

Question bias, private beliefs and common knowledge

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Workshop

“Background Beliefs in the Construction of Meaning”

University of Tübingen

January 9, 2025



Agenda for today

- ▶ **Empirical focus:** 'biased questions', part of a family of linguistic devices that channel information about the speaker's beliefs & communicative intentions
- ▶ **Goal:** offer a shift from discourse-based approaches to a purely doxastic view rooted in belief revision
- ▶ **Aspiration:** highlight relevance for research on the construction of belief & knowledge in conversation
- ▶ **Guiding parallel:** how research on generic language enhances our understanding of generic thought, stereotype formation and social reasoning (Bosse 2022; Cimpian et al. 2010; Neufeld et al. forth.; Reuter et al. 2025; van Rooij and Schulz 2019; Sterken 2015, a.o.)

- (1)
 - a. Vulcans value logic.
 - b. Heffalumps are scary.

Questions I

- ▶ **Canonical view:** questions are inquiries for information (cf. Searle 1969 and much later work)
- ▶ **Some core properties** (a tricky semantics/pragmatics interface issue; Farkas and Roelofsen 2017, a.o.)
 - ▶ **Sincerity:** Sp wants to have an answer
 - ▶ **Ignorance:** Sp does not know the answer
 - ▶ **Neutrality:** Sp has no expectations/preferences
 - ▶ **Competence:** Sp expects Ad to know the answer
 - ▶ **Compliance:** Sp expects Ad to provide the answer

(2) *Approaching a stranger on the street:*
Is there a public library around here?

Questions II

- ▶ Question forms (aka 'interrogative sentences'): many departures from the canonical uses
- ▶ To wit: interactions with your students
- (3)
 - a. What is 'p value'?
 - b. What are the key tenets of Gricean pragmatics?
- ▶ Burgeoning interest within linguistics: non-canonical questions (stay tuned for Eckardt, Walkden, and Dehé in prep.)
 - ▶ they lack some of the standard properties
 - ▶ they are often expressed through dedicated words and constructions (=they are marked compared to 'canonical' questions)

Questions III

- ▶ **Rhetorical questions:** ignorance suspended, aim at making a point/eliciting a commitment (Biezma and Rawlins 2017; Caponigro and Sprouse 2007; Farkas 2023; Rohde 2006)

- (4) a. *Am I good or am I good?* [English]
b. *Was hätte ich schon tun können?* [German]
what have.1SG.CONJ I SCHON do.INF can.INF
≈ 'After all, what could I have done?'
(adapted from Biezma and Rawlins 2017:311; see Meibauer 1986)

- ▶ **Non-intrusive questions:** no pressure to respond (Farkas 2022; closely related to conjectural questions; Eckardt 2020; Littell et al. 2010)

- (5) *Maria to Paul, after a knock on the door in the middle of the night:*
Oare cine e la ora asta? [Romanian]
OARE who is at hour this
≈ 'Who could it be at this hour, I wonder.'
(adapted from Farkas 2022:301)

Questions IV

- ▶ **Focus today:** another member of the non-canonical family, biased questions
 - ▶ core properties
 - ▶ common approaches
 - ▶ empirical challenges & novel conceptualization
 - ▶ connection to belief formation?

Biased questions I

- ▶ **Question bias:** the speaker's attitude towards the truth/likelihood of the prejacent of a polar question (see overview in Romero 2024)
- ▶ **Key feature:** non-neutrality (notoriously bad/rude out of the blue, e.g., in visa forms, job interviews)
- ▶ **Source of non-neutrality:** matter of debate, putting aside for now (e.g., is it hard-wired or arises pragmatically; see especially Farkas and Roelofsen 2017; Goodhue 2022; Rudin 2022)

Biased questions II

- (6) **Bias for p :** *Friend takes me to a bakery, I ask them to order for me, they thought I was perfectly capable fo doing so myself.*
- a. Negation (high) (Goodhue 2022; Ladd 1981; Romero 2020; Romero and Han 2004; Romero et al. 2017)
Don't you speak German?
 - b. Tags (some) (Bill and Koev forth.; Ladd 1981; Malamud and Stephenson 2015; Reese and Asher 2007; Romero 2020)
You speak German, don't you?
- (7) **Bias against p :** *Friend takes me to a bakery and is ready to order for me, but then I go ahead and boldly do so myself.*
- a. Rising intonation in declaratives (Büring and Gunlogson 2000; Gunlogson 2003, 2008; Jeong 2018; Rudin 2022)
You speak German?
 - b. Really (Bill and Koev 2022; Domaneschi et al. 2017; Romero and Han 2004)
Do you really speak German?

Biased questions III

Trenn di von schlechten Ausreden.
Trenn deinen Müll.

Wien macht gutes Klima

Kann das Trennen nicht die KI machen?

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Abfallwirtschaft, Straßenreinigung und Fuhrpark

abfall.wien.gv.at

The image shows a young woman with glasses sitting at a table with food containers. A speech bubble points to her with the question 'Kann das Trennen nicht die KI machen?' (Can't the AI do the separation?). The background is orange with white text and logos.

- (8) Kann das Trennen nicht die KI machen?
can DEF separation NEG DEF AI make.INF?
≈ 'Can't the AI do the separation?'

(Separate yourself from bad excuses. Separate your trash. City of Vienna's campaign.)

Biased questions IV

- ▶ Approaches to bias:
 - ▶ operators updating discourse commitments of the interlocutors (Gunlogson 2003; Krifka 2015; Malamud and Stephenson 2015; Xu 2017)
 - ▶ operators that allow the speaker to mediate, and possibly manipulate, the common ground (Repp 2013; Romero and Han 2004; Silk 2019)
 - ▶ Common thread:
 - ▶ bias as an ultimately discourse notion
 - ▶ expressions of bias hard-wire certain conversational moves
- Q Can we derive discourse effects by appealing to beliefs instead?

Biased questions V

- ▶ Another dimension: presence of contextual evidence (see Korotkova 2023, submitted for detailed discussion of evidential bias through the prism of evidence in language)

(9) English polar questions with positive prejacent

✓ **Context 1: no evidence**

Talking to friend elsewhere on the phone.

✓ **Context 2: evidence for p**

Asking a friend who came in soaking wet.

#**Context 3: evidence against p**

Asking a friend who has flushed cheeks, is taking off sunglasses and carrying snowshoes.

Is it raining outside?

Biased questions VI

- ▶ **Common parameterization** (see especially Domaneschi et al. 2017)
 - ▶ Original bias: the speaker's prior attitude, e.g., belief or preference (Romero and Han 2004)
 - ▶ Contextual bias: mutually available evidence (Büring and Gunlogson 2000; Kamali and Nakamura 2024; Sudo 2013)
 - ▶ Polarity: positive, negative, neutral
- ▶ **Combinatorics** (simplified) (cf. Gärtner and Gyuris 2017, 2023)

		Contextual		
		neut	p	$\neg p$
<i>Original</i>	neut	?	?	?
	p	?	?	?
	$\neg p$?	?	?

Negative bias & belief revision I

- ▶ **Focus:** negative epistemic bias (prior belief that $\neg p$)
- ▶ **Current approaches:** a conversational crisis stemming from the speaker's denial to accept some information/actions (formalized through the `FALSUM` operator; Frana and Rawlins 2019; Repp 2013; Repp and Geist forth)
- ▶ **Goals:**
 - ▶ link negative bias to non-monotonic belief revision
 - ▶ derive conversational moves as a by-product

NB English: too many confounds, so we're going to look at two Russian particles, *razve* and *neuzheli* (Korotkova 2023, submitted)

Negative bias & belief revision II

- ▶ **Neutral epistemic:** We just met, go out for lunch.
 - # **Neutral contextual:** I order, check with you beforehand.
 - # **Positive contextual:** You order beetroot hummus.
 - # **Negative contextual:** You avoid all beet mezzes.
- ▶ **Positive epistemic:** I was sure you like beets.
 - # **Neutral contextual:** I invite you over, check before cooking.
 - # **Positive contextual:** We go out, you order beetroot hummus.
 - # **Negative contextual:** We go out, you avoid all beet mezzes.
- ▶ **Negative epistemic:** I was sure you hate beets.
 - # **Neutral contextual:** I invite you over, check before cooking.
 - ✓ **Positive contextual:** We go out, you order beetroot hummus.
 - # **Negative contextual:** We go out, you avoid all beet mezzes.

(10) **Razve/neuzheli** ty liubish' sveklu?
RAZVE/NEUZHELI you.NOM love.2SG.PRS beet.ACC.SG
≈ 'Do you like beets?'

Negative bias & belief revision III

- ▶ **First approximation:** family resemblance to English *really* (Romero and Han 2004), Italian *mica* (Frana and Rawlins 2019), German *etwa* (Xu 2017)

	Cont: neut	Cont: p	Cont: $\neg p$
Epi: neut	#	#	#
Epi: p	#	#	#
Epi: $\neg p$	#	✓	#

- ▶ **Reminder:** such markers treated as signalling a conversational crisis

Negative bias & belief revision IV

NB Both particles can express desires in addition to beliefs, but only the epistemic component is hard-wired (cf. Bulygina and Shmelev 1997:274)

(11) *We're in what we thought was a non-smoking bar. Another guest lights a cigarette.*

✓**Context 1: Positive bouletic**

An avid smoker, I am delighted to be mistaken.

✓**Context 2: Negative bouletic**

An adamant non-smoker, I am dismayed to be mistaken.

✓**Context 3: Neutral bouletic**

I have no preference either way.

Razve/neuzheli zdes' mozhno kurit'?
RAZVE/NEUZHELI here can.PRED smoke.INF
'Can one smoke here?'

Negative bias & belief revision V

Key idea

- ▶ Negative bias marks stages of non-monotonic belief revision
- ▶ Sp considered p unlikely
- ▶ There is current evidence to the contrary

▶ Razve

- ▶ Credence in p may have increased due to new evidence, but not enough to accept p
- ▶ **Conversational uses:**
 - information-seeking: Sp presently unopinionated about p
 - challenging: Sp holds on to belief that $\neg p$

▶ Neuzheli

- ▶ Upward trending credence in p , up to full belief
- ▶ **Conversational uses:**
 - positively biased: Sp leaning towards p but isn't sure
 - polar exclamatives: Sp astonished that p

Negative bias & belief revision VI

- ▶ **Razve**: evidence strong enough to entertain p , but not too strong to accept it (additionally, *razve* only abductive inferences)

- (12) *We're above the tree line on what should be a fine day.*
#/?? **Context 1: weak** *Cumulus clouds form in the distance.*
✓ **Context 2: sufficient** *Your companion dons raingear.*
Context 3: too strong *Large rain drops are falling.*

Razve budet dozhd'?

RAZVE be.3SG.FUT rain.NOM.SG

'Will there be rain? (I thought there wouldn't be).'

- ▶ **Neuzheli**: permits stronger evidence

- (13) *Opening the door to someone you never expected to see again.*

✓ **Neuzheli/#razve** eto ty?

NEUZHELI/RAZVE this you.NOM

'I can't believe this is you!'

Negative bias & belief revision VII

- ▶ **Information-seeking questions:** presently unopinionated speaker, open to revising beliefs

(14) *A friend thanks the waiter in Turkish at a coffee shop.*

- a. **Razve** ty govorish po-turetski?
RAZVE you.NOM speak.2SG.PRS Turkish
'Do you speak Turkish? (I thought you didn't.)'
≠ 'Do you really speak Turkish?'
- b. **Ia** ✓dumala / ??dumaiu, chto net.
I.NOM think.F.SG.PST think.1SG.PRS COMP be.NEG
'I thought / (??) think that you didn't.'

- ▶ Not predicted by current approaches

Negative bias & belief revision VIII

- ▶ **Challenging questions:** opinionated speaker, unwilling to revise beliefs

(15) *According to the Chukchi ritual, offerings were left in the snow for the spirits, but a city boy refers to it as a 'buried meat'.*

Razve tak **mozhno** **nazyvat'** **sviashchennuiu** **zhertvu**?
RAZVE SO CAN.PRED call.INF sacred.FEM.ACC.SG offering.ACC.SG
≈ 'How dare you call a sacred offering this way! (Literally: Can one call a sacred offering this way?)'

(The Time of Melting Snows, Yuri Rytkeu)

- ▶ Current approaches only predict such uses

Negative bias & belief revision IX

- **Positively biased:** Sp leaning towards p but isn't sure

(16) *Soviet diplomat Volodin has long been contemplating contacting a foreign ministry about the Soviet Atomic Program. Initially he considers an anonymous call safe but after nerve-wrenching deliberations he is becoming convinced otherwise.*

Neuzheli uznaiut po telefonnomu sdavlennomu
NEUZHELI identify.3PL.PRES by phone.M.SG.DAT muffled.M.SG.DAT
golosu?
voice.SG.DAT

'Surely they couldn't identify a muffled voice over a telephone?'
(Literally: Will they identify a muffled voice over a telephone?)

(In The First Circle, Aleksandr Solzhenitsyn; translated by H. Willets)

Negative bias & belief revision X

- ▶ **Exclamative:** Sp astonished that p , cf. English ‘can’t believe’
(\neq *don’t believe*; Roberts 2019)

(17) *A reader’s first encounter with Hawking’s multiverse theory.*

Neuzheli vokrug nashego mira zerkalami
NEUZHELI around our.M.GEN.SG world.GEN.SG mirror.INSTR.PL
rasstavleny drugie miry?
put.PTCP.PL other.NOM.PL world.NOM.PL

≈ ‘I can’t believe that there are other worlds put like mirrors
around ours’.

(Magazine *Knowledge is power*)

NB *neuzheli* isn’t always veridical (unlike markers of surprise/violated expectations, Zhuang 2023) neither does it require a gradable property (unlike e.g. *wh*-exclamatives; cf. *that*-exclamatives across Germanic, Grosz 2012)

Negative bias & belief revision XI

Bottom line

- ▶ Current typology not fine-grained enough
- ▶ A doxastic approach fares better (and puts bias in a larger context of attitudinal operators)
- ▶ No need to hard-wire conversational moves

Negative bias & belief revision XII

- ▶ **Existing feature typology**: epistemic bias and contextual bias viewed as independent notions
- ▶ **Incorrect prediction**: existence of markers that only encode negative bias
- ▶ **No-negative-bias conjecture**: negative bias always coupled with positive evidence

Negative bias & belief revision XIII

(18) *In the morning, I burned a cake in the kitchen and had to leave the window wide open to get rid of the nasty smell. I am at work and check with my spouse that they did not close the window. I expect they didn't.*

- a. **Mica** hai chiuso la finestra? [Italian]
MICA have close DEF window
'You didn't close the window, right?' (cf. Frana and Rawlins's (2019) ex.36)
- b. #**Razve/neuzheli** ty zakryl okno? [Russian]
RAZVE/NEUZHELI you close window
- c. #**Hast** du ETWA das Fenster zugemacht? [German]
have you **ETWA** DEF window close
- d. #**Nandao** ni guan-shang chuanguhu le ma? [Mandarin]
NANDAO you close-up window INC Q

- *Mica*: not a marker of bias in questions, it can be used in assertions

Negative bias & belief revision XIV

- ▶ **Lexical gaps:** instrumental in the understanding of cognitive underpinnings of language & underlying concepts (**nall* for 'no ... and ...', Enguehard and Spector 2021; **grue* for 'a thing is grue exactly if it is examined before the year 2100 and is green, or otherwise is blue', Goodman 1955)
- ▶ **Belief revision:** costly from a cognitive standpoint (see, for example, vast literature on 'belief bias'; Evans et al. 1983 and later work), reflected in all formal systems (AGM etc; see overview in Hansson 2022)
- ▶ **Utility perspective on bias** (cf. Van Rooij and Šafářová 2003): only expected that natural language will have dedicated expressions for inquiries signalling belief revision potential, but not just negative epistemic bias

Outlook I

- ▶ **Biased questions:** a linguistic phenomenon whereby the speaker channels their pre-existing beliefs
- ▶ **Nature of the attitude:** not necessarily violated expectations, can be backgrounded beliefs (cf. *occurrent/salient beliefs vs. dispositional/backgrounded beliefs*; Bartlett 2018)
- ▶ **Overall role:** to what extent can biased questions express bias?

(19) *To a person speaking with an accent:*
You're not from here, are you?

Outlook II

- ▶ Can biased questions be ‘bad language’? (cf. Cappelen and Dever 2019)
 - ▶ Like any benign discourse strategy, they can be co-opted towards nefarious goals
 - ▶ Case in point: ‘what about’ questions that signal a lateral QUD-shift (Bledin and Rawlins 2021)

(20) A: Where should we go on vacation?
B: What about Albania?

Thank you!

References I

- Bartlett, G. (2018). Occurrent states. *Canadian Journal of Philosophy* 48(1), 1–17.
- Biezma, M. and K. Rawlins (2017). Rhetorical questions: Severing asking from questioning. In D. Burgdorf, J. Collard, S. Maspong, and B. Stefánsdóttir (Eds.), *Semantics and Linguistic Theory* 27, pp. 302–322.
- Bill, C. and T. Koev (2022). *Really*: Ambiguity and question bias. In D. Gutzmann and S. Repp (Eds.), *Proceedings of Sinn und Bedeutung* 26, pp. 130–148.
- Bill, C. and T. Koev (Forth.). Bias in tag questions. In A. Benz, M. Krifka, T. Trinh, and K. Yatsushiro (Eds.), *Perspectives on Biased Questions*. Language Science Press.
- Bledin, J. and K. Rawlins (2021). About what about: Topicality at the semantics–pragmatics interface. Talk presented at SALT 31; <https://osf.io/k4zpe/>.
- Bosse, A. (2022). Stereotyping and generics. *Inquiry* 67(10), 3876–3892.
- Bulygina, T. and A. Shmelev (1997). *Jazykovaja Konceptualizaciia Mira [Conceptualizing the World through Language. In Russian]*. Moscow: Jazyki Russkoi Kul'tury.

References II

- Büring, D. and C. Gunlogson (2000). Aren't positive and negative polar questions the same? Ms. UCSC/UCLA.
- Caponigro, I. and J. Sprouse (2007). Rhetorical questions as questions. In E. Puig-Waldmüller (Ed.), *Sinn und Bedeutung 11*, pp. 121–133.
- Cappelen, H. and J. Dever (2019). *Bad Language*. Oxford: Oxford University Press.
- Cimpian, A., A. C. Brandone, and S. A. Gelman (2010). Generic statements require little evidence for acceptance but have powerful implications. *Cognitive Science 34*(8), 1452–1482.
- Domaneschi, F., M. Romero, and B. Braun (2017). Bias in polar questions: Evidence from English and German production experiments. *Glossa 2*(1)(26), 1–28.
- Eckardt, R. (2020). Conjectural questions: The case of German verb-final *wohl* questions. *Semantics and Pragmatics 13*(9), 1–17.
- Eckardt, R., G. Walkden, and N. Dehé (Eds.) (In prep.). *The Handbook of Noncanonical Questions*. Oxford: Oxford University Press.
- Enguehard, E. and B. Spector (2021). Explaining gaps in the logical lexicon of natural languages: A decision-theoretic perspective on the square of Aristotle. *Semantics and Pragmatics 14*, 1–28.

References III

- Evans, J. S. B. T., J. L. Barston, and P. Pollard (1983). On the conflict between logic and belief in syllogistic reasoning. *Memory and Cognition* 11(3), 295–306.
- Farkas, D. (2022.). Non-intrusive questions as a special type of non-canonical questions. *Journal of Semantics* 39, 295–337.
- Farkas, D. (2023). Rhetorical questions revisited. Talk at the University of Tübingen.
- Farkas, D. and F. Roelofsen (2017). Division of labor in the interpretation of declaratives and interrogatives. *Journal of Semantics* 34(2), 237–289.
- Frana, I. and K. Rawlins (2019). Attitudes in discourse: Italian polar questions and the particle *mica*. *Semantics and Pragmatics* 12(16), 1–55.
- Gärtner, H.-M. and B. Gyuris (2017). On delimiting the space of bias profiles for polar interrogatives. *Linguistische Berichte* 251, 26–49.
- Gärtner, H.-M. and B. Gyuris (2023). On further delimiting the space of bias profiles for polar interrogatives. *Linguistische Berichte* 275, 359–362.
- Goodhue, D. (2022). Isn't there more than one way to bias a polar question? *Natural Language Semantics* 30, 379–413.

References IV

- Goodman, N. (1955). *Fact, Fiction and Forecast*, Chapter 3: The New Riddle of Induction. Cambridge, MA: Harvard University Press.
- Grosz, P. (2012). *On the Grammar of Optative Constructions*. Amsterdam: John Benjamins.
- Gunlogson, C. (2003). *True to Form: Rising and Falling Declaratives as Questions in English*. New York: Routledge.
- Gunlogson, C. (2008). The question of commitment. *Belgian Journal of Linguistics* 22, 101–136.
- Hansson, S. O. (2022). Logic of Belief Revision. In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy* (Spring 2022 ed.). Metaphysics Research Lab, Stanford University.
- Jeong, S. (2018). Intonation and sentence type conventions: Two types of rising declaratives. *Journal of Semantics* 35(2), 305–356.
- Kamali, B. and T. Nakamura (2024). Toward a crosslinguistically viable account of evidential bias. Talk presented at the workshop *Polar Question Meaning(s) Across Languages*, ILLC, University of Amsterdam.
- Korotkova, N. (2023). Conversational dynamics of *razve*-questions in Russian. In M. Onoeva, A. Staňková, and R. Šimík (Eds.), *Sinn und Bedeutung* 27, pp. 328–346. Prague: Charles University.

References V

- Korotkova, N. (Submitted). A new perspective on negative bias in polar questions: The view from Russian. In R. Eckardt, N. Dehé, and G. Walkden (Eds.), *The Oxford Handbook of Noncanonical Questions*. Oxford.
- Krifka, M. (2015). Bias in commitment space semantics: Declarative questions, negated questions, and question tags. In S. D'Antonio, M. Moroney, and C. R. Little (Eds.), *Semantics and Linguistic Theory 25*, pp. 328–345. LSA Open Journal Systems.
- Ladd, R. D. (1981). A first look at the semantics and pragmatics of negative questions and tag questions. In *Chicago Linguistics Society 17*, pp. 164–171.
- Littell, P., L. Matthewson, and T. Peterson (2010). On the semantics of conjectural questions. In T. Peterson and U. Sauerland (Eds.), *Evidence from evidentials*, pp. 89–104.
- Malamud, S. and T. Stephenson (2015). Three ways to avoid commitments: Declarative force modifiers in the conversational scoreboard. *Journal of Semantics* 32(2), 275–311.
- Meibauer, J. (1986). *Rhetorische Fragen*. Tübingen: Max Niemeyer Verlag.
- Neufeld, E., A. Bosse, G. del Pinal, and R. Sterken (Forth.). Giving generic language another thought. *WIREs Cognitive Science*.

References VI

- Reese, B. and N. Asher (2007). Prosody and the interpretation of tag questions. In E. Puig-Waldmüller (Ed.), *Sinn und Bedeutung 11*, Barcelona, pp. 448–462. Universitat Pompeu Fabra.
- Repp, S. (2013). Common ground management: Modal particles, illocutionary negation and VERUM. In D. Gutzmann and H.-M. Gärtner (Eds.), *Beyond Expressives: Explorations in Use-Conditional Meaning*, pp. 231–274. Leiden: Brill.
- Repp, S. and L. Geist (Forth.). Negative polar questions in Russian: Question bias and question concern. In A. Benz, M. Krifka, T. Trinh, and K. Yatsushiro (Eds.), *Perspectives on Biased Questions*. Language Science Press.
- Reuter, K., E. Neufeld, and G. del Pinal (2025). Generics and quantified generalizations: Asymmetry effects and strategic communicators. *Cognition* 256(C), 106004.
- Roberts, T. (2019). I can't believe it's not lexical: Deriving distributed veridicality. In K. Blake, F. Davis, K. Lamp, and J. Rhyne (Eds.), *Semantics and Linguistic Theory 29*, pp. 665–685. Linguistic Society of America.
- Rohde, H. (2006). Rhetorical questions as redundant interrogatives. In *San Diego Linguistics Papers, Issue 2*, pp. 134–168.

References VII

- Romero, M. (2020). Form and function of negative, tag, and rhetorical questions. In V. Déprez and M. T. Espinal (Eds.), *Oxford Handbook of Negation*, pp. 234–254. Oxford: Oxford University Press.
- Romero, M. (2024). Biased polar questions. *Annual Review of Linguistics* 10(1), 279–302.
- Romero, M., A. Arnhold, B. Braun, and F. Domaneschi (2017). Negative polar question types in English. In A. Lamont and K. Tetzloff (Eds.), *Proceedings of the North East Linguistic Society 47*, Volume 3, Amherst, MA, pp. 35–48. GLSA.
- Romero, M. and C.-H. Han (2004). On negative Yes/No questions. *Linguistics and Philosophy* 27(5), 609–658.
- Rudin, D. (2022). Intonational commitments. *Journal of Semantics* 39(2), 339–383.
- Searle, J. R. (1969). *Speech Acts*. Cambridge: Cambridge University Press.
- Silk, A. (2019). Expectation biases and context management with negative polar questions. *Journal of Philosophical Logic* 49(1), 51–92.
- Sterken, R. K. (2015). Generics, content and cognitive bias. *Analytic Philosophy* 56(1), 75–93.

References VIII

- Sudo, Y. (2013). Biased polar questions in English and Japanese. In D. Gutzmann and H.-M. Gärtner (Eds.), *Beyond Expressives: Explorations in Use-Conditional Meaning*, pp. 275–295. Leiden: Brill.
- van Rooij, R. and K. Schulz (2019). Generics and typicality: a bounded rationality approach. *Linguistics and Philosophy* 43(1), 83–117.
- Van Rooij, R. and M. Šafářová (2003). On polar questions. In R. B. Young and Y. Zhou (Eds.), *Semantics and Linguistic Theory 13*, pp. 292–309. Linguistic Society of America.
- Xu, B. (2017). *Question bias and biased question words in Mandarin, German and Bangla*. Ph. D. thesis, Rutgers.
- Zhuang, L. (2023). *The Surprise Factor: A Semantic Theory of Mirativity*. Ph. D. thesis, Cornell University.