Semantic Research Methodology

Based on Matthewson (2004)

LING 510

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Methods in semantics: preliminaries

In semantic fieldwork, the task is to figure out the meanings of morphemes.

We can only study individual morpheme meanings by examining their use in entire sentences and in larger discourse contexts.

Methods in semantics: preliminaries

Sentences have both **truth conditions** and **felicity conditions**.

Truth conditions: To understand a sentence, one must know what the world would have to be like in order for the sentence to be true.

Felicity conditions: In what discourse situations is a particular sentence acceptable? Aspects of meaning not covered by truth conditions alone.
→ **Includes presuppositions and implicatures**

Methods in semantics: preliminaries

The sentences in (3a,b) are intuitively true in the same situations, but they have **different felicity conditions.**

(3) a. It is Mary who wants fish.

    b. Mary wants fish.

Which sentence could I say in response to (4)?

(4) What do people want for dinner?

Methods in semantics: preliminaries

Some sentences sound quite odd to native speakers when not presented in any sort of discourse context.

(5)   Fish, Sarah likes.

Methods in semantics: preliminaries

Some sentences sound quite odd to native speakers when not presented in any sort of discourse context.

(5) *Context:* I'm telling you about the foods that Sarah

likes and doesn't like.

Fish, Sarah likes.

….but chicken, she doesn't.

Methods in semantics: preliminaries

Furthermore, a single sentence may be **ambiguous.** Ambiguous sentences have two (or more) distinct sets of truth and felicity conditions.

(6) The dog must be in her office.

Methods in semantics

How have people tried to study semantics?

- **Recorded materials** like dictionaries, stories, transcribed conversations, and documentation of spontaneous speech.

- **Asking for translations and judgments**

- **Data elicitation methods using contexts:**
    - Truth-value judgments in contexts
    - Felicity judgments in contexts

- **Experimental methods**

Using recorded materials

Advantages:

- They present particular words in a contexts in which they are **felicitous.**

- When working on understudied languages, that is usually the starting point.

Disadvantages:

- Texts and spontaneous speech do not show the full range of scenarios in which a form can be used.

- Texts and spontaneous speech only provide positive evidence and to develop a semantics project we also need **negative evidence** (that is, we need to know when a sentence or word **cannot** be used).

Using recorded materials

Example of a shortcoming of such materials from Menominee.

(7) a. **o**-se:t   b. **me**-se:t

     3poss-foot   *me*-foot

     'his foot'   'someone's foot / a foot'

Me seems to attach to particular kinds of nouns (like body parts and belongings) and indicates that the noun isn't possessed by anyone.

Using recorded materials

Prediction: (8a) should only be able to mean that he makes an unpossessed pack. (8b) should only be able to mean that the man carrying that pack **owns** that pack.

(8) a. [**Me:**-e:wanae:hkae]-w   b. Pes-kae:qc-[**o**-e:wasi]-w

    me-pack-3   come-big-3poss-3

     'He makes a pack'   'He brings a pack.'

…unfortunately, the translations from Bloomfield are not informative (both use *a pack*) so we can't test this hypothesis.

Asking for translations

Free translations of **entire sentences** are helpful so we have an idea of what is, roughly, the meaning of a sentence.

But consultants shouldn't be asked to translate functional morphemes ("what is your word for *the*?") This is essentially asking your consultant to do linguistic analysis (we call it "asking for **metalinguistic judgments**").

Asking for translations

What goes wrong with asking for translations for functional words?

- Many morphemes have subtly different meanings, e.g. *each*, *every*, *all*.

- Many morphemes have obscure meanings, e.g. morphemes for tense or aspect.

- Example from Matthewson (2004). Group of students asked a Mohawk consultant to say how the two forms in (8) were different.

(8)   a. ietawens
       b. waetawen

- The consultant replied that *ietawens* means 'she's swimming' and *waeta- wen* means 'she swam'. **The consultant also volunteered the information that the *-s* suffix on *ietawens* is what makes it so that she is swimming right now.** A little later on, the group asked for a translation of 'she is running'. They were given:

(9) teionrahtate

- At this point, the group became confused. They asked the consultant why there was no *-s* suffix on this form, since she is running right now. The consultant could not explain and began to feel uncomfortable. (Matthewson 2004)"

Asking for translations

Furthermore, the interpretation of certain constituents sometimes depends on the surrounding environment of the sentence.

If you ask a Mandarin speaker for the meaning of the word 狗 , they might reply 'a dog.' But when it is used in the sentence狗很大, they might translate狗 as 'the dog.'

Matthewson (2004): "Noun phrases in Chinese often bear no marking for specificity or definiteness; however, their syntactic position has an effect on their interpretation: preverbal noun phrases are specific."

Asking for translations:

Furthermore, a particular morpheme or construction may have no direct counterpart in another language. Asking for a translation may result in a range of English sentences which could wrongly suggest ambiguity.

(10) Nahałtin **daats'í**.

   3S.rain   PRT

Translations: 'Is it raining?', 'I wonder if it's raining.', 'I don't know if it's raining or not.' 'Maybe it's raining, or maybe not.', 'It might be raining.'

Asking for translations:

Guideline for translations from Matthewson (2004):

- "Ask for translations of complete sentences only.

- Try to make the source string a grammatical sentence.

- Assume that the result string is a grammatical sentence.

- Do not expect your consultant to conduct analysis. This includes not asking him/her to compare an English construction (or a construction of your meta-language) to one in his/her language and produce something parallel".

Asking for translations:

...and crucially, treat translations as **clues** rather than as **results.** Matthewson writes "An English translation of an object-language sentence does not provide direct evidence about the truth conditions of that sentence...

...The only real evidence about truth conditions **is truth value [and felicity] judgments in particular contexts.**"

Judgments in contexts

A **judgment** is "something a native speaker is qualified to give, by virtue of knowing the language."

Three kinds of judgments:
- Grammaticality judgments
- Truth value judgments
- Felicity judgments

We'll focus on the last two.

Judgments in contexts

But first: Why contexts?

One reason: Giving contexts can aid in the study of ambiguous sentences.

Let's say I want to study how Navajo expresses modality (words used to express possibility, probability, and necessity). I ask a consultant to translate (11):

(11) Sarah must be in town.

There are two possible interpretations:
- Given what I believe to be true about the world, Sarah must be in town.
- Given what the rules are in the world, Sarah must be in town.

If you only ask for a translation, the consultant will not necessarily know which meaning was intended.

Judgments in contexts

A similar ambiguity arises with the modal *can.*

(12)   a. John **can** walk to the store now his legs have healed.

   b. John **can** walk to the store; his mother said he's allowed.

Judgments in contexts

In addition to peeling apart ambiguous meanings, it is important to present sentences in contexts for other reasons as well:

- Some sentences will seem infelicitous to the consultant unless a discourse context is provided. These sentences may have particular presuppositions.

(13)   a. It was Mary who ate the banana.

         b. Fish, Mary likes.

How to elicit judgments

Working with non-verbal contexts:

- Present photos, drawings, or videos and ask for a free description of the context.

- Present photos, drawings, or videos and ask whether a given sentence can be used to describe that scenario.

How to elicit judgments

Storyboards: also good for elicitation of specific constructions.

How to elicit judgments

(16) a. Jóoj   shį́į́ t'ahdii 'ajiłhoosh.   b. Jóoj   daats'í t'ahdii 'ałhosh.
        George PRT still   4S.sleeps   George PRT   still   3S.sleeps

What differences do you see between the two sentences given by consultants?

How to elicit judgments

You'll probably find verbal scenarios to be even more useful.

Methodology, part 1: Present the context first, then present the target sentence. For every new scenario you are testing, repeat the sentence.

Imagine you're studying the semantics of the English past tense morpheme. You have a sentence (14) that you know obeys the grammatical rules of English. You (F) have the following discussion with your consultant:

(14) Mary danced.

(15) F: Say that Mary was dancing yesterday and right now she's resting. Could I say *Mary danced*?
C: Yes, that's good.

F: Say that Mary is dancing right now. Could I say *Mary danced*?
C: No, that's wrong.

F: Say that Mary is resting right now, but she's going to be dancing in an hour. Could I say *Mary danced*?
C: No, that's not right.

How to elicit judgments

Methodology, part 2: Once you have judgments about a particular target sentence in various contexts, you can change a sentence minimally and test it again. **Make minimal pairs of sentences.**

Why use minimal pairs?

"They allow the experimenter to control for differences between items so outcomes can be attributed to what is tested, not extraneous factors."

- (From: Jesse Harris course notes – 'Experimental methods in linguistics')

How to elicit judgments

Methodology, part 2: Once you have judgments about a particular target sentence in various contexts, you can change a sentence minimally and test it again. **Make minimal pairs of sentences.**

For example, once you've tested the English sentence *Mary danced* in the contexts in (15), try the sentence *Mary will dance*.

Don't try the sentence *The students will dance* unless you already know how the sentence *The students danced* works.

How to interpret judgments

Guidelines:

-If a speaker **accepts** a sentence S in a discourse context C, S is **true** in C.

-If a sentence S is **false** in a discourse context C, speakers will **reject** S in C.

How to interpret judgments

Guidelines:

-If a speaker **accepts** a sentence S in a discourse context C, S is **true** in C.

-If a sentence S is **false** in a discourse context C, speakers will **reject** S in C.

-...but it's **not the case** that if a consultant **rejects** an S in context C that S is necessarily **false**.   The sentence may be rejected for other reasons.

How to interpret judgments

Remember the following exchange:

(15) F: Say that Mary was dancing yesterday and right now she's resting. Could I say *Mary danced*?
C: Yes, that's good.

F: Say that Mary is dancing right now. Could I say *Mary danced*?
C: No, that's wrong.

F: Say that Mary is resting right now, but she's going to be dancing in an hour. Could I say *Mary is dancing*?
C: No, that's not right.

How to interpret judgments

There are at least two reasons why the consultant might have said 'No, that's wrong.'

The two reasons have to do with the difference between a **truth value judgment** and a **felicity judgment.**

Truth value judgments: Is a sentence true or false in the context?

Felicity judgments: Is a sentence 'acceptable' in a particular context?

How to interpret judgments

Telling the difference between truth value judgments and felicity judgments:

(17) *Context:* There are two cats in the room. They are both asleep.

    a. The cats are awake.

    b. The cat is asleep.

How to interpret judgments

(17) *Context:* There are two cats in the room. They are both asleep.

    a. The cats are awake.   **FALSE**

    b. The cat is asleep.   **INFELICITOUS**

How to interpret judgments

Truth value judgments relate to the truth conditions (AKA asserted content) of a sentence.

Felicity judgments relate to the implicatures or (especially) presuppositions of a sentence.

Knowing whether a sentence is 'bad' a particular context because of falsity or infelicity often hinges on knowing the difference between asserted and presupposed content. (we'll ignore implicatures for now).

How to interpret judgments

Remember the 'Hey, wait a minute!' test from last Thursday. Presuppositions can be challenged by saying 'Hey, wait a minute!'. Most speakers of English find it odd to challenge asserted (truth-conditional) content in this way.

(21) **Testing for the uniqueness presupposition of *the* in context where two cats are sleeping:**
    A: The cat is asleep.

    B1: Wait a minute! I thought there were two cats in here!

    B2: #Wait a minute! I didn't know it's asleep!

How to interpret judgments

Felicity judgments are more **coercible** (flexible) than truth/falsity judgments.

"If the consultant gives a "question mark" judgment (e.g., "ok but not that great," "yeah, I guess I would know what you meant," etc.), then it is possible one is dealing with infelicity rather than falsity (assuming, as always, that the sentences are grammatical, so "question mark" status does not relate to grammaticality)" (Matthewson 2004).

How to interpret judgments

But how do (a,b) sound in the following contexts?

(18) *Context:* You are riding the bus with your friend Bill. He says to
  you, out of the blue,
    a. My cousin looks like Elvis.
    b. # It's my cousin who looks like Elvis.

How to interpret judgments

But how do (a,b) sound in the following contexts?

(18) *Context:* You are riding the bus with your friend Bill. He says to
   you, out of the blue,
      a. My cousin looks like Elvis.
      b. # It's my cousin who looks like Elvis.

Is (18b) false or infelicitous in the context?

How to interpret judgments

But how do (a,b) sound in the following contexts?

(18) *Context:* You are riding the bus with your friend Bill talking to
     you about his family. He says to you, out of the blue,
        a. My cousin looks like Elvis.
        b. # It's my cousin who looks like Elvis.

(19) *Context:* Your friend Bill tells you that someone in his family
     looks like Elvis, but he can't remember who. You are looking
     through photos of his family together. Bill sees one of his
     cousin and says,
        a. My cousin looks like Elvis.
        b. It's my cousin who looks like Elvis.

How to interpret judgments

How do the contexts in (18) vs. (19) differ?

How to interpret judgments

How do the contexts in (18) vs. (19) differ?

Intuition: The *it*-cleft construction *it's my cousin who looks like Elvis* presupposes that there is *someone* who looks like Elvis.

How to interpret judgments

Let's apply the 'Hey, wait a minute!' test and see if we can find target this hypothesized presupposition.

(21)   A: It's my cousin who looks like Elvis.

        B1: Hey, wait a minute! There's someone who looks like Elvis in your family?!

        B2: #Hey, wait a minute! I didn't know that your cousin looks like Elvis!

How to interpret judgments

(18a) is infelicitous in the context. The judgment that (18a) is 'bad' in the context is a felicity judgment, not a truth value judgment.

Both sentences have the same truth conditions (asserted content).

(20) a. My cousin looks like Elvis.

b. It's my cousin who looks like Elvis.

Both are true *iff* my cousin looks like Elvis.

How to interpret comments

Consultant comments offered in tandem with judgments are important clues – like translations – to meaning. **Keep track of them! You are encouraged to quote consultant comments in your paper.**

(22) *Context:* Your friend Dave went to the rodeo today to ride. He
    rides various things at the rodeo, depending on the day: he
    could be riding a horse, a bull, or mule. You wonder if it is a
    horse that he is riding. *You say:*

Naa'ahóhai ná'ádleehí=di	<u>łį́į́</u>	**daats'í**	bił naaldloosh.
rodeo.ground=LOC	horse	PRT	3O.3S.ride.animal

 Comment: "It sounds like you're questioning the horse."

How to interpret comments

Also remember: during an elicitation session, a sentence may be considered bad for reasons that you did not anticipate (mispronunciation, inappropriate lexical choices) and which have nothing to do with truth/falsity or felicity.

Speaker comments often help you find problems like this.