NON-VISIBLE GESTURING IN TELEPHONE CONVERSATION

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QUESTIONS & OBJECTIVES

- In which conversational topics do gestures tend to occur in comparison to others?

- How do gestures used on the telephone differ from gestures used in face-to-face interaction?

- If a majority of a specific type of gesture occurs in telephone versus face-to-face conversation, what does that say about the function of gesture for the speaker and/or hearer, and the relationship between language and gesture?

- Compare the use of non-visible gestures in naturally occurring telephone conversation with visible gestures in face-to-face conversations in order to better understand the relationship between language and gesture, and what non-visible gesturing on the telephone says about that relationship.

GESTURE TYPES & THEORIES

- **Habit Theory** (Cohen & Harrison (1973)):
  I. Visible Gesturing: *"Illustrators"*, tied directly to speech and illustrates verbal utterances, used intentionally by speakers *in order to* communicate.
  II. Non-visible Gesturing: Produced out of habit.

- **Encoding Theory** (Rimé (1982)):
  I. Visible Gesturing: *"Communicative gestures"*, any gesture which accompanies/parallels verbal utterances.
  II. Non-visible Gesturing: Needed to facilitate speaker's own encoding rather than to transmit information to someone else.

- **Dialogue/Monologue Theory** (Bavelas et al. (2008)):
  I. Visible Gesturing: *"Topic gestures"* depict some aspect of concurrent verbal utterance, include 'representational' or 'iconic' gestures. *"Interactive gestures"* refer directly (in form and meaning) to the addressee or to the conversational interaction.
  II. Non-visible Gesturing: Does not depend on mutual viewership. Dependent on interactive nature of dialogue versus non-interactive nature of monologue.

METHODS

- Video and audio record three groups of two participants in one natural 30 min. telephone (using two video cameras, one at each telephone site) and one natural 30 min. face-to-face conversation each.
- Create time-coded topic indices and note the type, orientation, location, and co-occurring pronoun of gestures used in each conversation.
- Analyze data for each conversation as follows:
  I. Calculate total numbers of gestures and gesture types used in each conversation.
  II. Transcribe verbal utterances together with each gesture in topic sections that have a high occurrence of gestures.
  III. Analyze and compare the context and conversational development where each gesture is used to determine differences and similarities in the use of non-visible versus visible gestures.

TOTAL GESTURES: FACE – TO – FACE CONVERSATIONS

GESTURE		GESTURE SPACE LOCATION				LEXICAL				
ORIENTATION	FACING	CENTER CENTER	CENTER	PERIPHERY	EXTREME PERIPHERY	1st PERSON PRONOUNS	2nd PERSON PRONOUNS	3rd PERSON PRONOUNS	"LIKE"	WORD SEARCH
PALM UP TOTAL = 298	SPEAKER	2	16	71	3	25	4	14	14	2
	LISTENER	4	9	134	0	22	14	26	41	2
	NEUTRAL	0	8	48	3	13	4	13	17	1
PALM VERTICAL TOTAL = 36	NEUTRAL	2	2	31	1	4	4	10	9	0
PALM DOWN TOTAL = 148	SPEAKER	1	2	15	0	7	0	2	3	0
	LISTENER	1	6	31	0	5	4	7	7	1
	NEUTRAL	2	9	81	0	11	4	21	22	1

TOTAL INTERACTIVE GESTURES	482
TOTAL TOPIC GESTURES	285
TOTAL GESTURES	767

TOTAL GESTURES: TELEPHONE CONVERSATIONS

GESTURE		GESTURE SPACE LOCATION				LEXICAL				
ORIENTATION	FACING	CENTER CENTER	CENTER	PERIPHERY	EXTREME PERIPHERY	1st PERSON PRONOUNS	2nd PERSON PRONOUNS	3rd PERSON PRONOUNS	"LIKE"	WORD SEARCH
PALM UP TOTAL = 29	SPEAKER	1	3	8	0	6	3	0	5	0
	LISTENER	0	0	7	1	2	2	0	0	0
	NEUTRAL	1	2	6	0	4	1	2	4	0
PALM VERTICAL TOTAL = 11	NEUTRAL	0	0	11	0	3	0	0	1	0
PALM DOWN TOTAL = 49	SPEAKER	0	2	7	0	2	0	3	2	0
	LISTENER	0	0	3	0	0	1	0	1	1
	NEUTRAL	0	2	35	0	4	0	6	8	6

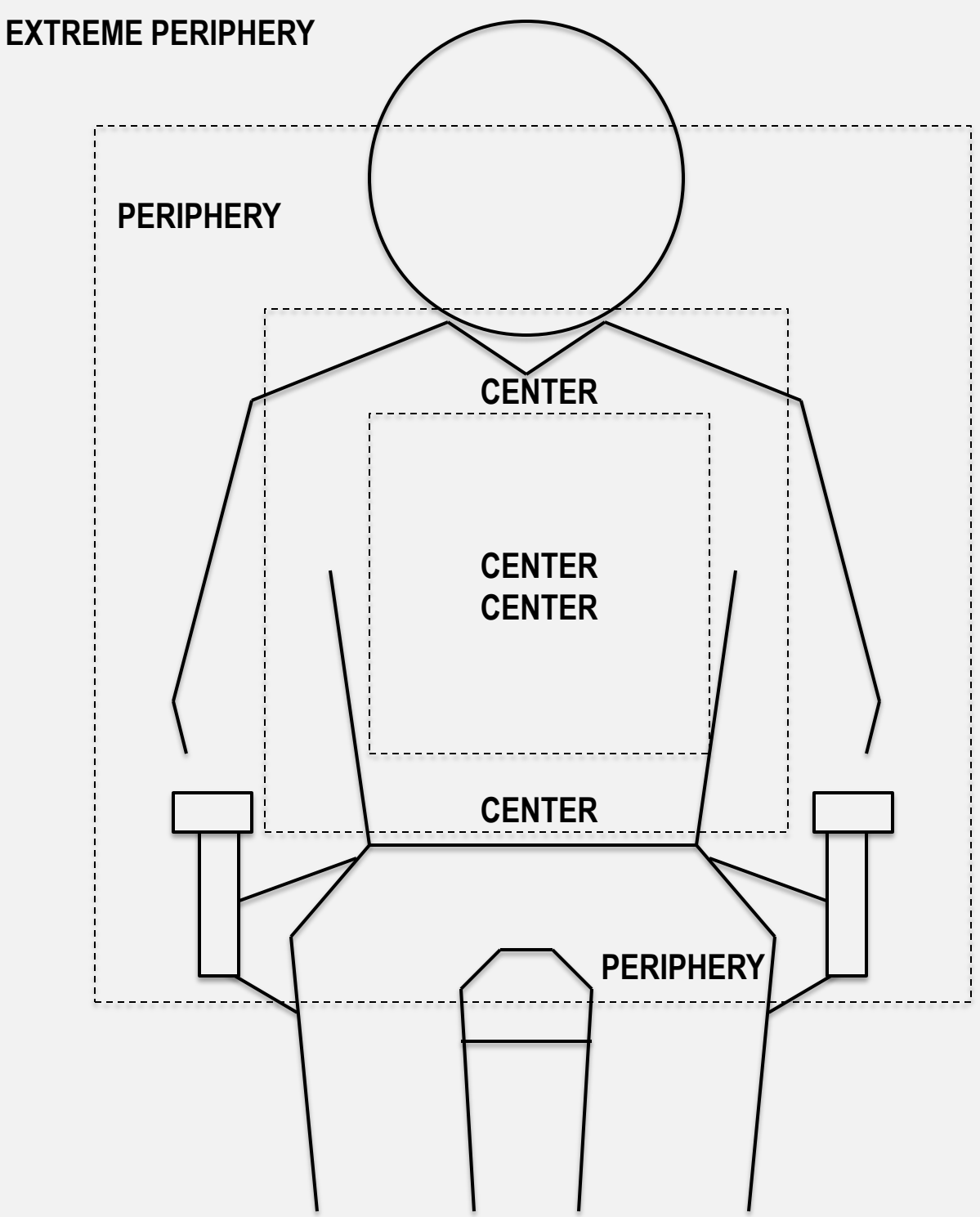|	
TOTAL INTERACTIVE GESTURES	89
TOTAL TOPIC GESTURES	37
TOTAL GESTURES	126

TOPIC GESTURE – FACE-TO-FACE CONVERSATION
P6 describing her closet and how it is organization
P6: "I've got one of those hanging things that's got those little sections"
Topic gesture

INTERACTIVE GESTURE – FACE-TO-FACE CONVERSATION
P3 asking P4 how often people sit and talk in the position they're currently in
P3: "how often do you talk to someone like this?"
Palm up, periphery, listener oriented, coincides with 2nd person pronoun

McNEILL'S (1992) GESTURE SPACE

EXTREME PERIPHERY
PERIPHERY
CENTER
CENTER CENTER
CENTER
PERIPHERY

INTERACTIVE GESTURE – TELEPHONE CONVERSATION
P3 agreeing with P4's description
P3: "I know!"
Palm up, center, speaker oriented, coincides with 1st person pronoun

WORD SEARCH – TELEPHONE CONDITION
P7 talking about getting a new cell phone
P7: "I was thinking, whenever my dad's, um, (tsk) (tsk)…contract is up"
Palm down, periphery, neutral, word search (thumb twitches)

GESTURE CLASSIFICATION

- Gestures were classified as belonging to one of two groups: TOPIC GESTURES or INTERACTIVE GESTURES (Bavelas et al. 2008):
  I. TOPIC GESTURES: "depict some aspect of the current topic of conversation", iconic representations of current speech.
  II. INTERACTIVE GESTURES: "gestures refer to directly (in form and meaning) to the addressee *or* to the conversational interaction".
- WORD SEARCH gestures occur at moments of speech failures or inability to recall specific words and are considered to be interactive gestures.

RESULTS

FACE-TO-FACE CONVERSATIONS
- Greater production of all gesture types (topic and interactive) over a wider spectrum of locations.
- Of interactive gestures, most were palm up, in the periphery, and oriented toward the listener.
- Word search gestures occurred less frequently and were primarily palm up.
- Utterances of 1st person pronouns coincided most often with speaker oriented palm up gestures. Utterances of 2nd person pronouns coincided most often with listener oriented palm up gestures.

TELEPHONE CONVERSATIONS
- Lesser production of all gesture types, and gestures produced in a more restricted spectrum of locations.
- Of interactive gestures, most gestures were palm down, in the periphery, and in a neutral position.
- Word search gestures occurred more frequently and exclusively palm down, primarily in the periphery.
- Of palm up gestures, most were speaker oriented.
- Utterances of 1st person pronouns continued to coincide most frequently with speaker oriented palm up gesture. Utterances of 2nd person pronouns varied according to palm orientation.

CONCLUSIONS
- Interactive, co-presence has impact on impact on gesture production, supporting the dialogue theory of gesturing.
- Interactive gestures are specifically impacted by mutual visibility.
- Word search gestures are produced more often in telephone conversation due to speaker compensating for lack of hearer input.
- Differences in rates and speaker orientations of palm up gestures, along with coinciding pronoun utterances, over each conversation type support the encoding theory of gesturing.
- Topic gestures occur exclusively in topics concerning descriptions.

REFERENCES
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