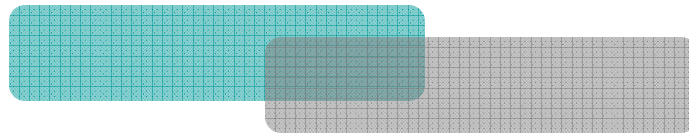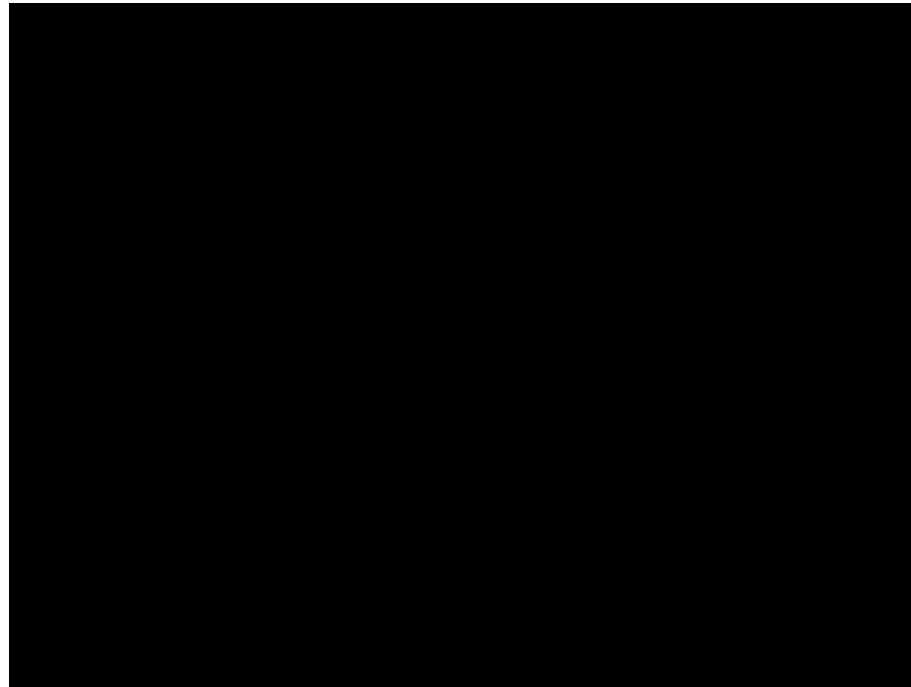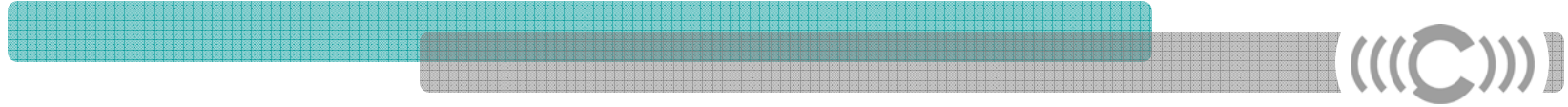# Communication Competencies

Discourse Competencies

1. Sometimes the protest was political and concerned events in the outside world
2. Universities, being charitable corporations, are subject to the powers of their visitor.
3. One function of the Visitor is to settle disputes between members of the university and to correct abuses and irregularities
4. Although student protest of one sort or another has a history as long as universities themselves, the 1960s saw a striking revival.
5. Often he is the sovereign (in effect the Privy Council); and the sovereign is deemed to be the Visitor if no person is appointed.
6. Sometimes it was directed against the way universities were organized and administered and most of the litigation before the courts arose from this cause.
7. This person will often be named in or under the charter establishing the university.

Sentence Ordering

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Assignment #1

- Collect a sample of naturally occurring spoken discourse. "Naturally-occurring" can be broadly construed to include radio or talk shows, children's play, radio or TV news items, spontaneous or scripted storytelling, classroom interactions, task-oriented conversations, classroom lectures, etc.

- By "collect" we mean make video recordings (unless absolutely impossible to do and audio recording is your only option). You should collect a minimum of 15 minutes, and then transcribe at least 5 continuous minutes (usually the middle of the discourse is the most natural).

- By "transcribe" we mean you should make a record on paper of what you saw/heard --a good enough record so that when we read the transcript, we know what went on (read the Schiffrin appendix before doing this. You will probably want to use one of her methods, or you will have to justify why you didn't).

What to Do

- The point is to push you to think about what discourse is and what makes it hard to model discourse in a computational system. You may want to have an interactive system in mind when you choose your sample.

- Think about how a computer could replace a participant in the discourse. Supposing that you had perfect word recognition, what are the most challenging issues in processing the discourse? Are some of these challenges specific to the sample domain you chose? Another point is to think about what makes a sufficient record of discourse: how do you turn a speech event into an on-paper transcript? What parameters need to be transcribed (the words, the pronunciation of words, the intonation, the facial expression, the gestures, fidgeting, pauses, etc.)?

- We ask you to turn in to us the typed transcript and a ONE PAGE discussion of the points listed above. That is, minimally, discuss the issue of what makes an adequate transcription, and what challenges a computer might have in interacting in the discourse that you have collected.

Some Phenomena of Interest

- "It's hard" presupposes referent for *it* previously introduced. **Anaphora**
  - (can we can build systems that resolve anaphoric reference?)
- "**This** laptop costs **nine** hundred dollars". Stress means that you are *contrasting* "this" to that and "900" to some other figure. **Info structure**
  - (can we produce & understand the meaning of these stress patterns?)
- "It would be nice if you were quiet" means you have to, because I'm the professor (based on rl'p betw. spkr & hearer). **Conv. Implic**ature
  - (Can we understand & generate these forms?)
- "Oh yes, I will" presupposes previous spkr's talk. **Response Pair**
- "Anyway" pops one back to an earlier topic of talk. **Discourse markers**
- "Now put that here" needs knowledge of situation of utterance for interpretation. **Deixis**

Phenomena of interest

posture shifts

gaze and mutual gaze

head movement, intonation, eyebrow movement

Phenomena of interest

hand gesture

Phenomena of interest

Reference to physical world

- Multi-party
- Social Talk

Disambiguation

Discourse: Main Ideas

- Focus on *actual use* of language
  - Must consider context
  - Must consider intention
  - No constitutive rules; only regularities
  - Regularities may be context-dependent
    - e.g., long pauses could mean high cognitive load, depression, distractedness. "Long" relative to what? Which dialect? What time of day?

Discourse: Main Ideas

- Context - many flavors
  - Situation: participation frameworks
  - Culture: speech community
  - Co-text: prior & upcoming text
  - Relational: what is the social rl'p?
  - Activity: what are interlocutors trying to do?
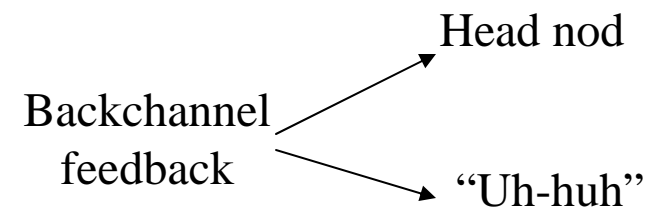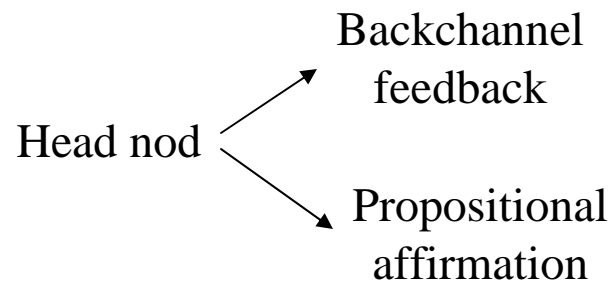 - Cognitive: shared knowledge & assumptions

Discourse: Main Ideas

- Cognitive context, cont'd
  - Assumptions allow us to make inferences and thus more efficient use of language
  - Grice - "Cooperative Principle"
    - Quantity (be as informative as required)
    - Quality (be truthful)
    - Relevance (be relevant)
    - Manner (avoid ambiguity, be brief, etc.)

Discourse: Main Ideas

- Form/Signal/Device vs. Function
- Many-to-many relationship

Head nod → Backchannel feedback

Head nod → Propositional affirmation

Backchannel feedback → Head nod

Backchannel feedback → "Uh-huh"

Discourse: Main Ideas

- Transactional vs. Interactional
  - aka Propositional vs. Interactional
  - Conveying referential meaning vs. other things
    - Regulating conversation
  - A given utterance or nonverbal behavior may be either one or both

Discourse: Main Ideas

- Discourse is fundamental unit of analysis

  - Interlocutors engage in a discourse to achieve a joint purpose
  - Discourse is partitioned into segments
  - How are segments bounded?
  - How are segments related?
  - How is the meaning of the discourse determined from the meaning of the segments?

Rules vs. Regularities: "Rules"

- Linguistics (some philosophy of language)
  - Formal Systems, Rules, Constraints, Grammars, Principles & Parameters, Algorithms
  - Characterize formal properties, Precise descriptions, descriptive, *UG*
- Data/Evidence
  - Constructed examples sentences
  - Speaker Intuitions, grammaticality judgements
  - example/counterexample

Rules vs. Regularities:"Regularities"

- Characterizing the phenomena in context, looking to make generalizations about phenomena by careful analysis of naturally occurring language (data)
- We don't need to explain the appearance of every device in a discourse, but we do need to explain the regularities of distribution of devices.
- Methodology: Sociolinguistics, anthropology, communications theories, discourse analysis
- Less precise? More robust?

Example: Discourse Analysis

- Interpersonal communications, politeness, face, turn-taking, expectation, function of behaviors in larger context
  - (situational, socio-cultural, discourse…)
- Identifying performance variables, transcription and coding of data coding coding

Example: Ethnomethods

- "I find iconic gestures with most introductions and descriptions of landmarks, but there are some that just don't occur there, I am not concerned with exhaustive description…"

A. C2 dialogue with head-mounted video camera

B. Dialogue with semi-autonomous robot or UAV

C. Translated dialogue with UN peacekeeper

D. Remote, low bandwidth database query dialogue with information software agent at command post

E. Monitored/recorded dialogue between soldiers

F. Dialogue with the CommandPost control agent "bouncer"

G. Dialogue between Cybersoldier and CP occupant

H. Dialogue between co-occupants of Command Post

I. User-Interface dialogue between comander and application

J. Simulation of human dialogue by lifelike computer