Ambiguity and vagueness in English: speakers vs. linguists:

David Denison

Outline of talk

- Introduction
- Ambiguity vs. vagueness
- Linguists’ assumptions
- Stepwise change of word class
- Prefabs and multi-word units
- Closing remarks

Full disclosure

- Talk draws on presentation at workshop on psycholinguistic perspectives on history of English
- Round table will help me with chapter on ‘Ambiguity and vagueness in historical change’ (in prep.), to be paired with one by Claudia Felser
- Talk also draws on my work on linguistic change in English, especially concerning word classes and word class boundaries

Hundt, Mollin & Pfenninger (in prep.); Denison (various); Felser (in prep.)

Participants

- SP/W = speaker/writer
- AD/R = addressee(s)/reader
- Historical linguist is also R for written data, but
  - potentially more knowledgeable than intended readership
  - probably ignorant of cultural and pragmatic facts obvious to contemporary reader
  - = normal AD for recent audio broadcast or telephone data (but can listen repeatedly)
  - with audio conversational data, probably lacks non-verbal communication available to actual AD
- Psycholinguist: highly peculiar SP/W and[??] AD/R!
Incomplete knowledge

- **Ambiguity**
  - AD/R cannot be sure which of two (or more) analyses was intended by SP/W, and something hangs on choice.
  - Uncertain analysis may concern (e.g.) lexical semantics, syntactic structure, lexeme boundaries.

- **Vagueness**
  - Linguistic analysis in some respect underdetermined, equally for SP/W and AD/R
  - No further info needed for interpretation

---

Psychological difference

- Relevant kind of vagueness concerns properties normally specified (otherwise would be unlimited).

  - *A priori*, vagueness less costly psychologically than ambiguity
    - ambiguity: AD/R may need to explore alternatives – though evidently they often don’t
    - vagueness: no need to back up and try again

  Traugott & Trousdale (2013: 199-200), Felser (in prep.)

---

Bridging context

- More than one interpretation of word possible in context, possibly only subtly different
- ‘Wrong’ selection by AD/R (≠ SP/W’s intention) → unrecognised misunderstanding, often harmless
- linguistic innovation = actuation of potential change
- By definition, must arise from ambiguity, not vagueness.


---

Bridging contexts: example 1

- Classic example: early history of *still* adv.
  2. ‘motionless’ (OE-)
  3a. ‘without change’ (ME-?lModE obs.)
  4a. ‘now as formerly’ (1535-)

  - Bridging context:
    One generaciõ passeth away, another commeth, but the earth abydeth still.
    (1535, not OED)
  - Reasonable to invoke ambiguity here, but can bridging contexts involve vagueness too?

OED Online, OED Dictionary Browser

---

Bridging contexts: example 2

- In basic sense 1a, semantics of *discrimination* carries no value judgement – so is vague in that respect
- Invited inference that *discrimination* is good (sense 4) or bad (sense 6) would belong to pragmatics and involves context and collocation.
  - e.g. via ellipsis of against-PP or of a premodifier like racial for sense 6.
Linguists’ assumptions

Modularity, constituency
- Common assumptions:
  - modular architecture
  - centrality of syntax
  - binary branching
  - no crossing branches (no discontinuous constituents)
  - single mother (no multiple inheritance)

Elegance and economy
- Further assumptions:
  - grammaticality is binary: yes or no
  - a grammar must be internally consistent
  - every word in every grammatical sentence belongs to one and only one word class
  - parsimony: avoid alternative ways of deriving grammatical sentences or blocking ungrammatical ones
  - the fewer rules needed to account for some data, the greater the explanatory power

Which theories assume this?
- MIT-style generative grammar – or unfair to recent work?
- many other formal approaches (apart from centrality of syntax)
- much structuralist grammar

The edges of grammaticality
- Usage-based work rejects
  - grammaticality is binary: yes or no
- Acceptability is gradient, contingent on such factors as context, priming, discourse rather than isolated sentences, creativity, exposure to prescriptive ideas.
- Linguistic knowledge may be probabilistic.
- I reject
  - every word in every grammatical sentence belongs to one and only one word class

Networks rather than trees
- Cognitive Grammar, Construction Grammar (many flavours), ?Théorie des opérations énonciatives generally reject
  - modular architecture
  - centrality of syntax
- Dependency Grammars, Word Grammar reject
  - binary branching, no crossing branches, one mother in favour of networks

Denison, ‘Ambiguity & vagueness’
**Diseconomy**
- I mistrust as psychologically implausible
  - parsimony: avoid alternative ways of deriving grammatical sentences or blocking ungrammatical ones
  - the fewer rules needed to account for some data, the greater the explanatory power
- More plausible that actual behaviour is additive: usage (SP/W) or analysis (AD/R) more likely, the **more** factors conspire to support it

**Messiness of grammar**
- I mistrust (but on largely anecdotal evidence):
  - a grammar must be internally consistent
  - Speaker grammar allows inconsistent fragments.

**Stepwise change of word class**

**Well-studied type: N → Adj**
- Nouns (esp. recently) may develop Adj usage alongside existing N distribution:
  - fun, key, ace, amateur, apricot, core, bandaid, cardboard, champion, corks, cowboy, dinosaur, draft, freak, genius, killer, landmark, luxury, niche, pants, powerhouse, rubbish, surprise, Velcro ...
- N and Adj are distinct word classes with some properties in common.

Denison (2013; in prep. a)

**Syntactic ‘bridging contexts’**
- **Premodifier of head noun:**
  - Gold is real money and paper is pretend money. (1974, OED)
  - That’s why inflation money is false purchasing power. (1946, WebCorp)

- **Predicative complement** (N only if mass noun or plural):
  - a third of the pictures are beautiful, but I think two-thirds of the pictures are fakes (BNC)
  - His gentleness was fake (BNC)

- Word class underdetermined in these syntactic contexts (though may be known from distribution elsewhere)
Early history of core: only N

- Certain frequent collocations place core in pre-modifying function, a syntactic bridging context:
  ’Shall there be a core curriculum in secondary schools?:
  a symposium. (1935, OED)
  in relation to our guiding ethical principles and core values
  and laws in American democracy (1975, COCA)
  the core ideas of Jung and LeviStraussS (1982, COCA)
- It remains N, even here.
- Acquisition of Adj behaviour is generally step-wise rather than all at once.

Word order

- Modifying adjectives usually precede modifying nouns
- Modifying N before Adj only if Adj is a classifier

<table>
<thead>
<tr>
<th>D</th>
<th>Adjective zone</th>
<th>Modifying noun zone</th>
<th>Head noun</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>big tourist</td>
<td>tourist attraction</td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>garish big expensive London tourist</td>
<td>attraction</td>
<td></td>
</tr>
<tr>
<td>*a</td>
<td>tourist</td>
<td>big attraction</td>
<td></td>
</tr>
</tbody>
</table>

core: Adj too (not intended to show chronology)

- Before a non-classifier Adj:
  once you get away from the core big jobs in government -- like the
  President, his staff [...] (1990, COHA)
- Tackling these jobs beyond Europe should be a core new mission of
  NATO (2003, COHA)
- With intensifier:
  Anything that was so core to the election (1990, COCA)
  It is very core to our program strategies (2011, web)
- In comparative or superlative:
  in my life and my most core beliefs (2007, COCA)
- As post-modifier:
  there is something central, something core, in everyone’s experience of
  shame (2004, WebCorp)

Mixed community

- During period of transition, three groups of speakers:
  Group 1 (most conservative): only have core = N
  Group 2: core = N and core with some but not all Adj properties
  (perhaps to be differentiated further)
  Group 3 (most advanced): core = N and core = Adj
- Can produce as SP/W (and accept as AD/R):

<table>
<thead>
<tr>
<th>Examples that must be N</th>
<th>Examples that could be vague N - Adj (but N for group 1)</th>
<th>Examples that must be Adj</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1</td>
<td>+</td>
<td>?</td>
</tr>
<tr>
<td>Group 2</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Group 3</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

Denison (2007; 2013)

Word class may depend on SP/W

- Typical example of core in ‘bridging context’:
  [...] to include only core academic content (2006, COHA)
- For Group 1 SP/W, example contains core as N.
- For Group 2 or 3, vague between N and Adj.
  - SP/W and AD/R in these groups don’t need to decide.
  - For AD/R, cf. ‘good enough’ analysis in psycholinguistics
  - Distinction for linguist would be arbitrary. No semantic or structural ambiguity. Choice only affects labels.

Christiansen et al. (2000), Ferreira et al. (2002), Ferreira & Patson (2007), Feveber (in prep.)
Can word class be vague?

- "No"
  There is no evidence I am aware of that SPs/Ws create underspecified syntactic representations. (Claudia Felser, p.c.)

- "Problematic"
  Re underspecification, the problem I see is a logical one. [...] In other words, every time you assume underspecification you assume a supercategory which may well conflict with other supercategories. Either that's a strong testable hypothesis (and you'll never actually need conflicting supercategories), or it's wrong. (Dick Hudson, p.c.)

Response to Hudson

- Possible conflicts so far involve Adj (with N, D, V, Adv), and some with Pronoun and Modals – if separate word classes.

Can word class be vague?

- "Maybe"
  Partial underspecification is compatible with rule-based, compositional models (Paul Kiparsky, p.c.)
  [...] even if [such words as fun] are underspecified in the mental lexicon, it’s also possible that they always get fully specified in actual sentences. I don’t see any way to decide between these possibilities on the basis of linguistic evidence. Perhaps there could be psycholinguistic experiments? (Kiparsky, p.c.)

Response:

- Challenge idea that every word in sentence must be assigned unique word class in linguist’s grammatical representation.
- Query whether SP/W’s mental grammar must use word classes, and if so, whether must always specify them.

Is word class always stored?

- Proper names can appear in Adj-like contexts:
  It’s very silly, it’s very odd, it’s very Woody Allen. (2000)
  This is so Woody Allen. Neurotic as ever and [on top of his game. (2008)]
- Counter-intuitive to suggest that speakers store Woody Allen and any other name as both (Proper) Noun and Adj ‘just in case’.
- Note anaphora in last example.
- Better interpretation: ‘wrong’ word class coerced by construction.
- Word class as epiphenomenon in Construction Grammar

Prefabs, multi-word units

Lexeme boundaries

- A word class must be assigned to a word (lexeme).
- Can knowledge of extent of lexeme be incomplete in
  - mental lexicon?
  - linguist’s grammar?
- Non-compositional a lot of as unit vs. modification of lot (a whole lot of)
- Many overlapping prefabs in the sort of family:
  - kind of, all kinds of, what kind of, those sort of, sort of thing, etc.

Complex prepositions in PDE

- Should strings like by dint of, in front of, on behalf of be analysed as a single lexeme (a complex preposition) or as separate words with internal structure?
- The Cambridge Grammar argues for separate words except for the few cases where there is no evidence at all for the separate analysis, e.g. dint, which is hardly used as N.
Complex prepositions in ModE

- **Behalf** analysed as N, head of NP:
  - on behalf of his country (PPCMBE)
  - [as [of] [is] [a] [of] [is] [a] [his] [country]]
- Justified by varied distribution of **behalf** in PPCMBE (1700–1914)
- Same analysis in *Cambridge Grammar*, citing alternations like
  - on his country’s behalf
- but PDE ≠ 18–19C English

<table>
<thead>
<tr>
<th>Pattern</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>in behalf of X</td>
<td>6</td>
</tr>
<tr>
<td>at the behalf of X</td>
<td>2</td>
</tr>
<tr>
<td>in X’s behalf</td>
<td>6</td>
</tr>
<tr>
<td>in that behalf</td>
<td>16</td>
</tr>
<tr>
<td>on behalf of X</td>
<td>11</td>
</tr>
<tr>
<td>on the behalf of X</td>
<td>1</td>
</tr>
<tr>
<td>on X’s (own) behalf</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
</tr>
</tbody>
</table>

Complex prepositions

- Alternative analysis as [as on behalf of] supported e.g. by
  - infrequency of interruption
  - possibility of substitution
  - different distribution of on behalf of X and on X’s behalf
    (common nouns vs. proper nouns or pronouns)
  - Choice affects word class but structure too
  - Both analyses available to AD/R
  - Ambiguity or vagueness? Very little hangs on choice.

Hoffmann (2007), Denison (2010: 118–121), Bybee & Beckner (2014: §3.3)

Problems and questions

For historical linguist:

- Ambiguity and structural change needs more work.
- Differentiating ambiguity and vagueness in their diachronic effects and historical stability?
- How to constrain vagueness to relevant properties
- Perhaps need functions like attribute and classifier rather than, or as well as, word class categories like N and Adj.
- Striking frequency in recent decades of N > Adj transitions. Perhaps type frequency relevant after all? (cf. ‘gang effect’)


Problems and questions

For psycholinguist:

- What is known about (real) speaker grammar?
- Are mutually inconsistent parts of grammar possible?
- Are word classes a necessary prerequisite for using language?
- If so, is vagueness as to word class possible for speakers?
- Is underspecification (vagueness) in general possible?
- Is there psycholinguistic evidence for my groups 1, 2 and 3?

References

On handout, and also
Slides from presentation + references will be on
http://tinyurl.com/DD-download

work-in-progress
comments very welcome, but please don’t quote
References


Felser, Claudia. in prep., 2015. Syntactic ambiguity in real-time language processing and diachronic change. In Hundt, Mollin & Pfenninger (eds.).


OED Online http://dictionary.oed.com/
