

## (Just) about: *an analysis*\*

Erin Zaroukian

Johns Hopkins University

### Abstract

Sauerland and Stateva (2007) compare the approximators *about* and *approximately* and suggest that *about* occurs in a subset of contexts that allow *approximately* – while *approximately* can combine with any non-endpoint scalar expression, *about* can only combine with numerals and temporal expression. Here I highlight two complications for the subset analysis they put forth: *approximately*, but not *about*, is infelicitous in contexts that imply speaker certainty, and *about* is felicitous with select maximum-standard gradable adjectives. To account for these, I propose that *about* has an epistemic possibility component, and when *about* appears with a maximum-standard adjective, it is actually an instance of *just about* with a covert *just*.

### 1. Introduction

Sauerland and Stateva (2007) claim that *approximately* can only combine with non-endpoint expressions, as demonstrated in (1) from Sauerland and Stateva (2007, p. 241).

- |     |    |                                    |                |
|-----|----|------------------------------------|----------------|
| (1) | a. | approximately three/north/the same | (non-endpoint) |
|     | b. | #approximately dry/pure/white      | (endpoint)     |

They also claim that *about* is restricted to a subset of these expressions, specifically, numerals and temporal expressions, as demonstrated in (2) from Sauerland and Stateva (2007, p. 242).

- |     |    |  |                |
|-----|----|--|----------------|
| (2) | a. | about three, at about noon, at about the same time | (non-endpoint) |
|     | b. | #about north/open                                  | (non-endpoint) |
|     | c. | #about clean                                       | (endpoint)     |

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This characterization of *about*, however, is not restrictive enough. Not all numerals and temporal expressions are felicitous with *about*, demonstrated by the expressions in (3), which many speakers find degraded.

- (3) a. ?There were about two people at the party.  
b. ?He'll arrive on about Tuesday.  
c. ?Today is about Thanksgiving.  
d. ?The year is about 2010.

This data will be addressed in Section 3 and explained through an epistemic component that I propose for *about*.

While Sauerland and Stateva's characterization of *about* is not restrictive enough, it is simultaneously *too* restrictive. We see in (4) that not all endpoint expressions are infelicitous with *about*. In particular, many (though not all) maximum-standard gradable adjectives are felicitous, shown in (4) (Rotstein and Winter 2004, a.o.).

- (4) a. about full/empty/straight  
b. about ?dry/?certain/?closed/#invisible/#pure

This will be addressed in Section 4 and explained as involving a separate form of *about* synonymous with *just about*.

## 2. Epistemic content

To account for the data in (3), I propose that *about* has an epistemic possibility component that implies speaker uncertainty. I first provide independent evidence for this epistemic content and then demonstrate how this content can explain the degradedness of the sentences in (3).

### 2.1 Evidence for epistemic content

First, observe that *about* behaves like an epistemic possibility modal in examples like (5).

- (5) [The speaker is 26 years old, and the addressee is seeking a 25-year-old]  
a. I'm approximately 25.  
b. ?I'm about 25.  
c. # I'm maybe 25.

The utterance in (5c) with the epistemic possibility modal *maybe* entails that, according to the speaker's knowledge, it is possible that he is 25. This generates what I will refer to as an uncertainty implicature wherein the speaker does not know whether or not he is 25. Usually, however, a speaker is expected to know his own age, including whether or not he is 25. This expectation conflicts with the uncertainty implicature, leading to infelicity. The same effect can be seen with other epistemic possibility modals, as in (6).

- (6) [The speaker is 26 years old, and the addressee is seeking a 25-year-old]
- a. #I'm possibly 25
  - b. #I might be 25

Note that the uncertainty implicature generated by these epistemic possibility modals is cancellable, for example, in cases like (7).

- (7) I might be 25, and in fact I *am* 25.

While *approximately* is felicitous in (5a), *about* in (5b) patterns with the epistemic possibility modals, suggesting that it too has modal content generating an uncertainty implicature.

If *about* is an epistemic possibility modal as I suggest, altering the context in (5) such that it no longer conflicts with the uncertainty implicature should cause *about*, along with other epistemic possibility modals like *maybe*, to become felicitous. And this is what we see in (8).

- (8) [The speaker is 26 years old but is suffering from amnesia such that he does not know his age, and the addressee is seeking a 25-year-old]
- a. I'm approximately 25.
  - b. I'm about 25.
  - c. I'm maybe 25.

Here the speaker is no longer expected to know whether or not he is 25, and *about*, like *maybe*, becomes felicitous, supporting *about* as an epistemic possibility modal.

A second argument for *about* as an epistemic possibility modal can be seen in its interaction with epistemic predicates like *might*. When these predicates appear with epistemic possibility modal adverbs like *maybe*, they can give rise to concord readings, as in (9a). Under such modal concord readings, one modal is ostensibly vacuous. This contrasts with the non-concord, or cumulative, reading in (9b), which maintains independent modal contributions from *might* and *maybe*, leading to two layer of epistemic quantification (Geurts and Huitink 2006, Zeijlstra 2008, Anand and Brasoveanu 2010, Huitink 2012).

- (9) John might be maybe six feet tall.
- a. 'It is possible that John is 6'.' (MC)
  - b. 'It is possible that it is possible that John is 6'.' (non-MC)

If *about* is an epistemic possibility marker, we expect it to allow a concord reading with *might*. And, in fact, we do see this reading in (10), shown in (10a), where *might* appears vacuous.

- (10) John might be about six feet tall.
- a. 'John's height is close to 6', and it is possible that John is 6'.' (MC)
  - b. 'It is possible that John's height is close to 6', and it is possible that it is possible that John is 6'.' (non-MC)

This contrasts with *approximately*, which only allows one reading, one where *might* contributes to the interpretation.

- (11) John might be approximately six feet tall.  
‘It is possible that John’s height is close to 6’.

To explain the two phenomena described above, I propose that *about* is an epistemic possibility modal (like *maybe*), but also expresses range (like *approximately*). I assume the denotation for *approximately* in (12), using a compositional quantifier theory as in Hackl (2000). I propose that  $\llbracket \text{about} \rrbracket$  is identical to  $\llbracket \text{approximately} \rrbracket$ , except that it also entails that the uttered numeral is epistemically possible ( $\diamond D(n)$ ).

- (12)  $\llbracket \text{approximately} \rrbracket = \lambda n_d. \lambda D_{\langle dt \rangle}. \exists m_d \in \{y | n - \sigma \leq y \leq n + \sigma\} \ \& \ D(m)$   
‘ $D$  is true of some degree  $m$  that falls within some contextually-determined distance  $\sigma$  from the uttered degree  $n$ ’
- (13)  $\llbracket \text{about} \rrbracket = \lambda n_d. \lambda D_{\langle dt \rangle}. \exists m_d \in \{y | n - \sigma \leq y \leq n + \sigma\} \ \& \ D(m) \ \& \ \diamond D(n)$

This epistemic component accounts for the felicity pattern of *about* in (5) and (8). *About* generates an uncertainty implicature via  $\diamond D(n)$ , just as the modal possibility adverb *maybe* does. In (5), speaker knowledge is assumed, conflicting with *about*’s uncertainty implicature and leading to infelicity. In (8), where speaker knowledge is not assumed, no conflict arises, and *about* is felicitous.

While I suggested that uncertainty implicatures are cancellable in (7), similar examples do not work for *about*, shown in (14).

- (14) ?I’m about 25, and in fact I *am* 25.

This, I propose does not argue against *about*’s modal component. Rather, I take it as evidence for *about*’s range component ( $\exists m_d \in \{y | n - \sigma \leq y \leq n + \sigma\} \ \& \ D(m)$ ). Pure modals like *maybe* and *might* only concern epistemic possibility and can thus be felicitously followed up with existence assertions as in (7). *About*, on the other hand, highlights its range component and is more felicitously followed up with a precisifying expression like *exactly*. This is shown in (15a).

- (15) a. I’m about 25, and in fact I’m 25 exactly.  
b. ?I’m about 25, and in fact I’m 26 exactly.

Keep in mind that, while *approximately* allows precisifying follow-ups as well, as in (16a), *about* is degraded with continuations as in (15b) which conflict with the entailments of *about*’s epistemic component (if the speaker is 26, it is not possible that they are 25). *Approximately* shows no such contrast.

- (16) a. I’m approximately 25, and in fact I’m exactly 25.  
b. I’m approximately 25, and in fact I’m exactly 26.

Returning to modal concord, the denotation in (13) supports both readings in (10).

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- (17) a.  $[\exists m_d \in \{y | 6' - \sigma \leq y \leq 6' + \sigma\} \& [\text{John is } m] \& \diamond [\text{John is } 6']]$  (MC)  
 b.  $\diamond [\exists m_d \in \{y | 6' - \sigma \leq y \leq 6' + \sigma\} \& [\text{John is } m] \& \diamond [\text{John is } 6']]$  (non-MC)

I arrive at this concord reading through the analysis in Anand and Brasoveanu (2010), where the modal-concord reading roughly amounts to the intersection of *John is about six feet tall* with *John might be six feet tall*, which amounts to *John is about six feet tall*, as shown in (18).

- (18)  $[\exists m_d \in \{y | 6' - \sigma \leq y \leq 6' + \sigma\} \& [\text{John is } m \text{ feet tall}] \& \diamond [\text{John is six feet tall}]]$   
 $\& \diamond [\text{John is six feet tall}]$   
 $= [\exists m_d \in \{y | 6' - \sigma \leq y \leq 6' + \sigma\} \& [\text{John is } m \text{ feet tall}] \& \diamond [\text{John is six feet tall}]]$

A final piece of evidence for *about*'s epistemic modal content can be seen in *about*'s epistemic interaction with rising intonation (following Gunlogson 2008, Zaroukian 2011). In (20), *about* (like modal *maybe* but unlike non-modal *approximately*) gives rise to a modal concord reading with rising intonation.

- (19) Amy: How many books did John bring?  
 Ben:  
 a. 10?  
 b. About 10?  $\approx$ (19a)  
 c. Maybe 10?  $\approx$ (19a)  
 d. Approximately 10?  $\not\approx$ (19a)

I assume, based on data like what was presented above, that *about* is an epistemic possibility modal, as shown in (13). Below I show how this analysis accounts for the degradedness of (3).

## 2.2 Epistemic content as explanation

Given the above evidence for *about*'s epistemic content, here I use this content explain the data in (3). I propose that *about* is degraded here because these contexts do not support speaker uncertainty, clashing with the uncertainty implicature generated by *about*. In the following, I contrast *about* with non-epistemic *approximately*. I show that *about*, unlike *approximately*, remains degraded in contexts that support speaker certainty but improves in contexts that support speaker uncertainty.

For ?*There were about two people at the party* in (3a), *about*, not *approximately*, is degraded when the context creates an explicit conflict with speaker knowledge, comparable to (5). In (20), the speaker knows how many people came to the party, and *approximately* is felicitous while *about* is degraded.

- (20) You think two people came? Actually, three people came, but I guess...  
 a. there were *approximately* two people at the party.  
 b. ?there were *about* two people at the party.

Also, (3a) biases speaker certainty because a speaker unlikely to be uncertain about small

numbers.<sup>1</sup> Note that using a larger, rounder number (i.e. one more consistent with speaker uncertainty), improves felicity. Explicit reference to estimation has the same effect.

- (21) (Judging by how much food was eaten, I'd say...)
- a. There were approximately fifty people at the party.
  - b. There were about fifty people at the party.

The same pattern is seen with *?He'll arrive on about Tuesday* in (3b). In (22), *about*, not *approximately*, is degraded when it conflicts with speaker knowledge.

- (22) You think he'll arrive Tuesday? He'll actually arrive on Monday, but I guess...
- a. he'll arrive *approximately* Tuesday.
  - b. ?he'll arrive *about* Tuesday.

And, as above, *about* improves in a context that supports uncertainty, as shown in Next.

- (23) John is stopping by our house on his cross-country bike ride. His schedule depends heavily on the weather, but he thinks he'll arrive on about Tuesday.

Again with *?Today is about Thanksgiving*, in (3c), *about*, not *approximately*, is degraded when it conflicts with speaker knowledge.

- (24) You think today is Thanksgiving? It's November 30th, but I guess...
- a. today is *approximately* Thanksgiving.
  - b. ?today is *about* Thanksgiving.

*About* improves in a context that supports uncertainty, as shown in (25), where the date is more remote.

- (25) Since it was right around the time my brother was born, I'd say it was about Thanksgiving.

And finally, with *?The year is about 2010* in (3d), *about*, not *approximately*, is degraded when it conflicts with speaker knowledge.

- (26) You think it's 2010? It's actually 2013, but I guess...
- a. it's *approximately* 2010.
  - b. ?it's *about* 2010.

And again, *about* improves in a context that supports uncertainty, like (27).

- (27) Since it was right around the time my brother was born, I'll say it was about 1990.

Overall, we see that *about* does not simply occur in a subset of *approximately*-felicitous

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<sup>1</sup>We therefore expect *approximately* to also be marked in this context, which it is, shown in (i).

- (i) ??There were approximately two people at the party.

contexts. These contexts must also support speaker uncertainty, a condition not included in Sauerland and Stateva's characterization of *about*.

### 3. (*Just*) *about*

To account for the data in (4), I propose that these examples do not contain approximative *about* as defined in (13). Instead, they contain a separate by homophonous modifier, which I refer to as directional *about*, which I take to be a conventionalized form of *just about* with a covert *just*.

*Just about* is an '*almost* modifier', as described by Morzycki (2001). This class contains modifiers such as *almost*, *virtually*, *nearly*, *damn near*, *pretty much*, *not quite*, and *just about*. Nouwen (2006) describes this class of modifiers as having both a proximal and a polar component. In the example in (28), the proximal component expresses that the glass was close to being full, while the polar component expresses that it was not actually full.<sup>2</sup>

- (28) The glass was {just about/almost/virtually/nearly/damn near/...} full.
- a. Proximal – The glass was close to being full
  - b. Polar – The glass was not full

Note that approximative *about*, which we saw above modifying numerals and temporal expressions, lacks a polar component, shown in (29).

- (29)
- a. almost ten → not ten
  - b. just about ten → not ten
  - c. about ten ↗ not ten

*Almost* modifiers are felicitous with maximum-standard adjectives, as demonstrated in (30). (Recall that *about* is not felicitous with the adjectives in (30b).)

- (30)
- a. just about full/empty/straight
  - b. #(just) about dry/certain/closed/invisible/pure

And when *about* modifies a maximum standard adjective, it patterns with *almost* modifiers, having both a proximal and a polar component.<sup>3</sup>

- (31) The glass was about full.
- a. Proximal – The glass was close to being full

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<sup>2</sup> This, polar component is not prominent, as can be seen in the infelicity of (ia) (cf. (ib))

- (i)
- a. #Fortunately, the glass was just about full when it fell.
  - b. Fortunately, the glass was not full when it fell.

<sup>3</sup> Again, this polar component is not prominent

- (i)
- a. #Fortunately, the glass was about full when it fell.
  - b. Fortunately, the glass was not full when it fell.



- b. Polar – The glass was not full

I conclude that this use of *about* with maximum-standard adjectives is truly separate from approximative *about*. It is rather a variant of *just about* with a phonologically null *just*. In making this distinction, I show that data like (4) is not evidence against Sauerland and Stateva’s theory (assuming that they were only interested in characterizing approximative *about*).

This directional *about*, however, is not identical to *just about*. This was highlighted in (30), which showed that *just about* can modify maximum-standard adjectives that appear infelicitous with plain *about*. To reconcile this, I assume that the availability of this directional *about* is frequency-based. This is supported by the infelicity of many paraphrases of maximum standard adjectives with *about*.

- (32) a. about full/?brimming/?saturated/?loaded  
b. about empty/?vacant/?blank/?barren

### 3.1 Relation between directional (*just*) *about* and approximative *about*

This analysis opens the question of what exactly the relationship between *about* and *just about* is. Particularly, is it compositional? Three challenges face such an analysis: the difference in directionality, the difference in polarity, and the difference in epistemic status. For the first, note that directional (*just*) *about* is 1-sided proximal, while approximative *about* is 2-sided proximal. For example in (33a), John can be older or younger than 25 (the speaker does not need to commit to a side). In (33b), on the other hand, the speaker must commit to the direction in which John is approaching 25 (in most contexts, this will be from below).

- (33) a. John is about 25. → John’s age is close to 25 (2-sided)  
b. John is just about 25. → John’s age is close to 25 (1-sided)

For the second, recall that directional (*just*) *about* is polar, while approximative *about* is not.

- (34) a. John is about 25.  $\nrightarrow$  John is not 25  
b. John is just about 25. → John is not 25

And finally, (*just*) *about* is compatible with speaker certainty, while approximative *about* is not.

- (35) [The speaker is 24 years old, and addressee is seeking a 25-year-old]  
a. ?I’m about 25.  
b. I’m just about 25.

This may be challenging for a compositional analysis, but it could be accomplished, for example, through an approach like Morzycki (2001), which separates *almost* into an



adverb (which encodes the proximal component) and a functional head (which encodes the polar component).

### 3.2 Directional version of *approximately*?

Given the above discussion, we might wonder whether *approximately* has something analogous to *about*'s covert-*just* form. And in fact *approximately* patterns distributionally like directional *about* in (36), appearing felicitously with maximum standard adjectives.

- (36) a. approximately full/empty/straight  
b. approximately ?dry/?certain/?closed/#invisible/#pure
- (4) a. about full/empty/straight  
b. about ?dry/?certain/?closed/#invisible/#pure

There are, however, stronger reasons to doubt that such a form exists. For one, inserting an overt *just* does not have the same effect on *approximately* as it does on *about*. In (37), *approximately* does not give a directional reading. It can only express that a more precise modifier would be false (e.g. *It's not full, it's just/only/merely approximately full*).

- (37) a. just about full/empty/straight  
b. just approximately full/empty/straight (contrastive reading only)

With maximum standard adjectives, this results in a polar reading, as demonstrated in (38).

- (38) a. just about full → not full  
b. just approximately full → not full

With midpoint scalars, however, we see that *just approximately* is 2-sided proximal, unlike *almost* modifiers, which remain 1-sided.

- (39) a. just about 10 → close to 10 (1-sided)  
b. just approximately 10 → close to 10 (2-sided)

In other words, *just about 10* mean slightly less than ten or slightly more than ten, depending on the context, while *just approximately 10* does not force the speaker to commit to a side.

Finally, there is no contrast in certainty as with (*just*) *about*. We see this in (40), where the speaker can know that he is 24 years old and describe himself as (*just*) *approximately 25*, but not as *about 25*.

- (40) [The speaker is 24 years old, and addressee is seeking a 25-year-old]  
a. ?I'm about 25.  
b. I'm just about 25.  
c. I'm approximately 25.  
d. I'm just approximately 25.

I therefore conclude that no directional form of *approximately* exists.

#### 4. Conclusion

Here we have look critically at Sauerland and Stateva (2007)’s take on *approximately* and *about*, where they claim that *approximately* can only combine with non-endpoint expressions and *about* is restricted to a subset of these expressions: numerals and temporal expressions. I also demonstrated some ostensible problems with this analysis in (3) and (4) (repeated below).

- (3) a. ?There were about two people at the party.  
 b. ?He’ll arrive on about Tuesday.  
 c. ?Today is about Thanksgiving.  
 d. ?The year is about 2010.
- (4) a. about full/empty/straight  
 b. about ?dry/?certain/?closed/#invisible/#pure

While I maintain that approximative *about* occurs in a subset of contexts allowed by *approximately* (it is the directional, not approximative, form of *about* occurs with maximum standard adjectives), the presence of an epistemic component requires some revamping of their proposed licit contexts and denotation for *about* (which, like their *approximately*, simply adjusts scale granularity, giving a rougher reading).

- (41)  $\llbracket \text{approximately} \rrbracket^{\text{gran}}(G) = G(\text{coarsest}(\text{gran}))$  (Sauerland and Stateva 2007, p. 233)
- (42)  $\llbracket \text{about } \mathbf{D} \rrbracket^{\text{gran}} = \text{coarsest}(\text{gran})(\llbracket \mathbf{D} \rrbracket)$  (Sauerland and Stateva 2007, p. 242)

Another case of epistemic content in quantifiers can be seen in Geurts and Nouwen (2007)’s analysis of *at most/least*, which bears interesting similarities to *about* (see also Nouwen 2010, Cummins and Katsos 2010, Coppock and Brochhagen to appear, a.o.). Both *at most/least* and *about* express that the uttered numeral is possible.

- (43) [The speaker is 26 years old, addressee is seeking a 25-year-old]
- a. I’m approximately 25. c. I’m older than 24.  
 b. ?I’m about 25. d. ??I’m at least 25.

Neither, however, seems to allow direct denial of this content (unlike assertions).

- (44) A: I’m {at most/about} 25.  
 B: #You’re wrong, you know you’re not 25.  
 B’: Hey, wait a minute, you know how old you are!

This epistemic content also does not exhibit the projection behavior of presuppositions or CIs, demonstrated in (45).

- (45) It’s not the case that I’m {at most/about} 25.

Here, if the epistemic content were part of a presupposition, we would expect it to project out of negation. This does not happen in (45), and a speaker can utter this sentence knowing full well that he is not 25.

Interestingly, this behavior, however, pattern of behavior appears to be general to epistemic expressions

- (46) A: I'm {at most/about/maybe/definitely} 25.  
B: #You're wrong, you know you're not 25.  
B': Hey, wait a minute, you know how old you are!....
- (47) It's not the case that I'm {at most/about/maybe/definitely} 25.

The fact that *about* patterns like these other epistemic expressions supports the epistemic content I proposed for it above, and points toward a unified class of epistemic modifiers.

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Cognitive Science Department  
Johns Hopkins University  
3400 N Charles Street  
Baltimore, MD 21211

Contact me at [egz@jhu.edu](mailto:egz@jhu.edu)