

A linear logic account of social meaning as enthymematic inference

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The *social meaning* of an utterance is that which it implicitly reveals about the socio-cultural identity of the speaker. In interaction, participants draw on a complex web of sociolinguistic variables and associated sociocultural identities — what Eckert (2008) terms *the indexical field* — to craft a localised personal linguistic style that projects sociocultural *personae* (Campbell-Kibler 2007). Traditionally, sociolinguistics has focused on variation of the kind where two different linguistic forms index the same meaning (e.g., different speech sounds that realize the same phoneme), but semantic and pragmatic choices can also carry social meaning.

Ubiquitous reliance on *enthymematic reasoning* is characteristic of human dialogue, i. e. both explicit and implicit arguments are not strictly logical, but rather of the “common sense” variety. This means that utterance interpretation often relies on one or more implicit but commonly recognised patterns of reasoning, or *topoi* (Breitholtz 2020; Ducrot 1980). Using (or accepting the use of) a particular topos can signal something about an agent’s social identity (Noble et al. 2020); but the relationship goes both ways, since a speaker’s perceived social identity can affect which topoi the listener uses to interpret their utterances. A speaker who *evokes a topos* (by making an utterance whose interpretation relies on it) or a listener who *accepts a topos* (by grounding such an utterance) implicitly endorses that topos. In this way, topoi can act as sociolinguistic variables that index certain socio-cultural identities.

In this work, we propose a linear logic framework (Girard 1995; Maraev et al. 2020) for computing social meaning in interaction. In this framework, the interpretation of an utterance involves making inferences both about the propositional meaning of a speaker’s utterance and about the sociolinguistic persona projected by the speaker. In comparison to probability-based accounts linear logic’s orientation towards propositions as *resources* offers the potential to develop a more cognitively plausible account of how social and propositional meaning are jointly inferred.

References

- Breitholtz, Ellen (Nov. 2020). *Enthymemes and Topoi in Dialogue: The Use of Common Sense Reasoning in Conversation*. Brill. ISBN: 978-90-04-43679-4.
- Campbell-Kibler, Kathry N (2007). “Accent, (ING) and the Social Logic of Listener Perceptions”. In: *American Speech*, p. 34.
- Ducrot, Oswald (1980). *Les Échelles Argumentatives*.
- Eckert, Penelope (Sept. 2008). “Variation and the Indexical Field”. In: *Journal of Sociolinguistics* 12.4, pp. 453–476. ISSN: 13606441. DOI: 10.1111/j.1467-9841.2008.00374.x. (Visited on 08/28/2019).
- Girard, J.-Y. (1995). “Linear Logic: its syntax and semantics”. In: *Advances in Linear Logic*. London Mathematical Society Lecture Note Series. Cambridge: Cambridge University Press, pp. 1–42. DOI: 10.1017/CB09780511629150.002.
- Maraev, Vladislav, Jean-Philippe Bernardy, and Jonathan Ginzburg (2020). “Dialogue management with linear logic: the role of metavariables in questions and clarifications”. In: *Traitement Automatique des Langues (TAL)* 61.3, pp. 43–67. ISSN: 1248-9433. URL: https://www.atala.org/sites/default/files/TAL-61-3-2_Maraev.pdf.
- Noble, Bill, Ellen Breitholtz, and Robin Cooper (June 2020). “Personae under Uncertainty: The Case of Topoi”. In: *Proceedings of the Probability and Meaning Conference (PaM 2020)*. Gothenburg: Association for Computational Linguistics, pp. 8–16. (Visited on 10/28/2020).