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1 Prosody-pragmatics

1.1 Zhao et al. (2018): From pitch to purpose: The prosodic–pragmatic mapping of [I + verb] belief constructions in English and Mandarin

1.1.1 Summary

- The paper provides an empirical study on whether there is a universal link between prosodic features and pragmatic implicatures. Previously, prosody has been considered a universal cue of prominence across languages.
- A perception test was implemented to investigate the prosodic-pragmatic mapping of [I + verb] (*“I + think” as in English or “wo juede” as in Mandarin to be exact*) belief constructions in English and Mandarin. Native speakers were asked to provide confidence rating of [I + verb] belief expressions in their native language. These expressions contain four prosodic paradigms with six prosodic-syntactic variations as shown in Fig 1.
- Results are threefold. First, the four prosodic paradigms and their pragmatic attitudes of [I + verb] belief expressions are correlated in terms of confidence rating, which decreases in the following order: direct statement, focus-marking on pronoun (main clause), focus-marking on verb (epistemic marker), and no focus-marking discourse marker. Second, English and Mandarin exhibit analogous [I + verb] confidence rating trends. Third, sociolinguistic background has no significant effect on confidence rating.
- The authors conclude that (1) [I + verb] confidence rating trends coincide with alternative semantics theory; and (2) the findings support the notion of a cross-linguistic pragmatic–prosodic mapping of [I + verb].

Table 5
Prosodic–syntactic [I + verb] variations and labels.

Prosodic–syntactic form (based on focus placement)	Label for study's use	Associated pragmatic form	Example of construct (<i>focus in bold-italics</i>)
Direct statement (no [I + verb])	DIR	Direct	“It's a #.”
Focus-marking on pronoun	PRN	Main clause	“ <i>I</i> think it's a #.”
Focus-marking on verb	V	Epistemic marker	“I <i>think</i> it's a #.”
No focus-marking ([I + verb] sentence-initial)	FRONT	Discourse marker	“I think it's a #.”
No focus-marking ([I + verb] sentence-medial)	MID		“It's, I think, a #.”
No focus-marking ([I + verb] sentence-final)	END		“It's a # I think.”

Figure 1: Six [I + verb] prosodic-syntactic variations.

1.1.2 Notes

1. Dehé and Wichmann (2010) appears to be **the first study that distinguishes three of the four prosodic paradigms** of [I + verb] belief constructions. The study is a corpus-based prosodic analysis of two sentence-initial pronoun-verb combinations, i.e., “I think (that)” and “I believe (that)” followed by a belief expression. The authors find that, when the prosodic focus is placed on the pronoun, the combinations function as main clause;

when the prosodic focus is placed on the verb, they function as comment clause (CC, = epistemic marker as in Zhao et al., 2018); and with no stress, they function as discourse marker (DM). The terminology used in Zhao et al. (2018) follows Quirk et al. (1985).

2. **Alternative semantics theory:** Alternative semantics states that all non-focal lexical items maintain their original semantic values, whereas focus-marked items take on a different semantic value than their original lexico-semantic identities (Rooth, 1992). That is, whilst some lexical items do not function pragmatically to transform discourse, focus-marked items under the lens of alternative semantics redirect or update the conversational implicature. Focus-marked items possess a set containing all semantic objects of the same semantic type, known as the “focus semantic value” (Zimmermann and Onea, 2011).
3. **Justification for the prosodic–pragmatic mapping of [I + verb]:** see Section 3 of Zhao et al. (2018). Zhao et al. (2018) propose a continuum of speaker stance and confidence for [I + verb]: deliberate, when [I + verb] is used as main clause; uncertain, when [I + verb] is used as epistemic marker; and reluctant, when [I + verb] is used as discourse marker. *Why does the direct statement (having no [I + verb]) display highest confidence?* My intuition is, the speaker takes the belief she expresses for granted.
4. **An important exception:** Zhao et al. (2018) particularly excludes “I know” from [I + verb] because “know” is “the one certainty verb of belief” (in other words, the conclusions may only hold for uncertainty verbs, such as “believe”). Zhao et al. (2018) argue that “I know” used as main clause expresses similar level of confidence, compared to when it is used as an epistemic marker, because focus-marking “know” also contains deliberate semantic connotation: “I know factively, as opposed to merely believing.” This argument is mainly based on Cappelli (2007). However, there are also two questions unmentioned: (1) Does direct statement convey more confidence than its “I know” belief construction? (2) Can “I know” be used as a discourse marker (unstressed) and how? Crucially, Zhao et al. (2018) has argued that discourse marker used as an interpersonal/interactional marker is largely indistinguishable from when it is used as a gap filler. Is unstressed “I know” an interpersonal/interactional marker or a gap filler (it seems unlikely that “I know” is ever used as a filler)?

1.2 Tonhauser (2016): Prosodic cues to presupposition projection

1.2.1 Summary

1. This paper describes three perception experiments designed to explore the influence of the prosody of an utterance with a factive predicate on the projection of the content of the clausal complement under an entailment-canceling operator “Perhaps”.
 - Consider: Perhaps he discovered that she’s a widow.
 - The possible stress positions: the matrix factive predicate (discovered), the embedded subject (she), and the embedded object (widow).
 - Degree of prosodic prominence or the type of pitch accent: e.g., relatively more stressed and relatively less stressed
2. Experiments 1 and 2 show that the complement of an utterance with a factive predicate embedded under an entailment-canceling operator is less likely to project if an expression in the complement clause is narrowly focused than if the complement clause is deaccented (i.e., stress on the matrix factive predicate).
3. Experiment 3 shows that the degree of prosodic prominence (i.e., the type of pitch accent) of the last content word of the complement clause has an influence on the projectivity of the content of the complement.
4. The paper thus demonstrates that listeners attend to the prosody of utterances with factive predicates in identifying what they take the speaker to be committed to, or in interpreting whether the content of the complement projects.

1.2.2 Notes

1. The paper is greatly inspired by Beaver (2010) and Simons et al. (2017), particularly the latter of which the author is a co-author. Both inspections are based on impressionistic judgments.
2. For the example sentence, “Perhaps he discovered that she’s a widow”, when the **only** stress occurs in “discovered”, “she”, and “widow”, the author proposes it may be interpreted as follows, inspired by Simons et al. (2017):
 - (a) $\{p: \text{for some relation } R, \text{ he } R \text{ that she's a widow}\}$
 - (b) $\{p: \text{for some entity } a, \text{ he discovered that } a \text{ is a widow}\}$
 - (c) $\{p: \text{for some property } P, \text{ he discovered that she } P\}$
3. Questions: (1) Although Beaver (2010) and Simons et al. (2017) seem to base their judgments on other entailment-cancelling environments, e.g., *conditional* and *negation*, Tonhauser (2016) only considers *perhaps*. It may be more interesting to experiment with other entailment-cancelling environments. (2) For all experiments, the results across different conditions only show **small practical mean differences with noticeable variations in ratings**. The average ratings are always slightly above 4 (neutral to possibly certain), meaning the speaker’s commitment is felt to be weak.
4. A highly related follow-up paper. Djärv and Bacovcin (2020): Prosodic effects on factive presupposition projection.

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