Book of abstracts

Measuring commitments in communication

Radboud University
Nijmegen, The Netherlands

18 & 19 June, 2026

Programme

Thursday, June 18th

Location: Ulbo de Sitter room, Elinor Ostrom building 00.240

Timing	Presenter	Title	Page
9:00-9:30	Arrival		
9:30-9:40	Welcome, opening remarks		
9:40-10:40	Ben Weissman	Lying & commitment: Experimental approaches & challenges	3
10:40-11:10	Lennart Fritzsche	Measuring commitment: A diagnostic comparison using belief–commitment dissociation	10
11:10-11:30	Coffee break		
11:30-12:00	Hannah Seeman Britta Stolterfoht	Committing in German: Measuring the contribution of modal particles	12
12:00-12:30	Nicole Katzir Natalia Levshina	Differences in commitment marking in Large Language Models vs. humans	15
12:30-13:30	Lunch at the Refter		
14:00-14:30	Harriet Yates Corien Bary Thomas van der Leer Bob van Tiel Peter de Swart	Tracing commitments in communication via facial electromyography	17
14:30-15:00	Yulia Clausen Tatjana Scheffler	Commitment attribution in German tag questions: Evidence from judgment-elicitation experiments.	19
15:00-15:15	Break		
15:15-16:15	Tatjana Scheffler	Graded commitments in modified utterances: Attitude verbs and question tags	4
16:15-16:30	Closing remarks		

Dinner: 18:30, De Hemel Restaurant, Franseplaats 1, 6511 VS Nijmegen

Friday, June 19th

Location: Erasmus building 15.39/41

Timing	Presenter	Title	Page
9:00-9:30	Arrival		
9:30-10:30	Mailin Antomo	Commitment in the visual modality	5
10:30-11:00	Sebastian Walter Jonas Hartke	Measuring commitment in iconic gesture: The role of (not-)at-issueness	21
11:00-11:15	Coffee break		
11:15-11:45	Ana Celmare Merel Scholman Vera Demberg	Multimodal investment in epistemic stance expression: Gestural and prosodic indicators of speaker commitment	23
11:45-12:45	Manfred Krifka	Mitigation and strengthening of assertions and their effect on trustworthiness	7
12:45-13:00	Closing remarks		
13:00-14:00	Optional lunch at the Refter		

Lying & commitment: Experimental approaches & challenges

Ben Weissman

College of the Holy Cross

Recent theoretical accounts of lying have turned to commitment as a critical notion – an utterance can be a lie inasmuch as the speaker has committed themselves to the false content. Commitment thus offers a promising mechanism for explaining why some false implicatures are perceived to be lies and others are not. In addition, it allows for a move away from the slippery notion of "what is said," providing a way to explain lie judgments on content like pictures, gestures, and emoji. Preliminary experimental research in this direction has provided support for these theoretical claims, uncovering significant correlations between individuals' assessments of commitment and judgments of lying on experimental items.

In this talk, I'll discuss the experimental work I've done on the link between commitment and lying. In particular, the talk will highlight research on commitment as an explanatory mechanism for whether emoji are perceived to be lies, a context in which it appears to fare quite well. The talk will also present research on whether false scalar implicatures are taken to be lies, a context in which the explanatory value of commitment appears to fare less well. In presenting these streams of research together, I will highlight the promising potential of the notion of commitment with respect to theories of lying as well as some of the methodological challenges involved in assessing the notion of commitment experimentally in the first place.

Graded commitments in modified utterances: Attitude verbs and question tags

Tatjana Scheffler

Ruhr-Universität Bochum

We will revisit two types of phenomena where many close variants of semantically modified utterances exist: first, sentences with attitude verbs, and second, English tag questions. In both cases, we show that different tests for speakers' commitments to the prejacent of the modified utterance demonstrates a "mixed" behavior - indicating that speakers are taken to be somewhat, but not fully committed to the embedded content. We conclude that commitment should be seen as gradual, as we need to model at least two intermediate "levels" of commitment between non-commitment and full commitment. We also discuss how (graded) commitment interacts with different (categorical) dimensions of meaning contributions often assumed in semantics, such as at-issue and non-at-issue meaning.

Measuring commitment in the visual modality

Mailin Antomo

Georg-August-Universität Göttingen

Discussions of commitment in communication have traditionally focused on speaker commitment. However, recent research on meaning has broadened this view by showing that meaning is often multimodal, with the visual modality playing a particularly important role. Work in semantics and multimodal communication demonstrates that visual content contributes to meaning composition and shows substantial parallels between visual and verbal communication. As in spoken language, different layers of meaning can be distinguished: visual meaning may be at-issue or not-at-issue, and phenomena such as visual implicatures and presuppositions have been identified. This has been investigated for different kinds of visual meaning, such as iconic gestures (Barnes & Ebert, 2023; Ebert, 2024; Fritzsche, 2025; Schlenker, 2021, amongst others), emojis (Grosz et al., 2023; Pierini, 2021), and pictures (Esipova, 2021). Against this background, a central question arises: is visually communicated meaning binding, i.e. does it give rise to commitment? And how can commitment in the visual modality be measured?

Recent years have seen initial empirical advances addressing these issues. Weissman (2024) and Antomo et al. (2025) show that content conveyed via emojis can give rise to commitment, although this depends on factors such as (not-)at-issueness and agreed-upon meaning. Antomo and Chen (2025) report comparable findings for pointing and iconic gestures. Viebahn (2019), in turn, discusses commitment to pictorial content.

These findings raise a number of further questions: do different types of visual communication, such as emojis, gestures, photographs, or drawings, differ in the degree to which they give rise to commitment? Does the well-established link between lying and commitment also hold in the visual domain? And, most importantly, how can commitment best be measured in this modality?

Addressing these questions is not straightforward. Measuring commitment in the visual modality poses specific challenges, as established tests such as deniability cannot simply be transferred. One reason is that these tests are often biased toward verbally expressed meaning. This makes it necessary to reconsider how commitment can be operationalized. In this talk, I will discuss several possible approaches to testing commitment in the visual modality.

Whether visual meaning is binding – and whether it is so to the same extent as verbally conveyed meaning – does not only bear on current debates about the most appropriate definition of commitment, it is also highly relevant for understanding the relationship between visual meaning and the notion of assertion, given the close connection between commitment and assertion (for a recent discussion and overview see Bary, 2025; Krifka, 2026).

References

Antomo, M., & Chen, Y. (2025). Lying and commitment: The case of pointing gestures. *Proceedings of Sinn und Bedeutung*, *29*, 59–76. https://doi.org/10.18148/sub/2025.v29.1193

Antomo, M., Fricke, L., Grosz, P. G., & Scheffler, T. (2025). Lying with at-issue and not-at-issue emojis. *Proceedings of Sinn und Bedeutung*, *29*, 77–97. https://doi.org/10.18148/sub/2025.v29.1195

Barnes, K., & Ebert, C. (2023). The information status of iconic enrichments: Modelling gradient at-issueness. *Theoretical Linguistics*, *49*(3-4), 167–223. https://doi.org/10.1515/tl-2023-2009

Bary, C. (2025). Speech acts, common ground and commitments. *Linguistics and Philosophy*, *48*(3), 505–526. https://doi.org/10.1007/s10988-025-09434-y

Ebert, C. (2024). Semantics of gesture. *Annual Review of Linguistics*, *10*, 169–189. https://doi.org/10.1146/annurev-linguistics-022421-063057

Esipova, M. (2021). On not-at-issueness in pictures. *Glossa: a journal of general linguistics*, *6*(1). https://doi.org/10.5334/gjgl.1314

Fritzsche, L. (2025). The at-issue status of (modified) pro-speech gestures. *Proceedings of Sinn und Bedeutung*, *29*, 501–518. https://doi.org/10.18148/sub/2025.v29.1226

Grosz, P. G., Greenberg, G., De Leon, C., & Kaiser, E. (2023). A semantics of face emoji in discourse. *Linguistics and Philosophy*, *46*(4), 905–957. https://doi.org/10.1007/s10988-022-09369-8

Krifka, M. (2026). Managing the reputation of trustworthiness in face-to-face communication. *Frontiers in Communication*, *10*, 1688492. https://doi.org/10.3389/fcomm.2025.1688492

Pierini, F. (2021). Emojis and gestures: A new typology. *Proceedings of Sinn und Bedeutung*, *25*, 720–732. https://doi.org/10.18148/sub/2021.v25i0.963

Schlenker, P. (2021). Iconic presuppositions. *Natural Language & Linguistic Theory*, *39*(1), 215–289. https://doi.org/10.1007/s11049-020-09473-z

Viebahn, E. (2019). Lying with pictures. *The British Journal of Aesthetics*, *59*(3), 243–257. https://doi.org/10.1093/aesthj/ayz008

Weissman, B. (2024). Can an emoji be a lie? The links between emoji meaning, commitment, and lying. *Journal of Pragmatics*, *219*, 12–29. https://doi.org/10.1016/j.pragma.2023.11.004

Mitigation and strengthening of assertions and their effect on trustworthiness

Manfred Krifka

Leibniz-Zentrum Allgemeine Sprachwissenschaft

In this talk, I assume the commitment account of assertions according to which a speaker, when asserting a proposition, vouches for its truth, as opposed to the view that the speaker expresses a belief that the proposition is true (cf. Geurts, 2019). This notion of commitment is a social notion that acts as a guarantee for the addressee to accept the truth of the proposition. Following work dating back to Peirce (ca. 1905, cf. Tuzet, 2006), I assume that assertive commitments are backed up by possible detrimental effects on the reputation of trustworthiness, effects that the speaker wants to avoid.

The main focus of this talk is on the ways that speakers have available to fine-tune the potentially threatening effects of assertions on their reputation. In some situations, it might be advisable to weaken this effect to shield one's reputation; and in others, to strengthen it to get a potentially controversial proposition accepted. In addition, such fine-tuning will have additional effects on the persona a speaker projects, e.g. as cautious or bold (Burnett, 2019).

It is well-known that speech acts can be weakened or strengthened. Holmes (1984) discusses different ways of "attenuating" and "boosting" speech acts, including assertions. Searle and Vanderveken (1985) assume that speech acts in general come with five distinct levels of strength, as expressed by speech act verbs such as *suggest* and *swear*. Sbisà (2001) investigates linguistic tools that "mitigate" speech acts, which include deontic operators like *I must say* and marking a reduced state of assertion, like *my suggestion is*. She states that "the speaker's commitment is often downgraded, so as to lower the cost of the speech act, thereby making it more easily defensible." Caffi (2013) characterizes mitigation as being driven by hedging the risks and responsibilities that come with communication for the speaker, mentioning prosodic devices like rising intonation, syntactic devices like tag questions, lexical devices such as parentheticals like *I think*, epistemic adverbs like *probably* and reportative evidentials like *allegedly*. More recently, there are formal accounts for weakening assertions. Wolf (2015) proposes a probabilistic interpretation of assertions with epistemic operators, where a regular assertion of *probably* p is tantamount to a weakened assertion of p. Incurvati and Schlöder (2019) propose that the modifier perhaps indicates a weak assertion, in the sense that *perhaps* p prevents the proposition $\neg p$ from being added to the common ground.

In this talk I present a taxonomy of the linguistic means to weaken or strengthen assertions, understood as adjustments on the reputation of trustworthiness of the speaker (cf. Krifka, 2026).

1. The speaker can modify the proposition to be communicated itself, typically by reducing the likelihood that it is false. This can be done by weakening the proposition with hedges like *roughly*, *about*, *approximately* and *sort of* that create a "pragmatic halo" effect (Lasersohn, 1999). It can also be done by selecting more general expressions, or measure terms with round numbers (Solt, 2015).

2. The speaker can commit to his or her own supportive subjective epistemic stance towards

the proposition by epistemic adverbs like *probably* (Ernst, 2009) and parenthetical verbs like *I think* (Urmson, 1952). Such devices have a mitigating effect even for strong epistemic modals like *certainly* (cf. Lassiter, 2016; Yatsushiro et al., 2022). The reason is that it is easier to defend one's prior epistemic attitude towards a proposition even if it has turned out to be false.

3. The speaker can commit to the supporting evidence for the proposition. This can be expressed by grammatical or lexical evidentials, e.g. adverbs like *apparently* and *obviously*, and by appeal to one's (possibly faulty) memory, as in *as far as I remember*. This includes reportative evidence where a commitment of another person is relayed as relevant for the current conversation, as in *people say* or *according to Bill*. This supports the proposition itself as well, but only insofar as one can trust the evidence (Müller, 2021).

4. It is also possible to fine-tune the strength of the commitment itself, as in *I guess* and *I swear*, and by adverbs like *seriously*. It furthermore includes the appeal to trusted or sacred authorities, like *by God* or *by my mother's grave*. It has been claimed that commitments, in contrast to beliefs, are not gradable (Geurts, 2019). However, I argue that these linguistic means indicate how much risk the speaker wants to occur in vouching for the proposition, thus communicating to the addressee the level of support.

I argue that these distinct morphosyntactic means can be modelled in a refined version of the account of Krifka (2023), who distinguishes between distinct syntactic layers above the TP that expresses the asserted proposition.

I will furthermore report on the results of two experiments, in German, in which 450 (120) participants judged the effect of assertions in a scenario in which they turned out to be true or false (cf. Krifka, 2026). The participants had to indicate on a 4-item Likert scale whether the trustworthiness of the speaker stayed the same (0), increased (+), decreased a bit (−) or decreased (−−). The experiment investigated differences between unmodified assertions (0) and assertions modified by the commitment changers *echt* ('really'), *wirklich* ('truly'), *ich sag mal* ('I would say') and *hundertprozentig* ('one hundred percent'), by the subjective epistemics *wahrscheinlich* ('probably') and *sicher* ('certainly'), and by the adjectival epistemic *es ist sicher* ('it is certain'), a proposition modifier. I also investigated assertions vs. corresponding sentence exclamatives marked by *Mensch!* ('man!'). The experiment showed partly the hypothesized effects. I will reflect on possible variations of the experimental setup.

References

Burnett, H. (2019). Signalling games, sociolinguistic variation and the construction of style. *Linguistics and Philosophy*, *42*(5), 419–450. https://www.jstor.org/stable/45218676

Caffi, C. (2013). Mitigation. In M. Sbisà & K. Turner (Eds.), *Pragmatics of Speech Actions* (pp. 257–286, Vol. 2). Walter de Gruyter.

Ernst, T. (2009). Speaker-oriented adverbs. *Natural Language & Linguistic Theory*, *27*(3), 497–544. https://doi.org/10.1007/s11049-009-9069-1

Geurts, B. (2019). Communication as commitment sharing: Speech acts, implicatures, common ground. *Theoretical Linguistics*, *45*(1-2), 1–30. https://doi.org/10.1515/tl-2019-0001

Holmes, J. (1984). Modifying illocutionary force. *Journal of Pragmatics*, *8*(3), 345–365. https://doi.org/10.1016/0378-2166(84)90028-6

Incurvati, L., & Schlöder, J. J. (2019). Weak Assertion. *The Philosophical Quarterly*, *69*(277), 741–770. https://doi.org/10.1093/pq/pqz016

Krifka, M. (2023). Layers of assertive clauses: Propositions, judgments, commitments, acts. In J. M. Hartmann & A. Wöllstein (Eds.), *Propositionale Argumente im Sprachvergleich / Propositional arguments in cross-linguistic research: Theorie und Empirie / Theoretical and empirical issues* (pp. 115–181). Gunter Narr Verlag.

Krifka, M. (2026). Managing the reputation of trustworthiness in face-to-face communication. *Frontiers in Communication*, *10*, 1688492. https://doi.org/10.3389/fcomm.2025.1688492

Lasersohn, P. (1999). Pragmatic halos. *Language*, *75*(3), 522–551. https://doi.org/10.2307/417059

Lassiter, D. (2016). *Must*, knowledge, and (in)directness. *Natural Language Semantics*, *24*(2), 117–163. https://doi.org/10.1007/s11050-016-9121-8

Müller, K. (2021). *Satzadverbien und Evidentialität*. Mouton de Gruyter.

Sbisà, M. (2001). Illocutionary force and degrees of strength in language use. *Journal of Pragmatics*, *33*(12), 1791–1814. https://doi.org/10.1016/S0378-2166(00)00060-6

Searle, J. R., & Vanderveken, D. (1985). *Foundations of illocutionary logic*. Cambridge University Press.

Solt, S. (2015). Vagueness and imprecision: Empirical foundations. *Annual Review of Linguistics*, *1*, 107–127. https://doi.org/10.1146/annurev-linguist-030514-125150

Tuzet, G. (2006). Responsible for truth? Peirce on judgment and assertion. *Cognitio*, *7*, 317–336. https://papers.ssrn.com/abstract=2888435

Urmson, J. O. (1952). Parenthetical verbs. *Mind*, *61*(244), 480–496. https://www.jstor.org/stable/2251029

Wolf, L. (2015). *Degrees of assertion* [Doctoral dissertation]. Ben Gurion University of the Negev.

Yatsushiro, K., Trinh, T., Żygis, M., Solt, S., Benz, A., & Krifka, M. (2022). *Certainly* but not *certain*: The expression of subjective and objective probability. *Glossa: a journal of general linguistics*, *7*(1). https://doi.org/10.16995/glossa.5847

Measuring commitment: A diagnostic comparison using belief–commitment dissociation

Lennart Fritzsche (presenter)

Goethe-Universität Frankfurt

Overview. Experimental work on commitment uses a range of indirect diagnostics (e.g. Bonalumi et al., 2020, 2024; Krifka, 2026; Mazzarella et al., 2018; Weissman, 2024). However, it is unclear whether results obtained with different diagnostics are comparable. It is also unclear whether some diagnostics track commitment or instead are sensitive to belief (see Yates et al. (2025) for discussion), a distinction that is central in commitment-based accounts of speech acts (e.g. Brandom, 1983; Geurts, 2019; Krifka, 2023; Peirce, 1994). We present a series of planned experiments comparing these diagnostics with respect to (i) whether they track commitment rather than belief, and (ii) whether diagnostics that track commitment yield comparable results. Data collection will be completed by the time of the workshop.

Design. All experiments use the same set of English items ($N = 24$), each realized in three conditions:

(1) a. **Assertion (A):**
The museum is open today.

b. **Belief-boosted, commitment-weakened (B):**
I fully believe that the museum is open today, but I wouldn't bet my money on it.

c. **Commitment-boosted, belief-weakened (C):**
The museum is definitely open today, but I don't believe it.

In all scenarios, p later turns out to be false (= the museum is closed). The design aims to dissociate belief and commitment. In (A), both belief and commitment are high. In (B), belief is strengthened while commitment is weakened. In (C), commitment is strengthened while belief is weakened. Acceptability of the materials will be assessed in a separate pretest, and minor adjustments (e.g., the inclusion of a focus particle such as *still* in the *but*-clause to mitigate paradoxicality) will be considered if needed.

Experimental program. The study comprises five planned experiments on these materials ($N = 75$ each). Each experiment implements a within-subject manipulation of UTTERANCE TYPE (three levels, cf. Example (1)) and tests a different diagnostic with a separate participant sample. A baseline experiment collects certainty ratings (*How certain is X that p?*) as a measure of belief. The remaining experiments test (i) plausible deniability and accountability (*Could X convincingly deny having said that p?*, *Would X have to explain themselves?*), (ii) trustworthiness (*How much would you trust X in a similar situation again?*), (iii) apology (*Should X apologize?*), and (iv) lying (*Did X lie?*). All judgments are collected on 7-point Likert scales.

Predictions and evaluation. Graphic predictions are shown in Figure 1. Certainty ratings are predicted to be high for (A) and (B), and low for (C), since they track the speaker's attributed belief. Commitment diagnostics are predicted to show a different pattern: high values for (A) and (C), and lower values for (B), since they are intended to track publicly undertaken commitments rather than belief.

Diagnostics are evaluated in terms of their response profiles across conditions. If a diagnostic reproduces the certainty pattern, this indicates that it tracks belief and is therefore not a suitable measure of commitment. If it shows

the complementary pattern, with (A) and (C) patterned together against (B), this supports a commitment-based interpretation.

Independently of this contrast, diagnostics are compared in terms of whether they converge on the same response profile across conditions, which bears on the comparability of results obtained with different measures.

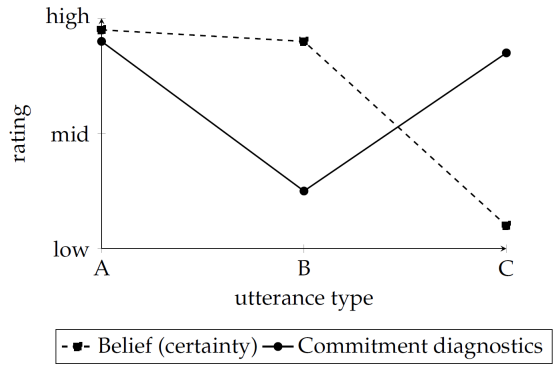

Figure 1: Predicted response profiles. A = assertion, B = belief-boosted, commitmentweakened, C = commitment-boosted, belief-weakened. The dashed line shows the belief baseline (certainty). The solid line shows the predicted pattern for commitment diagnostics. Values are schematic and reflect predicted ordering across conditions.

References

Bonalumi, F., Mahr, J. B., Marie, P., & Pouscoulous, N. (2024). Beyond the implicit/explicit dichotomy: The pragmatics of plausible deniability. *Review of Philosophy and Psychology*, *15*(4), 1399–1421. https://doi.org/10.1007/s13164-023-00699-5

Bonalumi, F., Scott-Phillips, T., Tacha, J., & Heintz, C. (2020). Commitment and communication: Are we committed to what we mean, or what we say? *Language and Cognition*, *12*(2), 360–384. https://doi.org/10.1017/langcog.2020.2

Brandom, R. (1983). Asserting. *Noûs*, *17*(4), 637–650. https://doi.org/10.2307/2215086

Geurts, B. (2019). Commitments continued. *Theoretical Linguistics*, *45*(1-2), 111–125. https://doi.org/10.1515/tl-2019-0009

Krifka, M. (2023). Layers of assertive clauses: Propositions, judgments, commitments, acts. In J. M. Hartmann & A. Wöllstein (Eds.), *Propositionale Argumente im Sprachvergleich / Propositional arguments in cross-linguistic research: Theorie und Empirie / Theoretical and empirical issues* (pp. 115–181). Gunter Narr Verlag.

Krifka, M. (2026). Managing the reputation of trustworthiness in face-to-face communication. *Frontiers in Communication*, *10*, 1688492. https://doi.org/10.3389/fcomm.2025.1688492

Mazzarella, D., Reinecke, R., Noveck, I., & Mercier, H. (2018). Saying, presupposing and implicating: How pragmatics modulates commitment. *Journal of Pragmatics*, *133*, 15–27. https://doi.org/10.1016/j.pragma.2018.05.009

Peirce, C. S. (1994). *Collected papers of Charles Sanders Peirce* (J. N. Deely, A. W. Burks, C. Hartshorne, & P. Weiss, Eds.). Intelex.

Weissman, B. (2024). Can an emoji be a lie? The links between emoji meaning, commitment, and lying. *Journal of Pragmatics*, *219*, 12–29. https://doi.org/10.1016/j.pragma.2023.11.004

Yates, H., Bary, C., Swart, P. d., & Tiel, B. v. (2025). fEMG as a window into conversational commitments. *Proceedings of Sinn und Bedeutung*, *29*, 1765–1783. https://doi.org/10.18148/sub/2024.v29.1308

Committing in German: Measuring the contribution of modal particles

Hannah Seeman (presenter), **Britta Stolterfoht** (presenter)

Universität Tübingen

Recent empirical work has pointed towards commitment being graded, with speakers being assessed to be less committed to content introduced by indirect means (Antomo et al., 2025; Viebahn et al., 2021; Wiegmann et al., 2022). Reducing (and possibly even avoiding) commitment is thus possible via various linguistic strategies, especially not-at-issue (NAI) material (Liu, 2021). One group of elements that has been frequently associated with indicating and modifying speaker commitment in German are modal particles (MPs; Gast, 2008; Repp, 2013; Zimmermann, 2004):

(1) a. Käsekuchen ist **ja** ihr Lieblingskuchen.
'(I expect you to know:) Cheesecake is her favorite cake.'

b. Käsekuchen ist **doch** ihr Lieblingskuchen.
'(In contrast to what was previously insinuated:) Cheesecake is her favorite cake.'

c. Käsekuchen ist **wohl** ihr Lieblingskuchen.
'(I guess:) Cheesecake is her favorite cake.'

Modal particles inform about an utterance concerning its status in the Common Ground: *ja* and *doch* in (1a) and (1b) indicate cheesecake being her favorite cake to be Common Ground between all interlocutors; *wohl* in (1c) signals that the speaker is uncertain about the proposition expressed in the *wohl*-utterance. Therefore, *wohl* is usually described as indicating low speaker commitment (e.g. Döring, 2018; Gast, 2008; Zimmermann, 2004). Other accounts propose that modal particles commit speakers to the pragmatic, NAI content added by the particle, not to the proposition conveyed by the MP-utterance – e.g., the speaker in (1a) commits to the propositional content already being known to the addressee (Karagjosova, 2004; Kaufmann & Kaufmann, 2012; Krifka, 2023; Repp, 2013).

Since previous work on modal particles and commitment has been mostly theoretical, we conduct a rating study to provide empirical evidence regarding commitment modification by modal particles (experiment 1). Building on both the conceptualization of com-mitments as normative obligations that can be (socially) sanctioned if broken (Bary, 2025; Geurts, 2019; Krifka, 2019) and previous experimental work (Antomo et al., 2025; Krifka, 2026; Mazzarella et al., 2018; Reins & Wiegmann, 2021), we measure commitment in terms of accountability. Furthermore, the aforementioned MP-accounts focus on pre-sumed commitment and knowledge on the side of the speaker; what remains an open question is the particles' effect on commitment and knowledge of the addressee. To close this gap, we assess the effect of modal particles on the epistemic status of an MP-utterance in a second rating study (experiment 2).

We test the same general context and critical sentence in both experiments to enable comparisons between speaker commitment and an information's epistemic status on the side of both speaker and addressee:[1]

[1]The experiments are preregistered as experiment 1 and 3 here: OSF | Modal Particles as Indicators of Commitment and Common Ground

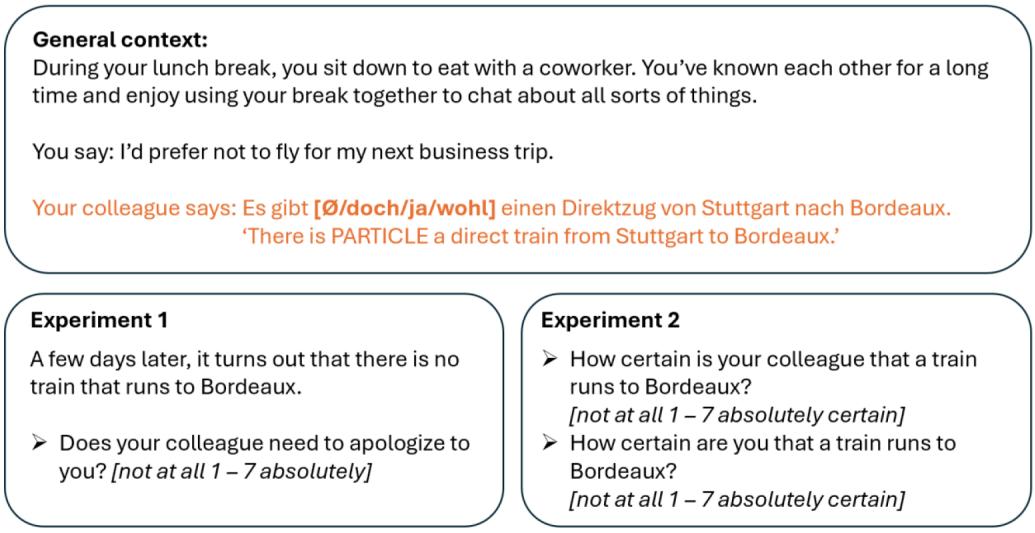

Figure 1: Experimental design for experiments 1 and 2. The critical sentence is displayed in orange.

By providing empirical evidence for the effect modal particles have on commitment, the study will contribute experimental results related to the question of how NAI content and commitment interact while also taking the addressee's perspective into account.

References

Antomo, M., Fricke, L., Grosz, P. G., & Scheffler, T. (2025). Lying with at-issue and not-at-issue emojis. *Proceedings of Sinn und Bedeutung*, *29*, 77–97. https://doi.org/10.18148/sub/2025.v29.1195

Bary, C. (2025). Speech acts, common ground and commitments. *Linguistics and Philosophy*, *48*(3), 505–526. https://doi.org/10.1007/s10988-025-09434-y

Döring, S. (2018). *Modal particles, discourse structure and common ground management.* [Doctoral dissertation]. Humboldt-Universität zu Berlin.

Gast, V. (2008). Modal particles and context updating – the functions of German *ja*, *doch*, *wohl* and *etwa*. In O. Letnes, E. Maagerø, & H. Vater (Eds.), *Modalverben und Grammatikalisierung* (pp. 153–177, Vol. 34). Wissenschaftlicher Verlag.

Geurts, B. (2019). Commitments continued. *Theoretical Linguistics*, *45*(1-2), 111–125. https://doi.org/10.1515/tl-2019-0009

Karagjosova, E. (2004). *The meaning and function of German modal particles* [Doctoral dissertation]. Utrecht University.

Kaufmann, M., & Kaufmann, S. (2012). Epistemic particles and perfomativity. *Semantics and Linguistic Theory*, *22*, 208. https://doi.org/10.3765/salt.v22i0.2635

Krifka, M. (2019). Commitments and beyond. *Theoretical Linguistics*, *45*(1-2), 73–91. https://doi.org/10.1515/tl-2019-0006

Krifka, M. (2023). Layers of assertive clauses: Propositions, judgments, commitments, acts. In J. M. Hartmann & A. Wöllstein (Eds.), *Propositionale Argumente im Sprachvergleich / Propositional arguments in cross-linguistic research: Theorie und Empirie / Theoretical and empirical issues* (pp. 115–181). Gunter Narr Verlag.

Krifka, M. (2026). Managing the reputation of trustworthiness in face-to-face communication. *Frontiers in Communication*, *10*, 1688492. https://doi.org/10.3389/fcomm.2025.1688492

Liu, M. (2021). Processing non-at-issue meanings of conditional connectives: The *wenn/falls* contrast in German. *Frontiers in Psychology*, *12*, 629177. https://doi.org/10.3389/fpsyg.2021.629177

Mazzarella, D., Reinecke, R., Noveck, I., & Mercier, H. (2018). Saying, presupposing and implicating: How pragmatics modulates commitment. *Journal of Pragmatics*, *133*, 15–27. https://doi.org/10.1016/j.pragma.2018.05.009

Reins, L. M., & Wiegmann, A. (2021). Is lying bound to commitment? Empirically investigating deceptive presuppositions, implicatures, and actions. *Cognitive Science*, *45*(2), e12936. https://doi.org/10.1111/cogs.12936

Repp, S. (2013). Common ground management: Modal particles, illocutionary negation and verum. In D. Gutzmann & H.-M. Gärtner (Eds.), *Beyond Expressives: Explorations in Use-Conditional Meaning* (pp. 231–274, Vol. 28). Brill.

Viebahn, E., Wiegmann, A., Engelmann, N., & Willemsen, P. (2021). Can a question be a lie? An empirical investigation. *Ergo an Open Access Journal of Philosophy*, *8*, 7. https://doi.org/10.3998/ergo.1144

Wiegmann, A., Willemsen, P., & Meibauer, J. (2022). Lying, deceptive implicatures, and commitment. *Ergo an Open Access Journal of Philosophy*, *8*, 50. https://doi.org/10.3998/ergo.2251

Zimmermann, M. (2004). Zum *wohl*: Diskurspartikeln als Satztypmodifikatoren. *Linguistische Berichte*, *199*, 253–286. https://doi.org/10.46771/9783967696974_1

Differences in commitment marking in Large Language Models vs. humans

Nicole Katzir (presenter), **Natalia Levshina**

Radboud Universiteit

Large Language Models (LLMs) suffer from "epistemic miscalibration," i.e., they generate information with higher verbal confidence than their actual internal probabilities warrant (Ghafouri et al., 2024; Steyvers et al., 2025). This leads humans to misinterpret such outputs as reflecting high confidence (ibid.). While previous studies have examined this issue primarily from a computational perspective, the present research adopts a corpus-linguistics approach, focusing on the category of epistemic stance in human and LLM outputs, using the Human-AI Parallel English (HAP-E) corpus (Reinhart et al., 2025).

We treat epistemic stance as the linguistic expression of a speaker's commitment to the truth of a proposition. Markers of epistemic stance may be used to guide the addressee's assessment of the speaker's credibility and, consequently, their willingness to accept a proposition and its contextual implications. Thus, we ask whether LLMs differ from humans in the distribution of such expressions.

Data. The HAP-E corpus includes 12,000 human-authored English texts from six types (academic, news, fiction, spoken, blogs, and television and movie scripts), each paired with continuations generated by six different LMs from the GPT-4o and Llama 3 families. The GPT-4o and two of the Llama-based models are instruction-tuned, i.e., they have undergone further training to better align with users' goals.

Method. An extensive list of lexicogrammatical epistemic stance-marking features was compiled based on Biber et al. (2004). The features include verb-, adjective- and noun-controlled complement clauses, modals, and various adverb types (e.g., certainty, imprecision, and degree adverbs). We used NLP methods, such as part-of-speech (POS) tagging and dependency parsing, to extract these features from the HAP-E corpus. We compare four sources: human data, instruction-tuned GPT-4o and Llama-based models, and non-instruction-tuned Llama-based models. Previous research suggests that instruction-tuned models generate output that diverges more from human writing (Reinhart et al., 2025) and exhibit a larger gap between models' verbalized confidence and actual accuracy (Leng et al., 2024), raising the question of whether such differences are also reflected in how they mark stance.

A set of binomial Bayesian models (one for each genre in HAP-E) is used to identify which factors (POS and whether an expression marks an increased or decreased commitment) vary between human-authored text from each source type (human/Llama-base/Llama-base (instruction tuned)/GPT-4o (instruction tuned)).

Preliminary findings. The preliminary results show that instruction-tuned models systematically underproduce both increasing and decreasing commitment expressions across genres. In contrast, non-instruction-tuned Llama models often show the opposite pattern, with increased rates of commitment marking, particularly for increasing commitment. These effects are not uniform: they vary by POS, with

adverbs showing the most consistent reduction across models, and by genre, with a stronger overall decrease in commitment-marking expressions in academic and news writing than in spoken or fictional texts.

We raise possible reasons for this pattern, such as that humans face different functional pressures when conveying commitment (Hyland, 1996), or that LLMs and humans map expressions of (un)certainty to the probabilities they convey differently (Tang et al., 2026), and that raters penalize LLM outputs that include hedges (Zhou et al., 2024).

References

Biber, D., Conrad, S., Reppen, R., Byrd, P., Helt, M., Clark, V., Cortes, V., Csomay, E., & Urzua, A. (2004). *Representing Language Use in the University: Analysis of the TOEFL 2000 Spoken and Written Academic Language Corpus*. Educational Testing Service.

Ghafouri, B., Mohammadzadeh, S., Zhou, J., Nair, P., Tian, J.-J., Tsujimura, H., Goel, M., Krishna, S., Rabbany, R., Godbout, J.-F., & Pelrine, K. (2024). Epistemic integrity in large language models [Version Number: 2].

Hyland, K. (1996). Writing without conviction? Hedging in science research articles. *Applied Linguistics*, *17*(4), 433–454. https://doi.org/10.1093/applin/17.4.433

Leng, J., Huang, C., Zhu, B., & Huang, J. (2024). Taming overconfidence in LLMs: Reward calibration in RLHF.

Reinhart, A., Markey, B., Laudenbach, M., Pantusen, K., Yurko, R., Weinberg, G., & Brown, D. W. (2025). Do LLMs write like humans? Variation in grammatical and rhetorical styles. *Proceedings of the National Academy of Sciences*, *122*(8), e2422455122. https://doi.org/10.1073/pnas.2422455122

Steyvers, M., Tejeda, H., Kumar, A., Belem, C., Karny, S., Hu, X., Mayer, L. W., & Smyth, P. (2025). What large language models know and what people think they know. *Nature Machine Intelligence*, *7*(2), 221–231. https://doi.org/10.1038/s42256-024-00976-7

Tang, Z., Shen, K., & Kejriwal, M. (2026). An evaluation of estimative uncertainty in large language models. *npj Complexity*, *3*(1), 8. https://doi.org/10.1038/s44260-026-00070-6

Zhou, K., Hwang, J. D., Ren, X., & Sap, M. (2024). Relying on the unreliable: The impact of language models' reluctance to express uncertainty.

Tracing commitments in communication via facial electromyography

Harriet Yates (presenter), **Corien Bary** (presenter), **Thomas van der Leer** (presenter), **Bob van Tiel**, **Peter de Swart**

Radboud Universiteit

Recently, it has been argued that much of what happens in communication can be understood in terms of undertaking commitments (Geurts, 2019). When a speaker utters an assertion, they commit to the truth of that proposition (Hamblin, 1971); when they use a word, they commit to the appropriateness of that term (Harris, 2016; Hess, 2020). Despite their central role, a full understanding of how we undertake, attribute and avoid commitments is missing. In this project, we aim to find a way to gather reliable data on the assignment of commitments in communication. Only then will we know what theoretical analyses should account for, and whether existing analyses are on the right track.

In this talk, we present a series of experiments which demonstrate that the physiological measure of facial electromyography (fEMG)—the recording of facial muscle activity—is a useful methodology for studying commitments in communication. Specifically, we experimentally demonstrate that we can use fEMG to measure norm violations in conversation via the *corrugator supercilii* (the inner-eyebrow "frowning" muscle), and from there infer the commitments taken on by speakers (Yates et al., 2025). We start from the relatively uncontroversial assumption that with plain assertions speakers commit to the truth of the proposition they express; if they continue speaking in an incongruent way, this will cause observers to frown.

Having established the proof of method, we outline two further experiments which apply this method to ongoing pragmatic debates: the effect of reportative evidentials on speaker commitment, and the use of scare quoting as a distancing strategy. In the first, we find that adding 'I heard' to an utterance lowers perceived speaker commitment, but that this effect is not modulated by the syntactic construction used (parenthetical vs. embedding). In the second, we find that presenting a word within scare quotes lowers perceived speaker commitment to the appropriateness of that word.

We show how this methodology contributes valuable empirical evidence to these discussions, and thus to a better understanding of what happens when we communicate. Looking ahead, we discuss potential further applications of fEMG for studying commitments, for instance in empirically investigating addressee commitment and the role of at-issueness.

References

Geurts, B. (2019). Communication as commitment sharing: Speech acts, implicatures, common ground. *Theoretical Linguistics*, *45*(1-2), 1–30. https://doi.org/https://doi.org/10.1515/tl-2019-0001

Hamblin, C. L. (1971). Mathematical models of dialogue. *Theoria*, *37*, 130–155.

Harris, J. (2016). Commitments by proxy: Perspective management with transparent free relatives [Abstract for talk at the GLOW Workshop on Perspectivization, Göttingen, Germany].

Hess, L. (2020). Practices of slur use. *Grazer Philosophische Studien*, *97*(1), 86–105. https://doi.org/10.1163/18756735-09701006

Yates, H., Bary, C., Swart, P. d., & Tiel, B. v. (2025). fEMG as a window into conversational commitments. *Proceedings of Sinn und Bedeutung*, *29*, 1765–1783. https://doi.org/10.18148/sub/2024.v29.1308

Commitment attribution in German tag questions: Evidence from judgment-elicitation experiments

Yulia Clausen (presenter), **Tatjana Scheffler**

Ruhr-Universität Bochum

We present experimental results revealing how readers attribute speaker and hearer commitments in different tag question (TQ) types (Clausen & Scheffler, 2020). We focus on TQs consisting of a declarative anchor followed by a question tag. These utterances express the speaker's commitment to the anchor proposition while also inquiring about the addressee's commitment to that proposition. TQ types differ with respect to the type of involved commitment and the type of requested response (Malamud & Stephenson, 2015; Wiltschko et al., 2018). In German, tags are generally interchangeable across these TQ types, but remain subject to contextual constraints, as (1–3) illustrate.

(1) *Agreement-seeking TQ* (independent commitments of both speaker and addressee; requests agreement on an opinion)
Eva and Laura are talking about their mutual friend Mark. Laura says:
Er ist attraktiv, gell/(?)ja/ne/nicht/oder?
He's attractive, TAG?

(2) *Inquisitive TQ* (contingent speaker commitment and independent addressee commitment; requests confirmation of the proposition's truth)
Else tells her brother Martin that the letter she sent to their grandmother was returned despite the correct address. Martin asks:
Du hast den Brief falsch frankiert, gell/(?)ja/ne/nicht/oder?
You stamped the letter incorrectly, TAG?

(3) *Assertive TQ* (independent speaker commitment and dependent addressee commitment; requests acknowledgment of provided information)
Anna is out walking her new dog when she runs into her acquaintance Peter. Expecting him to congratulate her, but noticing that he does not, she says:
*Ich habe einen neuen Hund, gell/(?)ja/ne/(?)nicht/*oder.*
I have a new dog, TAG.

We examine contextual factors governing the use of the tags *gell*, *ja*, *ne*, *nicht* and *oder* across these TQ types in two large-scale online judgment-elicitation experiments. Participants rated the felicity of utterances with different tags in short conversational scenarios that reflect the properties of the delineated TQ types. In the target items, speaker and hearer commitments were conveyed through semantic content, lexical cues and punctuation (question mark vs. full stop). Control items included declarative sentences that clearly signal full speaker commitment. We demonstrate how commitments can be operationalized and systematically manipulated via constructed conversational scenarios, taking into account both the type of commitment (contingent/independent etc.) and its strength. Our results allow us to identify patterns of commitment attribution in TQs and highlight cases in which this does not function as expected, suggesting that commitment interacts with and potentially influences other phenomena, such as speech acts and pragmatic functions of tags. We find that TQs are primarily interpreted as utterances that inquire about independent commitments of the addressee. This presents a difficulty for TQs that combine a full, independent speaker commitment with a request: the acceptability-judgments for such TQs are inconsistent with corpus-based evidence (Clausen, 2021; Clausen & Scheffler, 2022; König, 2017). We will discuss the challenges of experimentally testing assertive TQs and broader methodological questions of studying commitment attribution in TQs. This includes issues with operationalizing commit-

ment through descriptions of the conversational contexts in experimental items and the extent to which TQ properties and specific tag forms interact with contextual cues.

References

Clausen, Y. (2021). You shall know a tag by the context it occurs in: An analysis of German tag questions and their responses in spontaneous conversations. *Proceedings of the 29th Conference of the Student Organization of Linguistics in Europe*, 116–140.

Clausen, Y., & Scheffler, T. (2020). Commitments in German tag questions: An experimental study. *Proceedings of the 24th Workshop on the Semantics and Pragmatics of Dialogue*. https://www.semdial.org/anthology/papers/Z/Z20/Z20-3014/

Clausen, Y., & Scheffler, T. (2022). A corpus-based analysis of meaning variations in German tag questions: Evidence from spoken and written conversational corpora. *Corpus Linguistics and Linguistic Theory*, *18*(1), 1–31. https://doi.org/10.1515/cllt-2019-0060

König, K. (2017). Question tags als Diskursmarker? – Ansätze zu einer systematischen Beschreibung von *ne* im gesprochenen Deutsch. In H. Blühdorn, A. Deppermann, H. Helmer, & T. Spranz-Fogasy (Eds.), *Diskursmarker im Deutschen. Reflexionen und Analysen* (pp. 233–258).

Malamud, S. A., & Stephenson, T. (2015). Three ways to avoid commitments: Declarative force modifiers in the conversational scoreboard. *Journal of Semantics*, *32*(2), 275–311. https://doi.org/10.1093/jos/ffu002

Wiltschko, M., Denis, D., & D'Arcy, A. (2018). Deconstructing variation in pragmatic function: A transdisciplinary case study. *Language in Society*, *47*(4), 569–599. https://doi.org/10.1017/S004740451800057X

Measuring commitment in iconic gesture: The role of (not-)at-issueness

Sebastian Walter (presenter), **Jonas Hartke**

Goethe-Universität Frankfurt

Overview. Iconic co-speech gestures are standardly analyzed as contributing not-at-issue meaning, i.e., backgrounded content that does not directly affect the truth-conditional core of an utterance and thus not part of the assertion (**ebert_gestures_**; Schlenker, 2018). While the default not-at-issue status of co-speech gestures has been experimentally validated (Ebert et al., 2020; Tieu et al., 2018), considerably less is known about how the at-issue status of iconic enrichments affects speaker commitment. More generally, commitment is not directly observable but is typically assessed via a range of indirect diagnostics, such as accountability and deniability (Antomo & Chen, 2025; Weissman, 2024).

Background. We investigate how the attribution of speaker commitment depends on the at-issue status of iconic gestures. Research on pointing gestures shows that speakers are perceived to be committed to gestural content—albeit often to a lesser degree than to verbal content (Antomo & Chen, 2025). We test whether iconic co-speech gestures pattern similarly when interpreted as not-at-issue modifiers versus when they make at-issue contributions. We focus on gestures in the NP-domain, where at-issueness can be manipulated via alignment with demonstratives, which shift content from the not-at-issue to the at-issue dimension (Ebert et al., 2020).

This question bears directly on current debates on lying and commitment. Traditional definitions of lying require that a speaker asserts a false proposition (Stokke, 2018), whereas more recent approaches define lying in terms of commitment, allowing for any communicative act that gives rise to commitment to false content, (Marsili, 2021; Viebahn, 2019). Commitment has further been argued to be gradient and influenced by factors such as the strength and accessibility of the conveyed content (Mazzarella et al., 2018; Moeschler, 2013), as well as its relevance to the discourse (Bonalumi et al., 2020; Reins & Wiegmann, 2021).

Proposed experiment. We report a video-based rating study with a single-factor design (gesture vs. demonstrative + gesture vs. adjective), in which all target utterances are embedded in contexts that establish clear cases of lying, i.e., cases where the speaker is known to possess correct information (e.g., about the dog's size in (1)) but intentionally misrepresents it. Participants rate (i) accountability, (ii) discursive responsibility, and (iii) plausible deniability on continuous slider scales (cf. Antomo & Chen, 2025; Antomo et al., 2025). A representative item is given in (1):

(1) a. Ich habe mir [einen Hund] gekauft.
LARGE
'I have bought [a dog].'

b. Ich habe mir [so einen Hund] gekauft.
LARGE
'I have bought a dog [like this].'

c. Ich habe mir einen großen Hund gekauft.
'I have bought a big dog.'

In (1a), size information is conveyed via an iconic co-speech gesture and is expected to be interpreted as not at-issue. In (1b), alignment with the demonstrative integrates the gestural content more tightly into the at-issue dimen-

sion. In (1c), the same content is expressed via an adjective, serving as an at-issue baseline.

Discussion. The central question is whether speakers can be said to lie with not-at-issue content to the same extent as with at-issue content, or whether such content weakens attributed commitment. Previous work suggests a link between at-issueness and commitment, with at-issue content giving rise to stronger commitment than backgrounded content (Antomo & Chen, 2025). We hypothesize that commitment attribution tracks this distinction: fully at-issue content should yield the highest accountability and responsibility and the lowest deniability, while purely gestural modification should pattern at the opposite end. Demonstrative + gesture configurations are predicted to occupy an intermediate position, in line with a gradient approach to at-issueness (Barnes & Ebert, 2023).

References

Antomo, M., & Chen, Y. (2025). Lying and commitment: The case of pointing gestures. *Proceedings of Sinn und Bedeutung*, *29*, 59–76. https://doi.org/10.18148/sub/2025.v29.1193

Antomo, M., Fricke, L., Grosz, P. G., & Scheffler, T. (2025). Lying with at-issue and not-at-issue emojis. *Proceedings of Sinn und Bedeutung*, *29*, 77–97. https://doi.org/10.18148/sub/2025.v29.1195

Barnes, K., & Ebert, C. (2023). The information status of iconic enrichments: Modelling gradient at-issueness. *Theoretical Linguistics*, *49*(3-4), 167–223. https://doi.org/10.1515/tl-2023-2009

Bonalumi, F., Scott-Phillips, T., Tacha, J., & Heintz, C. (2020). Commitment and communication: Are we committed to what we mean, or what we say? *Language and Cognition*, *12*(2), 360–384. https://doi.org/10.1017/langcog.2020.2

Ebert, C., Ebert, C., & Hörnig, R. (2020). Demonstratives as dimension shifters. *Proceedings of Sinn und Bedeutung*, *24*(1), 161–178. https://doi.org/10.18148/sub/2020.v24i1.859

Marsili, N. (2021). Lying, speech acts, and commitment. *Synthese*, *199*(1), 3245–3269. https://doi.org/10.1007/s11229-020-02933-4

Mazzarella, D., Reinecke, R., Noveck, I., & Mercier, H. (2018). Saying, presupposing and implicating: How pragmatics modulates commitment. *Journal of Pragmatics*, *133*, 15–27. https://doi.org/10.1016/j.pragma.2018.05.009

Moeschler, J. (2013). Is a speaker-based pragmatics possible? Or how can a hearer infer a speaker's commitment? *Journal of Pragmatics*, *48*(1), 84–97. https://doi.org/10.1016/j.pragma.2012.11.019

Reins, L. M., & Wiegmann, A. (2021). Is lying bound to commitment? Empirically investigating deceptive presuppositions, implicatures, and actions. *Cognitive Science*, *45*(2), e12936. https://doi.org/10.1111/cogs.12936

Schlenker, P. (2018). Gesture projection and cosuppositions. *Linguistics and Philosophy*, *41*(3), 295–365. https://doi.org/10.1007/s10988-017-9225-8

Stokke, A. (2018). *Lying and Insincerity*. Oxford University Press.

Tieu, L., Pasternak, R., Schlenker, P., & Chemla, E. (2018). Co-speech gesture projection: Evidence from inferential judgments. *Glossa*, *3*(1), 1–21. https://doi.org/10.5334/gjgl.580

Viebahn, E. (2019). Lying with pictures. *The British Journal of Aesthetics*, *59*(3), 243–257. https://doi.org/10.1093/aesthj/ayz008

Weissman, B. (2024). Can an emoji be a lie? The links between emoji meaning, commitment, and lying. *Journal of Pragmatics*, *219*, 12–29. https://doi.org/10.1016/j.pragma.2023.11.004

Multimodal investment in epistemic stance expression: Gestural and prosodic indicators of speaker commitment

Ana Celmare (presenter), **Merel Scholman**, **Vera Demberg**

Universität des Saarlandes

Background. Stance-taking is a central resource in communication, because it allows people to express their opinions and attitudes about a topic, beyond propositional content. Compare Examples (1) and (2): they have the same propositional content (it is raining), but the underlined stance markers modulate how the utterances are perceived.

(1) I'm pretty sure it's raining.
(2) I'm certain that it's raining.

At the linguistic level, stance can be expressed through lexical means (e.g. modals, adverbs, adjectives) or discourse means (e.g. complement-taking predicates, discourse management markers) (Kaltenböck et al., 2020; Traugott, 2020). Beyond the lexicogrammatical level, stance can also be influenced by gestural and prosodic resources (Andries et al., 2023). For example, Figure 1 illustrates a double-handed Open Hand Supine gesture, in which the speaker raises both his arms and flips the palms to yield an upwards-oriented gestural form. This gesture has previously been identified to encode obviousness (Jehoul et al., 2017).

While there is some research on multimodal contributions to stance expression (Andries et al., 2023), less is known about how these cues interact specifically with the degree of commitment a speaker invests in their stance. This dimension, referred to as *investment* in the pragmatics literature (Kiesling, 2011, 2022), refers to the scalar degree to which a speaker is committed to the epistemic position they are expressing. Despite its theoretical significance, the investment dimension of stance has received limited empirical attention, and its multimodal realization remains particularly underexplored. The present study addresses this gap by investigating the role that gestural and prosodic signals play in modulating speaker commitment of high certainty stance expressions.

Method & analysis. We compiled a multimodal corpus consisting of 160 video fragments from TED talk monologues (Hasebe, 2015) and spontaneous dyadic interactions (Agrawal et al., 2025). This design allows for comparison of commitment marking strategies across contexts that differ in terms of planning, audience design, and interactional pressure. The fragments were selected based on the presence of one of four stance markers (*sure, must (have), certain, certainly*) in the transcript. Each instance was annotated for hand gesture form, orientation, position, beat-likeness, kinesthetic features and head movement, as well as prosodic prominence operationalized as an aggregate measure of F0, energy and duration, complemented by manual ToBI annotations (Silverman et al., 1992). Additionally, each stance expression was annotated for the speaker's degree of commitment as estimated by crowdsourced human annotators.

Preliminary annotation of the gestural dimension reveals an emerging catalogue of forms that pattern systematically with commitment level. Open Hand Supine gestures, pointing toward interlocutors, and head nods tend to co-occur with higher degrees of speaker com-

mitment, amplifying the force of the lexical stance marker. Conversely, flicks, hand cycling gestures and head tilts tend to co-occur with lower commitment, attenuating the stance expressed lexically. These patterns suggest that specific gestural form-meaning pairings function as systematic nonverbal resources for scaling epistemic investment. Prosodic and kinesthetic annotation, as well as full co-occurrence analysis across all annotation layers, are ongoing.

Implications. By decomposing the multimodal realization of epistemic stance in terms of scalar commitment, this study contributes to an understanding of how speakers coordinate semiotic resources to calibrate their degree of investment in a communicative stance. The results will inform pragmatic theories of intersubjective communication and embodied cognition.

This study is part of a larger project that will form the basis for future psycholinguistic experiments on whether specific gestures modulate perceived speaker commitment, and will provide input for computational models aimed at capturing stance and perspective-taking in multimodal communication.

Figure 1: Illustration of gesture-stance marker co-occurrence.
S: "So I'm sure he thought he was doing me a favour."
G: bimanual Open Hand Supine gesture

References

Agrawal, V., Akinyemi, A., Alvero, K., Behrooz, M., Buffalini, J., Carlucci, F. M., Chen, J., Chen, J., Chen, Z., Cheng, S., Chowdary, P., Chuang, J., D'Avirro, A., Daly, J., Dong, N., Duppenthaler, M., Gao, C., Girard, J., Gleize, M., ... Zollhoefer, M. (2025). Seamless interaction: Dyadic audiovisual motion modeling and large-scale dataset.

Andries, F., Meissl, K., De Vries, C., Feyaerts, K., Oben, B., Sambre, P., Vermeerbergen, M., & Brône, G. (2023). Multimodal stance-taking in interaction—A systematic literature review. *Frontiers in Communication*, *8*, 1187977. https://doi.org/10.3389/fcomm.2023.1187977

Hasebe, Y. (2015). Design and implementation of an online corpus of presentation transcripts of TED talks. *Procedia - Social and Behavioral Sciences*, *198*, 174–182. https://doi.org/10.1016/j.sbspro.2015.07.434

Jehoul, A., Brône, G., & Feyaerts, K. (2017). The shrug as marker of obviousness: Corpus evidence from Dutch face-to-face conversations. *Linguistics Vanguard*, *3*(s1). https://doi.org/10.1515/lingvan-2016-0082

Kaltenböck, G., López-Couso, M. J., & Méndez-Naya, B. (2020). The dynamics of stance constructions. *Language Sciences*, *82*, 101330. https://doi.org/10.1016/j.langsci.2020.101330

Kiesling, S. F. (2011). Stance in context: Affect, alignment, and investment in the analysis of stancetaking. *iMean conference*, *15*. https://doi.org/10.13140/RG.2.1.2372.8807

Kiesling, S. F. (2022). Stance and stancetaking. *Annual Review of Linguistics*, *8*, 409–426. https://doi.org/10.1146/annurev-linguistics-031120-121256

Silverman, K., Beckman, M., Pitrelli, J., Ostendorf, M., Wightman, C., Price, P., Pierrehumbert, J., & Hirschberg, J. (1992). TOBI: A standard for labeling English prosody. *2nd International Conference on Spoken Language Processing (ICSLP 1992)*, 867–870. https://doi.org/10.21437/ICSLP.1992-260

Traugott, E. C. (2020). Expressions of stance-to-text: Discourse management markers as stance markers. *Language Sciences*, *82*, 101329. https://doi.org/10.1016/j.langsci.2020.101329