Abstractness meets explanation

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Abstractness, explanation

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Abstractness, explanation

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Human acts

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Human acts

• surface realization: what one does

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- surface realization: what one does
- underlying structure: (conscious or sub-conscious) goals and plans, intentions

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Hungarian dative ending

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- standard generativist approach: maximally abstract "underlying"

representation, expressing their shared properties: $/n \left[\begin{array}{c} VOWEL \\ LOW \end{array} \right] k/$

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English a/an alternation

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• "underlying" $/a\langle n \rangle /$

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English *a/an* alternation

- "underlying" $\langle a \langle n \rangle /$
- rule eliminating the angle brackets between vowels (quasi-universal)

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JOGIND.	EF JJGCUNJDEF	GLU55	
[rak]	\sim [rakja]	′put′	
[baːn]	\sim [ba:p:a]	'feel sorry'	
[lart]	∼ [la:ʃ:ɑ]	'see'	
[ta:t]	∼ [ta:tʃ:ɑ]	'open mouth wide'	
[halast]	\sim [halas:a]	'postpone'	
[ad]	\sim [afa]	'give'	
[hoz]	\sim [hoz:a]	'bring'	
$[t\epsilon s]$	\sim [teje]	′put′	
(an abstract underlying ending /jA/ would be highly problematic)			

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26 CINDEE 26 CONDEE

(an abstract underlying ending /jA/ would be highly problematic)
"Psychological reality": economy of listing surface forms does not necessarily mean economy of accounting for acquisition/aphasia data, performance data etc.

Abstractness in semantics

Surface uses are to be explained by positing abstract, underlying meanings.

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Abstractness in semantics

Surface uses are to be explained by positing abstract, underlying meanings.

Definitions of some senses of the verb *push*

- exert force on (someone or something) in order to move them away from oneself;
- move one's body or a part of it into a specified position with effort;
- compel or urge (someone) to do something, especially to work hard;

Definitions of some senses of the verb *press*

- move or cause to move into a position of contact with something by exerting continuous physical force;
- apply pressure to (something) to flatten, shape, or smooth it, typically by ironing;
- make strong efforts to persuade or force (someone) to do something:

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- there is no way to derive the actual uses from them (they massively overgenerate)
- they are accompanied by very particular sub-cases and usage examples in order to illustrate typical usage situations, co-occurring expression types etc.

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Example: push

- exert force on (someone or something) in order to move them away from oneself: she pushed her glass towards him, Lydia pushed the door shut, he pushed at the skylight, but it wouldn't budge
 - hold and exert force on (something) so as to cause it to move in front of one: a woman was pushing a pram
 - move one's body or a part of it into a specified position with effort: she pushed her hands into her pockets
 - press (a part of a machine or other device): the lift boy pushed the button for the twentieth floor
 - cause to reach a particular level or state: competition in the retail sector will push down
 prices, the political chaos could push the country into recession
- move forward by using force to pass people or cause them to move aside: she pushed her way through the crowded streets, he pushed past an old woman in his haste
 - (of an army) advance over territory: the guerrillas have pushed south to within 100 miles of the capital
 - exert oneself to attain something or surpass others: I was pushing hard until about 10 laps from the finish
 - (be pushing) informal be nearly (a particular age or amount): she must be pushing forty, but she's still a good looker
- compel or urge (someone) to do something, especially to work hard: she believed he
 was pushing their daughter too hard
 - (push for) demand persistently: the council continued to push for the better management of water resources
 - (be pushed) informal have very little of something, especially time: I'm a bit pushed for time at the moment
 - (be pushed to do something) informal find it difficult to achieve something: he will be
 pushed to retain the title as his form this season has been below par
- (informal) promote the use, sale, or acceptance of: the company has been pushing a document management system
 - · sell (a narcotic drug) illegally: she was arrested for pushing hard drugs
- (computing) prepare (a stack) to receive a piece of data on the top.
 - transfer (data) to the top of a stack.
- (photography) develop (a film) so as to compensate for deliberate underexposure: some films can be pushed during processing

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Example: press

- move or cause to move into a position of contact with something by exerting continuous physical force: he pressed his face to the glass, her body pressed against his
 - exert continuous physical force on (something), typically in order to operate a device: he pressed a button and the doors slid open
 - · squeeze (someone's arm or hand) as a sign of affection: Winnie pressed his hand
 - move in a specified direction by pushing: the mob was still pressing forward
 - (of an enemy or opponent) attack persistently and fiercely: their enemies pressed in on all sides
 - . (press on/ahead) continue in one's action: he stubbornly pressed on with his work
- apply pressure to (something) to flatten, shape, or smooth it, typically by ironing: she pressed her nicest blouse (as adjective pressed) immaculately pressed trousers
 - apply pressure to (a flower or leaf) between sheets of paper in order to dry and preserve it.
 - extract (juice or oil) by crushing or squeezing fruit, vegetables, etc.: (as adjective pressed) freshly pressed orange juice
 - squeeze or crush (fruit, vegetables, etc.) to extract the juice or oil: the small seeds of sesame are chiefly pressed for their oil
 - manufacture (something, especially a record) by moulding under pressure: the record was pressed in two runs of 500 copies
- forcefully put forward (an opinion, claim, or course of action): Rose did not press the point
 - make strong efforts to persuade or force (someone) to do something: when I pressed him for precise figures he evaded the subject, the marketing directors were pressed to justify their expenditure, they continued to press for changes in legislation
 - (press something on/upon) insist that (someone) accepts an offer or gift: he pressed dinner invitations on her
 - (of time) be in short supply, necessitating immediate action: she was almost 45 years old and time was pressing
 - (be pressed) have barely enough of something, especially time: I'm terribly pressed for time
 - (be pressed to do something) have difficulty doing or achieving something: they may be hard pressed to keep their promise
- (weightlifting) raise (a specified weight) by lifting it to shoulder height and then gradually pushing it upwards above the head.
- (golf) try too hard to achieve distance with a shot, at the risk of inaccuracy.

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- there is no way to derive the actual uses from them (they massively overgenerate)
- they are accompanied by very particular sub-cases and usage examples in order to illustrate typical usage situations, co-occurring expression types etc.
- with lexical/literal meanings vs. actual uses, the situation seems even worse than with underlying phonological representations vs. surface forms (lexical semantics lacks elaborate rule systems)

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Abstractness, explanation

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 abstract characterization of smaller domains of use may be useful, but maximizing abstraction is not a sensible goal

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- the Aristotelian slogan "Words are names of concepts" is not tenable (there is no "concept of pushing", for example)

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- the Aristotelian slogan "Words are names of concepts" is not tenable (there is no "concept of pushing", for example)

now we must look into some of the consequences of this...

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Question

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If what we said is true for lexical entries, how about functions expressed by morphological or syntactic, rather than lexical means?

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If what we said is true for lexical entries, how about functions expressed by morphological or syntactic, rather than lexical means?

Examples

How about "the concept of" / "the literal meaning of"

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If what we said is true for lexical entries, how about functions expressed by morphological or syntactic, rather than lexical means?

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How about "the concept of" / "the literal meaning of"

• definiteness?

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- agenthood?

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How about "the concept of" / "the literal meaning of"

- definiteness?
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- noun + noun compounds (e.g., *haircut*, *pay cut*, *power cut* etc.)?

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- definiteness?
- agenthood?
- the present perfect?
- noun + noun compounds (e.g., *haircut, pay cut, power cut* etc.)?

What the uses of these have in common is at least as problematic as in the case of lexical entries.

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"Linguistic meaning"

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"Linguistic meaning"

• in principle, what can be "read off" grammatical structure plus lexical information alone

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"Linguistic meaning"

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- but both lexical entries and grammatical relations are massively polysemous (as we have seen): their potential uses can be given as "clouds" of loosely associated examples

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- language use is inherently metaphorical in the sense that speakers use their judgments of similarity to decide on what situation belongs to which cloud, and what linguistic entity can evoke it best

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"Linguistic meaning"

- in principle, what can be "read off" grammatical structure plus lexical information alone
- but both lexical entries and grammatical relations are massively polysemous (as we have seen): their potential uses can be given as "clouds" of loosely associated examples
- language use is inherently metaphorical in the sense that speakers use their judgments of similarity to decide on what situation belongs to which cloud, and what linguistic entity can evoke it best
- abstract properties of uses arise (emerge) from similarities of frequent individual uses, if at all just the oppposite of what is usually assumed

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Unsolved/unsolvable: Donkey sentences

If a farmer owns a donkey, he beats it.

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Unsolved/unsolvable: Donkey sentences

If a farmer owns a donkey, he beats it.

• people have no idea what this sentence says, or if it does at all, about farmers with several donkeys

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If a farmer owns a donkey, he beats it.

- people have no idea what this sentence says, or if it does at all, about farmers with several donkeys
- how about If a farmer owns a donkey, he pays taxes on it?
- or If you have a coin, drop it into the parking meter?
- what should an 'underspecified' literal meaning be, and how should it be disambiguated?

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Boolean connectives in English and Hungarian

(Szabolcsi and Haddican, 2004)

(1) a. *Mary didn't take hockey or algebra* can mean 'she took neither'

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Boolean connectives in English and Hungarian

(Szabolcsi and Haddican, 2004)

- (1) a. *Mary didn't take hockey or algebra* can mean 'she took neither'
 - b. *Mary didn't take hockey and algebra* can mean 'she didn't take hockey or she didn't take algebra'

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Boolean connectives in English and Hungarian

(Szabolcsi and Haddican, 2004)

- (1) a. *Mary didn't take hockey or algebra* can mean 'she took neither'
 - Mary didn't take hockey and algebra can mean 'she didn't take hockey or she didn't take algebra'
- (2) a. Mari nem járt hokira vagy algebrára. can only mean 'she didn't take hockey or she didn't take algebra'

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 - b. Mari nem járt hokira és algebrára.
 can only mean 'she didn't take either'

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 - b. Mari nem járt hokira és algebrára.
 can only mean 'she didn't take either'

There is no independent reason whatsoever to postulate such a difference between English and Hungarian syntax.

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Papafragou and Musolino (2003)

[after having seen three horses jumping over a fence:]



Papafragou and Musolino (2003)

[after having seen three horses jumping over a fence:]



a. Some of the horses jumped over the fence: 92 % false

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Papafragou and Musolino (2003)

[after having seen three horses jumping over a fence:]



a. Some of the horses jumped over the fence: 92 % falseb. Two of the horses jumped over the fence: 100 % false

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 principle of analogy: assume that interpretation is most similar to that of most similar expressions in earlier experience

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- what is needed for this is an associative memory model storing information on associations of sensori-motor experience including linguistic experience (may include endogenous experience)

- principle of analogy: assume that interpretation is most similar to that of most similar expressions in earlier experience
- what is needed for this is an associative memory model storing information on associations of sensori-motor experience including linguistic experience (may include endogenous experience)
- if you insist on using the word *meaning*, let it refer to memory traces of earlier understanding events (in the sense of stimuli including linguistic ones with their mental response)