretical points associated with them. The list covers a very wide range of things and it would be impossible for a researcher to cover everything. Please pick the ones to collect according to the following criteria:

1. The theoretical questions in a certain domain that interest you,
2. The material that are projected to be used for broad range comparison (see my suggestions for priority below),
3. The data that would be useful to have for other reasons than gestures.

Aside from the things listed below, please record whatever gesture practice or behavior that strikes you as "unusual" (e.g. directional gestures by Australian Aborigines). This type of information would broaden our knowledge of what gesture can do.

My suggestions for priority would be ... :

High Priority

For probable broad range comparison:

- Narrative with a stimulus story or film (See 3.2)
- Natural conversation in an informal setting (See 1.1 & 2.1)
- Pointing gesture elicitation (See 4.2)

Medium Priority

For a potential single culture study, which would substantiate a special cognitive or communicative or social characteristic of a culture.

- Telling of a (traditional, autobiographical, imaginary) story by a good story teller. (See 1.1)
- Formal oratory.(See 1.1 & 2.1)

Individual Projects or Projects for Narrower Range Comparison (No group priority given)

Projects that some researchers have done or are planning to do. So, if you also get interested in the following topics, you are likely to find somebody to share your data and ideas.

- Time as represented in gesture (See 4.1).
- Gestural adaptation to visibility variation (See 2.2).
- Gestural frame of reference (See 3.1)
- Ideophones and gestures (See 3.3)
- Social valuing of space as reflected in gesture (See 1.2)
- Sign languages (See 4.3)

HOW TO VIDEOTAPE

It is in general recommended to capture both the listener and speaker (with more emphasis on the speaker in near-monologue situations). For the cognitive questions, it is OK not to capture the listener, and it is useful to have close up view of the speaker. For the frame of reference question, it is useful to video tape the speaker from right in front of the speaker so that we can later judge the direction (left/right) of gestures easily.

GENERAL PRECAUTION

Don't tell your consultant that you are interested in gestures. (Elicitation and questioning of sign languages and conventionalized gestures , e.g. OK-sign with a loop made with the thumb and index finger, are exceptions.)

STIMULI

The 8mm copies for the following stimuli are in the steel cabinet in the FGKA archive room.

People Film
Kita's Maus Film
Tweety Animation
Heider Simmel Film (a triangle chasing circles).

The following stimuli are supposed to be in the original Kit.

the original 1992 Maus Films
Pear Film
Frog Story

RECOMMENDATIONS FOR THE KINDS OF DATA TO BE COLLECTED

1. Gesture as a social phenomenon.

• 1.1 Social codes on gesture production

Depending on social situations, certain types of gestures are boosted or suppressed.

Question

- What are relevant social variables?
- What types of gestures are affected by a certain variable?
- Are there restrictions on using certain body parts? (E.g. Left hand gestures are rude in Ewe speaking community)
- More generally, how does gesture fit in the structure of different speech event?

Recommended Data

- Face-to-face interaction in the "most informal" setting.
- Face-to-face interaction in a formal setting, telling of traditional stories and formal oratory.

• 1.2 Social valuing of space as reflected in gesture

A certain spatial relationship can symbolize a certain social status. This may have implications on how people generate images of locations and directions that are associated with a certain social status. Elizabeth Keating's questionnaire for eliciting social uses of space has to be filled in order to carry out this line of research.

Question

• Can a high status location be represented higher in gesture than a low status location even if two locations are physically level?
• More generally, can we observe social valuing of space affecting "iconic" gestural representation?

Recommended Data

• Talk on locations and motion that involve social status differentiation.

2. Gesture as an interactional phenomenon

• 2.1 Gestures in the structure of interaction

Gesture is integral part of the structure of face-to-face interaction. How gesture and speech fits into the structure is the focus of study. It is important to bare in mind that the interplay of speech and gesture can vary drastically depending on which functional dimension of communication is at issue. For example, the attention of interlocutor to the gesture channel may be more acute in the conative dimension (controlling of the interlocutor, e.g. speech act) than the referential dimension.

Questions

• What is the frequency of gestural and linguistic backchanelling? Do they have different functions?
• Can you get verbal responses to gestures and gestural response to linguistic expressions?
• Can an interlocutor repair a speaker's gesture?
• Is there any other evidence that a interlocutor is attending to or picking up information from the gesture channel.
• Can a speaker repair his/her own gesture without repairing the accompanying speech? (This is almost non-existent in American English narrations of Tweety cartoon.)
• More generally, what is the communicative load carried by gesture and speech? What is the level of consciousness of the gestural channel?
• How does the structure of interactional space (the number of participants, their positioning, and etc.) affect gesture performance?

Recommended Data

Face-to-face interaction with many gestures (informal conversation is a good candidate).

• 2.2 Adaptation to visibility variation

"High gesture culture" may take more advantage of the visibility among interactants. David Wilkins has collected pilot data from Arrernte speakers and English-speaking Australians with a similar methodology, which suggests that Arrernte speakers made more advantage of the visibility . Note that a quantitative study may be challenging in terms of the labour for transcription and the cross-linguistically valid definition of gesture frequency per linguistic unit (word? clause? proposition will probably work...)

Question

• Do different linguistic communities utilize the visual contact among interactants differently? Quantitative difference? Qualitative difference?

Recommended Data

This is a variation of Farm Animal photo-object matching task. The visibility level is varied within a pair.
Consultants
4 pairs (or multiples of 4) of consultants
Three conditions

1. High barrier : normal condition (Director and Matcher cannot see each other. The Director cannot see the farm animals, and the Matcher cannot see the photos).
2. Low barrier Director and Matcher can see each other, but the Director cannot see the farm animals, and the Matcher cannot see the photos.

Grouping of the Photos

Photos are divided into two sets for two conditions.
Set A: 1, 3, 5, 7, 9, 13
Set B: 2, 4, 6, 8, 10, 14

Procedure

The same person continues to be the Director in two conditions.
In one half of the pairs proceed: High => Low .
In the other half of the pairs proceed: Low => High
Change the correspondence between condition and photo set as you add subjcets.
An example of order jumbling and codition/photo-set combinations is : Pair#1 High-Set A, Low-Set B; Pair#2 High-SetB, Low-Set A; Pair#3 Low-Set B, High-Set A; Pair#4 Low-Set A, High-SetB.

3 Gesture as a cognitive phenomenon

3.1 Gestural frame of reference (Absolute vs Relative)

The focus of this study is how gesture encodes transverse spatial relationships in stimuli, and whether there is a correlation with the linguistic frame of reference in a comparable spatial context. This experiment is recommended if the Man and Tree linguistic elicitation task indicates that the language is predominantly Relative or Absolute.

Tzeltal and Dutch have been collected by Kita, Penny and Steve. Dutch speakers produce Relative gestures. The preliminary results from the Tzeltal data suggest that Tzeltal speakers can use both Relative and Absolute gestures, depending on how they construe the stimuli.

Question

- Is there are correlation between linguistic and gestural frames of reference for a given event construal?
- How can we characterize the "give event construal"?

Recommended Data

Stimuli: The second and the third People film (P2 and P3) and Kita's Maus films (M1-M8).
Consultant: In each session, there are two participants. One is the consultant to be tested (henceforth referred to as the Speaker), and the other can be another naive participant or a collaborator (henceforth referred to as the Listener). The Listener can be a non-native speaker who speaks the relevant language very well. When the Listener is a collaborator who sits as a listener for many Speakers, the Listener should pretend that he/she has never heard the story.

Minimally 3 Speakers have to be tested. 4-6 are recommended, and 10-15 would be ideal.

Apparatus: the stimuli has to be shown on a Watchman.
Spatial Arrangement: See Appendix 2.
Procedure:
If informants want to know what we are doing, tell them that we are interested in story telling. Do not mention gestures. Instruct the Listener to be a 'natural listener' for narrative situations. S/he can just listen or ask questions if that is natural and felt necessary to understand the narration.

For each video segment (i.e. P2, P3, M1-M8), repeat the following two steps.

Step1: The instruction to the Speaker: "I will show you a movie. Please try to remember what happens in the movie so that you can tell it to Listener." Show the segment twice (each segment is repeated twice in the tape) to the Speaker. If the informant wants to see more than twice, you can rewind and show the segment again. The Listener, who is waiting in Listener's chair, do not see the segment.

Step2: Speaker walks to the speaker's narration chair, which is 180 degrees rotated from the stimulus presentation chair. The instruction to Speaker: "Please tell the Listener every thing you saw in the movie in detail". Speaker narrates. After narration, the Speaker walks back to the stimulus presentation chair.

3.2 Motion event description in gesture and speech

This study is based on the assumption that iconic gestures reveal important aspects of imagistic conceptual representation evoked at the moment of speaking. Different languages require different chunking and ordering of information because of the canonical surface word order, lexicalization pattern, and "basic" Aktionsarten. It is predicted that iconic gestures indicate language-specific reorganization of conceptual information.

Question

- What is the relationship between conceptual linearlization and linguistic linearization?
- What is the relationship between the lexicalization pattern of motion verbs and the conflation of information in gesture?
- How is the temporal structure of an event is represented in language (Aktionsart) and gesture?
- More generally, is there evidence that the imagery evoked at the moment of speaking is constructed so as to make the verbalization of it easier?

Recommended Data

4 to 6 (or more) tellings of one or more of the following stimuli are recommended. Please follow the Consultant, Apparatus, and Procedure sections of 3.1. If possible, following the Spatial Arrangement of 3.1 is recommended. (In any case, please make a record of spatial arrangement).

The list below represents the priority of stimuli in the descending order, but please skip the ones that simply do not work in your community. Please see the Appendix 1 for the contents of each set (especially the relationship between the original 1992 Maus Films and Kita's Maus Films). The time in the parentheses is the estimated time for administration of the task.

1. The original 1992 Maus Films (in the standard kit) (50 min)
2. People Film, Kita's Maus Film (40 minutes)
3. Tweety Film (20 minutes)
There are two editions of the same animation on the tape. The edition called "Tweety in 2 parts" divides a 7 minute cartoon into two, and "Tweety in 3 parts" divides a 7 minute cartoon into three. Tweety in 2 parts are used in the US, Holland, and Japan. If you think that the memory load is too heavy, use "Tweety in 3 parts."
Unlike Frog story, you don't have to show the entire film before you have the consultant narrate part by part because Tweety Animation is very modular.
4. Frog story from memory (15 minutes)
If the memory load is too high, I recommend that the narration be divided into three parts. First, the consultant reads the entire book. Second, she tells the story up to page 7 (the boy is holding the dog in his arms, and looks upset). Third, she tells the story from page 8 to page17 (the boy is on a rock, calling the frog). The fourth, she tells the story from page 18 to the end.
5 Pear Film (15 minutes)
6. Hider Simmel Film (20 minutes)

3.3 Ideophones (mimetics, onomatopoeia) and iconic gestures

Some languages have a relatively large class of words that differ from other parts of the lexicon in that (1) sound symbolism is an important principle of word formation, (2) the words evoke vivid "at-the-scene" feeling when uttered or heard. These words are given different names, which include ideophones, mimetics, and onomatopoeias.

Chinese and Japanese ideophones are very likely (more than 95%) to be synchronized with an iconic gesture in the narration of Tweety Animation. It is argued that ideophones have 'imagistic semantics', which also underlies iconic gestures.

Kita and Xio-Lei Wang (at Univ. of South Dakota and Aberdeen) have analyzed Japanese and Mandarin narrations of Tweety Animation in this respect. Sue Duncan is planning to study Mandarin as well.

Question

• Can the above phenomenon be replicated in other languages (especially outside of East Asia)?

Recommended Data

• 3 or 4 telling of Tweety Animation.

4. Gesture as a semiotic system

4.1 Gestural representation of time

Gesture can be a useful way to probe the conceptualization of time in different cultures.

In Europe and the US, there are two kinds of gestural representation of time (Calbris, Kendon). One is "anchored" (the body of the speaker is situated in a certain time point, the anchoring point, typically "now"), and time with respect to the anchoring point is represented along the front-back axis (**front = future, back = past**). E.g. a gesture in the front of the body and/or away from the body that indicate the meaning of "tomorrow", or a gesture performed in the backside of the body or toward the backside of the body that indicates the meaning of " yesterday".

The other is "unanchored" (the speaker's body transcend the time flow), and time is represented along the transverse axis (**left = earlier, right = later**). That is to say, a gesture can contrast two (or more) time points by "locating" them along the transverse axis. E.g. Pointing to left to indicate "last year" and pointing to the right to indicate "this year". A gesture can also sweep along the transverse axis to indicate the flow of time. E.g. A hand can move from left to right to indicate "the progression of a wedding ceremony".

Unlike the above cases in which time is conceived as a linear flow, time can be conceptualized as a cycle. Cyclicity, namely periodic repetition, is systematically represented by looping or sometimes non-circular repetitive movement in Europe, the US, and China. (Calbris, Kendon, Duncan)

Kita is planning to collect some data on this issue.

Questions:

- Do other cultures represent time linearly in gestures?
- How about the directionality of the time representation?

The preliminary observation indicates that in Japan unanchored time flows from right to left. The effect of writing system?? There are cultures in which future is believed to be in the back because you can not see it, and the past is in front. What would their gestures look like (A. Kendon)?

- Absolute gestural representation of time? (East = earlier, West = later : Arrernte)
- Is a vertical flow possible?
- Are there any other way of time flowing?
- How is cyclicity conveyed?

Recommended Data

- Autobiographical talk.
- Talk on planning and procedure. E.g. "Tell me how you planned your wedding, and how it actually happened".
- Talk on agriculture.

4.2 Pointing gestures

Pointing gesture can be a subject of fruitful cross cultural comparison .

Questions:

- What are the meaning indicated by different "gesture shapes" such as hand shapes, choice of different body parts, the angle from the horizontal plane, full extension of elbow, co-ordination with face/gaze?
- How pointing gestures and deictic words are co-ordinated (temporally and semantically)?
- Do pointing gestures look differently depending on what is pointed: visible vs invisible, real vs metaphoric, near vs far, human vs non-human?
- How accurate are pointing gestures?
- Is there a distinction between dead-reckoning absolute pointing and schematic absolute pointing (e.g. pointing to the prototypical "north" to index something in the "north quadrant").

Recommended Data

The appropriate method of eliciting naturalistic pointings will vary from field to field. Any task that involve talk on different kinds locations (visibility, accessibility, human vs non-human) will be fine. Examples are given in the following, but please create methods that would suit the situations at your sites.

- Route direction. E.g. "how can I get to the train station from here?"
- Describing "special places" in the area (in what way, and where). E.g. " I am new in Nijmegen. Can you tell me about the places that are interesting to visit ?".
- Autobiographical talk involving different locations
- "Walnut game": (Good for eliciting pointing at objects that are close to the body) This involves three cups and a "walnut" that fits in a cup (a ball made of aluminium foil works nicely). The consultant is instructed to point and say which one contains the "walnut" after the investigator make some tricky movements. All the cups are upside

down, and the investigator shows the consultant which one contains the walnut at the beginning. Then, the investigator swiftly moves the walnut from one cup to another in the manner that would confuse the consultant where the walnut is. After several such movements, the consultant is to tell which cup contains the walnut.

4.3 Sign Languages

Sign languages of various sorts are of interest. They include the auxiliary sign language of Arrernte and the sign language of isolated deafs in Mopan.

Questions:

- What are the structural and lexical relationships to the main language or the surrounding language?
- The isolated deafs and their relatives in Mopan form a small speech community. What is the impact of having a speech community on the sign language (compared to the situation of Susan Goldin-Meadow's subjects)?
- What is the difference between the Mopan sign language spoken by deaf members and the hearing members (L2 learners) of the community?

Recommended Data

Elicited words and sentences.
Narratives (preferably with a stimulus)

Appendix 1: Tape contents.

All the tapes below are available in the steel locker in the FGKA archive room.

Tape name: "Maus + Pear" (in the standard space kit).

***** The original 1992 Maus Films *****

1. Apple Tree Climbing = Kita's D1
2. Bag Jumping = Kita's M1
3. Happy Birthday cake = Kita's D2
4. Labyrinth
5. Gramophone and Elephant's ears
6. Pancake = Kita's M2
7. Circus = Kita's D3
8. Playing Catch = Kita's M3
9. Rotating door
10. Broken guitar string
11. Elephant in Maus's skin & Maus in Elephant's skin
12. Elephant drumming
13. Elephant toothache
14. Shadow on the wall
15. Locked door & Maus's tail as a key
16. Tightrope and a parachute
17. Big gramophone and Elephant's nose
18. Bar & magician = M4

***** Pear Film *****

Tape name: "Kita's ABS-REL exp. stimuli with People".

***** Kita's People Films *****

P 1, Shirt on a tree
P 2, 2 on 1 chase
P 3, Hide and seek

Tape name: "Kita's ABS-REL exp. stimuli with Maus".

***** Kita's Maus Films *** (These are selected on the basis of having many lateral movements and having fewer potentially uninterpretable European artefacts.)**

M1 Bag Jumping
M2 Pancake
M3 Playing Catch
M4 Bar&Magician
M5 Banana
M6 Seesaw&Chestnut
M7 Elephant,Duck &Hippo
M8 Potter's Wheel

***** The 3 distracters in Kita's Maus Films ******

D1 APPLE TREE
D2 Happy Birthday Cake.
D3 CIRCUS

Tape name: "Tweety animation"

***** Tweety in 3 parts**

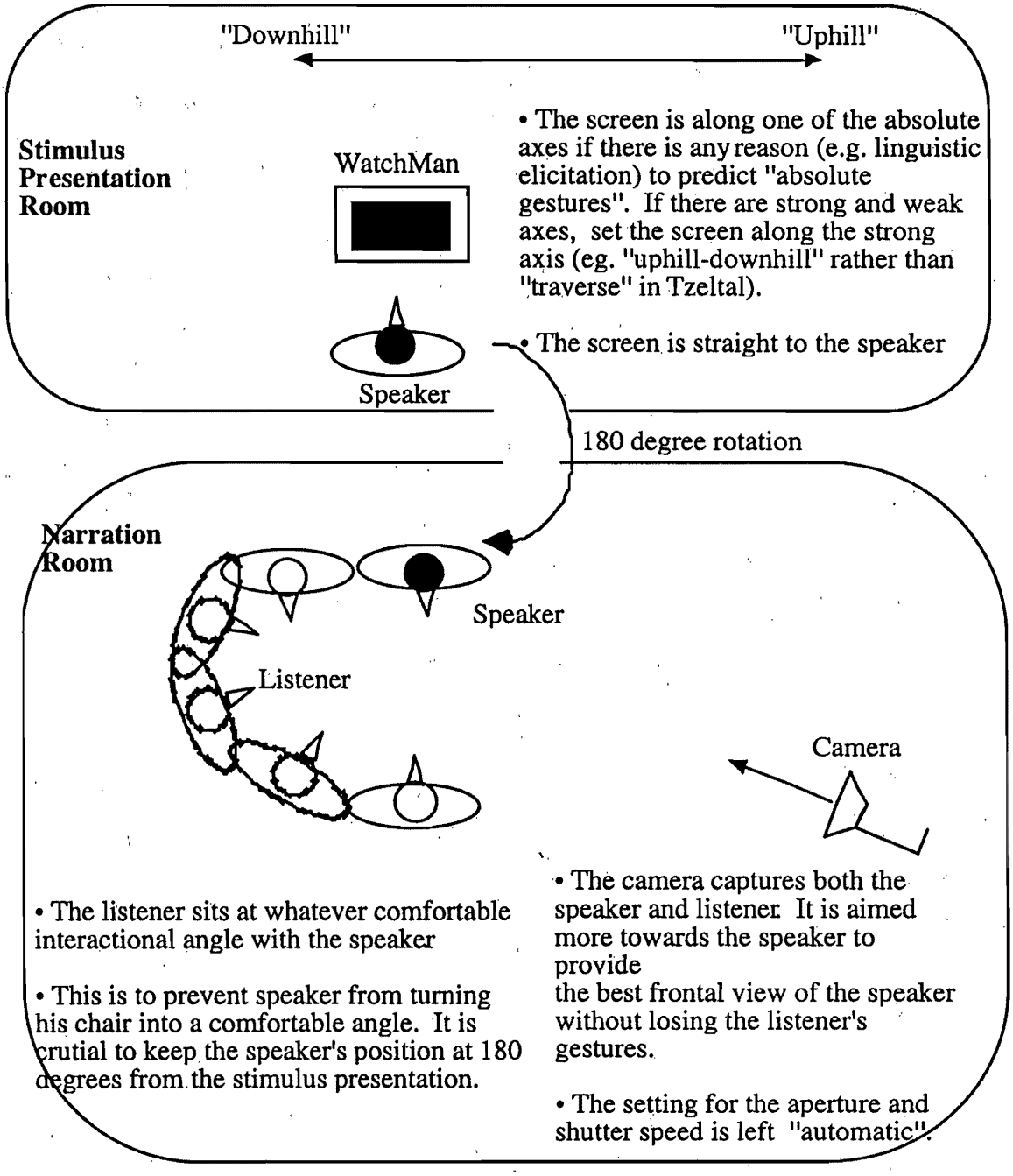
The Tweety animation is divided into three
***** Tweety in 2 parts *****
The Tweety animation is divided into two halves.

Tape Name: "Heider + Simmel"
***** Heider Simmel Movie *****
1. Normal play
2. Reverse play.

Appendix 2:

Spatial arrangement for the experiment on gestural frame of reference (See Section 3.1).

Use two rooms that are separated by a wall or curtain, and are accessible to each other through a door in the separation.



Misc. Points:
- The speaker and listener sit on whatever is comfortable for them.
- The listener overhearing the sound track is OK.