Misunderstanding the Concrete, Disagreeing about the Abstract

A Closer Look at Word Meaning Negotiation Triggers

Bill Noble, Staffan Larsson, Jenny Myrendal

SemDial 2025 – Bialogue

4 September 2025

What is WMN?

Research questions

Data

Descriptive Statistics

Experiments

What is WMN?

Word Meaning Negotiation (WMN)

WMN is a conversational sequence in which two or more speakers explicitly discuss the meaning of a word or phrase (Myrendal, 2015).

DIN originating in **disagreement** over the meaning of the trigger term

NON originating in **non-understanding** the meaning of the trigger term

WMN Example 1

Non-understanding (NON)

Myrendal (2015) – familjeliv.se forum, translated from Swedish

S1: I'm going to the doctor to get a **full body scan** tomorrow.

S2: What do you mean by **full body scan**?

S1: I mean a kind of X-ray where they can see all of the inflamed parts

S2: I've never had that done, was curious as to what that was I've had my hands examined by ultrasound.

WMN Example 1

Non-understanding (NON)

Myrendal (2015) – familjeliv.se forum, translated from Swedish

S1: I'm going to the doctor to get a **full body scan** tomorrow.
S2: What do you mean by **full body scan**?
S1: I mean a kind of X-ray where they can see all of the inflamed parts
S2: I've never had that done, was curious as to what that was I've had my hands examined by ultrasound.

- **trigger** – *full body scan* (S1)
- **indicator** – explicit clarification request (S2)
- **response** – explication of the in-context trigger (S2)

WMN Example 2

Disagreement (DIN)

Norén and Linell (2007) – translated from Swedish

S1: Telling children about Santa Claus is straight up **lying** to them.

S2: That's not what **lying** means at all!

S1: Of course it is, **lying** means not telling the truth and everyone knows Santa doesn't exist.

WMN Example 2

Disagreement (DIN)

Norén and Linell (2007) – translated from Swedish

S1: Telling children about Santa Claus is straight up **lying** to them.
S2: That's not what **lying** means at all!
S1: Of course it is, **lying** means not telling the truth and everyone knows Santa doesn't exist.

- **trigger** – straight up *lying* (S1)
- **indicator** – challenge usage in given context (S2)
- **response** – elaborates their understanding, connecting to situation (S2)

Situated meaning vs. Meaning potential[1]

Situated meaning – the **in context** meaning of a lexical item

- *disambiguated* and *enriched* by interactive context
- related to **speaker meaning**
- the *type of meaning* used to compute Montague-style compositional utterance meanings

[1] Norén and Linell (2007)

Situated meaning vs. Meaning potential[1]

Situated meaning – the **in context** meaning of a lexical item

- *disambiguated* and *enriched* by interactive context
- related to **speaker meaning**
- the *type of meaning* used to compute Montague-style compositional utterance meanings

Meaning potential – the **abstract** semantic context of the lexical item

- grounded in a particular **speech community**
- a function that produces situated meanings, given context

[1] Norén and Linell (2007)

WMN Examples 3

situated meaning	meaning potential
noun: *bell* | J9P/J9P_760	**noun:** *invisible fencing* | 4179-0/4179-0_4179-74/
A: Oh no not an alarm it's it's be too expensive, no just an internal **bell** to frighten the hell out of them.	**A:** I see other people out there and they hit their dogs and try to— and those horrible collars that they put on them with invinc— **invisible fencing**, least I—
[...]	**B:** Invisible what?
B: So what do you mean by a **bell**, [UNCLEAR] trying to visualize what you mean	**A:** **Invisible fencing**, have you heard of that?
A: Yes. Well like [UNCLEAR] I mean we all know what a **bell** is, a **bell** which is set off by— by a human body coming in.	**B:** No, what is that?
	A: It's— uh, it's a system you can put in your yard where you bury these little uh, transducers or emitters in your yard—

Research questions

Research questions

RQ1

What trigger word features are predctive of the **type of WMN** (NON or DIN)?

RQ2

What trigger word features are predictive of the **kind of meaning** (situated meaning or meaning potential) that is the focus of a WMN?

Research questions

RQ1

What trigger word features are predctive of the **type of WMN** (NON or DIN)?

RQ2

What trigger word features are predictive of the **kind of meaning** (situated meaning or meaning potential) that is the focus of a WMN?

What features?

Research questions

RQ1

What trigger word features are predctive of the **type of WMN** (NON or DIN)?

RQ2

What trigger word features are predictive of the **kind of meaning** (situated meaning or meaning potential) that is the focus of a WMN?

What features?

- Part of speech
- Concreteness/abstractness
- Lexical sentiment

Data

The NeWMe[2] corpus

- **Ne**gotiation of **W**ord **Me**aning
- The first large-scale annotated corpus of WMNs
- Spoken and written interaction: BNC, Switchboard, r/ChangeMyView

Interaction Type	**#**	**%**
Online (r/ChangeMyView)	216	55%
Spoken (total)	176	45%
Spoken (BNC)	141	36%
Spoken (SW)	35	9%
Total	**392**	**100%**

[2] `https://dev.clasp.gu.se/newme/` (Garí Soler et al., 2025)

Lexical concreteness ratings

Concreteness list (Brysbaert et al., 2014)

- Crowd-sourced ratings for 40 000 English words
- 5-point likert scale
  - $\geq$ 25 judgments for most words
- For multi-word WMN triggers not in the concreteness dataset, we use the statistics for the syntactic headword

Concreteness features

$\texttt{conc}_{\mu}$	mean of judgements for a given word
$\texttt{conc}_{\sigma}$	standard deviation of judgements for a given word

Sentiment metrics

SentiWordNet v. 3.0 (Baccianella et al., 2010)

- Includes three metrics: **positivity**, **negativity**, and *objectivity*
- Constructed such that all three sum to 1
- We use the first 2 as features:

Sentiment features	
$\texttt{sent}^{+}$	SentiWordNet positivity score
$\texttt{sent}^{-}$	SentiWordNet negativity score

Other lexical features

Annotated in NewMe / by one of the authors

Other lexical features	
`pos`	part of speech – *noun*, *adjective*, *verb*, *adverb*, or *acronym*
`lexform`	lexcial form – *single word*, or *multi-word expression*

Descriptive Statistics

Concreteness of trigger expression

	NeWMe		Brysbaert	
Type	**#**	**%**	**#**	**%**
Abstract	130	33%	15,447	39%
Mixed	116	30%	10,913	27%
Concrete	120	31%	13,594	34%
Unknown	26	7%	0	0%
Total	**392**	**100%**	**39,954**	**100%**

Abstract $\text{conc}_{\mu} \leq 2.5$

Concrete $\text{conc}_{\mu} \geq 3.5$

Mixed $2.5 < \text{conc}_{\mu} < 3.5$

Unknown Word or phrase not found in the dataset

Sentiment of trigger expression

Sentiment	#	%
Positive	50	13%
Negative	39	10%
Both	35	9%
Neither / Not Included	268	68%
Total	**392**	**100%**

Positive $\texttt{sent}^+ > 0$ and $\texttt{sent}^- = 0$

Negative $\texttt{sent}^+ = 0$ and $\texttt{sent}^- > 0$

Both $\texttt{sent}^+ > 0$ and $\texttt{sent}^- > 0$

Neither $\texttt{sent}^+ = 0$ and $\texttt{sent}^- = 0$

Other variables

Lexical Form	#	%
Single	266	68%
Compound	121	31%
Acronym	5	1%
Total	**392**	**100%**

POS	#	%
Noun	281	72%
Adjective	55	14%
Verb	50	13%
Adverb	6	2%
Total	**392**	**100%**

Experiments

Research questions

Remember these?

RQ1
What trigger word features are predictive of the **type of WMN** (NON or DIN)?

RQ2
What trigger word features are predictive of the **kind of meaning** (situated meaning or meaning potential) that is the focus of a WMN?

Summary of features

Features of WMNs	
`corpus`	*BNC*, *SwitchBoard*, *ChangeMyView*
`type`	*non-understanding*, *disagreement*, *other*
`situated`	did the WMN discuss *situated meaning*
`potential`	did the WMN discuss *meaning potential*

Features of trigger words	
`pos`	part of speech – *noun*, *adjective*, *verb*, *adverb*, or *acronym*
`lexform`	*single word*, *multi-word expression*
$\texttt{conc}_\mu$ / $\texttt{conc}_\sigma$	mean/standard deviation of concreteness judgements
$\texttt{sent}^+$ / $\texttt{sent}^-$	SentiWordNet positivity/negativity score

Model 1

Predicting type of WMN (NON or DIN)

$$\begin{aligned}\texttt{type} \sim 1 &+ \texttt{conc}_{\mu} + \texttt{conc}_{\sigma} \\ &+ \texttt{sent}^{+} + \texttt{sent}^{-} + (\texttt{sent}^{+} * \texttt{sent}^{-}) \\ &+ \texttt{pos} + \texttt{lexform} + (1|\texttt{corpus})\end{aligned}$$

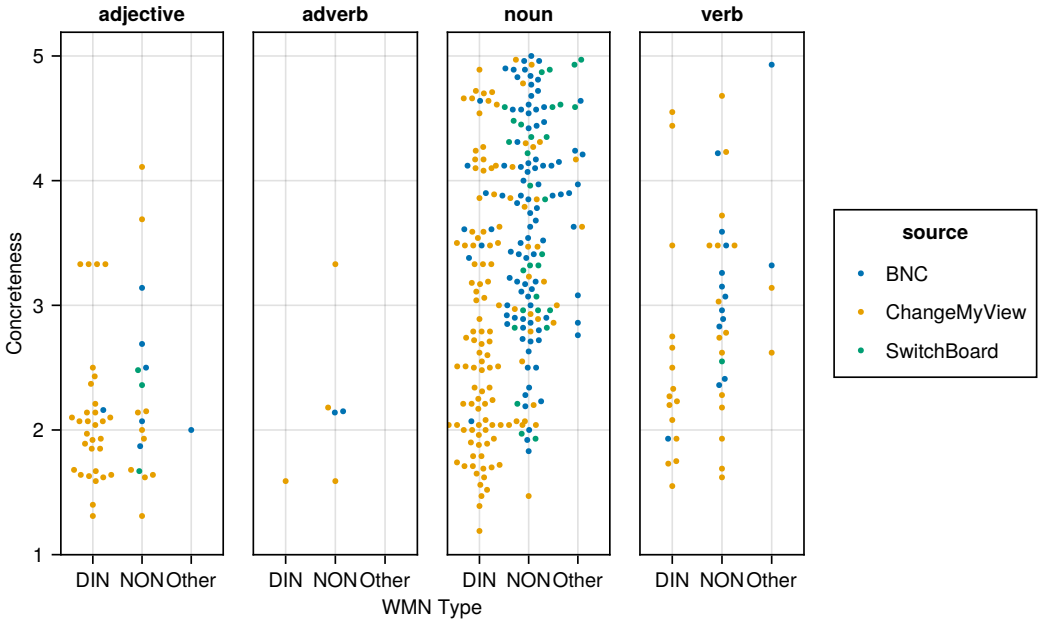
- `type` is a Bernoulli response variable (1 for *DIN* and 0 for *NON*)
  - We excluded `type` $=$ *Other*
- A random intercept is included for `corpus`
- $\texttt{sent}^{+} * \texttt{sent}^{-}$ captures the sentiment magnitude

Model 1

Predicting type of WMN (NON or DIN)

$$\begin{aligned}\texttt{type} \sim 1 &+ \texttt{conc}_{\mu} + \texttt{conc}_{\sigma} \\ &+ \texttt{sent}^{+} + \texttt{sent}^{-} + (\texttt{sent}^{+} * \texttt{sent}^{-}) \\ &+ \texttt{pos} + \texttt{lexform} + (1|\texttt{corpus})\end{aligned}$$

- DINs are more likely to be more abstract words; NONs about more concrete words
  - $\beta = -0.597$; $p = 0.0012$ ($\texttt{conc}_{\mu}$)
- Verbs are more likely to appear in NONs
  - $\beta = -1.306$; $p = 0.0030$ ($\texttt{pos} = \textit{verb}$)
- Multi-word expressions are more associated with NONs
  - $\beta = -0.785$; $p = 0.0226$ ($\texttt{lexform} = \textit{multi-word}$)


adjective
adverb
noun
verb
Concreteness
5
4
3
2
1
DIN
NON
Other
WMN Type
source
BNC
ChangeMyView
SwitchBoard

Model 2

Predicting *situated meaning* aspect

$$\begin{aligned}\texttt{situated} \sim 1 &+ \texttt{type} + \texttt{conc}_{\mu} + \texttt{conc}_{\sigma} \\ &+ \texttt{sent}^{+} + \texttt{sent}^{-} + (\texttt{sent}^{+} * \texttt{sent}^{-}) \\ &+ \texttt{pos} + \texttt{lexform} + (1|\texttt{corpus})\end{aligned}$$

- `situated` is a Bernoulli response variable
  - Recall that `situated` and `potential` are not mutually exclusive
- `type` is included as a predictor
- $\texttt{sent}^{+} * \texttt{sent}^{-}$ captures the sentiment magnitude

Model 2

Predicting *situated meaning* aspect

$$\begin{aligned}\texttt{situated} \sim 1 &+ \texttt{type} + \texttt{conc}_{\mu} + \texttt{conc}_{\sigma} \\ &+ \texttt{sent}^{+} + \texttt{sent}^{-} + (\texttt{sent}^{+} * \texttt{sent}^{-}) \\ &+ \texttt{pos} + \texttt{lexform} + (1|\texttt{corpus})\end{aligned}$$

- Adjective and verb triggers are *more likely* in situated meaning WMNs (vs. nouns)
  - $\beta = 1.305$; $p = 0.0111$ ($\texttt{pos} = \textit{adjective}$)
  - $\beta = 2.121$; $p = 0.0050$ ($\texttt{pos} = \textit{verb}$)
- Not quite significant results for `type`
  - $\beta = -0.688$; $p = 0.0684$ ($\texttt{type} = \textit{DIN}$)

Model 3

Predicting *meaning potential* aspect

$$\begin{aligned}\texttt{potential} \sim 1 &+ \texttt{type} + \texttt{conc}_{\mu} + \texttt{conc}_{\sigma} \\ &+ \texttt{sent}^{+} + \texttt{sent}^{-} + (\texttt{sent}^{+} * \texttt{sent}^{-}) \\ &+ \texttt{pos} + \texttt{lexform} + (1|\texttt{corpus})\end{aligned}$$

- Exact same model but with `potential` as the Bernoulli response variable

Model 3

Predicting *meaning potential* aspect

$$\begin{aligned}\texttt{potential} \sim 1 &+ \texttt{type} + \texttt{conc}_{\mu} + \texttt{conc}_{\sigma} \\ &+ \texttt{sent}^{+} + \texttt{sent}^{-} + (\texttt{sent}^{+} * \texttt{sent}^{-}) \\ &+ \texttt{pos} + \texttt{lexform} + (1|\texttt{corpus})\end{aligned}$$

- Adjective and verb triggers are *less likely* in meaning potential WMNs (vs. nouns)
  - $\beta = -1.562; p = 0.0016$ ($\texttt{pos} = \textit{adjective}$)
  - $\beta = -1.386; p = 0.0020$ ($\texttt{pos} = \textit{verb}$)
- DINs are significantly more likely to address meaning potential
  - $\beta = 2.133; p < 1\text{e}{-9}$ ($\texttt{type} = \textit{DIN}$)

Summary

- There are features of the **trigger word** that predict **type of WMN** (**RQ1**).
  - More abstract $\rightarrow$ disagreement
  - Verbs $\rightarrow$ non-understanding
  - Multi-word expressions $\rightarrow$ non-understanding

Summary

- There are features of the **trigger word** that predict **type of WMN** (**RQ1**).
  - More abstract → disagreement
  - Verbs → non-understanding
  - Multi-word expressions → non-understanding
- There are features of the **trigger word** that predict what **aspect of meaning** is negotiated (**RQ2**).
  - Adjectives / verbs → situated meaning
  - Nouns → meaning potential
  - **Additionally:** disagreement → meaning potential
- No significant results for sentiment in this preliminary study

Discussion

and future work

- Abstract words may leave more room for *individual variation* in interpretation (thus more disagreement)
- The part of speech results point to the *flexibility* of adjectives and verbs in comparison to nouns
- Disagreements are more likely to address meaning potential, pointing to the *normative stakes* of certain WMNs

Discussion

and future work

- Abstract words may leave more room for *individual variation* in interpretation (thus more disagreement)
- The part of speech results point to the *flexibility* of adjectives and verbs in comparison to nouns
- Disagreements are more likely to address meaning potential, pointing to the *normative stakes* of certain WMNs
- We only looked at WMNs here — how do the triggers compare to words that *don't* trigger WMNs?
- The *type of interaction* (task-orientation, relationship of interlocutors, etc.) may factor into what kinds of words get negotiated

Discussion

and future work

- Abstract words may leave more room for *individual variation* in interpretation (thus more disagreement)
- The part of speech results point to the *flexibility* of adjectives and verbs in comparison to nouns
- Disagreements are more likely to address meaning potential, pointing to the *normative stakes* of certain WMNs
- We only looked at WMNs here — how do the triggers compare to words that *don't* trigger WMNs?
- The *type of interaction* (task-orientation, relationship of interlocutors, etc.) may factor into what kinds of words get negotiated

Thank you!

References

Stefano Baccianella, Andrea Esuli, and Fabrizio Sebastiani. 2010. SentiWordNet 3.0: An enhanced lexical resource for sentiment analysis and opinion mining. In *Proceedings of the Seventh International Conference on Language Resources and Evaluation (LREC'10)*, Valletta, Malta. European Language Resources Association (ELRA).

Marc Brysbaert, Amy Beth Warriner, and Victor Kuperman. 2014. Concreteness ratings for 40 thousand generally known english word lemmas. *Behavior research methods*, 46:904–911.

Aina Garí Soler, Jenny Myrendal, Chloé Clavel, and Staffan Larsson. 2025. The newme corpus: A gold standard corpus for the study of word meaning negotiation.

Jenny Myrendal. 2015. *Word Meaning in Interaction: Semantic Negotiation in Online Forums*. Phd thesis, University of Gothenburg.

Kerstin Norén and Per Linell. 2007. Meaning potentials and the interaction between lexis and contexts: An empirical substantiation. *Pragmatics. Quarterly Publication of the International Pragmatics Association (IPrA)*, 17(3):387–416.

situated meaning	meaning potential

noun: *bell* | J9P/J9P_760

A: Oh no not an alarm it's it's be too expensive, no just an internal **bell** to frighten the hell out of them.

[...]

B: So what do you mean by a **bell**, [UNCLEAR] trying to visualize what you mean

A: Yes. Well like [UNCLEAR] I mean we all know what a **bell** is, a **bell** which is set off by— by a human body coming in.

adjective: *recent* | FME/FME_18

A: Is that is that **recent** or is that the old stuff the Venn diagrams?

B: What do you mean by **recent**?

A: Have you done it in the last sort of few weeks?

B: Oh yeah it's the last few weeks.

noun: *invisible fencing* | 4179-0/4179-0_4179-74/

A: I see other people out there and they hit their dogs and try to— and those horrible collars that they put on them with invinc— **invisible fencing**, least I—

B: Invisible what?

A: **Invisible fencing**, have you heard of that?

B: No, what is that?

A: It's— uh, it's a system you can put in your yard where you bury these little uh, transducers or emitters in your yard—

adjective: *anthropogenic* | F8E/F8E_21

A: Okay ? So we know that so far about fifty percent of our **anthropogenic** C O two has been locked away

B: What does **anthropogenic** mean?

A: From human sources . For example can we continue burning fossil fuel [...]

Model 1 results: $\texttt{type} = \textit{DIN}$

	Coef.	Std. Error	z	Pr(>|z|)
(Intercept)	0.353722	1.93684	0.18	0.8551
$\texttt{conc}_{\mu}$	-0.596865	0.184348	-3.24	0.0012
$\texttt{conc}_{\sigma}$	-0.204307	0.564173	-0.36	0.7173
$\texttt{sent}^{+}$	0.664035	1.15001	0.58	0.5637
$\texttt{sent}^{-}$	0.199255	1.1104	0.18	0.8576
pos: *adjective*	-0.727312	0.507808	-1.43	0.1521
pos: *verb*	-1.306430	0.439714	-2.97	0.0030
lexform: *multi-word*	-0.784656	0.344007	-2.28	0.0226
$\texttt{sent}^{+} * \texttt{sent}^{-}$	-5.356570	5.5816	-0.96	0.3372

Model 2 results: $\texttt{situated} = 1$

	Coef.	Std. Error	z	Pr(>|z|)
(Intercept)	1.58082	1.02038	1.55	0.1213
type: DIN	-0.687528	0.377333	-1.82	0.0684
$\texttt{conc}_{\mu}$	-0.00794446	0.16794	-0.05	0.9623
$\texttt{conc}_{\sigma}$	-0.332505	0.496781	-0.67	0.5033
$\texttt{sent}^{+}$	-1.52334	1.00917	-1.51	0.1312
$\texttt{sent}^{-}$	-0.345484	0.936351	-0.37	0.7122
pos: *adjective*	1.30509	0.513597	2.54	0.0111
pos: *verb*	2.12148	0.755799	2.81	0.0050
lexform: *multi-word*	0.360319	0.322338	1.12	0.2636
$\texttt{sent}^{+} * \texttt{sent}^{-}$	5.32303	5.34836	1.00	0.3196

Model 3 results: $\texttt{potential} = 1$

	Coef.	Std. Error	z	Pr(>|z|)
(Intercept)	-0.0314509	1.04118	-0.03	0.9759
$\texttt{type}$: DIN	2.13327	0.342115	6.24	$< 1\text{e}{-9}$
$\texttt{conc}_{\mu}$	-0.24192	0.172902	-1.40	0.1618
$\texttt{conc}_{\sigma}$	0.217801	0.497279	0.44	0.6614
$\texttt{sent}^{+}$	1.62563	0.990182	1.64	0.1006
$\texttt{sent}^{-}$	0.0794144	0.975404	0.08	0.9351
$\texttt{pos}$: *adjective*	-1.56217	0.49569	-3.15	0.0016
$\texttt{pos}$: *verb*	-1.38621	0.447837	-3.10	0.0020
$\texttt{lexform}$: *multi-word*	-0.550717	0.304911	-1.81	0.0709
$\texttt{sent}^{+} * \texttt{sent}^{-}$	1.48935	5.80966	0.26	0.7977