

# Three approximators which are almost / more or less / be-gadol the same<sup>1</sup>

Yael Greenberg  
*Bar Ilan University*

Moria Ronen  
*Bar Ilan University*

## Abstract

In this paper we look at three approximators: *Almost* (and the Hebrew *kim'at*), *more or less* (and the Hebrew *paxot o yoter*) and *be-gadol* (literally *in-big*, which can be translated as "by-and-large" / "loosely speaking" / "basically"). We examine a range of similarities and differences between the three approximators and propose to account for them by assuming that all of them are scalar operators, whose semantics combines **a polar (negative) component**, rejecting the prejacent under an actual value to a relevant parameter, is false, and **a proximity (positive) component**, accepting an alternative which is lower and close to the prejacent, but that the three particles differ in the choice of the 'relevant parameter' in the negative component (a world, a precision standard, a standard of answerhood to the Question Under Discussion, etc.), and hence also in the alternatives to the prejacent in the positive component.

## 1 Introduction

In this paper we will examine and account for a range of differences and similarities between three approximators: *almost* (and its Hebrew correlate *kim'at*), *more or less* (and its Hebrew correlate *paxot o yoter*) and the Hebrew *be-gadol* (literally *in-big*, can be translated as "basically", "by-and-large" / "loosely speaking"). We claim the three approximators share a core 'scalar' operation, inspired by proposals made about the semantics of *almost* (e.g. Hitzman (1992), Sevi (1998), Penka (2006), Amaral & del Prete (2010)). In particular, we will take the semantics of all three approximators to involve a polar, negative component, and a proximity, positive one. The polar (negative) component rejects the prejacent under the

---

<sup>1</sup> Research on this paper was supported by ISF grant # 490 / 09. Thanks also to the audience of IATL 28 for instructive comments.

current / actual value to a relevant parameter, while the proximity (positive) component indicates that a lower and close alternative to the prejacent, on a relevant scale, holds.

We propose that the difference between the three approximators results from the choice of the '**relevant parameter**' in the negative (polar) component (the actual world / the actual precision standards/ the actual standard determining what counts as a complete answer to the QUD), and consequently, also in the scale of alternatives to the prejacent, in the positive (proximity) component.

The paper is structured as follows: section 2 presents the relevant data concerning the similarities and differences between the three approximators, section 3 lays out our proposal, and section 4 accounts for the data for each of the three approximators and elaborates on the varying parameter. In section 5 we summarize and suggest some directions for further research.

## 2 Data

*Be-gadol*, *more or less* and *almost* pose an intriguing puzzle, since they can yield similar effects as well as very different ones. Examples for such similar effects can be found in examples like (1) and (2). (Notice that in the examples below we will translate *be-gadol* as 'basically', although the two are not exactly the same):

1. A: Are you there already?  
B: Almost / more or less / *be-gadol* ("≈ basically")
2. A: Is the room clean now?  
B: Almost / more or less / *be-gadol* ("≈ basically")

All answers in (1) imply that B is not 'there', but he is close. Similarly, all answers in (2) imply that the room is not completely clean, but it is not far from being clean either.

The different effects for the three approximators will be displayed in two parts, one which compares *almost* on the one hand, to *more or less* and *be-gadol* on the other hand, and another, which focused on the differences between *more or less* and *be-gadol*.

### 2.1 *Almost vs. more or less/be-gadol*

We observe four differences between *almost* and *more or less / be-gadol*, namely a difference in the 'distance from the limit point', a 'directionality' difference, a difference in 'polarity' and the presence / absence of a counterfactual reading. Let us examine each of these differences.

Starting from the 'distance from the limit point', we can first see that *almost p* implicates that although *p* is not true, there is a true alternative which is '**very** close' to *p*. In contrast, *more or less p* or *be-gadol p* just lead to an implication of the alternative being 'close' to *p* (cf. Sauerland & Stateva (2007) for a similar observation). The difference is illustrated in example (3):

3.
  - a. Room 1 is almost clean
  - b. Room 2 is *be-gadol* ("≈ basically") / more or less clean

Comparing (3a) and (3b) the implication is that room 1 is cleaner than room 2, i.e. the degree of cleanness of room 1 seems closer to the maximal point on the cleanness scale (being 'completely clean') than that of room 2.

Second, as pointed out by e.g. Amaral & del Prete (2010) for the Italian counterparts of *almost* and *more or less*, while *almost* yields a 'before/less than' effect with numerals, temporal expressions, and spatial expressions, no such directionality effect is present with *more or less*, and *be-gadol*. This is illustrated in (4), in which (4a) implies that John arrived (shortly) before 3, e.g. at 2.55, whereas (4b) implies that he arrived (shortly) before or after 3, e.g. at 2.55, or 3.05:

4.
  - a. John arrived at almost 3
  - b. John arrived at be-gadol (“≈ basically”) / more or less 3

Examples like 4 make it clear, then, that while *almost* has a clear directionality effect, *more or less* and *be-gadol* do not.

The third difference concerns the ‘polarity’ of *almost* vs. *more or less* and *be-gadol* (cf. Wierzbicka (1986), Amaral & del Prete (2010) cf. Siegel (2002) on *like*). Consider example (5):

5. How many students does John have?
  - a. Almost 200
  - b. more or less 200
  - c. be-gadol (“≈ basically”) 200

Imagine now that we find out that John has **exactly** 200 students. In this case we will judge the utterance in (5a) false, but those in (5b) and (5c) will be naturally still judged as true.

Notice, however, that if it is clear that the speaker of (5b) and (5c) **knows** that John has exactly 200 students, we will take these utterances to be false as well.<sup>2</sup>

In normal circumstances, though, we seem to take *almost*, but not *more or less* and *be-gadol* entail that the prejacent is false. Another way to illustrate this difference is demonstrated in example (6). While uttering *almost p* is compatible with explicitly rejecting *p*, this is not so with *more or less* and *be-gadol*:

6. Is the room clean?
  - a. (lo, aval) kim'at – “(No, but) almost”
  - b. (# lo aval) paxot o yoter / be-gadol - “(#No but) more or less / be-gadol (“≈ basically”)”

A last difference we will examine is the presence / absence of a 'counterfactual' reading (e.g. Sadock (1981), Penka (2006), Sevi (1998), Amaral & del Prete (2010)). Consider (7):

7. John almost arrived at 3

(7) has a counterfactual reading. E.g. it can be true in a scenario where John made a stupid mistake and missed the train which would enable him to arrive at 3, so he had to wait for the

---

<sup>2</sup> But see section 2.2 below for cases where *be-gadol* can be felicitously uttered in a situation where the speaker knows that *p* is ‘perfectly’ true.

next train, and eventually arrived at 8. Thus, we can utter (7) and continue it with “If John hadn’t made this stupid mistake he would have arrived at 3”.

In contrast, (8a) and (8b), with *more or less* and *be-gadol* do not have such a reading, and cannot be true in such a scenario:

8.
  - a. John more or less arrived at 3.
  - b. John be-gadol (“≈ basically”) arrived at 3.

It is interesting to notice that in the counterfactual reading of (7) with *almost*, neither the ‘directionality’ nor the ‘small distance from the limit point’ effects discussed above for *almost* are present. For example, given our scenario John arrived **after** 3 (not before it), and the time at which he actually arrived is not necessarily ‘very close’ (or even ‘close’) to 3.

## 2.2 *More or less vs. be-gadol*

From the data above *more or less* and *be-gadol* seem to behave in a similar way, and both seem differ from *almost*. In this subsection, though, we will show that *more or less* and *be-gadol* are more different than each other than they seem so far. In particular, we will examine three differences between these approximators: the presence / absence of a ‘temporal’ reading, the presence / absence of an ‘incomplete future commitment’ reading, and the effect of the two approximators in cases where the speaker knows that *p* is (perfectly / precisely / typically) true.

The first difference between *be-gadol* and *more or less* concerns a reading that is only available for *be-gadol*, which we will refer to as the ‘temporal’ reading. Consider example (9):

9. What did Mary do in the party?
  - a. She more or less danced
  - b. She be-gadol (“≈ basically”) danced

(9a) can mean that the way Mary moved resembled dancing (though could not be considered prototypical dancing). In contrast, (9b) has the reading of (9a), but also an additional reading where Mary (prototypically) danced, but did that only most of the time of the party (and in the rest she sang / spoke with people, etc.).

Another unique reading for *be-gadol p* is one that refers to the speaker’s commitment to a prejacent that is supposed to be true in the future. Such a reading is not available for *more or less*. An example illustrating the contrast is seen in (10), where (10a) is infelicitous, but (10b) is perfectly felicitous and can be paraphrased as “I will / intend to arrive, but there may be some obstacles which will prevent me from arriving”:

10. Are you coming to the party tonight?
  - a. #More or less yes
  - b. be-gadol (“≈ basically”) yes

Finally, consider what happens in a scenario where the speaker knows that *p* is prototypically / perfectly true. *More or less p* cannot be felicitously used in such a scenario, whereas *be-gadol* can. This is illustrated in (11):

11. So what’s happening with John and Mary? Do they love each other?
  - a. They more or less love each other, but they are still not ready to get married.

- b. They be-gadol (“≈ basically”) love each other, but they are still not ready to get married.

The only reading available for (11a) is a reading where John and Mary's degree of love to each other is rather high, but not maximal (and probably this is why they don't get married yet). Example (11b) with *be-gadol* shares this reading, but has an additional reading, where John and Mary's degree of love to each other is, in fact, maximal, but crucially we also understand that “that's not the whole story”. That is, there are other obstacles which prevent them from being married (e.g. they don't have any money).

Given this reading, we can sometimes get cases where *be-gadol* and *almost* are felicitous, while *more or less* is not. Consider example 12, in a context where in order to get accepted to the department John has to pass a test. The passing grade is strictly 60. The speakers of (12) are talking about John:

- 12. Well, what are the results?
  - a. He almost passed the test (e.g. he got 58)
  - b. ??He more or less passed the test
  - c. He be-gadol (“≈ basically”) passed the test. (E.g. he got 62), but eventually he didn't get accepted since there were too many candidates this year).

In this example we can see again that the use of *be-gadol* is felicitous even though the speaker knows that John clearly passed the test, i.e. where the speaker knows that the prejacent (completely / perfectly) true. The use of *be-gadol* here indicates again that although p is (completely) true, “this is not the whole story”. In contrast, *more or less* is infelicitous in such a scenario.

### 2.3 Intermediate summary

The following two tables summarize our observations so far:

Table I: Differences between *almost* and *more or less* / *begadol*:

	<b>Almost p</b>	<b>More or less/be-gadol p</b>
<b>Distance from the limit point</b>	Very close (not found with the ‘counterfactual’ reading)	Close
<b>Directionality w.r.t. p (with e.g. numbers / temporal adverbials)</b>	Yes - before / less than p (not found with the ‘counterfactual reading’)	No - Can be either before/less or after / more p
<b>Counterfactual reading</b>	Present	Absent
<b>Polarity (entails not p)</b>	Yes	No

Table II: Differences between *more or less* and *be-gadol*:

	<b>More or less p</b>	<b>Be-gadol p</b>
<b>Imprecision reading</b>	Present	Present
<b>Temporal reading</b>	Absent	Present
<b>'Incomplete future 'commitment' reading</b>	Absent	Present
<b>Status when the speaker knows that p (precisely / typically) holds</b>	Infelicitous	Felicitous

### 3 The proposal : a unified scalar semantics with one varying parameter

In order to account for both similarities and differences between *almost*, *more or less* and *be-gadol*, we propose that these three approximators share a basically identical semantic operation, and differ from each other in the value of a single parameter.

In particular, we propose that all three approximators have the same basic scalar semantics, combining a negative (polar) and a positive (proximity) component. The formal definition is in (13):

$$13. \lambda p. \neg p_c \wedge \exists p' \in S_{ALT} (p_c) \wedge p' <_s p_c \wedge \text{close}_s (p', p_c) \wedge p'^3$$

In words: approximators are sentential operators which combine with a prejacent  $p$ , and yield a conjunction of a two propositions. **The negative (polar) component**, which rejects  $p$  under a the current value to a parameter  $c$  (rejects  $p_c$ ), and **the positive (proximity) component**, which states that an alternative  $p'$  which is a member of the scaled set of alternatives to  $p_c$ , and which is lower and close to  $p_c$  on the scale, holds.<sup>4</sup>

Notice that this definition is heavily inspired by previous approaches to the semantics of *almost*, e.g. Hitzman (1992), Sevi (1998), Penka (2006), Amaral & del Prete (2010), all of which took *almost* to involve a polar (negative) and a proximity (positive) component. However, this semantics is usually given to *almost* only. In particular, Wierzbicka (1986) as well as Amaral and el Prete (2010) explicitly argue that it **does not** suit approximators like *more or less* or *approximately*. For example, Amaral and del Prete argue that (the Italian correlate of) *more or less* (or *approximately*) do not have the polar component, since they are compatible with the truth of  $p$ , and that they are not scalar, i.e. don't involve a scale with a proximity component, since they lack the 'directionality' effect found with *almost* (as illustrated in section 2.1 above). In contrast, we argue that the definition in (13) suits all three approximators (*almost*, *more or less* and *be-gadol*), and thus, that all of them have a scalar semantics.

To capture the differences between the approximators we propose that they can be derived from the different characterization of the parameter  $c$  in (13). In particular we

<sup>3</sup> In this paper we do not deal with the status of these two components, i.e. which of them is asserted and which presupposed (or, using e.g. Roberts 2011 terminology, which is 'at issue' and which is 'not at issue'). But see the last section for a brief discussion of this question.

<sup>4</sup> We assume that the associate of the approximator (usually what is focused in  $p$ ) contributes to the choice of the relevant scale of alternatives (see Amaral & del Prete (2010) for *almost*). For example, in *John almost / more or less / be-gadol arrived at [3]<sub>F</sub>*, the scale of alternatives will naturally concern closeness to 3.

propose that for *almost* the relevant parameter is always **the actual world  $w_0$** <sup>5</sup>, for *more or less* it is the **current precision standard ( $pre_c$ )**, and for *be-gadol* it is either the current precision standard ( $pre_c$ ), as in *more or less*, or the current standard determining what counts as a **complete answer to the QUD ( $ans_c$ )**.<sup>6</sup>

As we will show below, this different characterization of the  $c$  parameter for each of the approximators leads a difference in the characterization of the relevant alternative which is lower than (and close to)  $p$  in the positive (proximity) component.

## 4 Accounting for the data

We will now examine each of the approximators in turn, and show how the definition in (13), together with the specification of the relevant parameter  $c$  accounts for the range of readings the particles can (and cannot) yield.

### 4.1 Almost

We argued that *almost* has the semantics in (13) above, where  $c$  is the actual world  $w_0$ . This leads to (14):

$$14. \textit{Almost}: \lambda p. \neg p_{w_0} \wedge \exists p' \in S_{ALT}(p_{w_0}) \wedge p' <_s p_{w_0} \wedge \textit{close}_s(p', p_{w_0}) \wedge p'$$

In prose, the negative component in (14) guarantees that the truth of  $p$  in  $w_0$  is negated. As for the positive component, here we have two possibilities: Given the first possibility (possibility # 1), the same proposition  $p$  is true in a world  $w_1$  which is lower but close to  $w_0$  on the scale of similarity to  $w_0$ . Given the second possibility (possibility # 2), a distinct proposition  $q$ , lower but close to  $p$  on a salient scale is true in  $w_0$ .

Possibility # 1 gives rise to ‘counterfactual’ readings of sentences with *almost*. To illustrate this possibility consider example 14 where *almost* associates with the VP *arrived at 3* (since counterfactual readings easily arise when *almost* associates with a verbal predicate). The negative and positive components are paraphrased in (15a) and (15b):

15. John almost arrived at 3

- a. Negative component:  $\neg$ John arrived at  $3_{w_0}$
- b. Positive component: John arrived at  $3_{w_1}$ , where  $w_1$  is a world which is lower than  $w_0$  on a scale and close to it.

Under the counterfactual reading (15) can be true, for example in a scenario where John missed the train which would have enabled him to arrive at 3, and eventually arrived at 8. In this case the positive component guarantees that each alternative in the scale is the same prejacent, namely “John arrived at 3” in different worlds. These worlds are ordered by similarity to  $w_0$ , i.e.  $w_0$  is maximally similar to itself, and the rest of the worlds are different from  $w_0$ , and are ordered by their similarity to it, e.g.  $w_1$  is most similar to  $w_0$ ,  $w_2$  is a bit less similar, etc. Given such a scale the positive component says that John arrived at 3 in a world

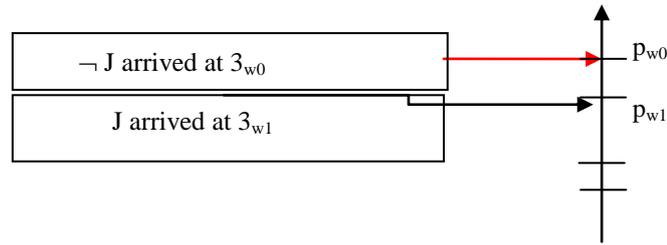
---

<sup>5</sup>we will see below how this differs from other approaches to *almost*.

<sup>6</sup>We assume that when the value to the relevant parameter changes in the positive components, the values to all other parameters remain fixed. E.g. when the alternatives to  $p$  under the current precision standards are calculated with *more or less*, these alternatives will differ from the prejacent only in the precision standards, but the world index and the ‘standard of answerhood to the QUD’ will stay fixed.

$w_1$ , namely a world which is lower than  $w_0$  in the scale of similarity to  $w_0$  (i.e. it is not  $w_0$  itself), but is close to it (other than  $w_0$ , most similar to it). This is schematically illustrated in (16):

16.



The counterfactual reading arises, then, in the following way, inspired by Lewis (1973) (see also Sevi 1998): in  $w_0$  it is false that John arrived at 3, but in  $w_1$ , a world which is maximally similar to  $w_0$  (except  $w_0$  itself), he did arrive at 3.

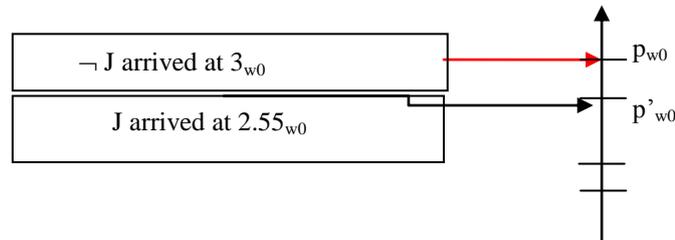
To illustrate possibility # 2 consider example (17), with the negative and positive components in (17a) and (17b), respectively:

17. John arrived at almost 3

1. Negative component:  $\neg$ John arrived at  $3_{w_0}$  (just as in possibility # 1)
2. Positive component: John arrived at  $t_{w_0}$ , for some  $t$  which is lower than 3 on a scale and close to it.

The world index,  $w_0$ , stays the same in the negative and positive components, so the scale of alternatives contains  $p$  and different alternative propositions to it, all of which are true in  $w_0$ . From the combination of the negative and the positive components we understand that although it is false that John arrived at 3 in  $w_0$ , he did arrive at some time before and close to 3 at  $w_0$ , e.g. in  $w_0$  John arrived at 2.55. This is schematically illustrated in (18):

18.



This analysis accounts for the effects of *almost* pointed out in section 2 above. The ‘directionality’ and ‘distance from the limit point’ effects are found with possibility # 2. In particular, in (17) *almost* indeed yields a directionality effect, since the positive component requires that John arrives at a time lower than / before 3 (e.g. at 2.55, but not at 3.05). Second, the time  $t$  in the positive alternative has to be close to 3.

Our analysis also accounts for the fact that none of these two effects are present with the counterfactual reading (i.e. given possibility # 1 above): the ‘directionality’ effect is not present (given the counterfactual reading the sentence can be true if John actually arrived **later** than 3) since ‘lower’ than relates to a scale of worlds, and not to a scale of times with a time lower than (before) 3. Similarly, the time at which John actually arrived in this reading need not be ‘very close’ or even ‘close’ to 3 (e.g. John may have arrived at 8, or at 12). This is again because under this reading ‘closeness’ is a relation between worlds, and not between times.

Finally, the ‘polarity effect’ is guaranteed to hold in both possibilities (in both the truth of *John arrived at 3* is negated in  $w_0$ ).

Notice that although our suggestion is heavily inspired by previous approaches to *almost*, it is not identical to them. In particular, insisting that the world parameter is the only parameter operative with *almost* makes our proposal different from Sevi’s (1998) and Sauerland & Stateva’s (2007) approach, who propose that *almost* may involve scales of precision standards. As we will show below while such scales are found with *more or less* and with one reading of *be-gadol*, they are not operative with *almost*. In addition, our proposal differs from Amaral & del Prete’s (2010) proposal for (the Italian correlate of) *almost*, which assumes that the proximal alternative is always a distinct proposition  $q$  (lower than  $p$  on a scale), which holds in  $w_0$ . That is, Amaral & del Prete’s proposal only allows for possibility # 2.

## 4.2 More or less

For *more or less* we assume that the relevant contextual parameter  $c$  is the **current standard of precision**  $pre_C$ . This yields the semantics in (19):

$$19. \textit{More or less}: \lambda p. \neg p_{preC} \wedge \exists p' \in S_{ALT} (p_{preC}) \wedge p' <_s p_{preC} \wedge \textit{close}_s (p', p_{preC}) \wedge p'$$

Thus, the negative component rejects  $p$  under the current standard of precision  $pre_C$ . As for the positive component, here the alternatives in the scale will differ from  $p_{preC}$  in exactly this parameter, namely the precision standard. Thus, the positive component says that  $p$  under a lower (more relaxed) but close precision standard  $pre_1$  holds.

To understand the effect of (19), then, we need to understand the effect of rejection /affirmation of a sentence under different precision standards. Such standards have been modeled in the literature in various ways: as finer / coarser granularities (Sauerland & Stateva (2007)), truth in more / less precisifications (superevaluation theories), distance from the precise point in the pragmatic halo (Lasersohn (1999)) or size of the set of alternatives (Morzycki’s (2011) formalization of Lasersohn’s approach).

For now we take expressions interpreted under (lower) standards of precision to denote (larger) sets of alternatives, using Morzycki’s (2011) approach. This is illustrated in (20), for the interpretation of *Tel Aviv* under different precision standards (where 1 is the strictest and 0 is the most relaxed one):

$$20. \begin{aligned} \textit{Tel Aviv}_1 &= \{\textit{Tel Aviv}\} \\ \textit{Tel Aviv}_{0.95} &= \{\textit{Tel Aviv}, \textit{Yafo}\} \\ \textit{Tel Aviv}_{0.9} &= \{\textit{Tel Aviv}, \textit{Yafo}, \textit{Givatayim}, \textit{Bat Yam}\} \\ \textit{Tel Aviv}_{0.6} &= \{\textit{Tel Aviv}, \textit{Yafo}, \textit{Givatayim}, \textit{Bat Yam}, \textit{Xolon}, \textit{Rishon Le-cion}, \textit{Bney Brak}, \textit{Herzeliya}\} \end{aligned}$$

Following Morzycki (2011) we assume that such interpretations are projected compositionally. E.g. *I am in Tel Aviv*<sub>0.95</sub> = {I am in Tel Aviv, I am in Yafo}. We further propose that a sentence interpreted under a degree of precision  $d$  is true if the speaker is **certain / committed** that one of the alternatives in the corresponding set is true. In other words, standards of precision are metalinguistic operators: they do not directly determine truth (of one of the alternatives), but only commitment / certainty with respect to truth of one of the alternatives.

Given this approach, negating precision standards will have a metalinguistic effect as well. For example, *John lives in Tel Aviv*<sub>0.95</sub> will be true if it the speaker is certain / there is

commitment that John lives in Tel Aviv or Yafo. Negating this sentence under this precision standard will not lead to a change in truth conditions, but only to a change in the commitment /certainty of the speaker . I.e.  $\neg(\text{John lives in Tel Aviv}_{0.9,5}) = \text{There is no certainty / commitment that John lives in Tel Aviv or in Yafo. He may live in other places, but it is still possible John lives in Tel Aviv or Yafo.}$

Turning back to *more or less*, we will take a sentence like (21) to have the following interpretation:

21. John arrived at more or less 3

1. The negative component:  $\neg(\text{John arrived at } 3_{\text{prc}})$
2. The positive component: There is a lower and close degree of precision  $\text{pre}_1$ , under which p holds.

Suppose our current precision standard is 0.9, and that 3 in *John arrived at 3* under this precision standard yields the set of alternatives in (22), i.e. the interval between 2.57 and 3.03. This means that a speaker of this sentence is committed to the truth of the sentence *John arrived at t* for one of the alternatives times in (22):

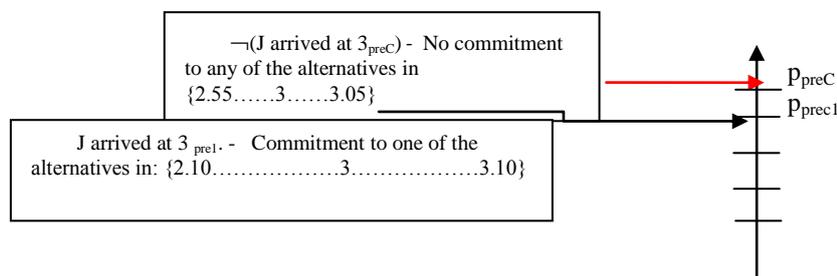
22.  $3_{0.9} = \{2.57, 2.58, 2.59, 3.00, 3.01, 3.02, 3.03\}$

The contribution of *more or less* to (21), then, is the following: the negative component of *more or less* negates *John arrived at 3* under the current precision standard (e.g. under 0.9). This means that the speaker is **not** committed to / not certain that John arrived at one of the times in the set in (22). The positive component says that p is true under a precision standard which is lower than but close to the current precision standard. Suppose 0.8 is such a standard, and suppose that  $3_{0.8}$  is interpreted as in (23), i.e. as the interval between 2.50 and 3.10:

23.  $3^{0.8} = \{2.50, 2.51, \dots, 3.00, \dots, 3.09, 3.10\}$

Thus, the positive component of *more or less* says that the speaker of (21) has commitment / is certain that *John arrived at t* is true for one of the alternatives in this larger interval (21). This is illustrated in (24):

24.



Together, the positive and negative components of 17 explain the following observations made in section 2 above:

First, *more or less* does not yield a directionality effect, since given that the relevant alternatives in the scale involve difference precision standards, and the way these precision standards are captured, all that the positive component requires is that there is certainty / commitment that 'John arrived at t' for some time in the interval **surrounding** 3 i.e. possibly (slightly) after 3. This is in contrast to *almost*, where (on possibility #2) the proximal

alternative is a proposition "John arrived at t" for some time which is perceived as lower than the time 3 itself, and hence **before** 3.

Second, *more or less* does not yield a polarity effect, i.e. it does not entail the falsehood of p. This is because, negation with *more or less* is metalinguistic: we reject the certainty of / commitment to one of the alternatives determined by the current precision standard.

Moreover, given the positive component there is certainty / commitment to the truth of one of the alternatives in a larger set / a wider temporal interval. Since this set / interval contains the time 3.00 itself, "John arrived at more or less 3" is compatible with a situation where John actually arrived at 3.

This is, again, in contrast with *almost*, where the negative component rejects the truth of p in  $w_0$ , and hence entails the falsehood of *John arrived at 3*. If indeed *almost* was able to operate on scales of precision standards too (as proposed in e.g. Saurland & Stateva 2007), these contrasts between *almost* and *more or less* could not be explained.

Crucially, we noted above that knowing that p is (precisely) true leads to a polarity effect with *more or less*. For example, if the speaker knows that John arrived at 3.00, his/her utterance of "John arrived at more or less 3" would be considered false. This is because in such a case the negative component in the semantics of more or less, repeated in (25), cannot hold:

25.  $\neg(\text{John arrived at } 3_{\text{prC}})$

As explained above, (25) says that there is no commitment to any of the alternatives in the set, e.g. to any of the alternative times in the set {2.57, 2.58, 2.59, 3.00, 3.01, 3.02, 3.03} in (25) above. But if a speaker **knows** that John arrived at 3.00, then she is committed to one of the alternatives, hence this negative component cannot hold.

A third observation concerns the distance from the limit point with *more or less* (relative to *almost*). This can be explained again by assuming that the relevant parameter with the former, but not with the latter approximator, is the current precision standard. In particular, we saw that what the negative component with *more or less* rejects is the commitment to one of the alternatives in the set dictated by the current precision standard  $\text{pre}_C$ . Crucially, however,  $\text{pre}_C$  can be one which is not maximally precise to start with (e.g. a set dictated by *John arrived at 3<sub>0.9</sub>*, as in (25) above. Now, the positive component requires that an alternative involving an even lower (more relaxed) precision standard holds, e.g. *John arrived at 3<sub>0.8</sub>*. From the system we are using, it follows that the time where John actually arrived can be even farther away from the precise point in time for '3'. Thus, *John arrived at more or less 3* can be true in a situation where John arrived at e.g. 2.50.

This is again in contrast to *almost*, where the proximal alternative is relativized to "John arrived at 3", and thus must involve an alternative time close to 3. Hence, comparing *almost 3* and *more or less 3* implies that the former yields a time closer to 3 than the latter.

The lack of counterfactual reading with *more or less* is due to the fact that, unlike *almost*, it only involves scales of p under different precision standards, not of ordering between worlds.

Finally, our theory can explain the infelicity of *more or less* with non-vague expressions, as in (26):

26. ??John more or less passed the test (where the passing test is strictly 60)

The 'current precision standard' in examples like 19 must be maximal. Relaxing the precision standard would mean that John got less than 60 (e.g. 58). However, since the context dictates that getting a grade of less than 60 is failing, the positive component (saying

that "John passed" under a more relaxed standard is true) cannot hold. More generally, with non-vague predicates,  $p$  cannot be both negated on a certain precision standard, an affirmed on a lower precision standard.

### 4.3 *Be-gadol*

We now turn to *be-gadol*. Above we saw that *be-gadol* shares many properties with *more or less*, but can have additional readings. We propose to account for this fact by assuming that *be-gadol* shares the same core semantics of approximators in (13), and that the contextual parameter it uses can be either precision standard, like *more or less*, or another parameter, which is operative at the discourse level, namely, the standard of answerhood to the Question Under Discussion.

In particular, assuming that *be-gadol* can use the same relevant parameter proposed for *more or less*, namely, the 'current precision standard', can account for all the cases where *be-gadol* has an 'imprecision' reading, illustrated again in the examples below:

- 27. John arrived at *be-gadol* ("≈ basically") 3
- 28. The room is *be-gadol* ("≈ basically") clean
- 29. Rina *be-gadol* ("≈ basically") danced

On this reading of *be-gadol p*, just like *more or less p*, it is clear that John did not arrive at (exactly) 3, that the room is not maximally clean, and that what Rina did cannot be considered prototypical dancing. More formally, on this reading we reject the prejacent under the current precision standard, and accept the prejacent under a lower precision standard, as schematically illustrated in (13) above.

However, as we saw above, *be-gadol* is also felicitous in cases where the speaker knows that  $p$  is 'precisely / typically / maximally' true (i.e. true under the current precision standard):

- 30. A: What did Mary do in the party?  
B: She *be-gadol* ("≈ basically") danced (she typically danced most of the time)
- 31. Context: In order to get accepted to the department John has to pass a test. The passing grade is 60. A and B are talking about John.  
A: Well, what are the results?  
B: He *be-gadol* ("≈ basically") passed the test (he got 62, but eventually he didn't get accepted since there were too many candidates this year).

As we said above, another reading *be-gadol* yields is the 'incomplete future commitment' reading, as in (32), where B means: "I will come unless something unexpected happens".

- 32. A: Are you coming to the party?  
B: *be-gadol* ("≈ basically") yes

To characterize the effects of *be-gadol* in these examples we propose that the relevant parameter in these is **the current level of completeness of answerhood to the QUD**, represented as *ans<sub>c</sub>*. Intuitively, in all of the examples above, the presence of *be-gadol* indicates that the prejacent, although (precisely / completely) true, is an incomplete answer to the Question Under Discussion (the QUD (Roberts 1996)). Under this parameter, then, the effect of *be-gadol* is as in (33):

$$33. \textit{Be-gadol}: \lambda p. \neg p_{\text{ansC}} \wedge \exists p' \in S_{\text{ALT}}(p_{\text{ansC}}) \wedge p' <_s p_{\text{ansC}} \wedge \textit{close}_s(p', p_{\text{ansC}}) \wedge p'$$

That is, on this reading the negative component in the semantics of *be-gadol* indicates that  $\neg(p_{\text{ansC}})$  i.e. that *p* does not reach the standard dictated by the context to be considered a complete answer to the QUD. The positive component requires that if we take a scale of propositions which are ordered by the degree to which they can be considered complete answers to the Question Under Discussion, then an alternative which is lower than  $p_{\text{ansC}}$  and close to it, will be considered a complete answer to the QUD.

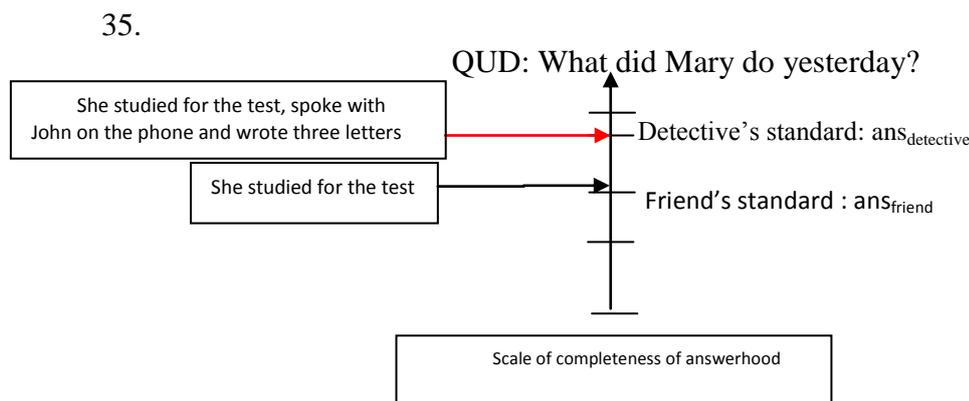
It is important to note that since *be-gadol* operates on metalinguistic levels, the negation in the definition doesn't affect truth value at all, similarly to what we saw with precision standards. Hence, in this reading *p* can be true in  $w_0$ , e.g. John passed the test, Mary (typically) danced, etc.

To illustrate the operation of the  $\textit{ans}_C$ , let us distinguish two cases where *be-gadol* operates with this parameter:

In the first case, degrees of completeness of answer can be lined on a scale where all alternatives are answers **to the same question**. The top of the scale is the most complete answer possible, and the lower an alternative is on the scale, the less complete it is. The context determines for each question a standard of what counts as a "complete answer". This standard can be different in different contexts, even without hedges like *be-gadol*. For example, consider B's answer to A's question in (34):

34. A: What did Mary do today?  
 B: She studied for the test

If B is a detective giving an account of Mary's activities to his commander, his answer may be considered an incomplete answer. That is, a really complete answer may be more elaborated "She studied for the test, spoke with John on the phone and wrote three letters". In contrast, for a regular conversation between two friends the same answer will be considered complete (as this is the main thing that Mary did, and the rest was not very important).<sup>7</sup> These different contextual standards can be ordered on a scale, as is schematically illustrated in (35):



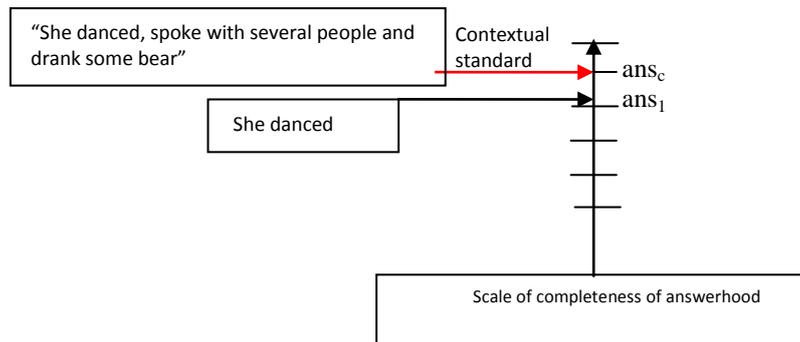
<sup>7</sup>We can derive the potential variation in what counts as a complete answer from the maxim of quantity, which dictates the speaker give the maximal amount of relevant information. What counts as 'relevant' can change from context to context, and hence, what counts as 'maximal amount of information' can change from context to context.

Given this possibility, then, the use of *be-gadol* can indicate that the prejacent does not reach the contextual standard for being a complete answer to a QUD Q, but it counts as a complete answer to this same QUD Q if we lower the standard. This is what we get in what we called the ‘temporal’ reading of (36), and the ‘incomplete future commitment’ reading in (38) as illustrated in (37) and (39), respectively:

36. A: What did Mary do in the party?  
B: She *be-gadol* (“≈ basically”) danced.

37.

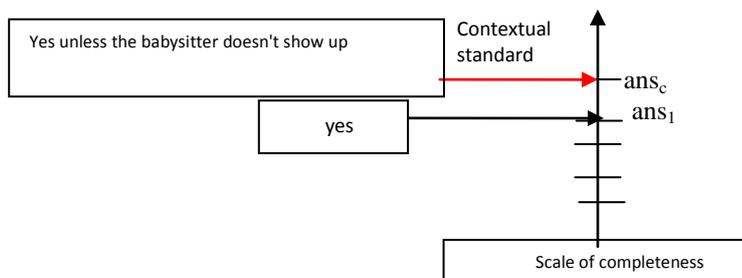
QUD: What did Mary do in the party?



38. A: Are you coming to the party?  
B: *be-gadol* yes

39.

QUD: Are you coming to the party?



There is, however, another option to think about ‘levels of answerhood to the QUD’, which *be-gadol* can exploit. This is what happens in the reading which we intuitively described above as ‘this is not the whole story’ reading. In this option, while the prejacent is considered a complete answer to the **explicit** question, it is an **incomplete** answer to a salient super-question of this explicit question, which is what is **really** under discussion (and which can be itself explicit or implicit) (see e.g. Roberts (2011) and Buring (1997)). Consider example (40), repeated here:

40. Context: In order to get accepted to the department John has to pass a test. The passing grade is 60. A and B are talking about John.  
A: Well, what are the results?

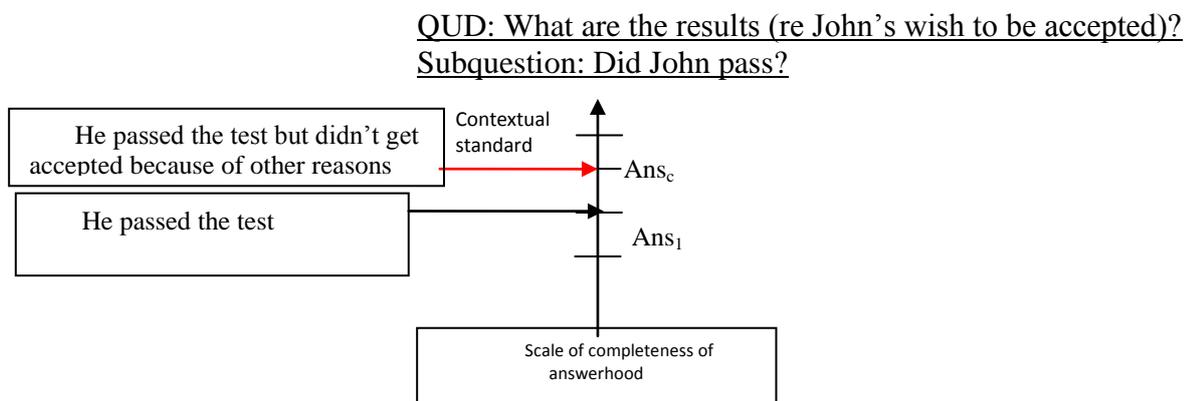
B: He *be-gadol* (“≈ basically”) passed the test (he got 62, but eventually he didn’t get accepted since there were too many candidates this year).

In (40) the prejacent “He passed” is, in fact, a complete answer to the explicit question the A presents, “Did he pass?”. However, the use of *be-gadol* indicates that “this is not the whole story”. In particular, it indicates the prejacent is not a complete answer to the ‘real’ question under discussion in this context, namely “How did John do in terms of his wish to be accepted to the department?”<sup>8</sup>. In other words, the question in (41a) that the prejacent fully answers is a sub-question of the real question which is under discussion, namely (41b):

- 41.
- a. What are the results (in terms of John’s wishes to be accepted to the department?)
  - b. Did he pass the test?

Thus, B's use of *be-gadol* in (40) instructs the listener to reject p as a complete answer under the current answerhood standard  $ans_c$ , but to accept p as a complete answer to a sub-question of this question, hence , accepting it as a complete answer under a lower answerhood standard  $ans_1$ . Moreover, since "Did he pass?" is an ‘important’ sub-question, (under normal circumstances passing the test predicts being accepted),  $p_{ans_1}$  can be considered not only ‘lower’ than  $p_{ans_c}$  , but also ‘close’ to it. This is illustrated in (42):

42.



A similar analysis seems to apply to 43:

43. A: So what’s happening with John and Mary? Do they love each other?  
B: They *be-gadol* (“≈ basically”) love each other, but they are still not ready to get married (they need more money).

Here too the use of *be-gadol* indicates that p is not a complete answer to the real question under discussion (e.g. What are John and Mary’s long term plans?), although it is a complete answer to an important subquestion of this QUD (Do John and Mary love each other?). Thus, we can think here too about an operation which says that p is not a complete answer under the current standard of answering the QUD (given that the real, current QUD is the

<sup>8</sup>See also Roberts (2011) for other strategies that a speaker may use to indicate that p is not an answer to the explicit question, but to another, sometimes implicit question.

superquestion), but that it reaches a lower an close standard (i.e. it answers an important subquestion of this QUD).

## 5 Summary and directions for further research

In this paper we have looked at a range differences between the approximators *almost*, *more or less* and *be-gadol*, in terms of polarity, directionality, distance from the limit point and the ability to get various readings: counterfactual/ temporal / ‘incomplete future commitment’ / imprecision / incomplete answerhood, etc.

As mentioned above, previous theories took such differences to indicate that approximators like *almost* and *more or less* have distinct semantic operations. In contrast, we proposed a unified schema for all three approximators (repeated in (44)) which is heavily inspired by the proposed semantics of *almost*, capturing the intuitive similarity between them. We derived the range of differences between the three approximators from a minimal varying component, i.e. from whether the relevant parameter (‘c’) in the definition is a world ( $w_0$ ), a precision standard ( $pre_C$ ) or a completeness standard of answerhood to the QUD ( $ans_C$ ):

$$44. \text{ Approximator: } \lambda p. \neg p_c \wedge \exists p' \in \mathbf{S}_{ALT} (p_c) \wedge p' <_s p_c \wedge \mathbf{close}_s (p', p_c) \wedge p'$$

The observations and claims made in this paper raise many questions and directions for further research. Here are some such questions:

- **How to model better and more precisely ‘degrees of answerhood’?**

In particular, in Roberts’ (1996, 2011) theory, an incomplete (partial) answer to a QUD is one which assigns a truth value to at least one element in the alternative in the question. Given this approach we may take an answer  $q$  as more complete than  $p$ , if  $q$  assigns values to more alternatives. For example: ‘Rina ate pizza and salad’ is a more complete answer than ‘Rina ate pizza’ to the question “What did Rina eat?”

However, there may be other kinds of ‘degrees of completeness’ of answerhood, which are not always ‘quantity-based’. Consider, for example, (45):

45. A: What do you study in semantics?

B: *Be-gadol* (“ $\approx$  basically”), about the meanings of expressions in the language.

The use of *be-gadol* in (45) seems to indicate B’s answer, although true, is too general. A more detailed answer would be considered more complete. Can this type of ‘incompleteness’ be covered by using Robert’s characterization above? Instead, can this example be captured by the ‘approximative’/‘imprecision’ reading, instead of incomplete answer?

- **Can the present proposal be extended to all approximators (cross linguistically)?**

For example, do ‘epistemic approximators’ (Sauerland & Stateva 2007) have the same schematic operation suggested above? If yes, what is the ‘relevant parameter’ with them (degrees of speaker’s commitment?) What other parameters differentiate different approximators cross linguistically?

- **What is ‘at issue’ and what is ‘not at issue’ in the semantics of approximators?**

According to Roberts (2011), the negative (polar) component of *almost* is ‘not at issue’, since it usually cannot be rejected. However, there seem to be cases this component **can** be rejected, as in (46):

46. A: The room is almost clean  
B: You're wrong. It is clean!

What are the implications of such data to the status of the polar and proximity components with *almost* and with other approximators?

- **How does focus interact with the semantics of approximators?**

It seems clear that *more or less* is focus sensitive, i.e. that the scales of alternatives in the positive component are associated with the focused element in the sentence. For example, the set of alternatives, and therefore also the implications of (47) and (48) differ:

47. John more or less [danced]<sub>F</sub> at 3  
48. John more or less danced at [3]<sub>F</sub>.

(47) implies that what John did at 3 is ‘more less dancing’, i.e. at 3 he didn’t typically danced, but did something which resembled dancing. On the other hand, (48) implies that the time when John danced is ‘more or less’ 3, i.e. he didn’t (necessarily) dance at 3, but perhaps at some time close to 3.

This behavior of *more or less* highlights a very interesting difference between it and ‘classic’ focus sensitive operators. *Only*, for example, is also focus sensitive, but the set of alternatives it operates on are standard “Roothian” alternatives, i.e. distinct propositions which are different from the prejacent in the focused element, which is replaced by an element of the same semantic type (Rooth 1985). In the case of *more or less*, on the other hand, the alternatives are different interpretational versions of the prejacent (which differ in the precision standards we use).

Schematically, then, we can say that whereas *only p* triggers ‘external’ alternatives, as in (49a) with *more or less p* the alternatives are ‘internal’, as in (49b):

49.  
a. *only p*: {*p, q, r, s, t...*}  
b. *more or less p*: {*p, p<sub>1</sub>, p<sub>2</sub>, p<sub>3</sub>, p<sub>4</sub>...*}

There are other alternative sensitive operators which are similar to *more or less* in this respect, e.g. the Hebrew exclusive *be-sax ha-kol* (‘all in all’) in some of its readings (see Orenstein & Greenberg 2012), as well as some focus sensitive operators which are themselves stressed / focused (e.g. the Hebrew *bixlal* (Greenberg & Khrizman (2012)), and perhaps some versions of stressed *doch* in German (Egg & Zimmermann (2011)). The difference may be also seen as similar to a distinction between contextual alternatives and ‘subdomain’ ones, discussed in e.g. Chierchia’s (2010) analysis of the similarities and differences between items triggering scalar implicatures and NPIs. More research is needed in order to develop a mechanism which will be able us to capture this difference and to predict which operator has ‘external’ alternatives like (49a), and which ‘internal’ alternatives like (49b), and how focus interacts with these two types of operators.

A related question, in this respect, is whether focus sensitivity should be part of the semantic entry of approximators, or it is a pragmatic epiphenomenon. Using Beaver & Clark’s (2008) terminology, what is the ‘degree of association with focus’ of *almost*, *more or less*, *be-gadol* etc. (see Amaral & del Prete for some discussion of *almost* in this respect).

- **Are approximators like *more or less* / *be-gadol* sensitive to the presence / absence of a judge argument in the semantics of their associates?**

As with saw above, sentences of the form 'more or less p' are usually compatible with a situation where p is precisely true. For example, as seen above, if we find out that John arrived precisely at 3, we can still take the sentence in (50) to be true:

50. John arrived at more or less 3

However, this is not always the case. Consider (51)-(53):

51. John is more or less running

52. The room is more or less clean

If a listener of (51) and (52) finds out that John was running in the most typical / wonderful way, or that the room is perfectly clean, he/she will consider (51) and (52), respectively, false. Why is that? What explains the difference between sentences like (51) and (52) and sentences like (50)?

We suspect that the difference has to do with the fact that predicates like *clean* and *running* are inherently evaluative, whereas '3' (or 'arrive at 3') is not. This can be captured by assuming that the semantics of adjectives like *clean* and even of certain verbs involves a judge parameter, which makes them similar to predicates of personal taste (Lasersonn (2005)). Intuitively, then, the idea would be that when a speaker utters (51) or (52) she necessarily does so after she evaluated the degree of cleanness of the room (and compared it to some standard of cleanness), or the quality of John's running. If this is indeed the case, then in case we find out that the room is maximally/perfectly clean, we cannot accept (52) for the same reason that we cannot accept (50) as true in case it is clear that the speaker knew that it is precisely 3 (see again section (4.2) above for an explanation). More research is needed here, though, to implement this idea in a precise way.

- **What happens with L(owr)-closed adjectives?**

*Almost* / *be-gadol* / *more or less* are all better with U(pper) closed than with L(ower) closed adjectives (using the terminology of Kennedy & McNally 2005):

53. The room is almost / more or less / be-gadol clean / ??dirty

It is interesting to note, however, that when the approximators themselves are stressed their status with *dirty* improves:

54. ?The room is [almost]<sub>F</sub> / [more or less]<sub>F</sub> / [be-gadol]<sub>F</sub> dirty

Further research should check whether these facts can be accounted for using the present proposal concerning the semantics of approximators, the difference between upper closed and lower closed adjectives (e.g. Kennedy & McNally (2005), McNally (2011), Sassoon & Toledo (2011)), and the special effects of stressed operators (e.g. Egg & Zimmermann (2011), Greenberg & Khrizman (2012)).

## References

- Amaral, P., and Del Prete, F. (2010). 'Approximating the Limit: The Interaction Between Quasi 'Almost' and Some Temporal Connectives in Italian'. *Linguistics and Philosophy*, 33(2), 51-115.
- Beaver, D., and Clark, Z., B. 2008. *Sense and Sensitivity: How Focus Determines Meaning* (Explorations in Semantics), Oxford: Blackwell.
- Büring, D., 1997. The meaning of topic and focus: the 59th street bridge accent. Routledge, London.
- Chierchia, Gennaro. 2010. Meaning as inference: the polarity system. Ms.
- Egg, M., and Zimmermann, M. (2011) "Stressed Out! Accented Discourse Particles – the Case of "Doch"", a talk given in S&B 16, Utrecht.
- Greenberg, Y., and Khrizman, K. (2012). 'Bixlal- a general strengthening operator'. In *Proceedings of IATL 27*.
- Hitzeman, J. (1992) "the selectional properties and entailment of 'almost'." CLS 28: 225-238.
- Laserson, P. (1999). Pragmatic halos. *Language*, 75, 522–551.
- Lewis, David K. (1973) *Counterfactuals*, Harvard University Press, Cambridge (MA).
- McNally, L. 2011. *The relative role of property type and scale structure in explaining the behavior of gradable adjectives*. *Vagueness in Communication*, 151–168.
- Morzycki, M. (2011). The several faces of adnominal degree modification. In *West coast conference on formal linguistics*, vol. 29.
- Penka, D. (2006). 'Almost there: The meaning of almost', in *Proceedings of SuB 10*. Berlin.
- Roberts, C. (1996). "Information Structure in Discourse: Towards an Integrated Formal Theory of Pragmatics." In J.H. Yoon and Andreas Kathol, eds., OSU Working Papers in Linguistics 49: *Papers in Semantics*, 91-136.
- Roberts, C. (2011). 'Only: A case study in projective meaning', *Formal Semantics and Pragmatics: Discourse, Context, and Models*, 6, 1-59.
- Rooth, M. 1985. *Association with Focus*. Doctoral dissertation, University of Massachusetts, Amherst.
- Sauerland, U., and Stateva, P. (2007). 'Scalar vs. Epistemic Vagueness. Evidence from Approximators'. In *Proceedings of Semantics and Linguistic Theory (SALT) 17*, Masayuki Gibson, and Tova Friedman (eds.), CLC Publications, Ithaca, NY.

Sadock, Jerold M. (1981). 'Almost' in: Peter Cole (eds.), *Radical Pragmatics*, 257-71, Academic Press, New York.

Sassoon, G. & Toledo A. (ms.). Absolute and Relative adjectives and their Comparison Classes.

Sevi, A. (1998). A semantics for almost and barely. M.A. thesis, Tel-Aviv University.

Siegel, M. E. (2002). Like: The discourse particle and semantics. *Journal of Semantics*, 19, 35–71

Wierzbicka, A. (1986). Precision in Vagueness: The Semantics of English approximatives. *Journal of Pragmatics*, 10, 597-614.