

# Definitions: Problems and Lessons

<http://www-rohan.sdsu.edu/~gawron/semantics>

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# Outline

- 1 Introduction
- 2 Difficulties with senses
- 3 Difficulties with senses
- 4 Hard
- 5 Line

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# What is a lexicographer?

“... a lexicologist with a deadline” (Fillmore)

## Three tasks

- 1 Identify senses by looking at data.
- 2 Compose definitions. (Many of you would get fired your first day on the job.)
- 3 Provide *illustrative* examples. (Not so easy!)

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# Identifying (and **individuating**) senses

- 1 How many senses are there? Look at the dictionary entries for *line* that follow, and compare with other dictionaries.  
Atkins and Levin (1991) find numerous cognitive and theoretical difficulties in merging *whistle*, *whistler* entries from two dictionaries
- 2 SENSEVAL1 and SENSEVAL2 (Kilgarriff and Palmer 2000): Verbs generally harder (more polysemous). Avg polysemy of 16.28 senses in WordNet (Fellbaum 1998). Average interannotator agreement (71%); [compare nouns and adjectives: 85%]
- 3 Modern Lexicographers have moved away from relying on that classical notion of what a dictionary is (American Heritage, Collins, New Oxford) to entries heavily fortified with examples, proliferating senses whenever necessary to accommodate a variety of examples.

# Verbs are worse (Atkins 1993, Palmer et al. 2007)

Hector  
Number of senses

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bury	15
float	18
seize	11



## Example problem verbs (Palmer et al. 2007)

	Hector	WN
shake	shake hands with so.	WN1
	shake o.'s fist at so.	WN1
	shake o's head	WN1
	My hands shook from the cold.	WN1
	He shook the bag violently.	WN1
		gentle tremors (WN2)
		rapid vibrations (WN3)
		swaying (WN4)
	shaken by his father's death	WN5

Sense grouping methodologies proposed (syntactic and semantic criteria); psychological priming experiments support the idea of core/peripheral senses. (Williams 1992)

## Kilgarriff (1997:19)

The primary implication is that a task independent set of word senses for a language is not a coherent concept. Word senses are simply undefined unless there is some underlying rationale for clustering, some context which classifies soem distinctions as worth making. For people, homonyms like *pike* are a limiting case; in almost every situation where a person considers it worth their while attending to a sentence containing *pike*, it is also worth their while making the fish/weapon distinction.

# Coactivation: two senses at once

- 1 For better or worse, this would bring **competition** to the licensed trade. (Kilgarriff 1993)
- 2 On streets where life can be as **hard**, gray, and dirty as the sidewalks, people seem to want art. (Anastasia Hernandez)

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# Defining *line* I

New Oxford American Dictionary

- ① a long, narrow mark or band: a row of closely spaced dots will look like a continuous line — I can't draw a straight line.
  - Mathematics a straight or curved continuous extent of length without breadth.
  - a positioning or movement of a thing or things that creates or appears to follow a line: her mouth set in an angry line — the ball rose in a straight line.
  - a furrow or wrinkle in the skin of the face or hands.
  - a contour or outline considered as a feature of design or composition: crisp architectural lines — the artist's use of clean line and color.
  - (on a map or graph) a curve connecting all points having a specified common property.
  - a line marking the starting or finishing point in a race.
  - a line marked on a field or court that relates to the rules of a game or sport.
  - Football the line of scrimmage.

# Defining *line* II

New Oxford American Dictionary

- (the Line)the equator.
- a notional limit or boundary: the issue of peace cut across class lines — television blurs the line between news and entertainment.
- each of the very narrow horizontal sections forming a television picture.
- Physics a narrow range of the spectrum noticeably brighter or darker than the adjacent parts.
- (the line) the level of the base of most letters, such as h and x, in printing and writing.
- [ as modifier ] Printing & Computing denoting an illustration or graphic consisting of lines and solid areas, with no gradation of tone: a line block — line art.
- each of (usually five) horizontal lines forming a staff in musical notation.
- a sequence of notes or tones forming an instrumental or vocal melody: a powerful melodic line.
- a dose of a powdered narcotic or hallucinatory drug, esp. cocaine or heroin, laid out in a line.

# Defining *line* III

New Oxford American Dictionary

- ② a length of cord, rope, wire, or other material serving a particular purpose: wring the clothes and hang them on the line — a telephone line.
  - a telephone connection: she had a crank on the line.
  - a railroad track.
  - a branch or route of a railroad system: the Philadelphia to Baltimore line.
  - a company that provides ships, aircraft, or buses on particular routes on a regular basis: a major shipping line.
- ③ a horizontal row of written or printed words.
  - a part of a poem forming one row of written or printed words: each stanza has eight lines.
  - (lines) the words of an actor's part in a play or film.
  - (lines) Brit.an amount of text or number of repetitions of a sentence written out as a school punishment.
- ④ a row of people or things: a line of acolytes proceeded down the aisle.

# Defining *line* IV

New Oxford American Dictionary

- a row or sequence of people or vehicles awaiting their turn to be attended to or to proceed.
  - a connected series of people following one another in time (used esp. of several generations of a family): we follow the history of a family through the male line.
  - (in football, hockey, etc.) **a set of players in the forwardmost positions for offense or defense.**
    - bf Football one of the positions on the line of scrimmage.
  - a series of related things: the bill is the latest in a long line of measures to protect society from criminals.
  - a range of commercial goods: the company intends to hire more people and expand its product line.
  - informal a false or exaggerated account or story: he feeds me a line about this operation.
  - the point spread for sports events on which bets may be made.
- ⑤ an area or branch of activity: the stresses unique to their line of work.



# Defining *line* V

New Oxford American Dictionary

- a direction, course, or channel: lines of communication — he opened another line of attack.
- (lines) a manner of doing or thinking about something: you can't run a business on these lines — the superintendent was thinking along the same lines.
- an agreed-upon approach; a policy: the official line is that there were no chemical attacks on allied troops.
- ⑥ a connected series of military fieldworks or defenses facing an enemy force: raids behind enemy lines.
  - an arrangement of soldiers or ships in a column or line formation; a line of battle.
  - (the line) regular army regiments (as opposed to auxiliary forces or household troops).

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# Senses of *hard*

- |                                   |  |
|-----------------------------------|--|
| 1. Difficult, challenging, taxing | Precedes infinitive<br><i>It's hard to focus now.</i>                    |
| 2. Exhibiting great effort        | Precedes the <b>noun</b> work<br><i>It was hard work convincing her.</i> |
| 3. Not soft, tough                | Precedes noun denoting physical object.<br><i>It has a hard shell.</i>   |
| 4. Resentful (of feelings)        | Occurs after <i>take it</i><br><i>Sam took it hard.</i>                  |

Consistent with statements above? *She tried hard to convince her parents, but they wouldn't budge.* (Michael Stephens)

# Part of speech lesson

Find the parts of speech of *hard* and *work* in the following examples (many based on Michael's)

- (1) a. It was hard work convincing her parents.
- b. She had to work hard to convince her parents.
- c. Bill had a work order for Room 111.
- d. The hard brick wall fell.
- e. He pushed hard the entire semester and passed all his classes.
- f. The cheese turned hard after sitting out so long.

# How senses divide

- 1 It's hard reading.
- 2 It's a hard reading.
- 3 It's hard to read.
- 4 a hard journey = a difficult journey = one requiring hard work

Distinct ideas may have overlapping extensions; *dog* means both male dog and the species

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- 1 A single unit of speech in a play, often a single utterance, or a segment of poetry that completes a metrical pattern (five iambs in iambic pentameter)
- 2 A horizontal string of words in a document; usually a page consists of many such lines
- 3 a boundary that divides two regions in space
- 4 People or Objects arranged in a chain for some purpose, a queue
- 5 An arrangement of mechanical devices including cables or wires for the purpose of carrying a communication signal
- 6 A collection of company products, usually unified by falling into some natural commercial category or by a theme or by an endorser or designer

# Whither Semantics?

- 1 How to do semantics if the foundations of meaning are so creaky?
- 2 We **do** understand each other (a lot of the time, anyways . . .)
- 3 Particular aspects of word meaning get activated/primed by context, not necessarily by logical associations (The astronomer married a star.)
- 4 Reference anchors a lot of noun meanings (“Oh, you mean Fred Hoyle, the astronomer,” short-circuiting the need for definitions of *astronomer* or *astronomy*)
- 5 Highly ambiguous verb meanings (*bury*) remain an interesting puzzle.
- 6 We focus in this course on the semantics/pragmatics connection, grammatical meaning, and how word meanings **combine**



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