Introduction to L2 Vocabulary Acquisition & Learning: Lecture 09

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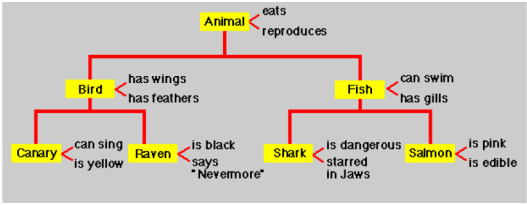
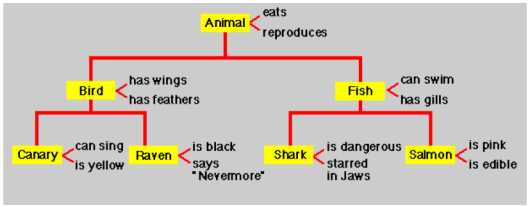
Fall 2015

( ) Network Models



(Hierarchical) Network Models



Spreading ( ) Models

- *Retrieval*: activation begins at a single mode and then spreads in parallel throughout the network. The activation attenuates over distance, thus ensuring that closely related concepts are more likely to be activated than distant concepts.

Spreading (Activation) Models

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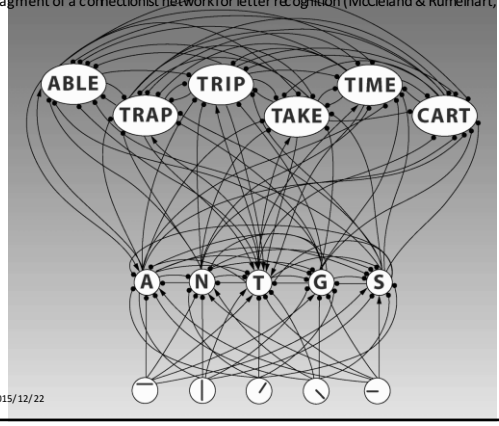
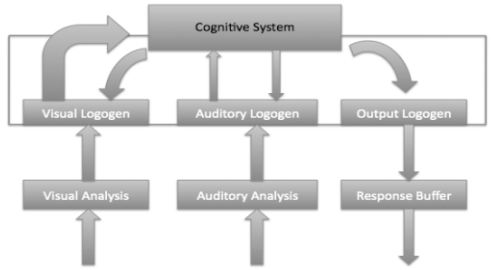
Fragment of a connectionist network for letter recognition (McCleland & Rumelhart, 1981)



McClelland, J.L., and Rumelhart, D.E. (1986). *Parallel Distributed Processing: Explorations in the Microstructure of Cognition*, Vol. 2: *Psychological and Biological Models*, Cambridge, MA: MIT Press.

( ) Model



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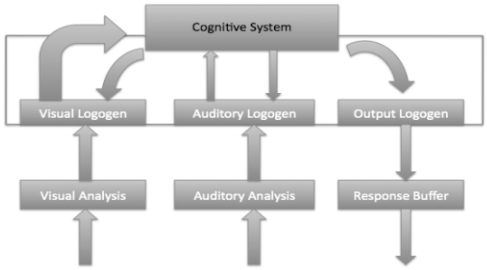
(Logogen) Model



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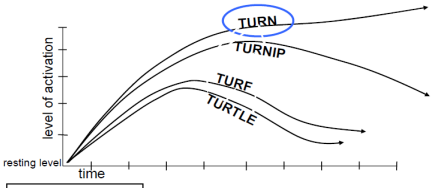
( ) Model

Activation Competition Selection



Stimulus: TURN

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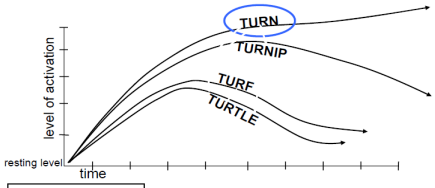
(Cohort) Model

Activation Competition Selection



Stimulus: TURN

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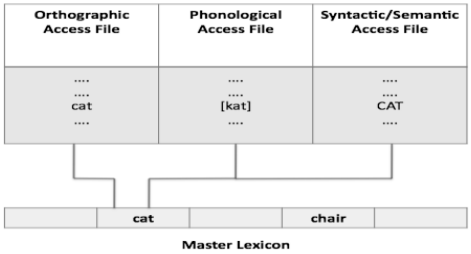
Forster's ( ) Search Models



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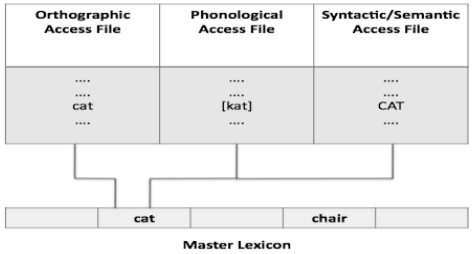
Forster's (Serial) Search Models



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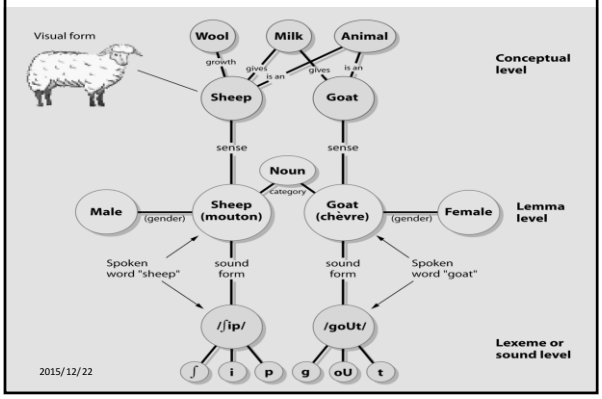
a model proposed by William ( ) in 1994



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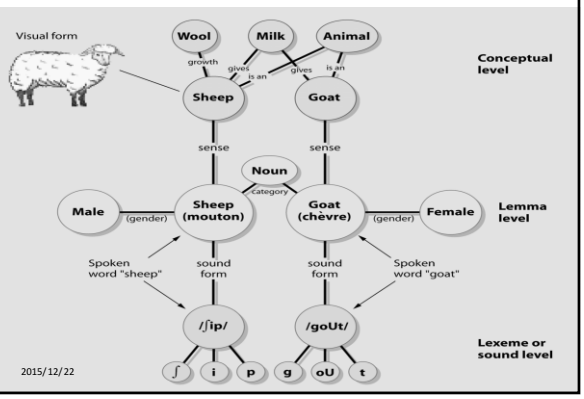
a model proposed by William (Levelt) in 1994



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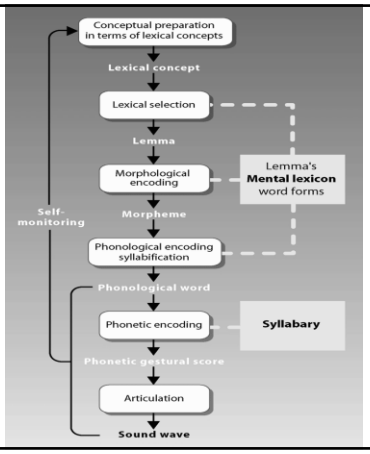
Speech Production

Outline of the theory of speech production developed by William Levelt (1999)



Adapted from Levelt, W.J.M., The Architecture of Normal Spoken Language Use, in Blanken, G., Dittman, J., Grimm, H., Marshall, J.C. and Wallesch C.-W. (Eds.), Linguistic Disorders and Pathologies: An International Handbook. Berlin: Walter de Gruyter, 1993

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Vocabulary in Use

- Let's look at how words are used by their users.
- Important questions:
  - Are all words of equal status or are some words more central to language use than others?
  - How different is vocabulary employed by different users in different contexts?
  - How does vocabulary help to structure longer stretches of language as coherent discourse?

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Core vocabulary

- Some words are more core, or central to the language, than others.
- Core words tend to be the most frequently occurring ones. → circular reasoning
- Is there any good way to define the "core"?

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How to define "core"

- Carter (1987):
  - lexical field: "having a weight above the norm"
  - fat/obese/overweight/plump/podgy/stout/etc.
  - fat: the most frequent
  - fat: used to define the other words, but not vice versa.
  - fat & overweight: occur in a wider variety of contexts
    - eg. 'a fat baby'/ 'an overweight baby' vs. 'a stout baby'
  - antonym: fat vs. thin; but plump vs. ??
  - overweight: neutral in the interpersonal sense
    - obese: carry negative evaluation
  - fat: collocate more widely; more readily used metaphorically in idioms
    - 'a fat wallet', 'a fat book', 'a fat chance', etc.
  - fat: polysemous & used in different word-classes:
    - meat has 'fat' on it; we can fry food in 'fat'; the verb 'fatten'; etc.

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TASK

- Using tests similar to those described above, decide which are the core words in these sets:
  - slim; slender; thin; emaciated; scrawny
  - cause; bring about; effect; instigate; precipitate

modifies	69331	31493	0.2	0.3
salamander	0	67	--	5.7
loris	0	46	--	5.5
minaret	0	41	--	5.1
stalk	19	156	2.3	5.9
spire	11	57	2.0	5.1
finger	298	935	3.0	4.7
leg	906	1447	4.0	4.7
brunette	56	46	4.2	4.6
waist	878	524	6.7	6.1
thigh	317	137	4.9	3.8
physique	370	151	5.4	4.3
figure	1930	825	4.9	3.7
silhouette	426	103	6.5	4.9
waistline	338	59	6.7	4.8
bezel	114	16	5.0	2.7
jean	703	53	5.5	1.9
trouser	227	14	5.3	1.6
margin	1109	68	6.0	2.0
fit	968	50	5.2	1.0
chance	2557	0	4.9	--
jim	96	0	5.2	--
pickin	95	0	5.4	--
forte	121	0	5.6	--
pomegranate	166	0	5.8	--
pickings	635	0	8.0	--

slim vs. slender

slim : GREEN
slender: RED

salamander サンショウウオ

pomegranate ザクロ

picking 収穫

modifies	69331	252762	0.2	0.3
air	0	13295	--	7.3
veneer	0	1196	--	6.8
crust	8	1547	0.5	7.1
layer	147	15993	1.8	8.4
film	0	8779	--	6.3
ice	0	2382	--	6.2
sheet	0	2766	--	6.1
wire	22	1740	0.1	6.1
slice	47	4346	2.2	8.1
lip	0	1396	--	5.6
veil	0	524	--	5.6
membrane	18	1173	1.0	6.3
strip	89	3582	2.4	7.3
coat	65	2152	1.4	6.2
needle	36	1245	1.8	6.3
tube	81	2251	1.9	6.4
coating	67	1500	2.6	6.5
strap	129	869	3.3	5.6
margin	1109	896	6.0	5.3
waist	878	448	6.7	5.0
waistline	338	62	6.7	2.8
silhouette	426	48	6.5	2.2
forte	121	0	5.6	--
pomegranate	166	0	5.8	--
pickings	635	20	8.0	1.3

slim vs. thin

thin : RED
slim: GREEN

thin occurs much more frequently

Core vocabulary

- Native-speaker informants have a good instinct for which words are core words in any given field, and teachers and materials writers base many of their decisions on what to present and teach on such instincts.
- As always, the question of how language learners perceive the coreness of words is a different one and they have problems like 'cogntate words' (words which are similar in two languages because they are derived from the same source).

Procedural vocabulary

- Widdowson's (1983) term
- procedural vocabulary = words used to talk about other words
- the main element in our interpretation and categorization of specific frames of reference.

Procedural vocabulary

- **vermiculite**
  a type of MICA that is a very light material made up of threadlike parts, that can be used for keeping heat inside buildings, growing seeds in, etc.
- **vermiform**
  shaped rather like a worm

LDOCE(1978)

Procedural vocabulary

- **vermiculite**
  a type of MICA that is a very light material made up of threadlike parts, that can be used for keeping heat inside buildings, growing seeds in, etc.
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LDOCE(1978)

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Procedural vocabulary

- These words are core words and are higher order superordinates in hyponym-trees
- These are highly useful not only in talking about specific words like 'vermiculite' but also in the cognitive process of categorizing and organizing features of meaning relative to other, known entities.
- Thus 'vermiculite' is crucially a *material, made up* of *a, b, c, used* for *x, y, z*; it is a *type* of something too.

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TASK

- Look up the definitions of:

  'graphite' 'hydrometer' 'perennial'

  and identify basic procedural vocabulary.

- You could also try looking up the equivalents of these words in another language and comparing the procedural vocabulary with that used in English.

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TASK

- **graphite**: a soft black mineral that is a form of CARBON. Graphite is used to make pencils, to LUBRICATE machinery, and in nuclear REACTORS. (OALD)
- **hydrometer**: an instrument for measuring the density of liquids. (ODE)
- **perennial**: lasting or existing for a long or apparently infinite time (ODE)

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Widdowson (1983)

- *Schematically bound* words:
  - Like 'hydrometer', some words will occur in a narrow range of texts identifiable within certain scientific and technical fields. They are called *schematically bound* words.
- *Indexical* (*procedural*) words:
  - 'Instrument' has high indexical potential; it will occur in a very wide range of contexts and can be used to define, and locate within their fields, a vast number of entities.

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Discourse

- Discourse analysis: very popular in applied linguistics
- Discourse analysts are concerned with features that connect language with the contexts in which it is used.
- In written texts, they are interested in how bits of text fit together coherently and form patterns, which, in turn, create whole, completed discourses.

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Lexical cohesion

- Halliday and Hasan (1976)
- Vocabulary items re-occur in different forms across boundaries (clause- and sentence-boundaries in writing, and, additionally, turn-boundaries in speech).

Example

- Police are examining a car parked on the hard-shoulder of the M11 between junctions 7 and 8. The vehicle appears to have been abandoned.
- 'Car' becomes its superordinate 'vehicle.'
- The initial word ('car') might have simply been repeated in identical form, but in fact, in discourse, we regularly find exact repetition alternating with this feature of *reiteration* or *relexicalization*.
- All this is part of the *negotiation of meaning*.
  - meanings become fixed in context by the lexical environment created around them by different speakers.

Topic

- Lexical cohesion → create quite complex chains in discourses.
- Such chains enable us to see how topics (the subjects people exchange ideas and information about) begin, shift, expand, and close, or perhaps arise and peter out very quickly.
- Topics are part of our schemata.
- They are important psycholinguistic concepts.

Lexical signals

- Another feature of vocabulary in discourse is the way that some words play a crucial role in organizing the discourse.
- Words below are typical signals of the problem-solution pattern in discourse:

(problem)	*problem, drawback, …*
(response)	*approach, response, …*
(result)	*result, outcome, …*
(solution)	*solution, answer, …*

Expressive vocabulary

- When we look at discourse-signalling words in real texts, we can often observe that they are accompanied by modifiers that express the author's attitudes and evaluations of the content of the text.

e.g.

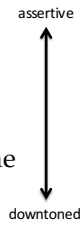
"Perhaps the *most important point* to emerge from the London/Liverpool experience is that if they are to attract industry, then urban development corporations need an enterprise zone. London has one; Liverpool has not."

Expressive vocabulary

- Here 'point' is one of our discourse-signalling words; it is lexicalized in the subsequent text.
- It is also pre-modified by 'important', which gives more weight in the message to this 'point' than any other that might emerge.
- 'Important' acts as a focusing word or weighting word.

Modality

- That cat definitely ate the cream.
- That cat ate the cream.
- That cat probably ate the cream.
- That cat possibly ate the cream.
- That cat might possibly have eaten the cream.



Modality

- *epistemic modality*:
  - Interpersonal meanings addressing *truth*, *possibility*, and so on are normally referred to under the heading of spistemic modality.
- *deontic modality*:
  - Interpersonal meanings addressing such things as *obligation* and *permission*.

Lexical realisation of modality

- **Modal verbs**:
  She *might* go on to university.
- **Lexical modals**:
  There's a *possibility* she'll go on to university.
  Apparently, there's a *chance* she'll go on to university.
  It *seems* she's *likely* to go on to university.

TASK

- Can you change the following sentence to show differences in the speakers' attitudes towards the truth or certainty of their statements?:
- *Obviously, he'd been stealing from the company for years.*

TASK

- *Obviously, he'd been stealing from the company for years.*
- *Apparently , he'd been stealing from the company for years.*
- *It seems he may have been stealing from the company for years.*
- *There's no way he's been stealing from the company!*