

Intensified Response Particles to Assertions and Polar Questions: The Case of Hebrew *legamrey*

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A. The story in short

• **Response particles** cross-linguistically got much attention in the literature:

□ A: *John is(n't) home* B: *Yes (he is(n't))* B': *No (he is(n't))*

• What about '**intensified response**' particles?

□ A: *John is(n't) home*

B: *Sure! / Absolutely! (he is(n't))* B': *No way! / Hell no! (he is(n't))*

• These are very common, but did not get much attention:

- No compositional analysis of such responses ☹
- No integration within general theories of response particles ☹

Goal: Contribute to this issue by examining one 'Intensified Response' particle: Hebrew *legamrey_{resp}* (*≈ absolutely / absolut*)

• We will deal with two challenges:

• **First challenge:** Giving a compositional analysis of *legamrey_{resp}* - unified with another use of *legamrey- legamrey_{prop}* (*≈ completely*)

• **Second challenge:** understand *legamrey_{resp}* vs. two other response particles in Hebrew: *Ken* (*≈ ja*) / *Naxon* (*≈ right*)

• **Main claims:**

❖ *legamrey_{resp}* is a degree modifier of gradable speech act operator *ASSERT* (Greenberg & Wolf 2018)

➢ It maximizes the degree of credence the speaker has towards the asserted proposition.

❖ The asserted proposition is anaphoric to a previously asserted / questioned proposition (Krifka 2013)

❖ In contrast, *ken* and *naxon* are anaphoric to a proposition and a speech act, respectively (*≈ ja* and *right* in Krifka 2013)

B. Challenge (I): Unifying two uses of *legamrey*

Data

• *legamrey_{prop}* is the default intensifying degree modifier in Hebrew (*-completely*), modifying only **upper-closed** predicates:

□ *ha-agartal legamrey male / #yakar / #nafal*

"The vase (is) completely full / #expensive / #fell down"

□ *[legamrey_{prop}] = λG. λx. ∃d [d=max(S_G) ∧ G(d)(x)]* (cf. Kennedy & McNally 2005 on *completely*)

• "The degree d the entity x has on the scale associated with the gradable predicate G is at the maximal endpoint on the scale":
➢ Only felicitous with **upper-closed** adjectives: since only they are associated with scales with maximal endpoints.

• But *legamrey* can be also used as a response particle *legamrey_{resp}*.

• Crucially, it is felicitous even when responding to assertions / questions with relative / non-gradable predicates (3):

□ A: *ha-agartal male / yakar / nafal (?)*

("The vase (is) full / expensive / fell down" OR ("Is / did the vase full / expensive / fall down?"))

B: *legamrey_{resp}* ("absolutely")

"I am completely sure that the vase is full / expensive / fell down"

The challenge: Both uses of *legamrey* intensify / maximize.

➢ How to capture that? Can we model *legamrey_{resp}* as a degree modifier too? But what gradable predicate does it modify?

Proposal: It modifies the gradable speech act operator *ASSERT!*

C. Background: The speech act operator *ASSERT* - independently analyzed as gradable (Greenberg & Wolf (G&W) 2018)

• G&W follow ideas about graded epistemic modality (e.g. Yalcin 2007, Lassiter 2015, 2017), and ideas in Pinon 2006 and Wolf 2015, and propose three moves:

➢ **First move:** Supplement existing entries of *ASSERT* with a **credence degree argument**

➢ **Second move:** Analyze **Modal Adverbs** as **overt degree modifiers of *ASSERT***,

➢ **Third move:** Take **apparently unmodified assertions**, to be modified by a **covert *POS***

An illustration:

Assume a Krifka 2014 style dynamic entry for *ASSERT* :

□ *[[ASSERT]]_{<c,s,t>,<c,c>} = λp. λc. ic': c' = <c_{sp} c_{hp} c_p C_w ∩ {w: *ASSERT*(p)(c)}>* i.e. *ASSERT* combines with a proposition *p* and a context *c* and yields the context *c'* where the CG is updated with *Assert*(p)(c).

➢ *Assert*(p)(c) holds in *w* iff the speaker believes in *w* that *p* at time *c_t*,

First move: Supplementing *ASSERT* with a degree argument

□ *[[ASSERT]]_{<c,s,t>,<d,<c,c>} = λp. λd. λc. ic': c' = <c_{sp} c_{hp} c_p C_w ∩ {w: *Assert*(p)(d)(c)}>*

➢ *Assert*(p)(d)(c) holds iff the speaker believes in *w* to a **credence degree *d***,

Second move: Taking **MADVs** to function as **overt degree modifiers over *ASSERT***

6. *[[Possibly]]*: λG. λp. λd. λc. ic': c' = <c_{sp} c_{hp} c_p C_w ∩ {w: ∃d > 0 ∧ G(p)(d)(c)}>

7. *[[Probably]]*: λG. λp. λd. λc. ic': c' = <c_{sp} c_{hp} c_p C_w ∩ {w: ∃d > 0.5 ∧ G(p)(d)(c)}>

8. *[[definitely]]*: λG. λp. λd. λc. ic': c' = <c_{sp} c_{hp} c_p C_w ∩ {w: ∃d = 1 ∧ G(p)(d)(c)}>

For example:

14. *John is probably a thief - [Probably(Assert)] (John is a thief) (c)*

*ic': c' = <c_{sp} c_{hp} c_p C_w ∩ {w: ∃d > 0.5 ∧ *ASSERT*(John is a thief)(d)(c)}>*

➢ "...the speaker believes in *w* that John is a thief **to a degree which is higher than 0.5**"

Third move: Take **apparently unmodified assertions** to be modified by a **covert *POS***

□ *[[POS]]*: λG. λp. λc. ic': c' = <c_{sp} c_{hp} c_p C_w ∩ {w: ∃d ≥ stand(G,C) ∧ G(p)(d)(c)}>

For example:

□ a. *Asserting John is a thief* b. *[POS (Assert)] (John is a thief) (c)*

□ *ic': c' = <c_{sp} c_{hp} c_p C_w ∩ {w: ∃d ≥ stand (ASSERT,C) ∧ *Assert*(John is a thief)(d)(c)}>*

➢ "...the speaker believes in *w* that John is a thief **to a degree which is at least as high as the standard of credence for assertions in the context**

• This 'semanticizes' ideas in e.g. Potts 2006 Davis et al 2007 that the 'quality threshold' / degree of credence with assertions is not necessarily 1, and can **vary in context**.

D. Proposal: *legamrey_{resp}* as an anaphoric degree modifier of *ASSERT*, maximizing a credence degree

• *legamrey_{resp}* acts as a **degree modifier of gradable *ASSERT*** (Greenberg & Wolf)

• the **asserted proposition is anaphoric to a proposition asserted / questioned in a previous turn in the discourse** (Krifka 2013)

• It (re)asserts this proposition with a **maximal degree of credence** (cf. *definitely*):

□ *[[legamrey_{resp}]]*: λG. λp. λd. λc. ic': c' = <c_{sp} c_{hp} c_p C_w ∩ {w: d=max(S_G) ∧ G(p)(d)(c)}>

• For example:

□ A: *John is a thief*

B: *legamrey!*

[POS (ASSERT)] (John is a thief)

[legamrey(INSERT)] (John is a thief)

A's degree of credence in "John is a thief

B's degree of credence in *John is a thief*

is at least as the context standard of credence is maximal

Meeting challenge I: ☺

We capture both **similarities** and **differences** between *legamrey_{resp}* and *legamrey_{prop}*:

• **Similarities:** In both its uses *legamrey* is a degree modifier of a gradable expression

• In both it indicates that the degree of the measured entity is at the maximal endpoint

• **Differences:**

• *legamrey_{prop}* modifies upper closed **adjectives** and maximizes degrees of an **individual** on an e.g. a **fullness / cleanness / dryness** scale

• *legamrey_{resp}* modifies a **covert *ASSERT*** operator and maximizes the degree of the **asserted proposition** on a scale of **credence** (the degree the speaker believes it)

• **Moreover:** The proposal explains why *legamrey_{resp}* is felicitous even with relative / non-gradable predicates: The credence scale is **upper closed** (cf. Lassiter 2017)

E. Challenge II: *legamrey_{resp}* vs. *ken* (*≈ ja*) and *naxon* (*≈ right*)

Data

1. A: *John is home* B: a. *legamrey* (maximal credence) b. *ken/naxon* (maximal credence)

2. A: *John is not home* B: a. *legamrey* (*he isn't*) : a. *ken* (*he isn't*) c. *naxon*. (*he isn't*)

3. A: *John is not home* B: a. *legamrey* (*he is*) : a. *ken* (*he is*) c. *naxon*. (*he is*)

4. A: *Is John home?* B: a. *legamrey* b. *ken* c. *#naxon*

4. A: *John is home* B: *If #legamrey / ken / #naxon, we better call him*

	<i>legamrey_{resp}</i>	<i>Ken</i> (<i>≈ ja</i>)	<i>naxon</i> (<i>≈ right</i>)
1. Intensified / 'maximal credence' interpretation	+	-	-
2. Negative reactions to negative assertions	+	+	+
3. Positive reactions to negative assertions	+	+	-
4. Felicity in responding to polar questions	+	+	-
5. Felicity in conditional antecedents	-	+	-

F. Proposal: *legamrey_{resp}* within an anaphoric theory of responses

➢ *legamrey_{resp}* A degree modifier of *ASSERT*, anaphoric to a previous proposition (see above)

➢ *ken* is anaphoric to a previous proposition (*≈ ja* in Krifka 2013)

➢ *Naxon* is anaphoric to a previous speech act (*≈ right* in Krifka 2013)

Meeting the second challenge ☺

1. Intensified / 'maximal credence' interpretation:

- Found with the maximizing degree modifier *legamrey_{resp}*
- **Not with *ken* and *naxon*** which keep the same degree of credence as in the original assertion

2. Negative reactions to negative assertions

- **Fine with *legamrey_{resp}* and *ken*** – which can pick the negative proposition
- **Fine with *naxon*** – which repeats the whole assertion (of the negative proposition)

3. Positive reactions to negative assertions:

- **Fine with *legamrey_{resp}* / *ken*** – can pick the embedded positive proposition (cf. Krifka 2013)
- **Bad with *naxon*** – which repeats the whole assertion speech act (of negative proposition)

4. Felicity in responding to polar questions:

- **Fine with *legamrey_{resp}* -** which inherently returns an assertion **and with *ken*** – which CAN be used to assert the antecedent proposition – both are natural reactions to polar questions.
- **Less good with *naxon***: It repeats the whole speech act (in this case the whole polar question) – ending up with "This is indeed an appropriate question to ask" effect (cf. Wiltschko 2017)

5. Felicity in conditional antecedents

- With *legamrey_{resp}* *naxon* we end up with a speech act (ActP) – infelicitous in this position
- With *ken* we can end up with a proposition – fine in this position

VI. Conclusion and directions for further research

❖ **Conclusion:** We proposed a compositional analysis of the intensified response *legamrey_{resp}*, which captures similarities and differences between it and (a) the more standard degree modifier *legamrey_{prop}* and (b) two other response particles in Hebrew.

❖ **Directions:**

- Our proposal applied to other means to increase / decrease credence?
➢ Other intensified response particles? / syntactic and intonational means to increase and decrease credence? / What about differences between *legamrey_{resp}* and similar particles, e.g. discourse *totally* (Beltrama 2018)?
- Other theories of response particles on 'intensified responses'? E.g. A feature-based theory (Roelofsen & Farkas 2015) / An ellipsis-based theory (e.g. Kramer & Rawlins (2009, Holmberg (2016)? / A 'hybrid' theory (Goodhue & Wagner 2018)