Once more, with feeling!
Scalar interpretations under face considerations

Marina Terkourafi | Leiden University Center for Linguistics

Universiteit Leiden
The Netherlands

Face: a sociological concept

- Human need to:
  - be liked by others (positive face)
  - be granted independence from others (negative face)

- Both Speakers and Addressees have this dual need

- Face needs arise in interaction; they don't exist outside of it

- How do interlocutors interpret scalars when they take each other's face needs into consideration?

Scalar terms in face-threatening contexts

- It has been claimed that the upper-bounding scalar implicature is absent in face-threatening contexts

  (Bonnefon & Villejoubert 2006, Bonnefon, Feeney & Villejoubert. 2009, Feeney & Bonnefon 2012, Bonnefon, Dahl & Holtgraves. 2015)

  - Some people loved your poem +> Some but not all…

SI presence

  - Some people hated your poem +> Some and possibly all…

SI absence

- Results attributed to the different 'face' orientations of the two utterances.

  So, "Some X-ed"

  - face-boosting context if predicate X expresses sth *favorable* for the listener
  - face-threatening context if predicate X expresses sth *unfavorable* for the listener

Face-orientation: a matter of lexical semantics?

- In Brown & Levinson's (1987) framework, all speech acts are **inherently threatening** to an aspect of the Speaker's or the Hearer's face.
- Problem #1:
  - What earlier researchers called face-boost is simply *absence* of face-threat
  - But "Some people loved your poem" can also be face-threatening, if it is made clear that the speaker wasn't among those who loved the poem
  - If so, face-threatening contexts can result in both absence *and* presence of the SI, contra previous claims

Face-orientation: a matter of lexical semantics?

- In Brown & Levinson's (1987) framework, all speech acts are **inherently threatening** to an aspect of the Speaker's or the Hearer's face.
- Problem #2:
  - The degree of threat inherent in a speech act is determined by extra-linguistic factors (Distance + Power between interlocutors + Ranking of the act) and guides the choice of (direct/indirect) strategy for its linguistic performance
  - We must separate the threat inherent in the (illocutionary) act (before an utterance is made) from any subsequent threat resulting from its (locutionary) performance
  - By implementing face-threat/boost as a matter of lexical semantics (the semantics of the predicate scoping over the scalar), earlier research conflated these two types of threat

Re-assessing the earlier results

Joint work with Ben Weissman & Joe Roy (Illinois); *International Review of Pragmatics* 12:1 (2020)

- We defined
  - 'face-boosting context': sets up expectations of **enhancing** hearer's **positive** face
  - 'face-threatening context': sets up expectations of **threatening** hearer's **positive** face
- We tested an **expanded set** of scalar terms
- We kept the scalar-containing utterance the same across conditions and alternately embedded it in short contexts which **situationally** set up face-threat or -boost, in order to observe how the scalar is interpreted each time.
- We **normed the contexts** on a sample of participants from M-Turk
- We used a **gender-balanced** sample of M-Turkers

Scalar diversity

- Scalar terms differ in their likelihood of inducing a scalar implicature
  - some terms (e.g., logical operators like *or* and quantifiers like *some*) seem to induce SIs more frequently than others.

(van Tiel et al. 2016)

- 8 scalars tested
  1. <*some*, all> in Subject position
  2. <*some*, all> in Object position
  3. <*or*, and>
  4. <*possible*, likely>
  5. <*often*, always>
  6. <*like*, love>
  7. <*good*, excellent>
  8. Ad hoc (non entailment) scales:
     1. <*assertive*, bossy>
     2. <*unwell*, sick>
     3. <*misleading*, lying>
     4. <*misguided*, illegal>

Experimental design

8 terms

1. *some*Subject
2. *some*Object
3. *or*
4. *possible*
5. *often*
6. *like*
7. *good*
8. Ad hoc scales

4 utterances

- utterance a
- utterance b
- utterance c
- utterance d

2 contexts

- FT context
- FB context

Total: 64 stimuli contexts (+ controls)

Context norming study

- Do participants perceive the context as face-threatening or as face-boosting?
- Participants (N=60) recruited on M-Turk

Example

Paul has his first guitar lesson with his new teacher. Paul plays a portion of a song so the teacher can get a sense of his abilities. The teacher, who is eager for new students, tells Paul.

"How likely is it that the teacher will **say something nice** to Paul?"

1	2	3	4	5
Extremely unlikely				Extremely likely

Context norming study

- Do participants perceive the context as face-threatening or as face-boosting?
- Participants (N=60) recruited on M-Turk

Example

Paul is playing guitar in a competition with a notoriously strict panel of judges. After Paul plays his song, the first judge is silent for a while and then mutters.

"How likely is it that the judge will **say something nice** to Paul?"

1	2	3	4	5
Extremely unlikely				Extremely likely

Context norming study

- Do participants perceive the context as face-threatening or as face-boosting?
- Participants (N=60) recruited on M-Turk

Example

Paul has his first guitar lesson with his new teacher. Paul plays a portion of a song so the teacher can get a sense of his abilities. The teacher, who is eager for new students, tells Paul.

FB

Paul is playing guitar in a competition with a notoriously strict panel of judges. After Paul plays his song, the first judge is silent for a while and then mutters.

FT

"How likely is it that the judge will **say something nice** to Paul?"

1 Extremely unlikely 2 3 4 5 Extremely likely

Implementing theoretical constructs #1: 'face'

- "Saying something nice" = verbally expressing approval, admiration, solidarity, inclusion – all notions relating to positive face.
  - 'Face' is a technical notion in politeness studies; asking participants about technical notions directly is a bad idea.

- Participants (N=60) recruited on M-Turk
- 16/64 stories were revised and run on 15 new participants.
  - After revision, all stories passed this test.
- Avg. rating for BOOST versions=4.37
- Avg. rating for THREAT versions = 2.07

Main study

- Research questions:
  #1: How are scalar terms interpreted in face-threatening vs. face-boosting contexts?
  #2: Is there variation among them or do they all behave alike in this respect?
- Participants (N=162) recruited on M-Turk

Example:

Paul has his first guitar lesson with his new teacher. Paul plays a portion of a song so the teacher can get a sense of his abilities. The teacher, who is eager for new students, tells Paul. "You have a good sense of rhythm".

"How likely is it that the teacher **means** Paul has an excellent sense of rhythm?"

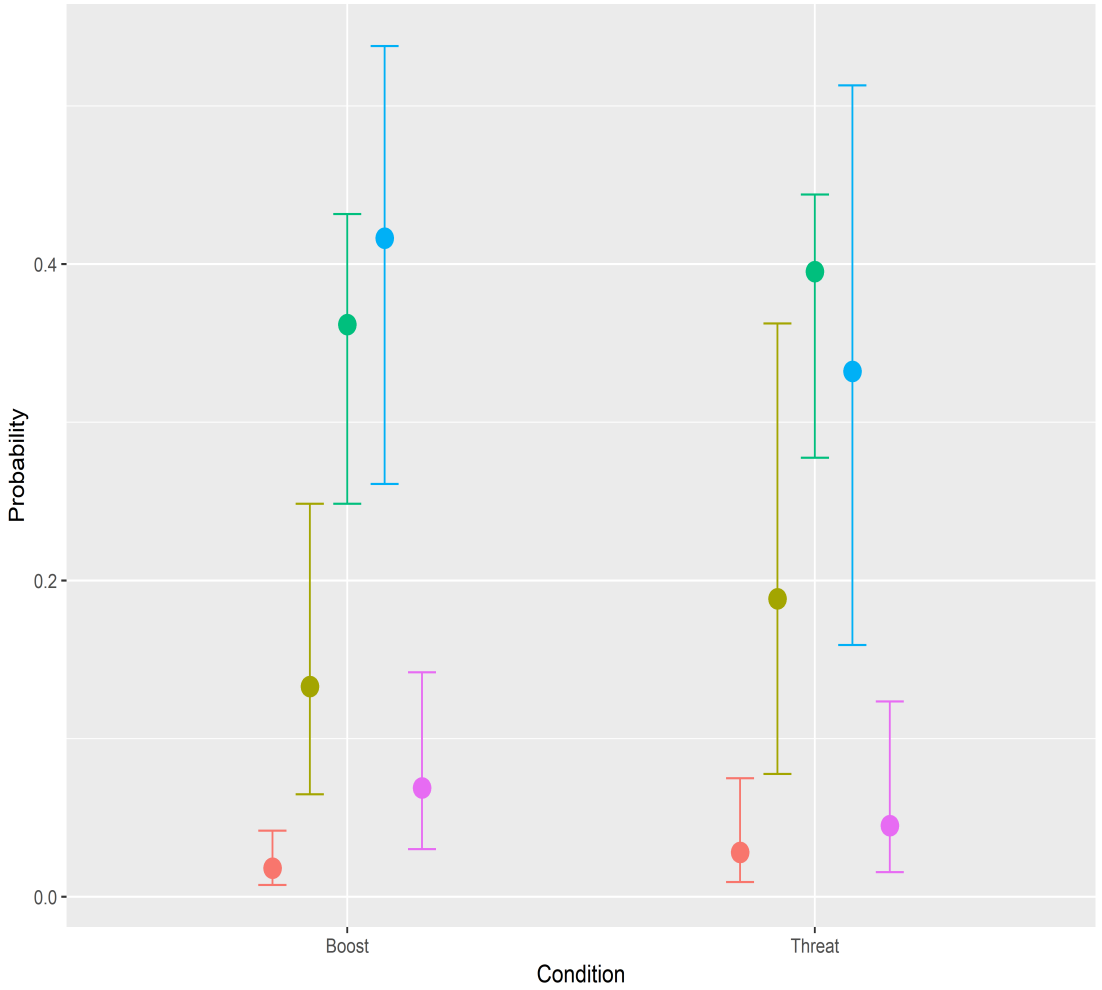
1	2	3	4	5
Extremely unlikely				Extremely likely

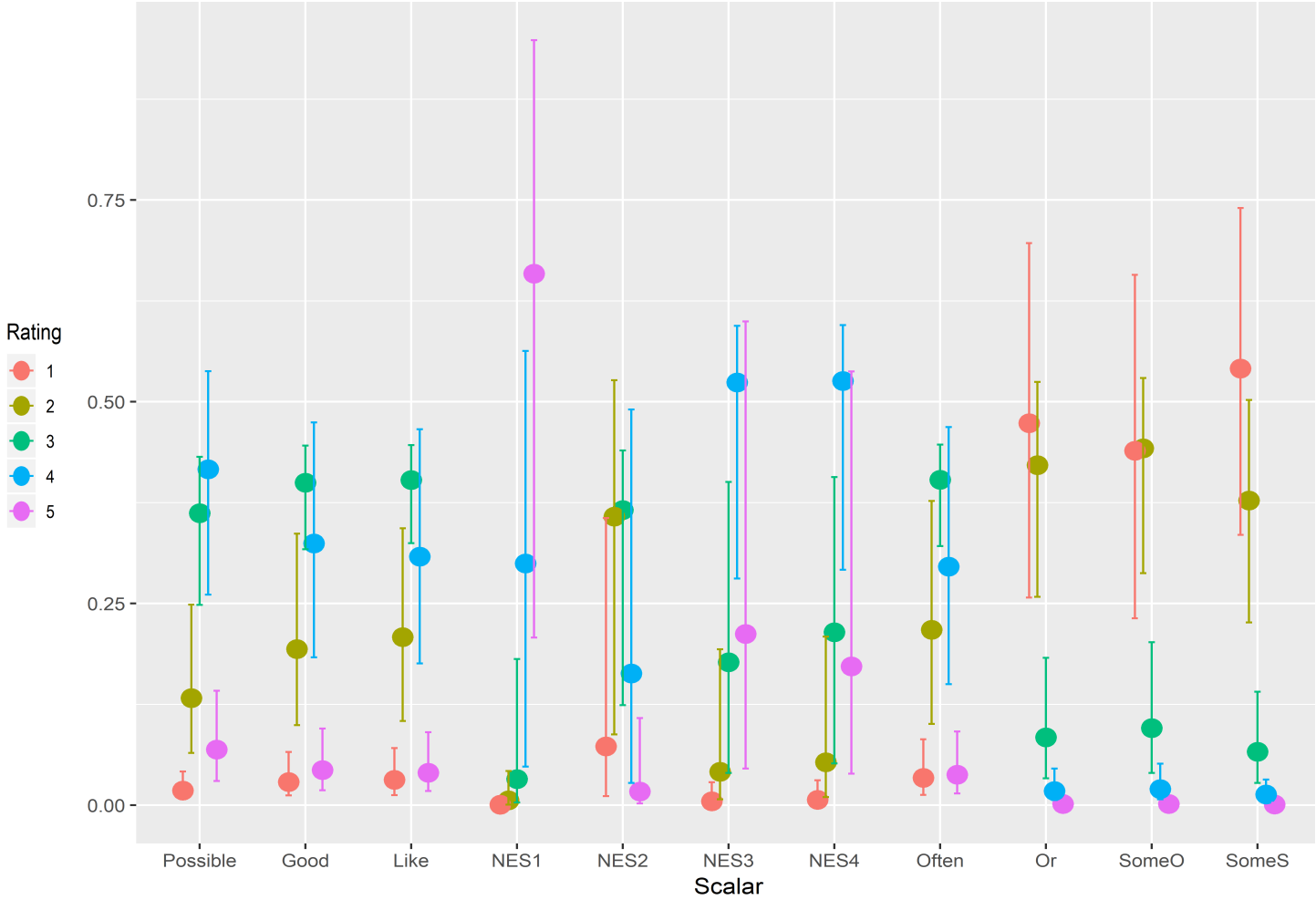
Implementing theoretical constructs #2: 'politeness'

- Research on scalars typically uses the inference or verification tasks, which check if the scalar inference is available in the context. This is not enough for politeness.
- We needed to know whether participants thought the scalar implicature was something the speaker wanted the listener to understand as **speaker-intended**.
- Politeness lies not in the Speaker not believing the stronger term but in the Speaker **choosing not to say** the stronger term (despite it being clear that they believe it) out of consideration for the Hearer's feelings.
- Asking whether Speaker **means** the stronger term allows us to find out whether participant interpretations of the scalar are motivated by the attribution of politeness to the speaker.

Results

No effect of FT/FB context *but* effect of scalar





Conclusions from 1st study

- Conclusions for the interpretation of scalars under face-boost/threat:
  - Unlike previous studies that found that face-threatening contexts induce absence of scalar implicature, we did not find an effect of context face-orientation on scalar implicature presence/absence.
  - We did find an effect of the type of scalar: *or* and *some* reliably tend to induce the scalar implicature in all contexts (not just face-boosting ones).

- Our results confirm scalar diversity but not the effect of face-orientation of the context on scalar implicature presence.

Two possible explanations

- #1: our materials (8 scalars, 4 utterances/scalar) introduced too much variability for any effects to be detected.
  - given robust results for *Or* and *Some*, we think #1 is unlikely

- #2: *some* and *or* are locally enriched (induce SI presence by default irrespective of context; Sun, Tian & Breheny 2018) while other scalar terms are globally enriched (no default preference).

NEW HYPOTHESIS: scalar terms are **semantically underspecified** (do not semantically encode the lower-bound meaning). Different scalar terms may encode **a default preference for (i) SI presence**  **(ii) SI absence**  **or (iii) no default preference**, in which case they are globally enriched in context.

Follow-up study

Joint work with Roxanne Casiez at Leiden University

Goals:

- #1 To disentangle the effect of the positive or negative evaluative polarity of the main clause predicate from the effect of face-orientation of the context on scalar interpretation
- #2 To eliminate potential sources of variability in results of 1st study that may have obscured any effects of face orientation on scalar interpretation.

Focus on:

- 1 type of speech act: assessments
- 1 type of scalar: evaluative adjectives (positive and negative)

3 preparatory studies (I, II, III) and 1 main study (3 tasks)

Prep I. Selecting scalar terms: corpus study

- Positive and negative polarity adjectives from the EMOtional TErms (EMOTE, Grühn 2016) and the Affective Norms for English Words (ANEW, Warriner et al,. 2013) databases.
- *Clever* was the least positive of the positive adjectives; *silly* was the least negative of the negative ones.

Positive polarity	EMOTE valence score	ANEW valence score	Negative polarity	EMOTE valence score	ANEW valence score
good	6.31	7.89	silly	**5.03**	**6.72**
funny	-	7.59	bad	1.73	3.24
clever	**5.92**	**7.36**	ugly	1.64	2.47

Positive polarity		Negative polarity	
Weak term	Possible strong terms	Weak term	Possible strong terms
funny	hilarious	*bad*	terrible, horrible
clever	brilliant, smart, genius	*silly*	ridiculous
good	great, amazing, perfect, incredible, excellent	*ugly*	hideous

Prep II. Elicitation experiment

- Goal: to identify **contextually appropriate strong term**
  - McNally (2017): strong term must sound natural to participants in the utterance presented to avoid rejecting it (not deriving the scalar implicature) for other reasons.
- For each scalar term, we elicited (1) a stronger alternative, (2) its contextual appropriateness (3 utterances per term, each utterance embedded in FB/FT context; Total=36 items

It is open mic night at the comedy club and Oliver just performed. He wants to know what people thought of him so he asks his girlfriend Eva, who was in the audience, "What did you think of my set?" Eva has always loved watching Oliver perform and she's a big fan of stand-up comedy. Eva says, "I think it's funny."

- Q1: What other word could Eva have used instead of funny if she thought it was ***very very*** funny? Please list every alternative you can think of._____
- Q2: Do you think the use of funny is **appropriate** in this context?
  o Yes (1)
  o No, because (2) _____

Elicitation experiment: Results

- N=200 (105 F; mean age: 37); recruited on M-Turk
- Q1 (strong term elicitation: "what other word… if it was very very …?"):

Weak term	Strong term	Story
Good	Amazing	exhibition
Good	Great	accent
Good	Great	app
Funny	Hilarious	stand-up
Funny	Hilarious	animation
Funny	Hilarious	article
Clever	Brilliant	idea
Clever	Brilliant	tiny-house
Clever	Brilliant	argument

Weak term	Strong term	Story
Ugly	Hideous	dress
Ugly	Hideous	wallpaper
Ugly	Hideous	tattoo
Bad	Awful	coffee
Bad	Terrible	column
Bad	Terrible	rhythm
Silly	Ridiculous	song
Silly	Ridiculous	plot
Silly	Ridiculous	bookstore

  - Most scalars elicited the same strong term across stories but *Good* and *Bad* did not!
- Q2 (weak term appropriateness: "appropriate in this context?"):
  - Combination of scalar and context was generally deemed appropriate
  - … bar a few comments that *ugly/bad* was too harsh/rude in face-boosting contexts.

Prep III. Scale distance experiment

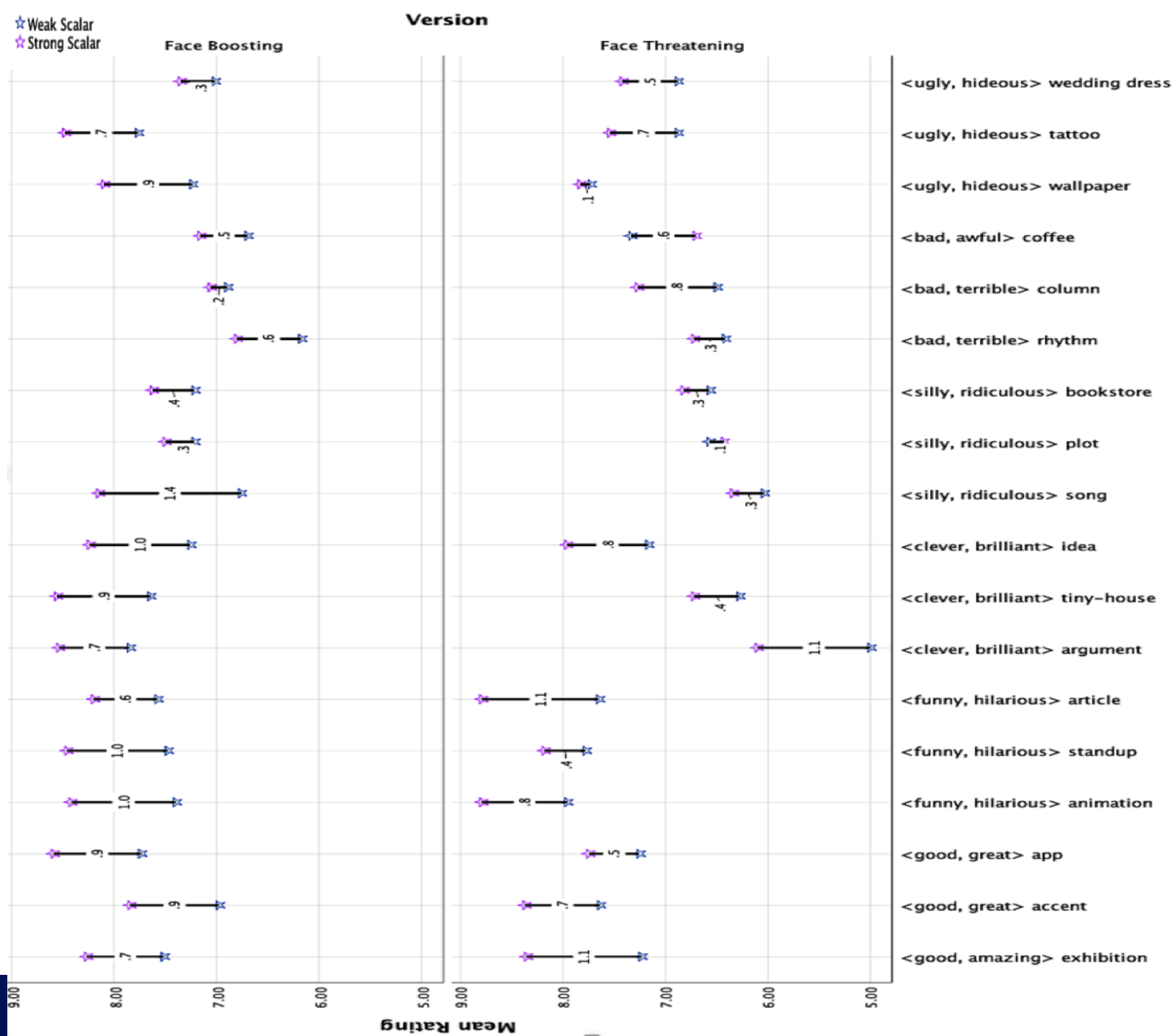
- Goal: to facilitate comparison of results across adjectival scales
- We measured the perceived semantic distance between the weak and the strong term forming a scale.

It is open mic night at the comedy club and Oliver just performed. He wants to know what people thought of him so he asks his girlfriend Eva, who was in the audience, “What did you think of my set?” Eva has always loved watching Oliver perform and she’s a big fan of stand-up comedy. Eva says, “I think it’s funny.” / “I think it’s hilarious.”

Q: On a scale of 1-10, how funny does Eva think Oliver’s set is?

Scale distance experiment: results

- N=199 (94 F; mean age: 36); recruited on M-Turk
- Perceived scale distance varied across:
  - Adjective
  - Story
  - Story version (FB vs. FT)



Main experiment (3 tasks)

- Goal: to find out how positive vs. negative polarity scalar adjectives are interpreted in face-boosting vs. face-threatening contexts

- **Task 1**: determines face orientation of context (FB or FT)
- **Task 2**: elicits scalar interpretation (likelihood of meaning stronger term)
- **Task 3**: taps into the perceived effects of the target utterance on relationship

- N=100 (50 F; mean age: 44), recruited on M-Turk

Task 1: determining face-orientation of context

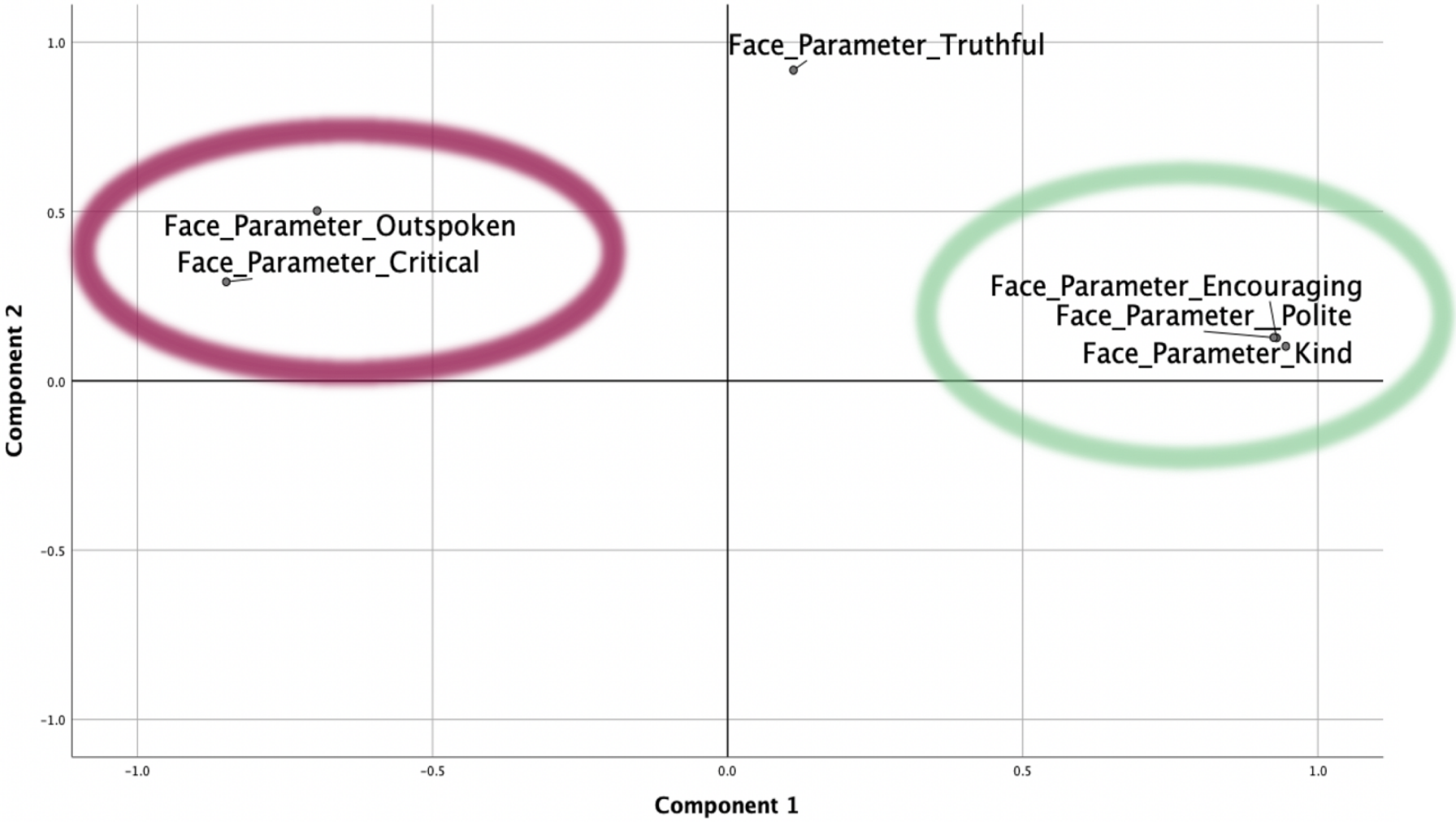
It is open mic night at the comedy club and Oliver just performed. He wants to know what people thought of him so he asks his girlfriend Eva, who was in the audience, “What did you think of my set?” Eva has always loved watching Oliver perform and she’s a big fan of stand-up comedy.

Please indicate to what extent you expect Eva to answer in a way that is:

truthful	☆ ☆ ☆ ☆ ☆ ☆ ☆
kind	☆ ☆ ☆ ☆ ☆ ☆ ☆
encouraging	☆ ☆ ☆ ☆ ☆ ☆ ☆
polite	☆ ☆ ☆ ☆ ☆ ☆ ☆
outspoken	☆ ☆ ☆ ☆ ☆ ☆ ☆
critical	☆ ☆ ☆ ☆ ☆ ☆ ☆

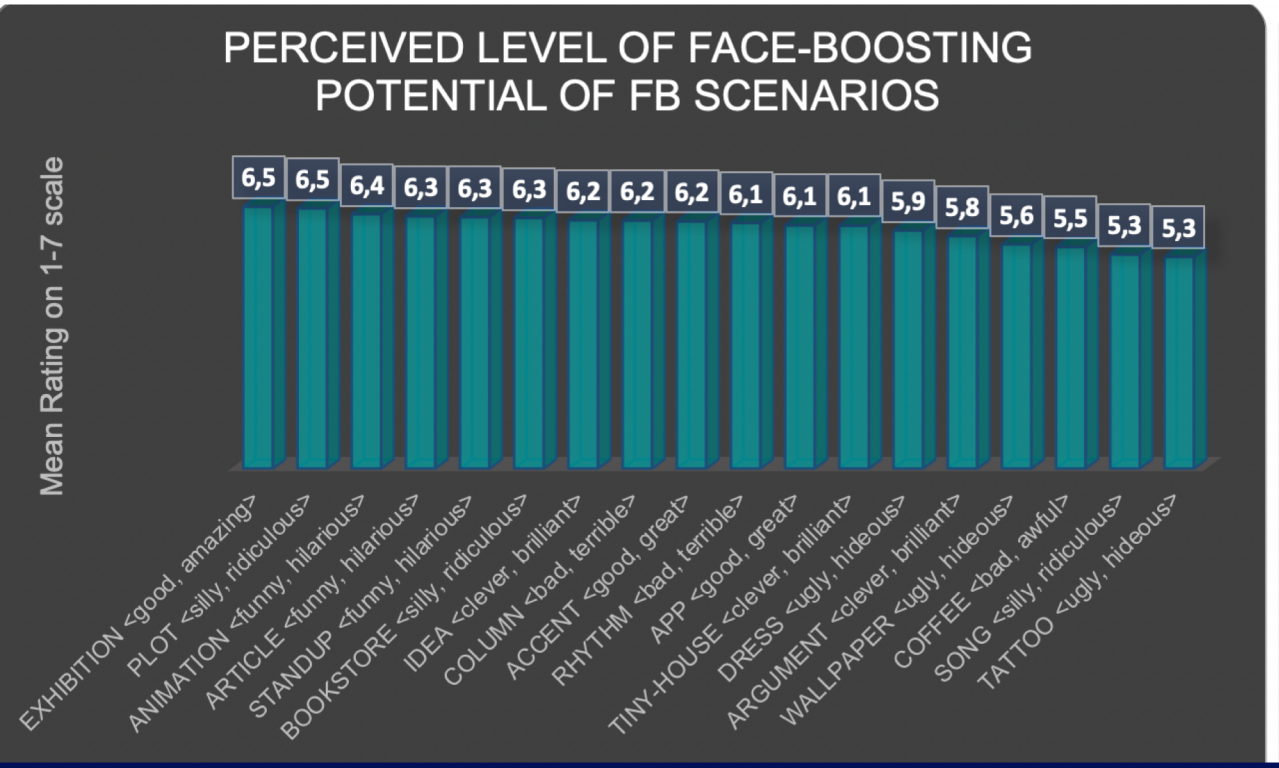
Task 1: Results

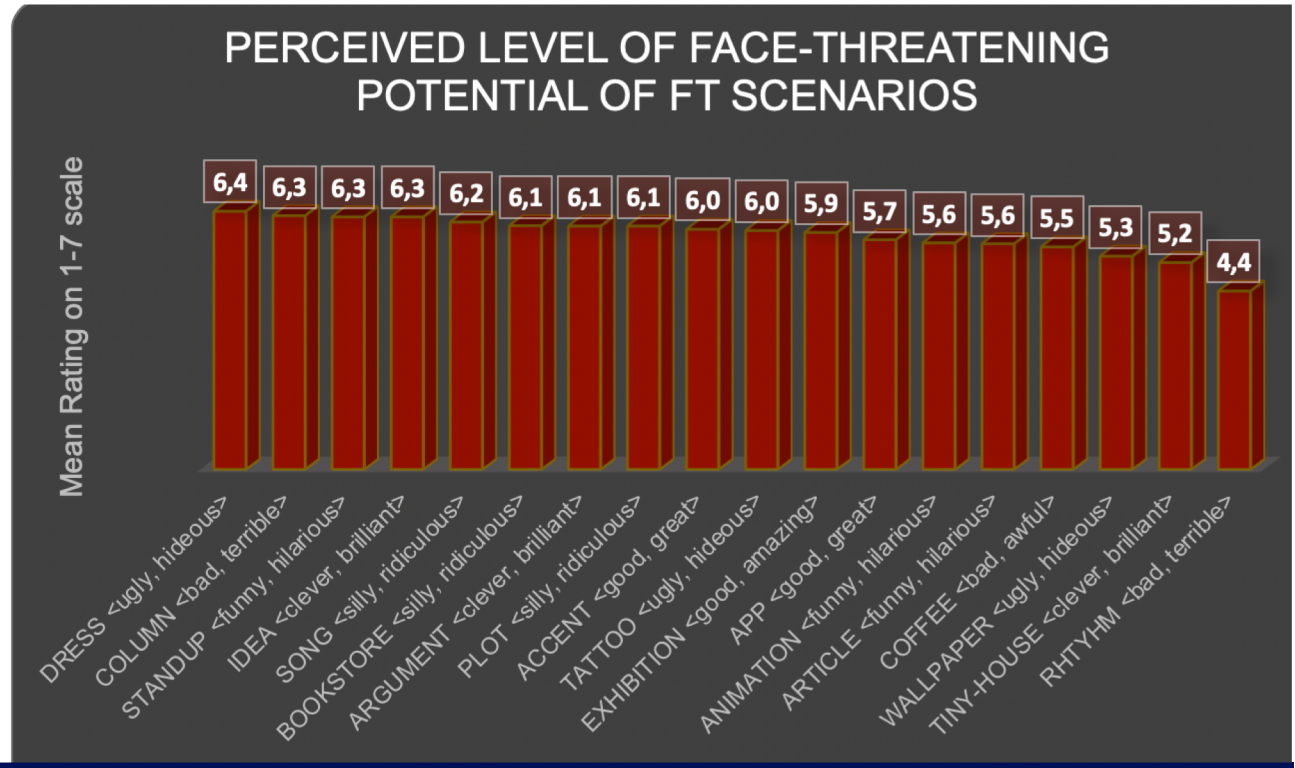
- Exploring effect of situational context on **components of positive face** (context norming task)
- Principal Component Analysis (PCA)
- Component 1 = face-orientation with *kind*, *encouraging*, and *polite* as face-boosting and *outspoken* and *critical* as face-threatening
- ***Truthful*** as a separate component: indicates it is not a reliable predictor of face-orientation and not the opposite of *polite* (as used in some studies, e.g. Yoon et al. 2016)



Task 1: Results

- FB/FT versions of scenarios were perceived as such by participants
  - mean ratings of *kind, encouraging, polite* = perceived level of FB
  - mean ratings of *outspoken, critical* = perceived level of FT
- All scenarios met 3.5 threshold, but some scenarios perceived as more FB/FT than others





Task 1: determining face-orientation of context

It is open mic night at the comedy club and Oliver just performed. He wants to know what people thought of him so he asks his girlfriend Eva, who was in the audience, “What did you think of my set?” Eva has always loved watching Oliver perform and she’s a big fan of stand-up comedy.

Please indicate to what extent you expect Eva to answer in a way that is:

truthful	☆ ☆ ☆ ☆ ☆ ☆ ☆
kind	☆ ☆ ☆ ☆ ☆ ☆ ☆
encouraging	☆ ☆ ☆ ☆ ☆ ☆ ☆
polite	☆ ☆ ☆ ☆ ☆ ☆ ☆
outspoken	☆ ☆ ☆ ☆ ☆ ☆ ☆
critical	☆ ☆ ☆ ☆ ☆ ☆ ☆

Task 2: determining scalar interpretation

It is open mic night at the comedy club and Oliver just performed. He wants to know what people thought of him so he asks his girlfriend Eva, who was in the audience, “What did you think of my set?” Eva has always loved watching Oliver perform and she’s a big fan of stand-up comedy.

Eva says, “I think it’s funny.”

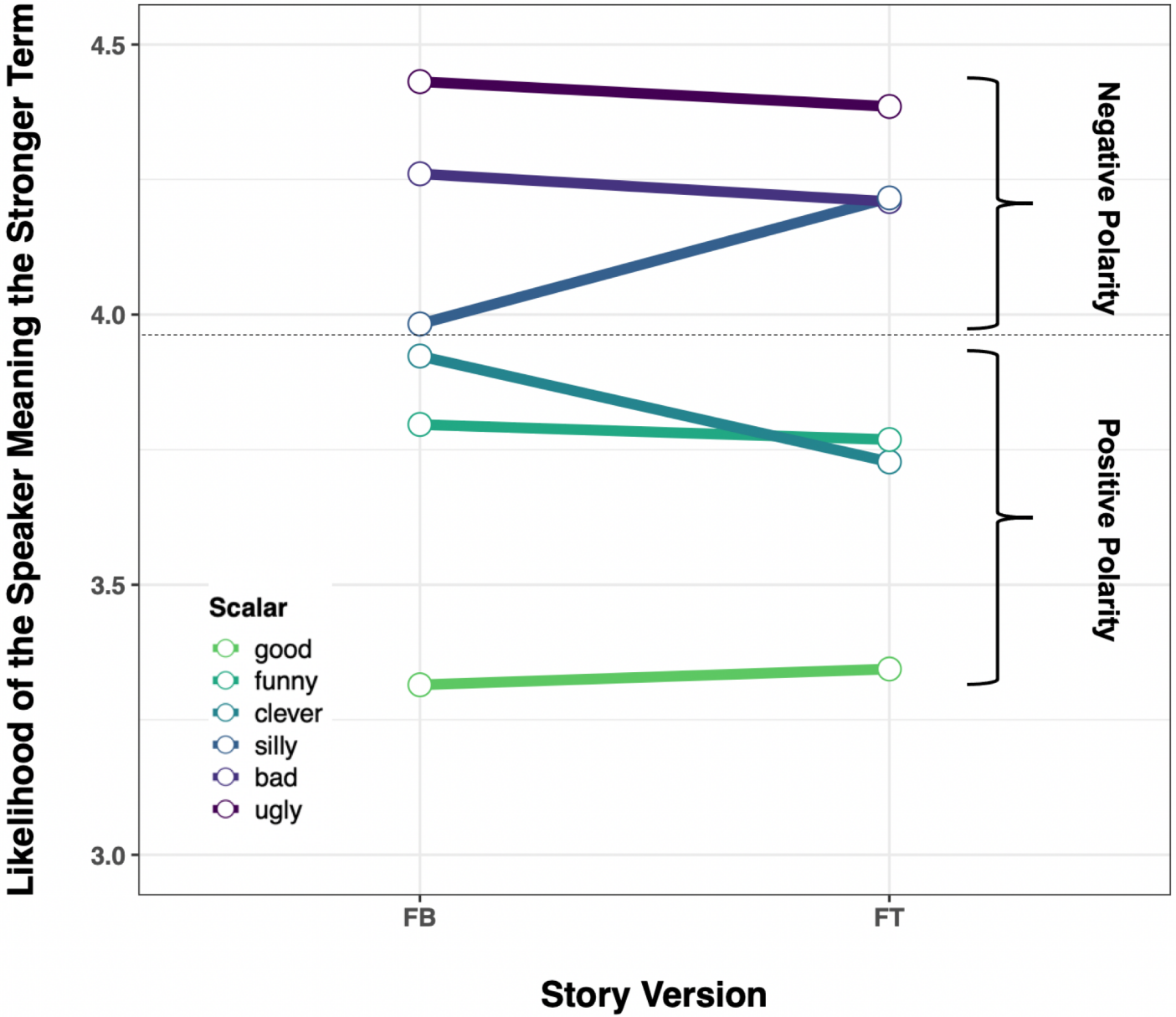
How likely is it that Eva means she thinks it’s hilarious?

extremely unlikely (SI presence) extremely likely (SI absence)

Task 2: Results

Linear mixed effects analysis:
-Fixed effects: **story version** (FB vs. FT), **adjective polarity** (pos. vs. neg.), and their **interaction** (version x polarity).
-Random effects: scalar term (6 levels), participant (N=100), and story (N=36).

- Significant main effect of **Adjective Polarity** (p=0.006)
  - SI more likely for positive terms than for negative terms.
- No significant effect for **Story Version** (p=0.828)
- Marginally significant **Interaction effect** (p=0.07)
  - SI more likely for positive terms embedded in FT stories than for positive terms embedded in FB stories



The in-between terms: *silly* and *clever*

- *Clever* was the least positive of the positive adjectives, *silly* was the least negative of the negative adjectives.

Positive polarity	EMOTE valence score	ANEW valence score	Negative polarity	EMOTE valence score	ANEW valence score
good	6.31	7.89	silly	**5.03**	**6.72**
funny	-	7.59	bad	1.73	3.24
clever	**5.92**	**7.36**	ugly	1.64	2.47

- Unlike the strongly positive and strongly negative adjectives, these mildly positive/negative adjectives are most affected by the face orientation of the context (**Hypothesis**: they encode no default preference for SI presence or absence).

Task 2: determining scalar interpretation

It is open mic night at the comedy club and Oliver just performed. He wants to know what people thought of him so he asks his girlfriend Eva, who was in the audience, “What did you think of my set?” Eva has always loved watching Oliver perform and she’s a big fan of stand-up comedy.

Eva says, “I think it’s funny.”

How likely is it that Eva means she thinks it’s hilarious?

extremely unlikely (SI presence) extremely likely (SI absence)

Task 3: determining effect of adjective polarity on face

It is open mic night at the comedy club and Oliver just performed. He wants to know what people thought of him so he asks his girlfriend Eva, who was in the audience, “What did you think of my set?” Eva has always loved watching Oliver perform and she’s a big fan of stand-up comedy.

Eva says, “I think it’s funny.”

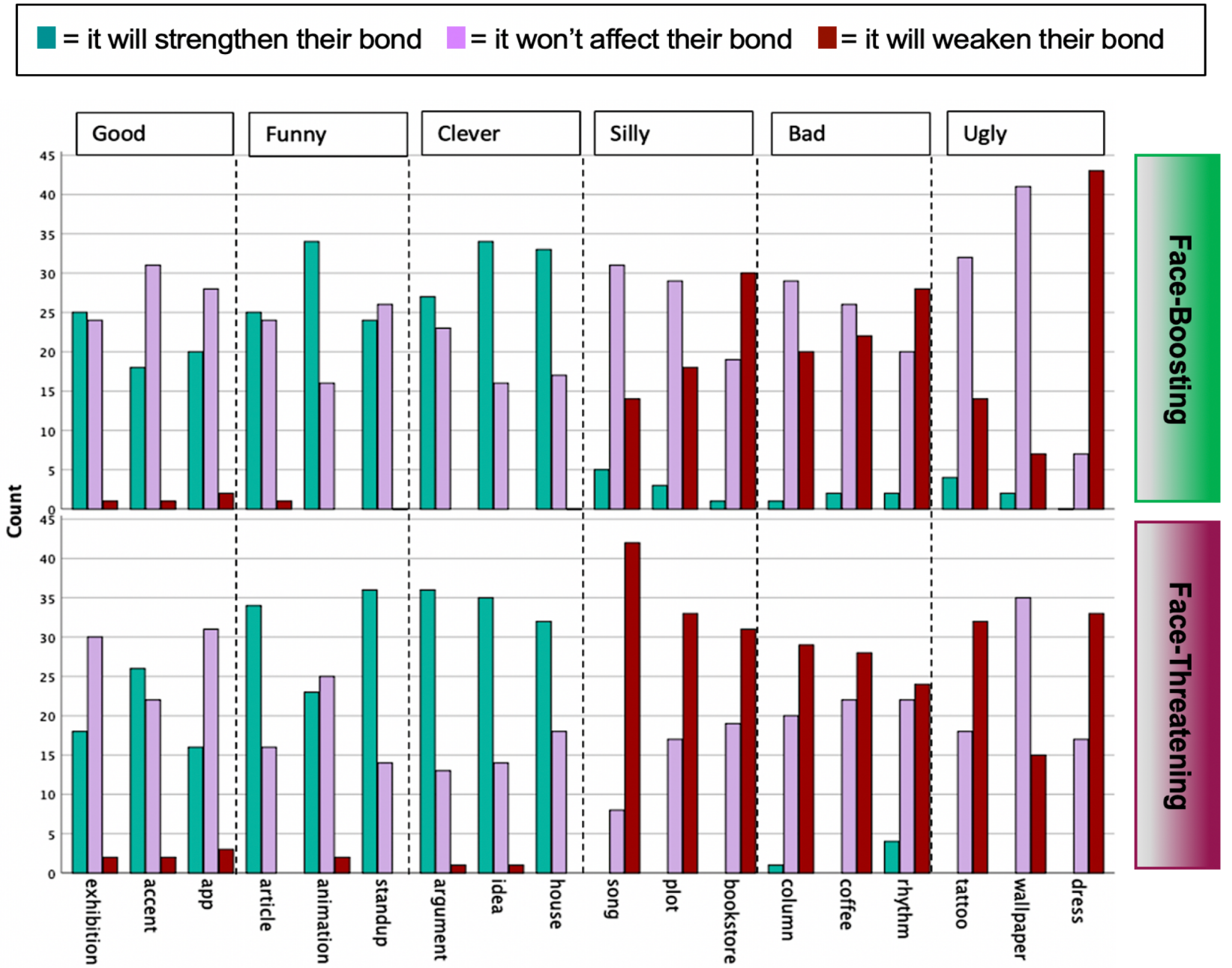
In your opinion, how will Eva’s answer affect the bond between her and Oliver?

- O It will strengthen their bond
- O It won't affect their bond
- O It will weaken their bond

Task 3:Results

Generally, irrespective of the face orientation of the context:

- Positive adjective polarity led to expectations that bond between S & H would be strengthened
- Negative adjective polarity led to expectations that bond between S & H would be weakened
- Yet, the face orientation of the context sets up expectations for the polarity of the language that will be used and when the 'unexpected' polarity is received, its effect on face is bigger:
  - A positive word in a FT context (bottom left) is *more positive* than a positive word in a FB context (above).
  - A negative word in a FB context (top right) is *less negative* than a negative word in a FT context (below).



Conclusions from 2nd study

- Truthful-polite are not opposites, they can co-occur
  - truthful not a reliable predictor of face-orientation.

- By eliciting ratings of *expected* face-threat/boost before the utterance based on situational context (Task 1) separately from ratings of *perceived* face-threat/boost after the utterance (Task 3), we can disentangle the effects on SI rates of the face orientation of the context (Task 2) from those of adjective polarity (Task 3).

Conclusions from 2nd study

- The effect previously attributed to context face-orientation (e.g. Bonnefon et al. 2011) seems to be an effect of lexical semantics (adjective polarity; cf. Terkourafi et al. 2020).
- Negative adjectives show lower SI rates, positive adjectives show higher SI rates, suggesting tendency for 'worst reading' in both cases (Negativity bias)
  - this can be mistaken as a face effect but it is not caused by the face orientation of the context but rather by the lexical semantics of the term used.
- In terms of our hypothesis that scalar terms are semantically underspecified, it is possible that
  - 'logical' words (*some, or)* encode a default preference for SI presence/upper-bound interpretation
  - negative adjectives (*bad, ugly)* encode a default preference for SI absence/lower-bound interpretation
  - positive adjectives (*good, funny*) encode no default preference and are globally enriched in context

What about the role of face management concerns in pragmatic inferences?

Some limitations of experimental politeness studies to date (including our own)

- **Investigated only small part of politeness**: threats to positive face (giving / withholding approval) and statements
  - Not investigated impositions (threats to negative face) and directives, which constitute bulk of empirical politeness research
  - Directives may not be possible to model as an epistemic goal (to be maximally informative), since there is no 'true state' to which S's utterance can be compared for (non)literalness

What about the role of face management concerns in pragmatic inferences?

Some limitations of experimental politeness studies to date (including our own)

- **Modeled politeness as a social goal of the speaker to put listener in affective state *s***
  (cf. R. Lakoff's 1973 Politeness Rule 3: " Make listener feel good"). This is again partial because:
  - Reduces face management to its individual affective dimension (the affective consequences for the listener of being in state *s)*, ignoring its socio-normative dimension (polite exchanges driven by exigencies of the setting rather than speaker intentions)
  - Affective state can be both input to face management (regulates expectations of face-threat/boost) and its output (face gain/loss has consequences for affective state); studies have focused on one or the other end of this process
  - The state *s* modelled as social utility is an affective state of the listener. What about S's face and how it is interconnected with the listener's?

What about the role of face management concerns in pragmatic inferences?

Some limitations of experimental politeness studies to date (including our own)

- **Postulate a conflict between informative and prosocial goals** (cf. R. Lakoff's 1973 tension between Rules of Rationality and Rules of Politeness)
  - The "truth vs. kindness" conflict doesn't seem justified given our empirical results: even in US culture, truth seems separate from assessments of politeness, not its opposite.
  - What is missed in such a model is the degree of conventionalization of an expression (how expected it is, given a context), which can affect whether it is perceived as polite or not (routine politeness). Both forms and contents can be conventionalized: people have expectations about both what a compliment sounds like and when it should occur in a conversation. When something unexpected comes, whether in terms of form or content, this will affect whether it is perceived as polite or not.
  - Currently, epistemic utility is modelled exclusively as departure from the Gricean maxims. However, epistemic utility (and also cost) can be affected (e.g., lowered) by conventionalization.
  - Conventionalization potentially brings in other kinds of (social) utilities as well that can have nothing to do with the listener, e.g., presenting oneself as a competent user of the language, and it is unclear how these can be modeled.

Bottom line: When it comes to the role of face management concerns in pragmatic inferences, there is still a lot we don't know.

References

- Bonnefon, J.F. & Villejoubert, G. (2006). Tactful or doubtful? Expectations of politeness explain the severity bias in the interpretation of probability phrases. *Psychological Science* 17: 9, 747–751.
- Bonnefon, J.F., Dahl, E. & Holtgraves, T. (2015). Some but not all dispreferred turn markers help to interpret scalar terms in polite contexts. *Thinking and Reasoning* 21, 230–249.
- Bonnefon, J.F., Feeney, A. & Villejoubert, G. (2009). When some is actually all: Scalar inferences in face-threatening contexts. *Cognition* 112, 249–258.
- Brown, P., & Levinson, S. C. (1987). *Politeness: Some universals in language usage*. Cambridge University Press.
- Casiez, R. (2020) The interplay between scalar inference and emotional valence: an interactional alternative. ResMA thesis. Leiden University Centre for Linguistics.
- Doran, R., Ward, G., Larson, M., McNabb, Y., & Baker, R. E. (2012). A novel experimental paradigm for distinguishing between what is said and what is implicated. *Language*, 124–154.
- Feeney, A. & Bonnefon, J.F. (2012). Politeness and honesty contribute additively to the interpretation of scalar expressions. *Journal of Language & Social Psychology* 32: 2, 181–190.
- Grühn, D. (2016). An English Word Database of EMOtional TErms (EMOTE). *Psychological Reports* 119: 1, 290–308.
- McNally, L. (2017). Scalar alternatives and scalar inference involving adjectives: A comment on van Tiel, et al. 2016. In J. Ostrove, R. Kramer, and J. Sabbagh (eds.*), Asking the Right Questions: Essays in Honor of Sandra Chung*, 17–28.
- Ruytenbeek, N., Verheyen, S., and Spector, B. (2017). Asymmetric inference towards the antonym: Experiments into the polarity and morphology of negated adjectives. *Glossa: A Journal of General Linguistics* 2: 1, 92. 1–27.
- Sun, C., Tian, Y., & Breheny, R. (2018). A link between local enrichment and scalar diversity. *Frontiers in Psychology* 9, 2092.
- Terkourafi, M., Weissman, B., & Roy, J. (2020). Different scalar terms are affected by face differently. *International Review of Pragmatics*, *12*(1), 1–43.
- Van Tiel, B., van Miltenburg, E., Zevakhina, N., & Geurts, B. (2016). Scalar diversity. *Journal of Semantics* 33, 137-175.
- Warriner, A. B., Kuperman, V., & Brysbaert, M. (2013). Norms of valence, arousal, and dominance for 13,915 English lemmas. *Behavior Research Methods*, *45*(4), 1191–1207.
- Yoon, E. J., Tessler, M. H., Goodman, N. D., & Frank, M. C. (2016). Talking with tact: Polite language as a balance between kindness and informativity. *CogSci*, 2771–2776.