

The meaning of modals: a view from pragmatics

Ilse Depraetere
Université de Lille, UMR 8163 STL
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Why modals?

- *Le possible et le nécessaire* (Larrea 1984)
- 'Modality has become one of the most vibrant areas of linguistic studies in the past decade, as linguists have come to recognize its importance for language and communication. Human beings constantly imagine things that are not real but still possible or even contrary to facts. They continually evaluate the reality status of states-of-affairs, or urge or allow interlocutors to bring about states-of-affairs in reality. And they constantly put these activities into words. Imagining things that are not real, things that go beyond what is factual, is certainly one of the most complex and interesting features of human cognition. Its representation in language, in turn, is certainly worth investigation, and the fact that this has been done so intensely only recently is not least due to the very complexity of the processes behind it, and of the linguistic expressions themselves.' (Narrog 2012:1)



Key questions

- What meanings?
 - Taxonomy of possibility and necessity meanings
- What meaning distinctions?
 - Polysemy or monosemy
- What role for the context?
 - Pragmatics and contextual meaning
- How can Construction Grammar help?



Credits



- Depraetere, Ilse and Susan Reed. 2011. Towards a new taxonomy of root possibility, *English Language and Linguistics*, 15.1: 1-29.
- Bert Cappelle and Ilse Depraetere. 2016. Short-circuited interpretations of modal verb constructions, *Constructions and Frames*, 8: 7-39.
- Depraetere, Ilse and Raf Salkie. (eds). 2017. *Semantics and pragmatics. Drawing a line*. Cham: Springer.
- Cappelle, Bert, Ilse Depraetere and Mégane Lesuisse. To appear. The necessity modals *have to*, *must*, *need to* and *should*: using n-grams to help identify common and distinct semantic and pragmatic aspects, *Constructions and Frames*.



Classification

Taxonomies of modal meaning

- epistemic vs. root
 - Coates 1983
- epistemic, deontic, dynamic
 - Palmer 1990, Huddleston & Pullum 2002, Aarts 2011
 - Epistemic: *You may be right.*
 - Deontic: *You may come in.*
 - Dynamic: *Susan can speak Russian.*



Taxonomies of modal meaning

epistemic modality	root necessity (non-deontic)	root possibility (non-deontic)	ability	volition	permission (deontic)	obligation (deontic)	
epistemic	root						Coates (1983)
epistemic	dynamic				deontic		Palmer (1990), Huddleston & Pullum (2002), Aarts (2011)



Based on Depraetere & Reed 2006



Huddleston & Pullum 2002: dynamic possibility

- Dynamic possibility includes a 'considerable range of uses' (2002: 184)
 - The most we *can* expect is a slight cut in sales-tax. – 'What is reasonable or acceptable'
 - Water *can* still get in. – 'What is circumstantially possible'
 - These animals *can* be dangerous. – 'What is sometimes the case: the 'existential use''
 - I *can* hear something rattling. – 'Ability'
- 'concerned with properties and dispositions of the persons, etc., referred to in the clause, especially by the subject NP.' (2002: 178)
 - Jill *won't* sign the form. 'volition'
 - Oil *will* float on water. 'characteristic or habitual behaviour of animates or general properties of inanimates' 'propensity'



Palmer 1990: dynamic necessity

- 1. Epistemic; 2. deontic; 3. dynamic
 - 'neutral' or 'circumstantial' necessity is, in fact, an additional class, but it will be treated as a subclass of dynamic modality' (p.37)
- 1. Epistemic; 2. deontic; 3. dynamic, 4. neutral/circumstantial
- 1. Epistemic; 2. deontic; 3. dynamic (neutral/circumstantial)
 - 'a distinction could in fact be drawn between three kinds of necessity, deontic (subject oriented), neutral and external' (p.116)
- 1. Epistemic, 2. deontic, 3. neutral, 4. external



Taxonomies of possibility meaning

epistemic possibility	root possibility (non-deontic, circumstantial, general, neutral, ...)	ability	permission	
epistemic	root			Coates (1983)
epistemic	dynamic		deontic	Palmer (1990), Huddleston & Pullum (2002), Aarts (2011)



Based on Depraetere & Reed 2006



A new taxonomy of root meaning

- One set of parameters (Depraetere & Reed 2011, Depraetere 2014)
 - Source of the modality
 - Narrow vs. wide scope
 - Potential barrier
- Systematic application



A new taxonomy of root meaning

- Possibility
 - Epistemic possibility
 - Root possibility
 - Ability, Opportunity, Permission, General situation possibility, Permissibility
- Necessity
 - Epistemic necessity
 - Root necessity
 - Subject-internal necessity, Subject-external necessity, General situation necessity



Root possibility (i)

- Source: subject-internal or subject-external
 - *Tim can't hear very well.*
 - *This place is so remote that you can't hear a sound at night*
- Scope: narrow vs. wide
- Potential barrier

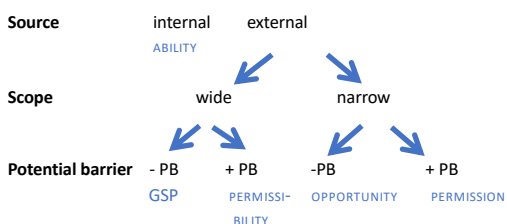


Root possibility (ii)

- *Can you speak any East European languages?* (ICE-GB) (ability)
- There are sawmills that *cannot* operate at full ability because of wood shortages. (BNC) (opportunity)
- Sorry *can* I interrupt you? (ICE-GB) (permission)
- When the soil dries out, strain is put on the house structure and cracks *can* appear overnight. (www) (General Situation Possibility, GSP)
 - *{For cracks to appear overnight} is possible.*
- All vehicles rented in Ireland *may* only be driven in Northern Ireland and the Republic of Ireland. (BNC) (permissibility)
 - *{For vehicles rented in Ireland to be driven elsewhere than in Northern Ireland and the Republic of Ireland} is not possible.*



Root possibility (iii)



Root possibility (iv)

	ability	opportunity	permission	general situation possibility (GSP)	permissibility
source	internal	external	external	external	external
scope	narrow	narrow	narrow	wide	wide
potential barrier	-	-	+	-	+



More questions

- What is the status of the different classes?
- Are modals monosemous or polysemous?



Modals are polysemous (root vs. epistemic)

- Sarah went to the bank and so did Harold. (Zwicky and Sadock 1975)
- Sarah swam a length and so did Harold.
- Sarah *may* help. (ambiguous: epistemic or permission)
- Sarah *may* help. And so *may* Mary-Anne.



Modals are polysemous (root meanings)

- Jennifer can swim. (ambiguous: ability, opportunity or permission)
- Jennifer can swim. So can Robin.
- Bicarbonate can be added to a pool. (GSP or permissibility)
- Bicarbonate can be added to a pool. So can sodium sesquicarbonate.



New questions

- How is the context involved in determining the semantic category?
- How is the context involved in choosing a modal from a set of verbs that potentially communicate a specific meaning? (*must, have to, need to, be supposed to, have got to, etc.*)
- What is pragmatic about modal meaning?



Context

Meaning in context

- ‘Philosophers and linguists often say that certain words (and sentences containing them) are *context sensitive*, that what they express is *context dependent*, as if it is perfectly obvious what context dependence is. It is *not*. So we will need to ask what context is, what depends on it, and what this dependence involves. Answers to these questions are not straightforward. It turns out that there is more than one kind of context and that different sorts of things depend on each. At least they seem to, for as we will see, much of what passes for context dependence is really something else. Looking at what goes on in specific cases suggests *that much of what is done in context is not done by context.*’ (Bach 2012)



Meaning in context - contextual meaning (i)

- **Meaning in context** = FORM
 - Linguistic context
 - Extra-linguistic context
- **Contextual meaning** = FUNCTION / INFORMATIONAL STATUS
 - (context-dependent) semantics (saturation, free pragmatic enrichment)
 - (context-dependent) pragmatics (implicatures, stylistic variation, ...)



Meaning in context – contextual meaning (ii)

FORM FUNCTION – INFORMATIONAL STATUS	Linguistic context = (meaning in context) (A)	Extra-linguistic context = (meaning in context) (B)
Context-dependent meaning resulting from lexically regulated saturation	You can go to the party tonight.	Jennifer can swim.
SEMANTICS (contextual meaning)	She can speak Russian. You can speak Russian.	She can speak Russian
PRAGMATICS (contextual meaning)	You can/may go to the party tonight. You should/must calm down. Can birds fly? How can you say such a thing?	She can't lift her right arm.

Saturation and free pragmatic enrichment (i)

Grice	code	reference assignment & disambiguation			conventional implicatures	GCI	Particularized conversational implicatures
what is said		what is implicated					
Carston	code	reference assignment & disambiguation	linguistically mandated enrichment = saturation	free enrichment	conventional implicatures	GCI	Particularized conversational implicatures
epilature		implicature					
Bach	conventional meaning	reference assignment & disambiguation	completion	expansion	conventional implicatures	GCI	Particularized conversational implicatures
what is said		implicature		what is said	implicature		what is implicated
Recanati	what is said						what is implicated
primary pragmatic processes							secondary pragmatic processes
saturation							
modulation: sense broadening, sense strengthening, semantic transfer, pragmatic enrichment							



Saturation and free pragmatic enrichment (ii)

- Saturation
 - Bottom-up process – linguistically mandated
 - Obligatory
 - Sarah's book is interesting.
- Free pragmatic enrichment
 - Top-down process
 - Free
 - You are not going to die, Peter. (from this cut) (Bach 1994: 267)



Saturation

- Sarah's book is interesting.
- Jennifer is too young. (*for what?*)
- Paracetamol is better. (*than what?*) (Carston 2009: 49)
- Mary finished. (*what?*) (Bach 1994: 285)
- *Linguistically mandated*: 'involves finding the intended content (or value) for a linguistically indicated variable or slot' (Carston 2009: 49)
- *Obligatory*: proposition communicated is incomplete without the contextual specification of the variable



Contextual meaning: semantics

- Semantic underdetermination
- Semantic template that needs to be contextually filled in
- Saturation with open-ended valuation vs.
 - large, essentially open class of possible contextual resolutions
- Saturation with lexically regulated valuation
 - limited (and small) class of discrete options, which are specified by the lexical meaning (possibility or necessity) of the modal
- Contributes to the truth-conditional content (Depraetere 2014, Depraetere & Salkie 2017)



Contextual meaning: semantics & pragmatics

Context-independent semantics	possibility
Context-dependent semantics (contextual meaning)	epistemic possibility, ability, permission, opportunity, general situation possibility (GSP), permissibility
(Context-dependent) pragmatics (contextual meaning)	illocutionary force, pragmatic strengthening, implicated propositions, stylistic effects, ...



Contextual meaning: pragmatics (i)

- Pragmatic strengthening
 - Thinking of moving your table out to your main room.
You may want to do that.
Right that's cleared up. Quickly cleared off. (ICE-GB)
- Pragmatic weakening
 - *You must have one of these cakes.* (Huddleston & Pullum 2002: 177)
- Power relations
 - *You can/may go to the party tonight.*
- Stylistic effects
 - *Inner ear infections may/can cause dizziness.*



Contextual meaning: pragmatics (ii)

- Illocutionary force: indirect speech acts
 - *Can you pass me the salt?*
 - *Can you wash those few cups up?* (ICE-GB)
- Implicated propositions
 - *She can't lift her right arm.* (her situation has got worse, you will need to do the laundry, ...)
 - *Can birds fly?* (the answer to the question you've asked is obvious)
 - *How can you say such a thing?* (I see no reason to say this, don't say this, you shouldn't be saying this, it's morally wrong, ...)



Constructions

Hypothesis (Cappelle & Depraetere 2017)

- Short-circuited implicature (Morgan 1977)
- *The Simpsons*
 - Humorous cases of 'misuse' of an expression with a modal verb
 - Interpretation (*semantics and pragmatics*) is highly conventionalized
- Short-circuited interpretation (Cappelle & Depraetere 2017)
- Put differently, 'constructions' matter



Morgan 1977. Conventions of language vs. Conventions of use (about language)

- Conventions of language
 - 'knowledge of the conventions of word meanings and the semantic rules of combination' (Morgan 1977: 30)
- Conventions of use (about language)
 - 'conventions about language, that govern the use of sentences, with their literal meanings, for certain purposes' (Morgan 1977: 1)
 - 'conventions of the culture that uses the language' (Morgan 1977: 12)



Short-circuited implicature

- *Can you pass me the salt?*
- 'the expression "can you..." is not an idiom, but has only the obvious literal meaning of a question about the hearer's abilities.'
 - a convention of language
- 'One can readily see how the expression could have, via Grice's maxims, the implicature of a request. In fact it has become conventional to use the expression in this way. Thus speakers (...) know also that using "can you..." is a standard way of indirectly making a request.'
 - a convention about language



Further examples

Short-circuited implicature: not limited to the discussion of indirect speech acts or typical realizations of specific speech acts in general

(1) *If you've seen one, you've seen them all.*

They're all alike, so it's a waste of time to examine them separately
Cp. *If you've seen one, you've seen all of them* - *You've seen them all if you've seen one.*

(2) *You can say that again.*

Cp. *You can repeat that.*

(3) *It takes one to know one.*

Cp. *It requires one to recognize one.*



Goldberg 1995, 2006. Constructions

- **Convention:** 'knowledge of shared habit' or 'common knowledge of the way things are done' (Morgan 1977: 31)
- C is a CONSTRUCTION iff C is a form-meaning pair $\langle F_i, S_i \rangle$ such that **some aspect of F_i or some aspect of S_i is not strictly predictable** from C's component parts or from other previously established constructions (1995: 4)
- Any linguistic pattern is recognized as a construction as long as some aspect of its form or function is not strictly predictable from its component parts or from other constructions recognized to exist. **In addition, patterns are stored as constructions even if they are fully predictable as long as they occur with sufficient frequency.** (2006: 5)



Hilpert 2014. Constructions

1. Does the expression **deviate from canonical patterns**?
E.g. *there was cat all over the street*
2. Does the expression carry **non-compositional meaning**?
E.g. *not much of a surprise*
3. Does the expression have **idiosyncratic constraints**?
E.g. *Mary is a smarter lawyer than John*
4. Does the expression have **collocational preferences**?
E.g. *I will call you tomorrow.* (*will* future construction)



Kids can be so cruel (i)

Homer: I felt so left out.
Marge: *Kids can be so cruel.*
Bart: [walking by] We can? Thanks, Mom!
Lisa: [from another room] Ow! Cut it out, Bart!

- **Deviates from canonical patterns**
 - so = very
 - Kids tend to be very / ? so cruel.
- **Idiosyncratic constraint**
 - Kids can / ?? may be so cruel.
 - Inner ear infections can / may cause dizziness
- **Collocational preferences**
 - Kids can be {very cute / such angels} -- OK but less typical than
 - Kids can be {so rude / such jerks / very trying / very naughty / such vicious little creatures / ...}



Kids can be so cruel (ii)

- A specific form conventionally triggers a specific meaning
- Context-dependent semantics
 - General situation possibility: 'For kids to be cruel is possible/conceivable'
 - **Short-circuited meaning**
 - (rather than a short-circuited implicature)
- *Kids can be so cruel* is a construction



Not if I can help it (i)

Lisa: I guess that's it; these animals are all gonna die.
Homer: *Not if I can help it, Lisa.*
Lisa: Do you have an idea?
Homer: Uh, no – sorry if it sounded like I did

- Context-dependent semantics:
 - Opportunity: 'Not if circumstances make it possible for me to avoid this situation from happening.'
 - Short-circuited meaning
- Pragmatics
 - Homer is making a pledge to do sth: 'This won't happen. I will do everything in my power to prevent it.'
 - Short-circuited implicature



Not if I can help it (ii)

- Unpredictable form
 - *This won't happen if I can help it.*
- Unpredictable meaning
 - *help = avoid, prevent*
 - open conditional interpretation not available
- Collocational preferences
 - collocational strength between the words in the expression



Empirical evidence for collocational strength

Context	collocate	Mutual Information (COCA)
* if I can help it	not	4.63
Not * I can help it	if	6.44
Not if * can help it	I	3.80
Not if I * help it	can	6.42
Not if I can * it	help	8.59
Not if I can help *	it	4.38



Not if I can help it (iii)

- A specific form conventionally triggers a specific meaning
- Short-circuited *meaning*: opportunity (context-dependent semantics)
- Short-circuited *implicature*: 'I will do something about it' (pragmatics)
- *Not if I can help it* is a construction



Differentiating necessity modals

- *Should, need to, have to, must, ought to, need, be supposed to, had better, ought to, ...*
- *Should, need to, have to, must* (Cappelle, Depraetere, Lesuiss (to appear))
- In what constructions are these verbs used?
 - Identify n-grams
 - Some but not all of these n-grams are shared
 - These n-grams reveal semantic and pragmatic properties

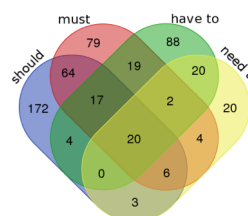


n-grams

- Manual procedure using BYU-BNC (100 million words)
- For each modal (*should, must, have to, need to*), extract bigrams
 - Minimum of 50 occurrences of the 2-word pairs
 - Minimum MI score of 3
 - e.g. *must admit*
- Enter these pairs and extract further collocates to left and right
 - e.g. *I must admit, must admit I*
- And so on, until no longer strings (freq. ≥ 50 ; MI ≥ 3) could be found



How many shared and distinct n-grams?



Some generalizations

- *Why should(n't) ...?*
 - Exhortation to do the opposite
 - *I felt so cross with myself, so stupid for wearing a short skirt. But on the other hand, I was furious; I thought: this is ridiculous, why shouldn't I go out wearing what I want without getting hassle?*
- Hedged performatives (Fraser 1975)
 - *I [have to / must] {say / tell (you)}; I must admit; I must ask; must admit I; I have to confess*
- Directive (you MOD)
 - Bonding (you MUST come/you MUST tell): *You must come and have supper some time. You must tell me all about it.*
- Self-exhortation: mitigating effect (we MOD)



Why modals?

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- 'Modality has become one of the most vibrant areas of linguistic studies in the past decade, as linguists have come to recognize its importance for language and communication. Human beings constantly imagine things that are not real but still possible or even contrary to facts. They continually evaluate the reality status of states-of-affairs, or urge or allow interlocutors to bring about states-of-affairs in reality. And they constantly put these activities into words. Imagining things that are not real, things that go beyond what is factual, is certainly one of the most complex and interesting features of human cognition. Its representation in language, in turn, is certainly worth investigation, and the fact that this has been done so intensely only recently is not least due to the very complexity of the processes behind it, and of the linguistic expressions.' (Narrog 2012:1)



Conclusions

- Taxonomy of modal meanings
- Polysemy
- Meaning in context vs. contextual meaning
- Context-dependent semantics vs. (context-dependent) pragmatics
- Constructions
- Additional feature analysis is needed to pin down syntactic, semantic and pragmatic features that are significant and in this way find out what unites and sets apart the possibility and necessity modal verbs
- ANR/SNF Project. Neuchâtel & Lille. *REM. Rethinking English modal constructions*. ANR-16-CE93-0009 REM



Thank you!

ilse.depraetere@univ-lille.fr



References

- Aarts, Bas. 2010. *Oxford Modern English Grammar*. Oxford: Oxford University Press.
- Bach, Kent. 1994. Semantic slack. What is said and more, In Tsohatzidis, Savas L. (ed.) *Foundations of speech act theory: philosophical and linguistic perspectives*. London: Routledge. 268–91.
- Bach, Kent. 2012. Context-dependence (such as it is), In Garcia-Carpentero, M. & M. Kölbel (eds.) *The Continuum Companion to the philosophy of language*. 153–184.
- Cappelle, Bert & Ilse Depraetere. 2016. Short-circuited interpretations of modal verb constructions: Some evidence from *The Simpsons, Constructions and Frames*, Special Issue. Modal meaning in Construction Grammar, 8.1 : 7–39.
- Cappelle, Bert, Ilse Depraetere, Mégane Lesuisse. To appear. The necessity modals *have to, must, need to and should*: using n-grams to help identify common and distinct semantic and pragmatic aspects, *Constructions and Frames*.



References

- Carston, Robyn. 2009. Explicit communication and 'free' pragmatic enrichment. In Soria, B. & E. Romero (eds.) *Explicit communication: Robyn Carston's pragmatics*. Basingstoke: Palgrave Macmillan. 217–87.
- Depraetere, Ilse. 2014. Modals and lexically-regulated saturation, *Journal of Pragmatics* 71: 160–177.
- Depraetere, Ilse & Susan Reed. 2011. Towards a new taxonomy of root possibility, *English Language and Linguistics*, 15.1: 1–29.
- Depraetere, Ilse & Raf Salkie. 2017. Saturation, free pragmatic enrichment, completion and expansion: a view from linguistics. In Depraetere, I. & R. Salkie (eds.), *Semantics and pragmatics. Drawing a line*. Cham: Springer. 11–38.
- Goldberg, Adele. 1995. *Constructions. A construction grammar approach to argumentation structure*. Chicago: Chicago University Press.
- Goldberg, Adele. 2006. *Constructions at Work. The Nature of Generalization in language*. Oxford: Oxford University Press.



References

- Hilpert, Martin. 2014. *Construction Grammar and its application to English*. Edinburgh: Edinburgh University Press.
- Huddleston, R. & G. Pullum. 2002. *The Cambridge Grammar of the English Language*. Cambridge: Cambridge University Press.
- Larreya, Paul. *Le possible et le nécessaire: modalités et auxiliaires modaux en anglais britannique*. Paris: Nathan.
- Morgan, Jerry L. 1977. *Two types of convention in indirect speech acts*. Technical report No. 52. University of Illinois at Urbana-Champaign. https://www.ideals.illinois.edu/bitstream/handle/2142/11765/ctrstreadtechrepv01977100052_opt.pdf?sequence=1
- Narrog, Heiko. 2012. *Modality, subjectivity and semantic change*. Oxford: Oxford University Press.
- Zwicky, Arnold M. & Jerrold M. Sadock. 1975. Ambiguity tests and how to fail them. In Kimball, J.P. (ed.) *Syntax and semantics*. New York, NY: Academic press. 1-36.

