Obligatorification stems from universal communicative requirements not syntactic reanalysis

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The Wellsprings of Linguistic Diversity

ARC CENTRE OF EXCELLENCE FOR THE DYNAMICS OF LANGUAGE

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(Also, no ambiguity.)

(Also, not hearer-based.)

"Obligatorification"

Sanskrit	(NP) *madhye*	> NP *mẽ*
Homeric Greek	ἐν (NP)	> ἐν NP
OldE	*se (N)*	> *the N*
Germanic	(N-)*lika*	> Germ. N-*lich*, Engl. N/ADJ-*ly*
Latin	(A) *mente*	> Romance A-*mente*

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a.   *Initial structure*   [[NP-GEN N_{rel}]   -CASE]

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How do we get from optional to obligatory?

Obligatoriness constraints exist in all languages at all times conditioned by specific **semantic** factors.

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Only **sometimes** do they develop into a **syntactic configuration**.

Skt. **(NP)** *madhye* > Hindi **NP** *mẽ*

'In the middle (of X)' > 'in X'

Reinöhl, Uta. 2016. *Grammaticalization and the Rise of Configurationality in Indo-Aryan*. Oxford: Oxford University Press.

Lexical Stage   (NP) *madhye*

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Lexical Stage   **Congruent** Use   (NP) *madhye*

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Lexical Stage: Congruent Use

(1) Vedic Sanskrit

mádhye	*hradásya*	*plavasva*	*vigŕhya*	*catúraḥ*	*padáḥ*
MADHYE	lake.GEN.SG.M	swim.IMP.2SG	spread.CONV	four.ACC.M	foot.ACC.PL.M

'Swim **in the middle of the lake**, spreading (your) four feet!' (AV 4.15.14)

Lexical Stage: Congruent Use

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overt referent!

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(2) Vedic Sanskrit

covert referent!

atha   ***madhya*** *āghārayati*

now   MADHYE   pour.3SG

'Now, (he) pours (ghee) **onto the middle** (**of the altar**, i.e. as opposed to its corners).' (ŚaB 3.5.2.13)

Lexical Stage: Incongruent use

(3) Apabhramsha (Late Middle Indo-Aryan)

dharivi	*ihu*	*majjhi*	*hiyayaha*
carry.CONV	DEM.ACC.SG	MADHYE	heart.GEN.SG

'he carried **in the middle of his heart** this: ('I will…')' (SA 707.4)

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> ***only* overt referent!**

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… **No matter how "salient" or "activated" the possessor!**

(4) Apabhramsha (Late Middle Indo-Aryan)

tahiṃ	*jāivi*	*ṭiṇṭahiṃ*		*gau*	*turantu /*
DEM.LOC.SG	go.CONV	gambling-house.LOC.SG		go.PPP.NOM.SG.M	in_haste

jūvārahaṃ	*sayalahaṃ*	*maṇu*	*harantu /*
gambler.GEN.PL	all.GEN.PL	mind.ACC.SG	grab.PPA.NOM.SG.M

tahaṃ	*majjhi*	*ṇiviṭṭhau*		*so*	*sahei /*
DEM.GEN.PL	madhye	settle_down.PPP.NOM.SG.M		DEM.NOM.SG.M	shine.3SG

chaṇaindaho	*līlā*	*ṇam*	*vahei*
full_moon.GEN.SG	beauty.ACC.SG	so	bear.3SG

'Reaching there, (the king) quickly went to the gambling house attracting the mind of all the **gamblers**. Sitting in **their middle** he shines as if bearing the beauty of the full moon.' (KA 8.15.3, cp. Jain)

Lexical Stage	**Congruent** Use	(NP) *madhye*
	Incongruent Use	NP *madhye*
Grammatical Stage		NP *mẽ*

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Replicating the Indo-Aryan case.

Test other parts of speech.

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Example: Engl. *middle*

Congruent use

(5)

On the shores of the lake, or on one of the little islets that may form **in the middle of it**, they build their lodge. (BNC, F9F, W_non_ac_nat_science)

overt referent!

(6)

Yes that's my father **in the middle**. That's right. So he's the central one. (BNC, K65, S_interview_oral_history)

covert referent!

Incongruent use

(7)

overt referent!

*If there is trouble it seems Jones is inevitably **in the middle of it*** (BNC, CEP, W_newsp_other_sports)

Incongruent use

(8)

overt referent!

*If there is trouble it seems Jones is inevitably **in the middle of it*** (BNC, CEP, W_newsp_other_sports)

highly **activated**, but still resumed

BNC results

100 million words

902 cases of non-attributive and non-compounded use of "middle"

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> optionality of argument only in congruent uses

> same results for other relational nouns (top, bottom, heart, foot, edge etc.)

> same results for other parts of speech

> same results for other languages

Replicating the Indo-Aryan case.

Test other parts of speech.

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ADV (+ N) > ADP + N	Homeric Greek ἐν (NP) > ἐν NP
DEM (+ N) > ART + N	OldE *se* (NP) > *the* NP

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Ex.: PIE spatial adverbs > modern adpositions (e.g. Engl. *in, on*, French *à, de* etc.)

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Lexical Stage: **Congruent** use

(9)

(ópseai …)	*nêas*	*emás,*	***en***	*d'ándras*	*eressémenai*
see.FUT.2SG	ship.ACC.PL.F	POSS	inside	PART man.ACC.PL.M	row.INF

memaôtas
think.PTCP.ACC.PL.M

"(you shall see) my ships, and **inside**, men eager to row" (Il. 9.361, Bortone 2010: 134)

(10)

Argeîoi d' **en nēusì** *phílēn* *es patríd'* *ébēsan*
Argives PTC in ship:DAT.PL.F dear:ACC.F to homeland:ACC.F go:AOR.3PL
'The Argives had gone back **in their ships** to their native land' (Il. 12.16, Luraghi 2003: 83)

Lexical Stage: **Incongruent** use

(11)

en   doiêi   ***dè***   ***saōsémen***   ***ḕ***   ***apolésthai***
in   doubt:DAT.F   PTC   save:INF.FUT PTC   perish:INF.AOR.MID
'it is **in doubt** whether we will save (the ships) or they are lost' (Il. 9.230, Luraghi 2003: 88)
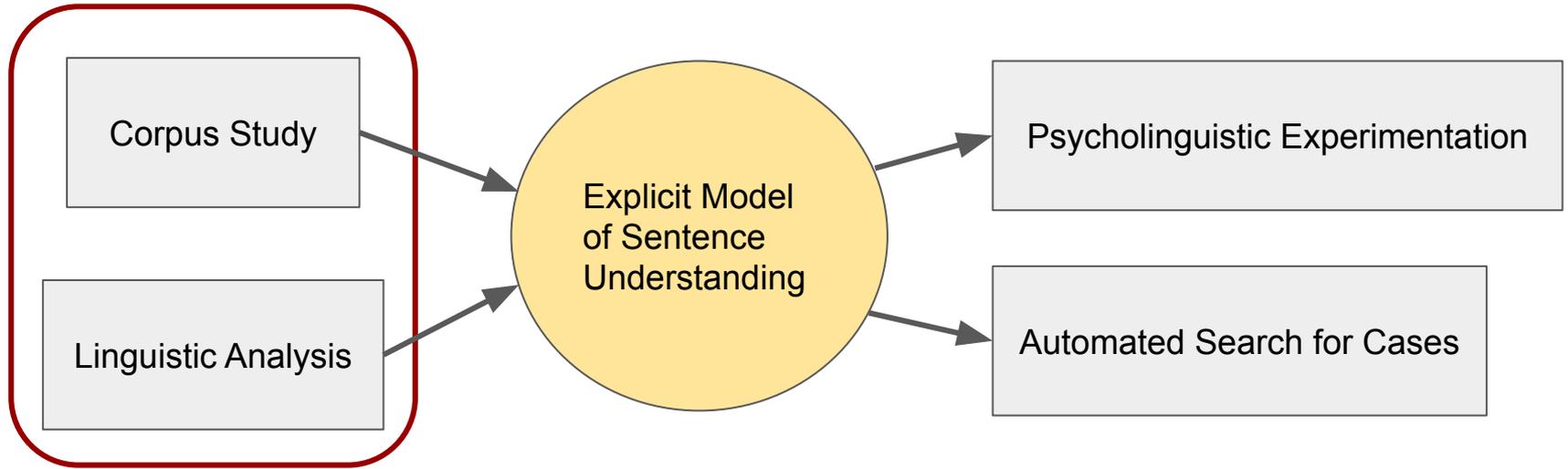
So, what does it really mean to be "**incongruent**"?

"The job of the metaphor is to provide relational structure to an abstract domain by importing it (by analogy) from a more concrete domain." (Boroditsky 2000: 3)

A brief outlook
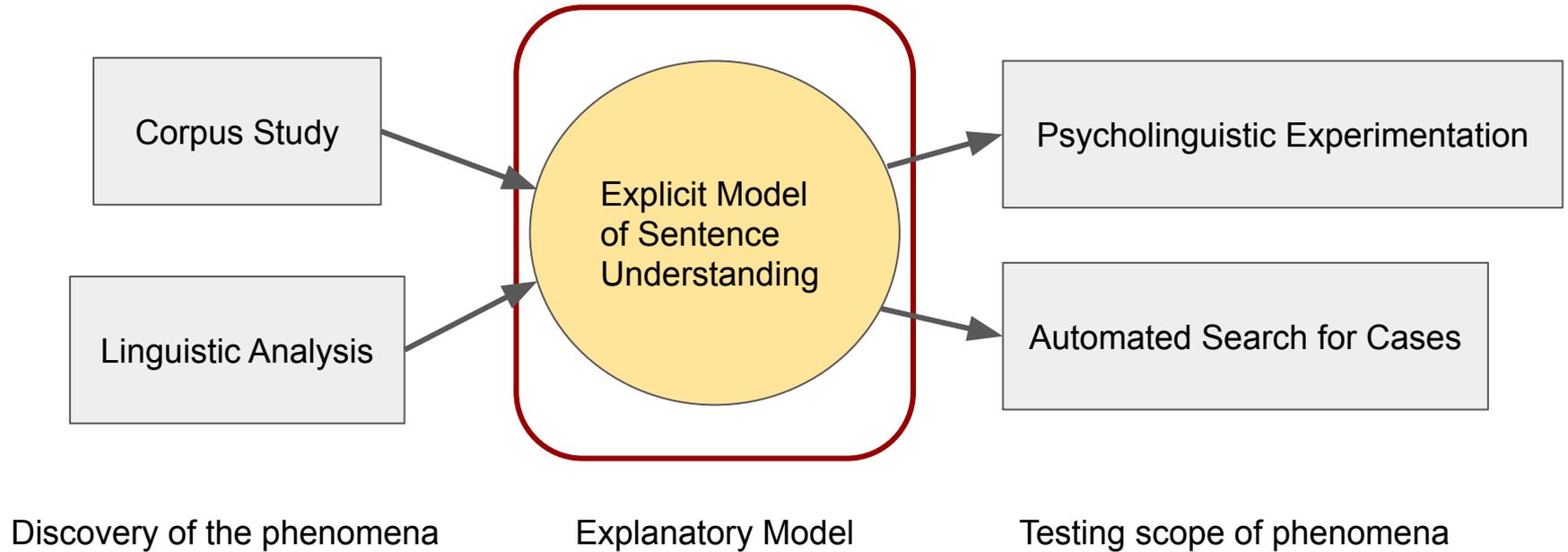
Modelling.

Experiments.

Corpus Study

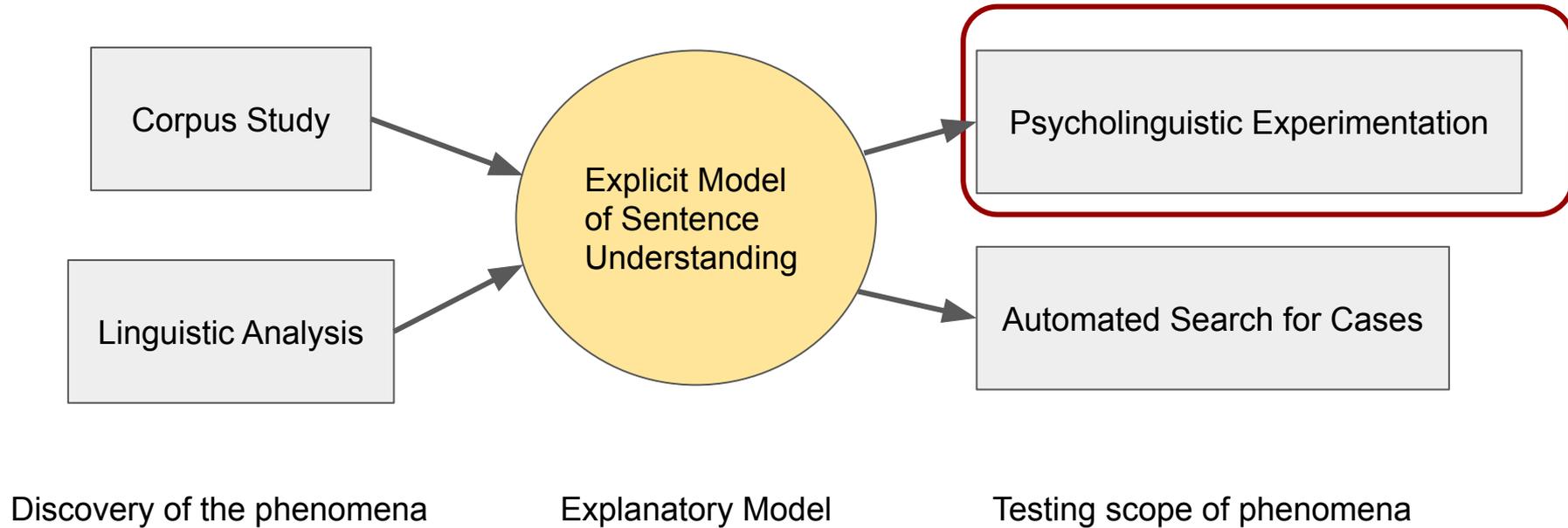Linguistic Analysis

Explicit Model of Sentence Understanding

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Automated Search for Cases

Discovery of the phenomena

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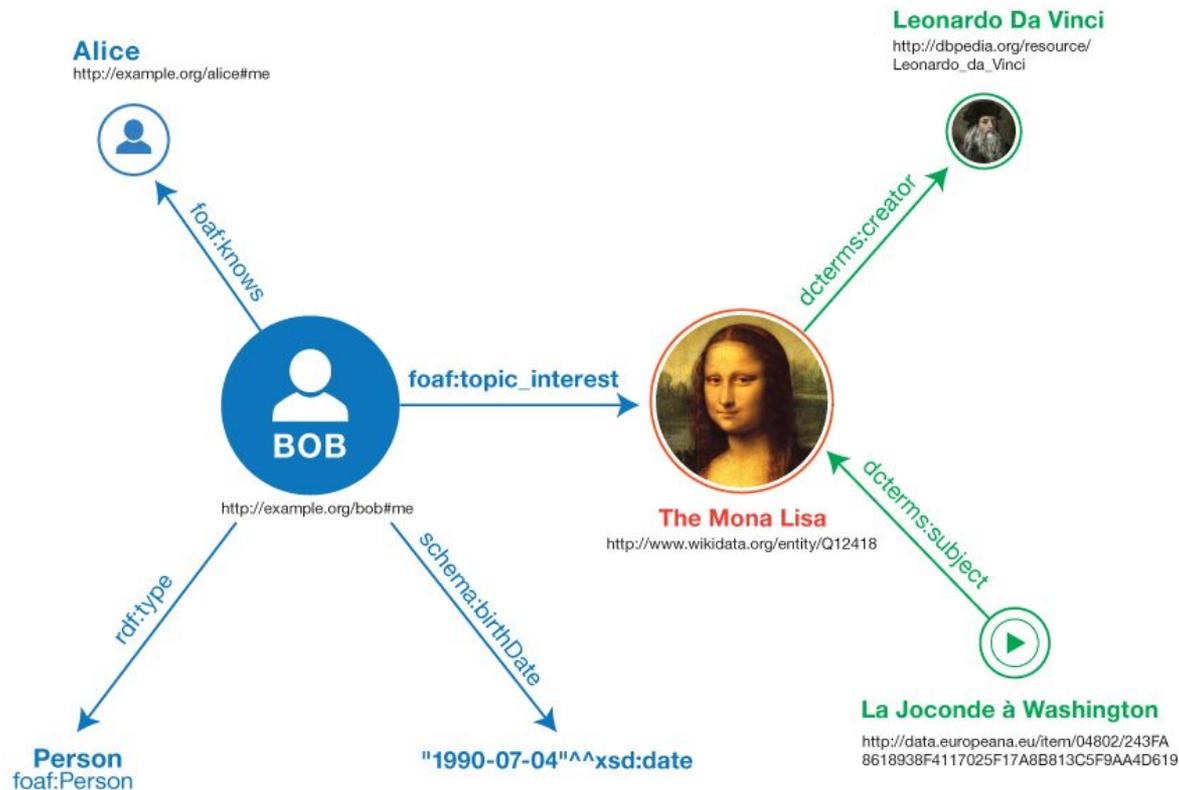
An Explicit Model of Obligatorification

We propose:

- a generic labelled-graph model of semantics (Sowa 2014), able to capture the semantics of words, sentences and world knowledge (RDF/N3)
- incremental interpretation by unification and inference (Bouma 1988)
- selecting most salient match (borrowing from Budiu & Anderson, 2004, Pisoni's 1998 Neighbourhood Activation Model)
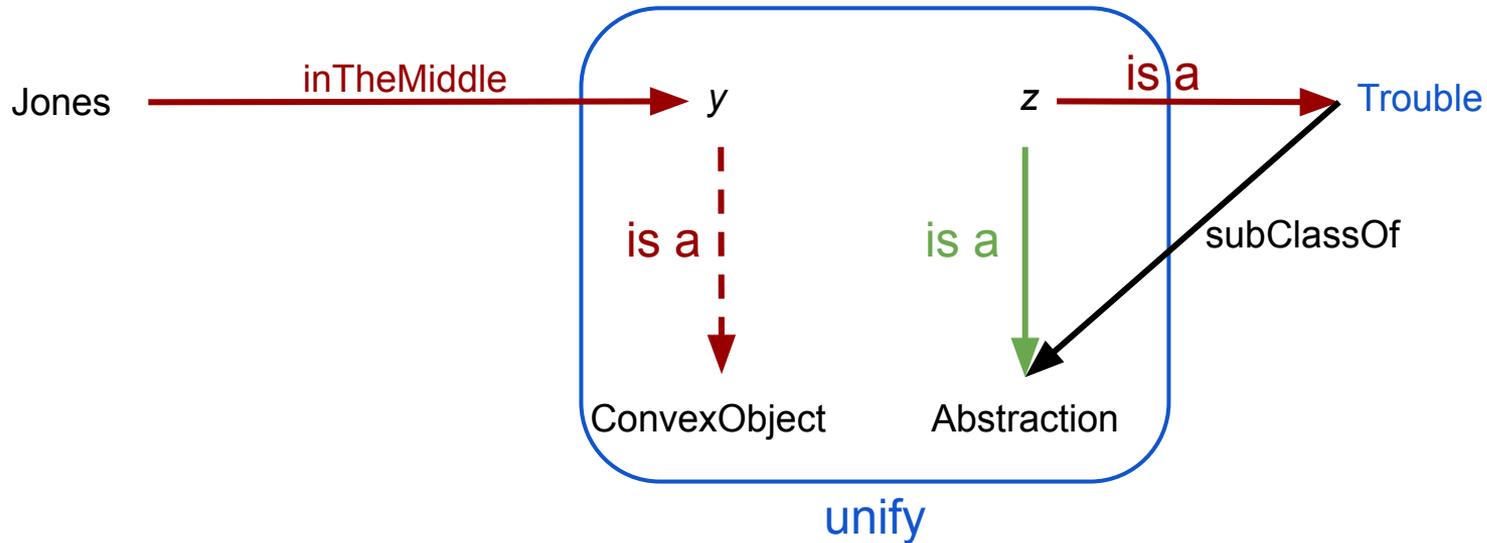
Representing Categorical Semantics
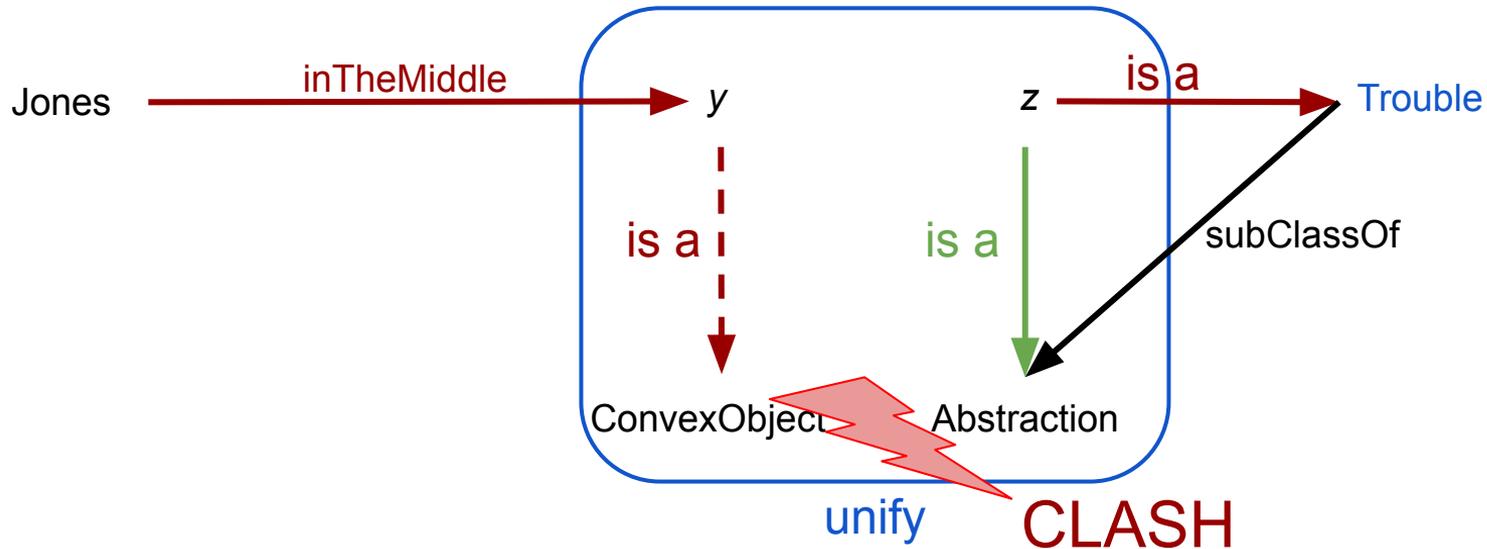
*If there is **trouble** ...*

covert referent!

*… then Jones is **in the middle.***

Jones —inTheMiddle→ *y*   *z* —is a→ Trouble

is a → ConvexObject

is a → Abstraction

subClassOf

unify

58

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*If there is **trouble** ...*

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*… then Jones is **in the middle of it.***

Jones —inTheMiddle→ y z —is a→ Trouble

is a (ConvexObject)

is a → Abstraction

subClassOf

NO CLASH

unify
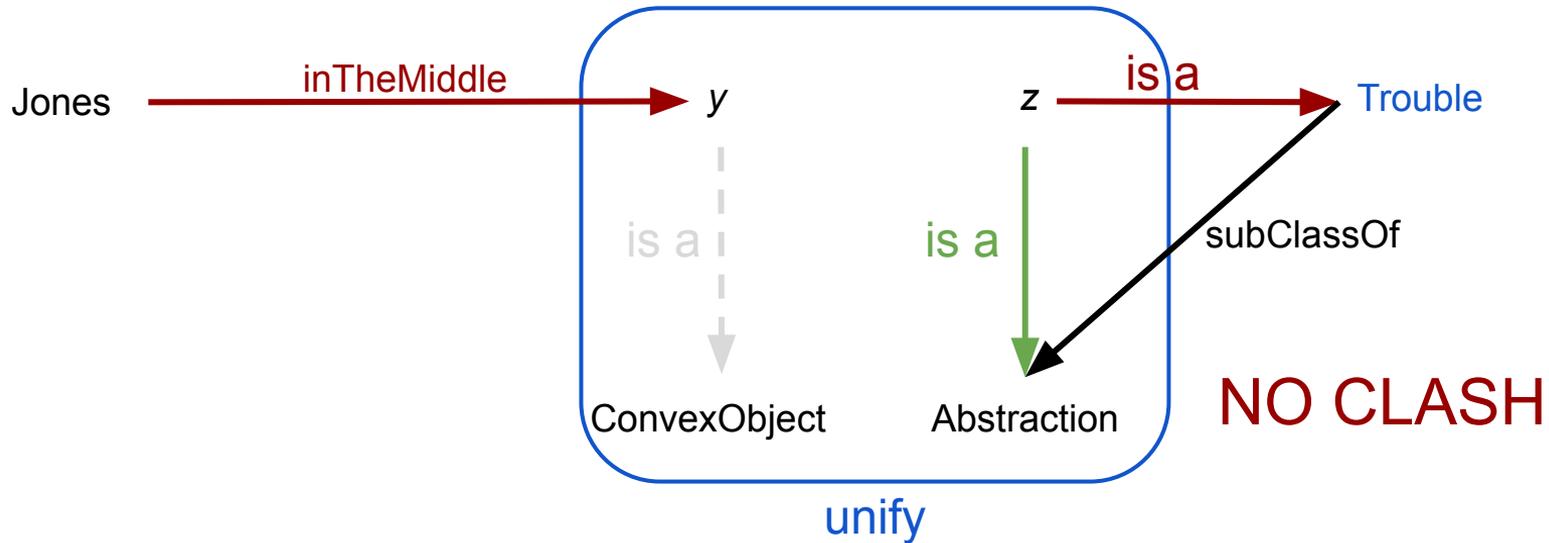
So, we've talked about obligatori**ness**.
What about obligatorifi**cation**?

"Grammaticalized" stage

(12) Hindi

hamāre			*ghar*	*ke pās*	*nadī*	*hai*.
POSS1PL.OBL.SG.M			house.OBL.SG	near	river.DIR.SG.F	be.3SG

***us** l*Ø*		***mẽ***	*tairnā*	*acchā*	*lagtā*	*hai.*
DEM.OBL.SG		in	swim.INF.DIR	good.DIR.SG.M	strike.IPFV.SG.M	be.3SG

'There is a river near our house; it's nice to swim **in it.**'

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Obligatory dependent even in basic spatial usages, i.e. congruent usages.

Lexical Stage: Incongruent use

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'he carried **in the middle of his heart** this: ('I will…')' (SA 707.4)

> ***only* overt** referent!

(15) Apabhramsha

annaha	*majjhi*	*vasuṃdharaha*	*niya-nāmu*		*vi*	*na*	*vahēmi*
otherwise	MADHYE	earth.GEN.SG	own_name.ACC.SG		PRT	NEG	carry.1SG

'otherwise, **in the middle of the earth**, I do not carry my own name!' (SA 504.7)

> mismatch of literal and intended meaning

> intended meaning becomes literal meaning

> new meaning requires dependent (obligatorification)

> expansion into non-metaphorical contexts, e.g. "in the river"

(These changes do not happen everywhere at once, but differ across genres etc.)

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Specific semantics condition obligatory dependencies at every synchronic stage of every language.

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Incongruent semantics require overt arguments for processing needs. Incongruency involves the importing of relational structure, i.e. metaphor.

Semantically conditioned obligatoriness only rarely develops into a syntactic constraint (obligatorification).

Semantic networks model why congruent and incongruent uses imply optional vs obligatory dependencies.

And what about reanalysis?

If you **"zoom out of"** or **"crunch"** the historical developments (i.e. depict them as a **leap** from stage A to stage B), then it **looks like a syntactic change from optional to obligatory**.

If you **"zoom in"**, it's semantics and pragmatics.

There is **no evidence for a change of "underlying structure"**.

And:

No bridging contexts needed.

No ambiguity needed.

Not hearer-based.

Thank you for

References

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Just an idiom? No:

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> "spatial framing"

DEM (+N) > ART N

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DEM (+N) > ART N

Lexical Stage: **Congruent use**

(8)

... nihil vocis causa facere, non ***illam*** *per gradus paulatim ab imo ad summum perducere…*
'... without doing anything for the sake of his voice—such as gradually taking **it** up from low to high' (Sen. *Con*. 1.*pr*. 16; from Pinkster 2015: 1147)

(9)

*Lucca castrum dirigunt, atque funditus subvertunt, custodes **illius castri** capiunt*
'They go to the fort of Loches, they raze it to the ground and take prisoner the guardians **of that fort.**' (Continuations § 25, Carlier & de Mulder 2010: 6)

Lexical Stage: **Incongruent uses**

(11) **anamnestic ("recognitional") use**

*Hic sunt carctas de illo thellenio **de illo mercatho**.*
'Here are the customs papers from **that market**.' (Merowingian, St. Denis; cp. Selig 1992, Himmelmann 1997: 96)

The … was lovely.

I would like to talk to …

Das ist doch der …

Ich wohne in …

Ich werde ...

Synchronically

> seen as a **syntactic issue**

> e.g. as a part-of-speech distinction:

ADV	ADP
above (X)	
besides	*beside X*
	from X
near	

> bracketing representation: optionality ... (X) vs. obligatoriness ... X

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