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Approximation derived from a scalar exclusive particle associating with covert focus: The case of Hebrew be-sax ha-kol

RESEARCH

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ABSTRACT

We propose a unifying analysis of two readings – exclusive and approximative – of the Hebrew particle be-sax ha-kol, arguing that under both the particle is a scalar focus sensitive exclusive, expressing a positive and a negative inference, i.e. the truth of its prejacent and the exclusion of stronger focus alternatives, respectively. The difference between the readings is argued to derive from a minimal difference in the overtness vs. covertness of the focus associate of be-sax ha-kol: Whereas the exclusive reading is standardly derived by associating the particle with overt and prosodically marked material, the approximative reading results from its association with the covert pos modifier of gradable expressions, resulting in an "x is pos A, but not maximally A" inference.

We show that this approximative reading is only licensed when the scale associated with the gradable expression is upper-bound, but the standard of comparison is not necessarily maximal, pace Kennedy & McNally (2005), and compare it with the effects of true approximators (like more or less). We also observe that relative to only and to the exclusive reading of be-sax ha-kol, the at-issueness status of the positive and negative components in the approximative reading is reversed, being at-issue vs. not-at-issue, respectively. We discuss this observation in light of claims about the mirror imaged status of components of only vs. p-exh in Bassi et al. (2019), and in light of theories arguing for the gradience of at-issueness status and its sensitivity to information structure (e.g. Abrusán 2011; Tonhauser et al. 2018).

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1 INTRODUCTION

This paper proposes an analysis of an interesting phenomenon found with the Hebrew focus sensitive particle *be-sax ha-kol* (literally translated as 'in sum the all/whole'), and examines implications of the analysis for issues in the research of focus/alternative sensitivity, typologies of scalar particles, gradability and (not-) at-issueness.

The core observation illustrating this phenomenon is two readings that *be-sax ha-kol* can give rise to. The first is an *exclusive* reading, of the sort we find with the English exclusive particles *only* or *just*, as in e.g. (1), and the second is what we call the *approximative* reading, which is similar to the one found with *more or less*, as in e.g. (2):¹

- (1) saba sheli haya **be-sax ha-kol** pakid. grandfather mine was be-sax ha-kol clerk 'My grandfather was only / just a clerk.'
- (2) ha-xeder **be-sax ha-kol** naki. the-room be-sax ha-kol clean 'The room is more or less clean.'

Based on preliminary suggestions and observations made in Orenstein & Greenberg (2013); Orenstein (2015; 2016); Greenberg & Orenstein (2016), we propose that despite inducing these two readings, be-sax ha-kol is not ambiguous, i.e. does not denote an exclusive and an approximative operations. Instead, we propose that in both readings it should be analyzed as a member of a typology of exclusive particles in Hebrew, along particles like rak ('only') and stam ('merely'). Following previous work, we take members in this typology cross linguistically to convey a positive and a negative semantic component, namely, the truth of their prejacent, p, and the exclusion of stronger alternatives on a relevant scale, respectively, but to potentially vary along several parameters.

Various studies have already suggested some parameters along which exclusive particles – both within and across languages – can vary. Some examples of such parameters are given below:

- (a) The ordering of alternatives along the scale: for example, Beaver & Clark (2008); Orenstein & Greenberg (2010) and Coppock & Beaver (2014) show that whether the alternatives are ranked in terms of entailment (where stronger alternatives asymmetrically entail weaker ones) or in terms of some evaluative or rank-based ordering can distinguish between exclusive particles. For example, whereas English merely and Hebrew stam are specified for evaluative ordering, English exclusive, exclusively, sole and Hebrew yaxid ('sole'), are specified to operate over entailment scales. Other particles, like English only and Hebrew rak ('only') seem to be compatible with both types of orderings.
- **(b)** The nature of the alternatives to p: e.g., whether they are atom-based or sum-based alternatives, discussed in Liu (2007). Liu shows that this distinction can derive different uses of Mandarin jiu: an exclusive use vs. a rank-order use, respectively.
- 1 There are two additional readings of *be-sax ha-kol*, discussed in Orenstein & Greenberg (2013); Orenstein (2016), namely the *precise* and the *discursive* readings. The former, translated as *altogether*, is obtained when *be-sax ha-kol* combines with numeral expressions:
- (i) tsipiti Se-yagiu 10 orxim. basof higiu **be-sax ha-kol** 20.

 I-expected that-will-arrive 10 guests, eventually arrived be-sax ha-kol 20

 'I expected 10 guests to arrive. Eventually there were altogether 20.'

On this reading be-sax ha-kol indicates that the number of guests who arrived is precisely 20. The reading is different from the exclusive reading of be-sax ha-kol as well as from the one we get with the unmarked exclusive in Hebrew rak ('only'). For example, in a context like (i), with a discourse salient alternative which is weaker than p, rak, as well as only are infelicitous (cf. Orenstein 2016; Greenberg 2019) but be-sax ha-kol is fine.

The discursive reading, translated as after all, implies that the information in the prejacent is relevant to all things being considered in the context (in (ii) these can be Danny's behavior, memory, health conditions, etc.):

(ii) Dani **be-sax ha-kol** kvar ben 80.

Dany be-sax ha-kol already 80 years old 'After all, Danny is already 80 years old.'

We leave future examination of these readings, and a potential unification with the *approximative* and *exclusive* readings of *be-sax ha-kol* to future research.

Orenstein and Greenberg Glossa: a journal of general linguistics DOI: 10.5334/gjgl.1036 (c) The strength of the exclusive component discussed in Liu (2017) as well: This parameter distinguishes Mandarin jiu from zhi. While zhi (like English only) requires the rejection of all non-weaker alternatives, jiu has the weaker requirement that all alternatives stronger than p are rejected.

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- (d) The semantic type of the particle discussed in Coppock & Beaver (2014). This suggestion can explain contrasts of e.g. The only/sole candidate vs. Only/#sole John arrived.
- (e) The question under discussion (QUD) that the exclusive helps answering discussed in Coppock & Beaver (2014) as well. According to them, sentences like e.g. x is a mere P are used to answer the question What is x like? whereas sentences like x is a sole P of y answer the relational question What is an R of y?
- (f) The position of the prejacent on the scale discussed in Orenstein & Greenberg (2010) and Orenstein (2016). For example, while the prejacent of *only* and *rak* can be very close to the top of the scale (e.g. having only one alternative above it), that of English *merely* and Hebrew *stam* needs to be low, having more alternatives above it.
- (g) The status of the preajeent and of the exclusive component discussed in Bassi et al. (2019), who suggest that with overt *only* the prejacent is presupposed and the exclusive component is asserted, whereas with covert *exh* the status of these components is reversed.

The main goal of this paper is to suggest an additional relevant parameter of variation that should be used to enrich the typology of exclusive particles, namely the ability vs. inability of the particle to operate over *overt-based* vs. *covert-based* alternatives. In particular, we will suggest below that on both the *exclusive* and *approximative* readings *be-sax ha-kol* conveys the same type of interpretative components, namely the truth of the prejacent and the exclusion of stronger alternatives, as all scalar exclusives do. However, unlike the unmarked Hebrew exclusive *rak* ('only'), *be-sax ha-kol* can associate with covert focused material – specifically the covert degree modifier *pos* – and operate over alternatives which vary with respect to this element. We will suggest that the fact that this particle can get an approximative interpretation results precisely from this ability. In addition, we will examine wider implications of our proposal regarding the relationship between scale structure and standards with gradable expressions, the difference between true and derivative approximators, and factors affecting variability in the (not) at-issue status of interpretive components.

The paper is structured as follows. In the next section we present differences between *rak* and *be-sax ha-kol*, concentrating on the *exclusive* and *approximative* readings of the latter. Section 3 offers our proposal of how to derive the two readings of *be-sax ha-kol*, and explores the types of gradable expressions which can and which cannot license the approximative reading in light of the literature on the scale structure and standards with such expressions. Section 4 is devoted to examining and rejecting a potential simpler analysis where *be-sax ha-kol* is ambiguous between an exclusive and an approximative operator. We argue that this suggestion is not only less economical than ours, but unlike our theory, it fails to capture differences between the approximative reading of *be-sax ha-kol* and true approximative particles (like *more or less*). Section 5 discusses the observation that the (not)-at-issuness status of the interpretive components with the approximative reading of *be-sax ha-kol* is reversed relative to the one found with the exclusive reading and with typical exclusive particles like *only/just*. We examine ways to capture this difference within our proposal, relying on theories which point out other cases of reversed (not)-at-issueness with exclusives, as well as those which take the status of interpretive content to be more flexible than has been traditionally assumed. Section 6 concludes.

2 DATA: TWO READINGS OF BE-SAX HA-KOL

This section describes in more detail the exclusive and the approximative readings of the Hebrew particle *be-sax ha-kol* mentioned above, which at least on the surface seem very different from one another.²

² The data in this paper is based on introspection, as well as on attested examples collected in natural conversations and web materials.

On its exclusive reading be-sax ha-kol can be translated as only or just. This is seen again in (3), where be-sax ha-kol is interchangeable with rak, the unmarked exclusive particle in Hebrew.

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- (3) a. saba sheli haya **rak / be-sax ha-kol** pakid. grandfather mine was only / be-sax ha-kol clerk 'My grandfather was only / just a clerk.'
 - b. Danny hizmin **rak** / **be-sax ha-kol** et Rina la-mesiba.

 Danny invited rak / be-sax ha-kol Acc. Rina to-the party 'Danny invited only / just Rina to the party.'

Similarly to *rak* in (3a, b), *be-sax ha-kol* gives rise to the inferences that my grandfather did not have any other more important or prestigious profession,³ and that Danny did not invite more people (besides Rina) to the party, respectively.

However, when *be-sax ha-kol* appears with some gradable expressions (e.g. gradable adjectives or verbs), the prominent reading it yields is approximative, similarly to the reading induced by *paxot o yoter* ('more or less').

- (4) a. ha-xeder paxot o yoter / **be-sax ha-kol** naki. the- room less or more / be-sax ha-kol clean 'The room is more or less clean.'
 - b. ani paxot o yoter/**be-sax ha-kol** mevin et ha-teorya. I less or more/be-sax ha-kol understand Acc. the-theory 'I more or less understand the theory.'

On this approximative reading, be-sax ha-kol, like paxot or yoter ('more or less'), raises two main inferences, a negative and a positive one. To illustrate, (4a) conveys that the room is not maximally clean, but it is nonetheless considered clean. The presence of the first, negative, inference is supported by the felicity contrasts between the responses in (5) and (6).

- (5) A: ha-xeder **be-sax ha-kol** naki. the-room be-sax ha-kol clean 'The room is more or less clean.'
 - B: lo naxon / #naxon. ha-xeder legamrey naki. not right / right. the-room completely clean 'That's not right. /#That's right. The room is completely clean.'
- (6) A: ha-xeder naki. the-room clean 'The room is clean.'
 - B: #lo naxon / naxon. ha-xeder legamrey naki.⁴ not right / right. the-room completely clean '#That's not right / That's right. The room is completely clean.'

To support the presence of the second, postive, inference, namely that the room is considered clean, we can rely on a diagnostic suggested in Amaral & del Prete (2010) concerning differences between approximators like *around*, *more or less*, and *almost* as shown in (7) and (8).

- (7) A: Leo arrived almost at 3 p.m.
 - B: That's false, actually Leo arrived at 3 p.m.
- (8) A: Leo arrived around 3 p.m.
 - B: #That's false, actually Leo arrived at 3 p.m.

As can be seen in the contrast between (9) and (10) below, be-sax ha-kol behaves like around/more or less, and unlike almost (kim'at), in this respect.

³ We discuss a slight difference between *rak* and *be-sax ha-kol* on this reading in Section 3.3. Thanks to two Glossa reviewers for raising this issue.

⁴ The infelicity of this reaction is improved if *legamrey* ('completely') is accented. This can happen, for example, if the question of whether the room is completely clean is salient in the context.

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A: ha- xeder kimat naki. the-room almost clean 'The room is almost clean.'

(9)

- B: lo. le-ma'ase ha-xeder naki. no. actually the-room clean 'No. Actually, the room is clean.'
- (10) A: ha- xeder **be-sax ha-kol** naki. the-room be-sax ha-kol clean 'The room is more or less clean.'

B: #/??lo. le-ma'ase ha-xeder naki. no. actually the-room clean #/??'No. Actually the room is clean.'

The difference between negating vs. entailing the prejacent with *kim'at* ('almost') vs. *be-sax* ha-kol, respectively, is further supported by the contrast in (11).

- (11) A: ha- xeder naki? the-room clean? 'Is the room clean?'
 - B: lo./#ken. hu kim'at naki. no. /yes. It almost clean 'No. / #Yes. It is almost clean.'
 - B': #lo. / ken. hu **be-sax ha-kol** naki. no. /yes. it be-sax hakol clean '#No. / Yes. It is more or less clean.'

Notice, however, that the approximative reading of *be-sax ha-kol* is constrained: while it is perfectly felicitous with adjectives associated with scales which have an upper-bound, it is degraded with one-dimensional adjectives associated with lower-closed and with open scales. This is illustrated by the felicity contrast in (12) with the totally closed, lower-closed and open-scale one-dimensional adjectives *full*, *dirty* and *expensive*, respectively.

(12) ha-kos **be-sax ha-kol** mele'a / #meluxlexet / #yekara. the-cup be-sax ha-kol full/ #dirty/ #expensive 'The cup is more or less full/ #dirty/ #expensive.'

Given these data, there seem to be two main options with which to analyze be-sax ha-kol. One is to treat the particle as ambiguous between an exclusive and an approximative operator. The other option is to derive its two readings from a parametric variation arising from a basically unified semantics. In this paper we adopt the second option, which we detail in the next section. In Section 4 we reject the first option.

3 PROPOSAL

3.1 THE BASIC IDEA

We suggest that on both of its readings *be-sax ha-kol* is a focus sensitive particle which conveys the positive and negative components conveyed by scalar exclusive particles cross linguistically, i.e. the truth of its prejacent, *p*, and the falsehood of all stronger alternatives in C (the contextually supplied set of focus alternatives to *p*). This is seen in (13).⁵

- Notice that the negative component here is scalar (requiring all alternatives stronger than *p* on the scale to be false). We follow here theories like Klinedinst (2005); Beaver & Clark (2008); Roberts (2011) and Coppock & Beaver (2014), who take this component to apply to all exclusive particles, both *scalar* (using Horn's 1969 terminology) as in (ia), and crucially also those which look *non-scalar*, as in (ib).
- (i) a. John is only a clerk
 - b. Only John arrived.

These theories argue that *both* kinds of exclusives are inherently scalar, and that they differ in the type of scales involved. Those as in (i) involve evaluative/rank-order scales (e.g. rejecting alternatives like *John is a manager*) whereas apparently non-scalar cases, as in (ii), involve entailment-based scales (e.g. rejecting alternatives like *John and Mary arrived*).

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Interpretative components conveyed by scalar exclusive particles:⁶

a. The positive component: $w \in p$

(13)

b. The negative component: $\forall q \in C \land q >_s p \rightarrow w \notin q$ Where $C \subseteq llpll_p \land llpll_p \in C \land \exists q \neq p \land q \in C$

(13) (see e.g. Beaver & Clark 2008 and Roberts 2011) is based on the assumption that exclusive particles are focus sensitive, namely that they operate on alternatives triggered by focus. This is captured in the literature by letting the focus sensitive operator associate with a focused element (which is usually also stressed and accented) and to create a set of alternatives C, which is a contextually supplied subset of the focus semantic value of this element. These alternatives are constructed by substituting this element with another element of the same semantic type (cf. Rooth 1985; 1992).

Our main claim is that although *be-sax ha-kol* shares these interpretative components with e.g. Hebrew *rak* and English *only*, it differs from them in that it is more flexible regarding the overtness or covertness of its associate, and as a result, with respect to the kind of alternatives it operates over. In particular, we suggest that *be-sax ha-kol*, but not *rak*, can associate with the covert degree modifier *pos* (cf. e.g. von Stechow 1984a and Kennedy & McNally 2005a). In this case too, alternatives are constructed by substituting this focused element with other (covert or overt) elements of the same semantic type, i.e. with other degree modifiers. We suggest that the approximative reading of *be-sax ha-kol* results from its association with the covert *pos*.

Preliminary support for the idea that the apparent ambiguity of *be-sax ha-kol* is due to its ability to operate over two different sorts of alternatives can be seen in (14). In particular, we observe that changing the salience of alternatives in the context affects the prominence of the two readings. Above we saw that a sentence like (2) ((14b here) has an approximative reading. But (2) can also have an exclusive reading, indicating that the room is clean, but does not have other properties. This reading is made more prominent when properties which can replace the one denoted by the overt adjective *clean* are made salient in the context. In contrast (14a) with *rak* is not ambiguous and can only have the exclusive reading, i.e. mean that the room is clean but does not have the other relevant properties, i.e. is not large and does not have a view to the sea.

- (14) Context: John and Mary booked a room in a hotel for their important guests and asked that the room will be clean, large, and with view to the sea. John says:
 - a. ha-xeder rak naki.the-room only clean'The room is only clean.'
 - ha- xeder be-sax ha-kol naki.
 the-room be-sax ha-kol clean
 'The room is only clean.' / 'The room is more or less clean.'

3.2 THEORETICAL BACKGROUND: THE "TYPE OF ALTERNATIVE" PARAMETER, AND ASSOCIATION WITH OVERT VS. COVERT FOCUS

Before showing in more detail how the exclusive and approximative readings of *be-sax ha-kol* can be derived from the difference in the type of alternatives this particle operates over, we would like to point out that our suggestion is similar in its general reasoning to a suggestion made in Liu (2017) regarding apparent ambiguities between Mandarin *jiu*, and *dou*. Let us quote Liu here (2017: 62):

"I take it to be our basic assumption that an FP [a focus particle] operates on a set of alternatives (Rooth 1985). Then, the meaning of an expression containing an FP is a function of (a) the meaning of the FP, (b) the meaning of FP's prejacent, π and (c) π 's alternatives. With this background, what we propose about Mandarin FPs is that (c), instead of (a), is the locus of 'ambiguity': with varieties of alternatives, apparent distinct meanings can be derived without altering the semantics of the FP."

⁶ Notice that (13) is not yet a lexical entry for scalar exclusives in general, or for any specific scalar exclusive particle, since it does not specify the asserted vs. presupposed status of the two interpretive components. We deal with this in Section 5 below.

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Liu takes this behavior of Mandarin focus particles to be part of a more general pattern, where different sorts of alternative sets are posited for a single alternative operator to create different interpretations (cf. Chierchia 2013 for different alternatives for *only*-like and for *even*-like operators). To the extent that our suggestion is on the right track, the behavior of *be-sax ha-kol* in Hebrew can further support this pattern.

More specifically, the variation in the type of alternatives we propose concerns overt-based vs. covert-based alternatives, which we take to derive from the association of *be-sax ha-kol* with overt vs. covert focused material.

This claim is not trivial, though, since focused elements are usually taken to be overt and prosodically marked. Moreover, some authors explicitly claim that focus *must* be realized phonologically, as in the discussion of Second Occurrence Focus⁷ (SOF henceforth). For example, Partee 1999 argues that the second occurrence of *vegetables* in (15) is not prosodically marked, although it is bound by *only*, and concludes that it is not focused. Rooth 1992 makes a similar claim regarding the second occurrence of *rice* in (16).

- (15) Partee (1999: 2016)
 Everyone already knew that Mary only eats [vegetables]_F. If even [Paul]_F knew that Mary only eats [vegetables]_{SOF}, then he should have suggested a different restaurant.
- (16) Rooth (1992: 109)
 People who [grow]_F rice usually only [eat]_F rice.

In contrast, some theories argue that SOF is prosodically marked after all, although not in the same form as the first occurring focus (see e.g. Beaver et al. 2007). What is more important to us are suggestions that prosodic prominence is actually not a necessary condition for the status of an expression as focused. For example, Féri & Ishihara (2009: 8) argue that in many cases "phonetic marking of focus can be masked by independent phonetic/phonological effects", such as de-accentuation due to competition with stronger phonetic realization on another element in the sentence, or having an element in post-nuclear position. In such cases, Féri & Ishihara propose, an element can be focused even if it has no prosodic prominence.

Similar cases were pointed out in e.g. the free-focused construction in (17), where an element is de-accented due to givenness, although it is focused (cf. Kadmon 2001 and Wagner 2012).

- (17) Wagner (2012: 3)
 - A: Smith walked into a store. What happened next?
 - B: A detective ARRESTED Smith.

Even more relevant to our proposal is (18) from Kadmon & Sevi (2011), where the exclusive particle *only* is argued to associate with the focused element *Larry*, even though it is not accented (see also Umbach 2009 on accented *noch* and Egg & Zimmermann 2011 on accented *doch*):

- (18) Kadmon & Sevi (2011: 8)
 - A: Larry danced with Mary.
 - B: Yes. The problem is that ONLY [Larry]_E danced with Mary.

In general, then, focused material is argued to optionally carry no prosodic prominence, and focus sensitive particles were argued to be able to associate with prosodically unmarked focus.

Our proposal takes such suggestions one step further, in that it takes *be-sax ha-kol* to be able to associate with elements which, by virtue of being covert, have no phonological realization, and hence *cannot* be accented. We can take this to be a special (and, in fact extreme) case of Féri & Ishihara's (2009) idea that a focused element can have no phonological marking if this marking is blocked due to some other phonological conditions (in our case, due to being covert).

Importantly, in this sense too, *be-sax ha-kol* is not isolated, since the ability to associate with covert material has been reported for other focus sensitive operators as well, for example for the covert *O* and *E* (as in the interpretation of *any* and *give a damn*) and the overt Hindi *bhii* (Chierchia 2013), the *only-*like particle *just* in English (Wiegand 2017), yielding an *unexplanatory*

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reading, the even-like BIXLAL in Hebrew (Greenberg 2020), and voobsce in Russian (Miashkur 2017; 2018), yielding intensification effects similar to very, as well as readings similar to at all. The ability to associate with covert material was claimed in these theories to explain special readings of these operators, which are not found with the unmarked correlates of these particles, e.g. the exclusive only, or the unmarked even-like particles in Hebrew (afilu) and Russian (daze).

Given this background, we turn now to show in detail how the proposed ability of *be-sax ha-kol* to associate with both overt and covert material can derive its exclusive and approximative readings, respectively.

3.3 DERIVING THE EXCLUSIVE READING OF BE-SAX HA-KOL

Henceforth, we will refer to the exclusive reading of *be-sax ha-kol* as in (3), repeated here, as *be-sax ha-kol* as results from the fact that *be-sax ha-kol* associates with overt focused elements, just like *rak* (and *only*) do, leading to standard, Roothian alternatives.

- (3) a. Danny hizmin **rak** / **be-sax ha-kol**_{excl} et [rina]_F la- mesiba.

 Danny invited rak / be-sax ha-kol_{excl} Acc. rina to the party

 'Danny only / just invited [Rina]_F to the party.'
 - b. saba sheli haya rak / be-sax ha-kol_{excl} [pakid]_F. grandfather mine was rak / be-sax ha-kol_{excl} clerk 'My grandfather was only / just [a clerk]_E.'

Given these focused elements, the sets of alternatives in (3a, b) look as in (19a, b), respectively, where the prejacent is in boldface.

- (19) a. {.....**Danny invited Rina**, Danny invited Rina and Yosi, Danny invited Rina, Yosi, and Moshe.....}
 - b. {....**My grandfather was a clerk**, my grandfather was a manager, my grandfather was the president of the company...}

Given the two semantic components conveyed by exclusives in (13) and these sets of alternatives, (3a) and (3b) convey (a) the truth of the prejacent, i.e. that Danny invited Rina/that my grandfather was a clerk, and (b) the negation of all stronger alternatives in C, e.g. that it is false that Danny invited Rina and Yosi, Rina and Yosi and Moshe/that it is false that my grandfather was a manager or the president of this company.

Notice that be-sax ha- kol_{excl} , like rak, is compatible both with entailment scales, as in (19a), where stronger alternatives asymmetrically entail weaker ones, and with evaluative, or rank order scales, as in (19b) (cf. Orenstein 2016). However, there is a slight difference between rak and be-sax ha- kol_{excl} in terms of the scales. For example, in (3b) with rak we can also get the $complement\ exclusion\ reading\ (using\ Coppock\ & Beaver's\ 2014\ terminology), where my grandfather had no other profession besides being a clerk, derived by an operation over entailment scales. Though this reading is less prominent than the evaluative reading (probably due to the real-world knowledge according to which people have one profession at a time), it is still possible. In contrast, with <math>be$ -sax ha- kol_{excl} this reading is harder to get, and the evaluative reading, where my grandfather never had any profession more prestigious than being a clerk, is much more prominent. On this reading, even if my grandfather worked for some time in a less prestigious job, e.g. as a cleaning person, the sentence is still true and felicitous. When an evaluative ordering is salient, then, it seems that be-sax ha- kol_{excl} prefers it, whereas rak is more neutral, or less specified.

3.4 DERIVING THE APPROXIMATIVE READING OF BE-SAX HA-KOL

3.4.1 The basic derivation

We now examine the more interesting story, which is the approximative reading of be-sax ha-kol, which we will henceforth refer to as be-sax ha-kol_{approx}. To do that, we assume that be-sax ha-kol_{approx} conveys the same two interpretative components as be-sax ha-kol_{excl}, but differs</sub>

from it in associating with a covert degree modifier, *pos*, which was argued to modify gradable adjectives in the positive form.⁹ Let us first briefly review the relevant claims regarding *pos*.

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We follow the view that gradable adjectives are of type <d, <e,t>> (e.g., von Stechow 1984; Kennedy & McNally 2005a, among many others), indicating that an individual x has the degree d on the scale associated with the adjective, as in (20), where $\mathbf{m}_{\mathbf{A}}(x)$ represents the projection of x onto the scale associated with the adjective A.

(20) Kennedy & McNally (2005a: 367)
$$[[A]]^{c,g} = \lambda d\lambda x. \ \mathbf{m}_{\lambda}(x) = d$$

The value of the degree d argument is not saturated and can be set by overt degree modifiers as in (21), which following Kennedy & McNally (2005a), we take to be of type <<d,<e,t>>,<e,t>>, as seen in (22), where R represents some restriction on d.

- (21) a. John is two meters tall.
 - b. The cup is completely full.
- (22) Kennedy & McNally (2005a: 367) $[[Deg (P)]]^{c,g} = \lambda G \lambda x. \ \exists d[R(d) \land G(d)(x)]$

For example, the measure phrases *two meters/completely* in (21a), specify the degree *d* to be at least two meters/is at the maximal endpoint of the scale, respectively.

In the case of apparently unmodified gradable adjectives, i.e. those in the positive form, as in (23a), the *d* argument is taken to be given a value through a covert degree modifier, *pos*, as in (23b). *Pos*, type <<d,<e,t>>,<e,t>> as well, relates the degree *d* to a relevant standard of comparison set on the scale associated with the adjective, as seen in (24).

- (23) a. John is tall.
 - b. John is pos tall.
- (24) Kennedy & McNally (2005a: 350) $[[pos]]^{g,c} = \lambda G \lambda x. \exists d[standard (d)(G)(C) \wedge G(d)(x)]$

For example, (23b) is true if John's tallness is at least as high as the standard of tallness in C.

Given this background, we now suggest that be-sax ha- kol_{approx} associates with the covert degree modifier pos. For example, (2) above, repeated as in (25a) is represented as in (25b) where pos is in focus.

- (25) a. ha-xeder **be-sax ha-kol**_{approx} naki. the-room be-sax ha-kol clean 'The room is more or less clean.'
 - b. ha-xeder **be-sax ha-kol**_{approx} pos clean. the-room be-sax ha-kol pos clean. 'The room is more or less clean.'

Crucially, since in this case *pos* is in focus, it is the source of the alternatives. Following Rooth's ideas (1985; 1992) the alternatives are propositions identical to *The room is pos clean* where *pos* is replaced by other elements of the same semantic type, that is, by other degree modifiers of the type <<d,<e,t>>,<e,t>>.¹0 This is schematically seen in (26).

(26) {....**The room is pos clean**, The room is DegMod clean....}

Now, given the semantics of be-sax ha-kol, all alternatives q in C which are stronger than p are negated. We suggest that such alternatives are those with maximizing degree modifiers, i.e., The room is maximally/completely clean, as seen in (27).

⁹ We assume that the same holds for gradable verbs like *understand*. However, given that most of the literature on gradability, scale structure, standards, etc. is on adjectives, and given the more complex event-based semantics of verbal expressions, we will from now on concentrate on the approximative reading with adjectives.

¹⁰ See Breheny et al. (2018) for a similar suggestion regarding scalar implicatures.

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a. {.... the room is pos clean, the room is completely/ maximally clean}

(27)

b. $\{\exists d [stand.(d)(clean)(C) \land clean(d)(the room), \exists d[d = max(clean) \land clean(d)(the room)\}$

Thus, given the core exclusive semantics of be-sax ha-kol in (13) and this set of alternatives, (25) makes two semantic contributions. The first is that *The room is pos clean* is true, i.e. that there is a degree of cleanness d which is at least as high as the standard for cleanness, and the room is clean to this degree d. The second is that the stronger alternative, namely *The room is completely/maximally clean* is false.

The result of combining these two interpretative components is exactly the one we observed in Section 2, namely that the room is considered clean (since its degree of cleanness is at least as high as the standard), but it is not maximally clean. The approximative reading of *be-sax ha-kol*, then, is successfully derived.

Notice, however, that this kind of derivation relies on a non-trivial assumption, namely that the standard degree with total adjectives like *clean* can be non-maximal. We turn to this point in the next subsection.

3.4.2 The approximative reading of *be-sax ha-kol* with total adjectives and the value of the standard

A prominent claim in the literature on gradable adjectives, made in Kennedy & McNally (2005a), is that the value of the standard degree is constrained by the structure of the scale associated with the adjective. Thus, open-scale adjectives like *tall* are interpreted relative to a contextual standard (determined by, e.g. comparison classes). In contrast, the standard of lower-closed scale (*partial*) adjectives like *dirty* and *wet* is just above the scale minimal point, and crucially, that of upper-closed scale (*total*) adjectives like *clean*, *straight* and *transparent*, is always at the maximal endpoint of the scale.¹¹

But if the standard with upper-closed adjectives is indeed always at the maximal endpoint of the scale, then for example, the negative component conveyed by sentences with *be-sax ha-kol_{apparox}* as in (2) and (25) (that the room is not completely clean) would contradict the positive component (that the room is pos clean, i.e. clean to at least the standard degree). This would wrongly predict sentences with *be-sax ha-kol_{approx}* to be systematically infelicitous. Thus, our suggestion above can only hold if we assume that *pos A* does not necessarily equal *completely A* for total adjectives. But this would clash with what is suggested in Kennedy & McNally (2005a).¹²

There are, though, independent suggestions, e.g. Rotstein & Winter (2004); McNally (2011) and Toledo & Sassoon (2011) which take the standard with at least some total, upper-closed adjectives in the positive form to be potentially lower than the maximal endpoint. In this paper we follow this view and take it to explain how in sentences like (2) the room can be pos clean but not completely clean at the same time.

This position can now lead to a prediction: to the extent that a certain total adjective, or a certain use of such an adjective, **does** require a maximal standard, the status of be-sax ha-kol_{approx} with it will be degraded. Rotstein & Winter (2004) label adjectives with such maximal standards pointal. Based on contrasts like (28), they take complete to be such a pointal adjective, as opposed to clean, which is non-pointal.

- (28) Rotstein & Winter (2004: 14)
 - a. Both towels are clean, but the red towel is cleaner than the blue one.
 - b. ?Both your painting and my painting are complete, but your painting is more complete than mine.

Similarly, Toledo & Sassoon (2011) argue that while a full tank is many times not completely full, an empty one tends to be taken as completely empty. This is motivated by contrasts in

¹¹ Kennedy & McNally suggest that this correlation between scale structure and standards is derived from the functional principle of "interpretative economy".

¹² Thanks to a Glossa reviewer for highlighting this point, as well as the prediction below.

(29). Using Rotstein & Winter's terminology, then, *empty*, unlike *full*, tends to behave as pointal, at least when applied to objects like tanks.

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- (29) Toledo & Sassoon (2011: 139)
 - a. The gas tank is full, but you can still top it off. It's not completely full yet.
 - b. ?The gas tank is empty, but there are still a few drops left. It's not completely empty yet.

Our prediction, then, is that be-sax ha- kol_{approx} will be degraded in sentences with such pointal adjectives. As can be seen in (30) and (31), this is borne out.¹³

- (30) ha-xeder ha- ze **be-sax ha-kol**_{approx} naki / ??shalem. the-room the-this be-sax ha-kol clean complete 'This room is more or less clean / ??complete.'
- (31) ha-mexal ha- ze **be-sax** ha-kol_{approx} male / ??rek. the-tank the-this be-xax ha-kol full / empty 'This tank is more or less full / ??empty.'

Moreover, we follow Rotstein & Winter (2004) and Toledo & Sassoon (2011) in taking the *pointal* vs. *non-pointal* distinction to be sensitive to context. For example, although *empty* behaves as pointal when applied to tanks (as shown in (29a)), it seems to have a non-pointal use as well, as in *The theatre is empty*, originally pointed out in Kennedy & McNally (2005a) which can be rather easily uttered when there are still a few people in the theatre. While Kennedy & McNally (2005a) take such cases to illustrate imprecise uses (modelled using e.g. Lasersohn's 1999 *pragmatic halos*), and thus to still be compatible with the view that the standard of *empty* is maximal, we assume here that such cases illustrate a non-pointal use of *empty*, namely one with a non-maximal standard.

We predict, then, that the status of *be-sax ha-kol*_{approx} with *rek* ('empty') will be better when the subject is *the theatre* than when it is *the tank*. As seen in (32), this prediction is borne out. Although we got some variations in speaker judgements regarding the status of the former, our consultants agreed that it is better than the latter:

(32) ?ha-teatron / ??ha-mexal **be-sax ha-kol**_{approx} rek hayom the-theatre / the-tank be-sax ha-kol empty today '?The theatre / ??the tank is more or less empty today.'

Thus, the behavior of *be-sax ha-kol*_{approx} can be taken to provide further support for the independently made claims that the standard of total adjectives in the positive form is not necessarily at the maximal endpoint of the scale, and more generally, that scale structure and standards can be, at least to some extent, dissociated (*pace* Kennedy & McNally 2005a, and as in McNally 2011 and Toledo & Sassoon 2011).

It is important to emphasize, though, that our theory does not rule out the fact that in general the standard for total adjectives in the positive form *can* be set to the maximal endpoint. In fact, in many cases this is the default situation, and it is always one of the possible values of the standard with such adjectives. Crucially, then, when *be-sax ha-kol_{approx}* associates with *pos*, its presence leads to constraining the standard, i.e. to reinterpreting the prejacent so that the standard variable in it is set to be *necessarily* non-maximal.¹⁴ Without such a reinterpretation, we can get a clash between the default or contextually supplied interpretation of the prejacent, in which the standard can be maximal, and the negative component. This process is reflected in (33), where the constraint on the standard is in boldface. In particular, (33a), the positive component, conveys that the room is clean to some degree which is at least as high as the standard for cleanness, **where this standard is not maximal**. And (33b),

¹³ Notice that, the English gloss with *more or less* is good with both types of adjectives. We come back to this point in Section 4, where we argue against assigning an approximative semantics to be-sax ha- kol_{approx} .

¹⁴ We come back to this point in Section 5, where we discuss a potential consequence of such reinterpretations of the standard for the at-issueness status of positive and negative components of *be-sax ha-kol*.

the negative component, conveys that this degree of cleanness is not maximal either, i.e. that the room is not maximally clean.¹⁵

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(33) a. Positive component: $\exists d[stand.(d)(clean)(C) \land clean(d)(the room) \land stand._{CLEAN} < Max (clean)]$

b. Negative component: $\neg \exists d[d = max(clean) \land clean(d)(the room)]$

3.4.3 Why the approximative reading is degraded with (one-dimensional) open-scale adjectives

In Section 2 example (12) we pointed out that *be-sax ha-kol*_{approx}, prefers upper-closed adjectives and is degraded with open-scale and lower-closed adjectives. In this section we examine a possible reason for this fact.

A number of theories (e.g. cf. Roberts 2011; Alxatib 2013) suggest that when no stronger alternative to the prejacent exists, the use of exclusives is infelicitous. This is illustrated by the infelicity of only in e.g. #Only all students arrived, where the prejacent, namely, All students arrived is the strongest member in the relevant set of alternatives C, i.e. in {some students arrived; most students arrived; all students arrived}. A proposition stronger than the prejacent simply does not exist in this set (because the quantifier all is maximal). The result is that the exclusive operation of only is vacuous, violating the general non-vacuity constraint (Crnič 2011), and hence infelicitous.¹⁶

Now, it seems that when *be-sax ha-kol*_{approx}, associates with the covert *pos* modifier of (one-dimensional) lower-closed, or open-scale adjectives, we get a similar problem, i.e. no stronger alternatives exist in C. Consider (34).

(34) ha-kvish ha-ze **be-sax ha-kol**_{approx} batu'ax / ?? mesukan / ?? raxav. the-road the-this be-sax ha-kol safe / ?? dangerous / ?? wide 'This road is be-sax ha-kol safe/?? dangerous/?? wide.'

When p is This street is $[pos]_F$ dangerous or This street is $[pos]_F$ wide, a stronger alternative with completely modifying the adjective is not available in C, since completely cannot modify such adjectives. We propose, then, that it is the unavailability of stronger degree modifiers of lower-closed and relative adjectives associated with open scales which leads to a vacuous operation of be-sax ha- kol_{approx} , and thus to infelicity.

Two apparent issues with this proposal, though, are the ability of such adjectives to be modified by *meod* ('very') and *mamaS* ('really'). Consider first the sentence in (35).

(35) ha-rexov ha-ze **meod** mesukan. the-street the-this very dangerous 'This street is very dangerous.'

The particle *meod* ('very') seems to be stronger than *pos*, and therefore (35) seems to be a potential stronger alternative than the prejacent *This street is pos dangerous*. If this is indeed the case, then we wrongly predict that sentences that have the template of *The road is be-sax ha-kol dangerous* could mean that the street is dangerous but not very dangerous. But this reading is absent from such sentences.

15 As a Glossa reviewer points out, given our proposal, *p* (e.g. *The room is pos clean*) is entailed by stronger alternative (e.g. *The room is completely clean*), but it is not clear that the stronger alternatives and *p* entail weaker alternatives (e.g. *The room is a little bit clean*). Is the scale for *be-sax ha-kol*_{approx}, then, an entailment-based or an evaluative scale?

Making the right choice here depends on wider issues discussed in the literature, e.g. whether the weaker alternatives are given an exhaustified/exactly reading, and whether the weaker alternatives are members of C, to start with (cf. Guerzoni 2003; Crnic 2012 and Greenberg 2019, suggesting that p is the weakest alternative in C for only). We leave, then, further examination of the type of scale here to future research.

Roberts (2011) and Alxatib (2013) argue that the requirement for having at least one alternative stronger than p in C with exclusive particles should not be hardwired into the semantics of such exclusives (cf. (13) above), since it is derived from a general constraint on non-vacuous operation. We follow these authors on this assumption. Another reason for not hardwiring such a requirement into C is that the definition of C (as defined in Rooth 1992) is supposed to be uniform for all focus-based phenomena. Thanks to a Glossa reviewer for raising this issue.

One way to rule out the availability of *meod* ('very') as a legitimate substitution for *pos* is to follow Kennedy & McNally (2005b), who analyze *very* as a modifier of type <<e,t>,<e,t>>, different from "true" degree modifiers (e.g. *two meters/pos*), type <<d,<e,t>>,<e,t>>. Based on previous analyses of *very* (e.g. Klein 1980), Kennedy & McNally (2005b) suggest that *very* takes [pos adjective], type <e,t>, and adjusts the standard of comparison associated with the gradable adjective that it modifies, based on a comparison class which includes only those individuals for whom the base standard applies. For example, in *very tall*, *very* applies to *pos tall*, and computes a new greater standard of height, based on a comparison class whose members are only those objects who exceed the standard of height determined by *pos tall*.

If this claim is adopted, then, we can argue that despite the fact that *meod* ('very') is a stronger modifier than *pos*, it cannot substitute the focused element *pos*, and thus cannot be used to construct a stronger alternative to the prejacent, because it is not of the right semantic type (as required in Rooth 1985; 1992).

Another apparent candidate that comes to mind as a potential stronger substitute for *pos* is the Hebrew modifier *mamaS* ('really'). The sentence in (36) with *mamaS* is intuitively stronger than its minimally contrasting variant with *pos*.

(36) ha-rexov ha- ze **mamaS** mesukan. the-street the-this mamaS dangerous 'This street is really dangerous.'

However, this modifier does not seem to be a true degree modifier either. Similarly to Kennedy & McNally's (2005b) claim regarding *very*, McNabb (2012) analyzes *mamaS* as a modifier of properties, type <<e,t>, <e,t>>. Moreover, given his analysis, *mamaS* does not make reference to degrees at all. It takes a property *P* of an individual *x* and returns a property which is true of the individual in all possible contexts, leading to an intensification effect (cf. also Beltrama & Bochnack 2015). McNabb supports this suggestion by showing that *mamaS* can also modify non-gradable expressions, as in (37).

- (37) a. ha-Skia mitraxeSet **mamaS** axSav. the-sunset happening mamaS now 'The sunset is happening right now.'
 - ha-malon mamaS be-merkaz Roma.
 the-hotel mamaS in-center Rome
 'The hotel is right in the center of Rome.'

Taking stock, we showed that be-sax ha-kol_{approx} is felicitous with upper-closed adjectives, like clean, but not with lower-closed or open-scale ones like dangerous or wide. We proposed that this is because of the (un)availability of stronger substitutes for pos, modifying the latter types of adjectives, namely maximality degree modifiers, which are of the same type as pos. Since with no stronger alternatives available, the exclusive function of be-sax ha-kol is vacuous, the approximative reading is blocked with such adjectives.

One adjective that can be used to test this claim is the Hebrew correlate of *open*, namely *patu'ax*. Given Kennedy & McNally's (2005a) classification, unlike e.g. *clean*, or *full*, this adjective is partial in that its standard is minimal (e.g. a box which is just a little bit open can be considered already open). However, it is associated with an upper-closed scale, and it can be modified by *completely*. Thus, given our suggestion above this adjective is predicted to license *be-sax ha-kol*_{approx} although it is not total.

The prediction is borne out, as can be seen in (38), where be-sax ha- kol_{approx} is much better (fine or close to fine) with open than with the open-scale adjective expensive:

(38) a. ha-kvish ha- ze **be-sax ha-kol**_{approx} ?patu'ax / #yakar. the-road the-this be-sax ha-kol open / expensive 'This road is more or less ?open / #expensive.'

Another support for our proposal is the felicity of be-sax ha- kol_{approx} with relative multidimensional adjectives, as opposed to its infelicity with relative one-dimensional ones, illustrated in (39)–(40). We follow Sassoon (2013; 2018) in taking multidimensional adjectives to associate with

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several scales, each representing a "respect" or a "dimension", e.g. being talented with respect to math, to history, etc. (in (39)), or being good with respect to service, food, comfortability, etc. (in (40)).

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- (39) Danny **be-sax ha-kol** #gavoha / nexmad / idiot / muxshar.

 Danny be-sax ha-kol tall / nice / idiotic / talanted

 'Danny (is) more or less #tall / ?nice / ?talented.'17
- (40) ha- tisa hayta **be-sax ha-kol**_{approx} #aruka / tova / gru'a. the flight was be-sax ha-kol long / good / bad 'The flight was more or less #long / good / bad / fine.'18

Following ideas in Sassoon (2018) and Greenberg (2020) to be $pos\ A$ in the multidimensional reading is to have the adjectival property A with respect to a number n of relevant dimensions, where n is at least as high as the standard number of dimensions for this adjective.

Sassoon argues that the standard number of dimensions for multidimensioanl adjectives as in (39)–(40) is contextually determined, similarly to the standard degree with relative one-dimensional adjectives like *tall*. Importantly, however, multidimensional adjectives can be still classified as upper-closed, since they can be taken to associate with a scale with an upper-closed end, namely the scale involving all relevant dimensions of the adjectival property. Indeed, all such adjectives can be modified by the maximizing degree modifier *be-kol ha-muvanim* ('in all respects').

To derive the approximative reading of *be-sax ha-kol* with multidimensional adjectives as in (39)–(40), then, we propose that here too the particle associates with a covert focused *pos*. In these cases, though, *pos* is used to set the standard number of dimensions for these adjectives (cf. Greenberg 2020 for a proposal). To illustrate, *The flight was* **be-sax ha-kol**_{approx} [**pos**]_F good (cf. (40)), conveys the truth of the prejacent *The flight was pos good* as its positive inference, i.e. that the number of dimensions with respect to which the flight was good is at least as high as the contextually supplied standard number of relevant dimensions of being good. It also conveys the negative inference that the stronger alternative to the prejacent is false, namely that the flight was not good with respect to *all* relevant dimensions of being good. These are indeed the inferences we get with such a sentence.

4 EXAMINING (AND REJECTING) AN ALTERNATIVE ANALYSIS: BE-SAX HA-KOL AS AMBIGUOUS BETWEEN AN EXCLUSIVE AND AN APPROXIMATIVE PARTICLE

We proposed above that *be-sax ha-kol* always conveys the positive and negative components of scalar exclusive operators, and that *be-sax ha-kol* approx is just a special case of it, derived from its association with the covert degree modifier *pos*.

But there seems to be a potential alternative hypothesis which one may consider, namely that be-sax ha-kol_{approx} is simply an approximator, similarly to e.g. more or less, about, sorta or -ish. Such approximators are usually analyzed as indicating that a standard of precision with respect to which a sentence with a scalar item is evaluated is low (cf. Sauerland & Stateva 2007), or as having a denotation within the pragmatic halo of the modified expression (cf. Lasersohn 1999; Morzycki 2011), etc.

One might want, then, to hypothesize that *be-sax ha-kol* is simply ambiguous between denoting an exclusive operation and an approximative operation. While this hypothesis is less economical than our own, in which this particle conveys the same interpretive components on both readings, it may seem simpler in that it does not force us to make the non-traditional

¹⁷ Notice that unlike the previous cases where a felicitous *be-sax ha-kol* approx is easily translated with *more or less*, in (39)–(40) modifying e.g. *nice*, *idiotic* or *talented* with *more or less* is degraded relative to modification by *be-sax ha-kol*. We discuss this point in the next section, where we argue against giving an approximative semantics to *be-sax ha-kol*.

¹⁸ Notice that be-sax ha-kol_{approx} is felicitous with both good and bad. We take this to indicate that it is not sensitive to the distinction between positive and negative adjectives. Thanks to a reviewer for raising this point.

assumption concerning the association of a focus sensitive particle with covert material (though see Section 3.2 for more particles reported to have this property).

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Assuming that *be-sax ha-kol*_{approx} is simply an approximator may also seem natural given that in many cases it can be easily substituted with "real" approximators such as e.g. *paxot o yoter* ('more or less') or *be-erex* ('around'), as illustrated in (41).

(41) ha-xeder **be-sax ha-kol**_{approx} / **paxot o yoter** / **be-erex** naki. this-room be-sax ha-kol / less or more / approximately clean 'This room is more or less clean.'

With all three expressions we get a similar reading that the room is close to being clean but is not completely clean.

However, a closer inspection of the data reveals differences between $be-sax\ ha-kol_{approx}$ on the one hand, and typical approximative expressions, on the other hand.

Two of these differences were briefly mentioned above. First, unlike *be-sax ha-kol*_{approx}, which as discussed in Section 3.4.2 above is degraded with pointal adjectives, typical approximative particles are felicitous with such adjectives. For example, when trying to replace *paxot o yoter* in the following attested example with the pointal adjective *shalem* ('complete')¹⁹ with *be-sax ha-kol*, the result is degraded.

(42) yadati she-ha-ofano'a yaxzor elay **paxot o yoter** /
-knew that-the-motorcycle will-return to me less or more /
??**be-xax ha-kol**_{approx} shalem.
be-sax ha-kol complete
'I knew that the motorcycle will come back to me more or less complete.'

The opposite fact is illustrated in (43): unlike be-sax ha- kol_{approx} , which as we saw in Section 3.4.3 above is felicitous with relative multidimensional adjectives, $paxot\ o\ yoter$ (as well as $more\ or\ less$) is degraded with many of these adjectives.

(43) Danny **be-sax ha-kol**_{approx} / ??**paxot o yoter** nexmad / muxshar.

Danny be-sax ha-kol / less or more nice / talented

?'Danny is more or less nice / talented.'

In addition, unlike true approximators, *be-sax ha-kol_{approx}* cannot modify measure phrases. Consider, for example, the interpretational difference between (44a) and (44b).

- (44) a. ha-temperatura kan hi **paxot o yoter / be-erex** 20 maalot. the-temperature here she less or more / approximately 20 degrees 'The temperature here is more or less/approximately 20 degrees.'
 - b. ha-temperatura kan hi **be-sax ha-kol** 20 maalot. the-temperature here she be-sax ha-kol 20 degrees 'The temperature here is only / #more or less 20 degrees.'

As seen in (44b), unlike the approximative reading we get with *paxot o yoter* (that the temperature is close to, but not precisely 20 degrees), the only reading we get with *be-sax ha-kol* is exclusive, namely, that the temperature is 20 degrees, and not higher (e.g. that it was expected to be warmer). The approximative reading is infelicitous here.

This difference is unexplained if be-sax ha- kol_{approx} is simply an approximator. In contrast, it is directly predicted if in order to get the approximative reading this particle must associate with a covert focused pos, which does not exist in (44).

Thus, we can now predict that, unlike real approximators, if we let *be-sax ha-kol* modify a gradable adjective which is itself modified by an overt degree modifier, the approximative reading will be blocked. Again, this is because in such cases too there is no covert *pos* to associate with. Indeed, the prediction is borne out, as seen in (45).

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ha- kos **paxot o yoter / be-erex** xaci mele'a. the-glass less or more / approximately half full 'The glass is more or less/approximately half full.'

b. ha- kos **be-sax ha-kol** xaci mele'a. the-glass be-sax ha-kol half full 'The glass is only half full.'

(45)

Here too, as in (44a), the true approximators *more or less/about* give rise to an approximative reading (indicating that the glass is close to be half full), whereas *be-sax ha-kol* lacks this reading. The only reading available is the classical exclusive reading, namely that the glass is half full but not more than that.

To summarize, we pointed out several differences between be-sax ha-kol_{approx} and true approximators, which cannot be explained if this particle has an approximative semantics. These differences seem to directly follow from our proposal above that be-sax ha-kol is a focus sensitive particle which conveys the same interpretative components as scalar exclusives, but it associates with covert material. Therefore, we conclude that be-sax ha-kol should not be considered ambiguous between the exclusive and approximative operations, and that its approximative reading is derivative.

5 THE STATUS OF THE INTERPRETIVE COMPONENTS WITH BE-SAX HA-KOL

5.1 THE DIFFERENCE IN THE STATUS OF THE PREJACENT AND THE EXCLUSION OF STRONGER ALTERNATIVES

In the previous sections we argued that *be-sax ha-kol*, on both its exclusive and approximative readings, conveys the same two components as scalar exclusive particles cross linguistically, namely the truth of the prejacent (the positive component) and the exclusion of stronger alternatives (the negative component).

However, a close look at these readings reveals that they differ in the status of these components. For be-sax ha-kol_{excl} this status is the same as the one reported for typical exclusive particles: the prejacent is presupposed/not-at-issue, and the exclusion of stronger alternatives is asserted/ at-issue.²⁰ In contrast, for be-sax ha-kol_{approx} the status seems to be the opposite, and in fact more similar to what we find with true approximators like more or less.²¹

This conclusion is supported by several diagnostics. For space reasons we present here two of them. The first is embeddability under antecedents of counterfactuals, which is supposed to target at-issue/asserted content. With be-sax ha-kol_{excl} what is being targeted by the counterfactual is the negative component that no stronger alternative is true: for example, from (46a) we infer that Danny has more than two dogs (and that this is why I am complaining). As seen in (46b) the same holds for English only/just. In contrast, for be-sax ha-kol_{approx} what is being targeted seems to be the positive component: from (47a) we do not infer that the room is maximally clean but that the room is not considered clean (and that if it **was** clean my aunt would agree to sleep in it). The same holds for the English translation with more or less seen in (47b):

- (46) a. im le-Danny hayu **be-sax ha-kol** sheny klavim lo hayiti mitlonen. if to-Danny had be-sax ha-kol two dogs not would-I complain 'If Danny had only /just two dogs I wouldn't have complained.'
 - b. If Danny had only /just two dogs I wouldn't have complained.

- 21 Thanks to a Glossa reviewer for raising this issue.
- 22 Notice that in some such cases we also get the inference that the positive inference, i.e. the prejacent is false. E.g. from (i) we infer that John is not a clerk:
- (i) If John was just a clerk Mary wouldn't agree to marry him

²⁰ While the asserted vs. presupposed is not identical to the at-issue/not-at-issue distinction (the former is a special case of the latter, see e.g. Tonhauser et al. 2013), we will not try to distinguish between these terms here and will often use the terms interchangeably.

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im ha-xeder haya **be-sax ha-kol**_{approx} naki doda sheli hayta maskima if the-room was be-sax ha-kol clean aunt mine was agreed lishon bo.

to-sleep in-it

(47)

- 'If the room was more or less clean my aunt would have agreed to sleep in it.'
- b. If the room was more or less clean my aunt would have agreed to sleep in it.

Another diagnostic involves *because*-clauses. Coppock & Beaver (2014) show that such clauses target asserted/at-issue content, and that in the case of scalar exclusives like *only* or *just* they target the negative component, namely the exclusion of stronger alternatives, which they indeed assume to be asserted/at-issue. This seems to be the case for the negative component of *be-sax-ha-kol_{excl}* as well: from (48a) we infer that the reason that Danny is sad is because he didn't publish more than two papers (and not because he published two papers). This is what makes the minimally contrasting version with *happy* a bit odd, given that people typically want to publish as many papers as they can. As seen in (48b) the same holds for English *only*, as expected.

In contrast, for be-sax ha-kol_{approx} the situation is reversed, and the because-clause seems to target the positive component: From (49a) we infer that Danny is happy because the room is clean (and not because it isn't completely clean). This is what makes the minimally contrasting version with sad a bit odd, given that people typically prefer cleaner to less clean rooms. As seen in (47b) the same seems to hold for English more or less:

- (48) a. Danny haya acuv / ?sameax ki hu pirsem **be-sax ha-kol**_{excl}
 Danny was sad happy because he published be-sax ha-kol
 shney ma'amarim
 two papers
 'Danny was sad / ? happy because he published only two papers.'
 - b. Danny was sad /? happy because he published only two papers.
- (49) a. Danny haya sameax/? acuv ki ha-xeder haya **be-sax ha-kol**_{approx}
 Danny was happy sad because the-room was be-sax ha-kol
 naki.
 clean
 'Danny was happy / ?sad because the room was more or less clean.'
 - b. Danny was happy / ?sad because the room was more or less clean.

In sum, while be-sax ha- kol_{excl} behaves like typical exclusive particles in terms of the status of its components, be-sax ha- kol_{approx} behaves like typical approximators.

One can attempt to take this observation as an indication that *be-sax ha-kol* is ambiguous between an exclusive and an approximative operator after all. However, given the differences we pointed out in the previous section between *be-sax ha-kol* _{approx} and clear approximators (in terms of compatibility with pointal adjectives, with relative multidimensional adjectives, with precise measure expressions and with adjectives which are themselves modified by degree modifiers), we believe that this direction is not the right one to take. Instead, in the next section we explore two ways to handle this data within the present proposal.

5.2 LEXICAL OR PRAGMATIC VARIABILITY IN THE STATUS OF THE COMPONENTS WITH BE-SAX HA-KOL

One way to handle the data above is to simply take *be-sax ha-kol* to have two entries as in (50a) and (50b), for the exclusive and the approximative readings, respectively.²³

(50) a.
$$||\text{be-sax ha-kol}_{excl}|/\text{rak}/\text{only}||^{g,c} = \lambda C. \lambda p. \lambda w: w \in p. \forall q \in C \land q >_s p \rightarrow w \notin q$$

b. $||\text{be-sax ha-kol}_{approx}||^{g,c} = \lambda C. \lambda p. \lambda w: \forall q \in C \land q >_s p \rightarrow w \notin q. w \in p.$

²³ Notice that in these entries we follow the traditional assumption which takes exclusive particles to be propositional operators (even if their surface position is not sentence initial). Thus, we do not deal with the *type* (nor with the QUD parameters) introduced in Coppock & Beaver (2014), which are not crucial for the main claim made in this paper.

The entry in (50a) is the typical entry for scalar exclusives, and (50b) differs minimally from it just in the reversed at issue vs. not at issue status of the positive and negative components. While on this proposal *be-sax ha-kol* is strictly speaking ambiguous, we think that taking this particle to have developed two closely related entries is still a more economical and plausible suggestion than taking it to be associated with two entirely distinct semantic operations (as an exclusive particle and as an approximator).

A relevant point to make here is that although on this hypothesis be-sax ha-kol_{approx} differs from be-sax ha-kol_{ard} and from typical exclusive operators (like English only and just, Hebrew rak, etc.), there is at least one other exclusive operator which seems similar to it in this respect. As already mentioned in the introduction, Bassi et al. (2019) argue that in order to account for a number of puzzles with scalar implicatures it is necessary to assume that unlike only, which presupposes its prejacent and asserts the exclusion of stronger (or non-weaker) alternatives, the status of these components with the covert exclusive operator involved with deriving scalar implicatures, which Bassi et al. (2019) call p-exh, is reversed. According to them, then, the prejacent of p-exh is asserted and the exclusion of non-weaker alternatives is presupposed (similarly to what has been sometimes claimed for clefts).²⁴ This is in contrast to previous analyses of exh, the covert operator assumed to be involved with scalar implicatures, which took it to assert both components (see e.g. Chierchia et al. 2011 and much subsequent work). To the extent that this suggestion is on the right direction, the status of the positive and negative components can be seen as one of the parameters of variation along which exclusives differ. Thus, the fact that be-sax ha-kol can be associated with the two lexical entries in (50) is less surprising, and still allows us to consider it as part of the typology of exclusive operators. be-sax ha-kol may then be taken to be unspecified along this parameter.²⁵

A second, more unified hypothesis we would like to examine is that *be-sax ha-kol* has only the entry in (50a), typical for exclusives. Unlike the previous proposal, where *be-sax ha-kol* differs from classical exclusive particles in two distinct properties (the ability to associate with covert focus and the status of its interpretative components), on this proposal it differs from them only in the former, and the different status of the interpretative components, observed in the approximative reading, will be pragmatically derived.

This kind of hypothesis is inspired by recent research on the flexibility of the asserted vs. presupposed status of interpretive content. While traditionally this status was assumed, implicitly or explicitly, to be totally fixed and lexically determined for each lexical item (cf. Heim 1992; van der Sandt 1992), there are now various theories which question one of these assumptions, or even both. We now briefly review some relevant claims made in such theories (although for space reasons we cannot do justice to their richness nor to the differences between them).

- 24 Cf. Erlewine (to appear) who analyzes Mandarin *shi* as a not-at-issue exhaustive operator. Erlewine shows that sentences with *shi* are translatable using English clefts.
- 25 Notice that, similarly to what is usually argued to be the default case for scalar implicatures (as in (i)), the exclusive (negative) component of be-sax ha-kol_{approx}, as in (ii), seems to be cancelled in antecedents of conditionals. We understand that if the room was at least pos clean (and possibly completely clean), my aunt would agree to sleep in it:
- (i) If some students fail the exam, then we should prepare an easier one.
- (ii) im ha-xeder be-sax ha-kol_{opprox} naki doda sheli taskim lishon bo.
 if the-room be-sax ha-kol clean aunt mine will-agree to-sleep in-it
 'If the room is more or less clean my aunt agrees to sleep in it.'

One could try to argue that this similarity indicates that the exclusive inference of *be-sax ha-kol*_{approx} is also an implicature. However, unlike what happens with scalar implicatures, trying to cancel this inference in matrix sentences, as in (iii), leads to oddness, and to the feeling of self-correction (e.g. the conclusion that the speaker checked again the room and found out that, unlike what she originally thought, the room has no dirt at all):

(iii) ha-xeder be-sax ha-kol naki. ??lemaase hu legamrey naki. the-room be-sax ha-kol_{approx} clean actually it completely clean 'The room is more or less clean. ??In fact it is completely clean.'

Given the independently made claim that scalar implicatures are the result of the operation of p-exh (as in Bassi et al. 2019), we hypothesize, then, that the similarity between (i) with this p-exh and (ii) with be-sax ha- kol_{approx} is not due to the **implicated** nature of the exclusive inference, but due to the fact that with both operators this inference is **presupposed/not at issue**, and hence is not targeted by the conditional to start with. We leave a more thorough examination of this issue to future research.

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5.3 EXISTING CLAIMS REGARDING GRADIENCER AND VARIABILITY IN PROJECTIVITY AND (NOT)-AT-ISSUENESS

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As is well known, presupposed/not at issue material is traditionally assumed to project over entailment cancelling operators like negation, questions, possibility modals, etc. even when embedded under such operators. However, various authors observed cases where such material does not project. In general, such authors observed that projectivity is gradient – some presuppositions are judged to be more projective than others. Moreover, projectivity of presupposed material has been argued to be affected by information structural factors, which in turn affect the degree to which such material ends up being at-issue, or up for debate/up for discussion.

To illustrate, consider the sentential complement of factive verbs like *find out* or *discover*, which is assumed to be presupposed, and does indeed usually project. As Simons et al. (2017) show, such commitments are weakened or disappear when relevant parts of such sentential complements are accented (which they take to indicate that they are focused), as in (51), or are answers to explicit or implicit questions in the context, (e.g. the question of where Sally is in (52)).

- (51) Simons et al. (2017: 161)
 - A: James just found out that Harry's having a graduation party, and I just can't understand why he's so upset about it.
 - B: He didn't find out that HARRY's having a graduation party, he found out that HARRIET is having a graduation party.
- [Interlocutors are aware that their friend Bill is trying to discover the whereabouts of his grown daughter Sally]If Bill discovers that Sally is in New York, he'll be relieved.

Given this and similar observations, Tonhauser et al. (2018) hypothesize that a content C projects to the degree to which it is not-at-issue (what they call the *gradient projection principle*). This hypothesis was given experimental support in e.g. Amaral et al. (2011); Cummins et al. (2012); Smith and Hall (2011) and Xue and Onea (2011). For example, based on examining the projectivity of content in 19 constructions in English (e.g. non-restrictive relative clauses, possessive NPS, the prejacent of *only* and complements of *stop*, *discovered* and *annoyed*), as well as the at-issueness of such contents (using assent/dissent reactions), Tonhauser et al. (2018) found that the more not-at-issue a content is judged, the more projective it is.

A result which is of particular interest to us is that of all these 19 constructions, the prejacent of *only* was found to have the lowest degree of not-at-issueness, and also the lowest degree of projectivity. A similar result regarding *only* was also reported in Amaral et al. (2011).

As to the sensitivity of projective content to information structure factors, we follow Abrusán's (2011) approach, who assumes that while not-at-issueness/presuppositional status can be originally conventionalized/lexicalized in the semantics of presupposition triggers, ²⁶ it can be overridden when we pay attention to the not-at-issue material, so it becomes at-issue (in which case it is not presupposed to begin with). ²⁷ Here is a relevant quotation:

Abrusán (2011: 501)

"Some aspects of the information conveyed are such that we pay attention to them by default, even in the absence of contextual information. On the other hand, contextual cues or conversational goals can divert attention to types of information that we would not pay attention to by default. Either way, whatever we do not pay attention to, be it by default, or in context, is what ends up presupposed."

5.4 BACK TO BE-SAX HA-KOL

Given the claims in the above reviewed theories, let us now go back to the status of the components of be-sax ha-kol. Following Abrusán's (2011) view, let us assume that the lexical

²⁶ Cf. Simons et al. (2017) and Tonhauser (2019).

entry for this particle starts out as (50a) above, where the prejacent is presupposed/not-at-issue and the exclusive component is asserted/at-issue.

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With be-sax ha-kol_{excl} nothing interesting happens, so the components keep their status. But something does happen with be-sax ha-kol_{approx}. We hypothesize that this might have to do with the way the interpretation of the prejacent in this reading is calculated: as already pointed out in Section 3.4.2, when calculating the meaning of the prejacent and the exclusive component with be-sax ha-kol_{approx}, there is a possible clash between them. To illustrate again, the interpretation of the positive component of *The room is be-sax ha-kol clean*, namely the prejacent *The room is pos clean*, is that the degree to which the room is clean is at least as high as the standard, where crucially the context can, and often does, set this standard at the scale maxima. The negative component, on the other hand, requires that the room is not maximally clean. In a context where the standard in the prejacent is maximal, then, the two components clash.

Hence, as argued in Section 3.4.2 above, the presence of *be-sax ha-kol* forces us to go back to the prejacent and re-interpret it in such a way that the value of the standard variable is set to being **non**-maximal (no matter what the original value of this standard is set to by the context).

We thus hypothesize that although the prejacent of be-sax ha-kol_{approx} is originally backgrounded, this process of re-interpreting the prejacent may be the reason for why it cannot stay backgrounded anymore. In particular, this re-interpretation moves the prejacent to the foreground, so it becomes at-issue. In Abrusán's (2011: 501) terms, this can be considered a case where a "conversational goal... can divert attention to types of information that we would not pay attention to by default", and hence makes this type of information at-issue.

Given that there is independent experimental evidence that the not-at-issueness of the prejacent of exclusives seems rather weak to start with (cf. again Amaral 2011; Tonhauser et al. 2018), we end up with the prejacent of *be-sax ha-kol*_{approx} getting an at-issue status.

This is not the whole story, though, because remember that given the data in Section 5.1 the change in the status of the prejacent of be-sax ha- kol_{approx} – from being not-at-issue to being at-issue – is accompanied by a change in the status of the exclusive component – from being at-issue to being not-at-issue. Why don't both interpretive components with be-sax ha- kol_{approx} end up being at-issue?

A suggestion made in Bassi et al. (2019) can perhaps help shed some light on the reason for this issue. As pointed out above, Bassi et al. argue that unlike what is traditionally assumed for covert *exh*, *p-exh* presupposes exclusion of non-weaker alternatives and asserts the prejacent, in a way which mirror-images overt *only*: "Only presupposes its prejacent and asserts exhaustivity; *p-exh* asserts the prejacent and presupposes exhaustivity; and *exh* presupposes nothing and asserts both the prejacent and the exhaustivity component" (Bassi et al. 2019: 23). Importantly, they further suggest that this proposal for *p-exh* fares better than the proposal for *exh*, since *p-exh* is compatible with the general requirement (which they take to be inspired by Schlenker 2007) that "a contribution must not lead to multiple novel inferences or answer different questions" (Bassi et al. 2019: 23).

Given such a general requirement, then, it can perhaps be also used to explain why, as far as the status of the components is concerned, be-sax ha- kol_{excl} is the mirror image of be-sax ha- kol_{approx} , similarly to the way only is the mirror image of p-exh in Bassi et al. (2019).

This suggestion needs to be further clarified and motivated, as well as empirically validated. At this point, however, we can at least point out one more construction where such a status mirror image is found, involving evaluative adjective sentences (EASs), described in Tonhauser et al. (2019). Tonhauser et al. discuss two meaning components conveyed by EASs, as in (53a), namely the truth of the prejacent (e.g. Feynman danced on the table) and the generalization (that for Feynman to dance on the table was stupid). The prejacent in such constructions is taken to be presupposed, while the generalization is asserted. This is evidenced in (53b), where the former, but not the latter projects.

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a. Feynman was stupid to dance on the table.

b. Was Feynman stupid to dance on the table?

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Tonhauser et al. attribute to Karttunen et al. (2014) the observation that there is variability in the status of the prejacent in this construction. This is seen in attested examples like (54), where the prejacent does not project, i.e. there is no commitment of the speaker that he went stumbling through the junkyard.

(54) Now I knew someone was in the junkyard and the cold wind was carrying the cries. I wasn't stupid to go stumbling through the junkyard in the dark and get hurt.

What is relevant for us is that Tonhauser et al. observe that in such cases there is variability in the status of the generalization as well. Thus, unlike the prejacent in (54), which indeed **does not** project, the generalization **does** project (there is commitment that stumbling through the junkyard is stupid). Tonhauser et al. conclude that in this construction "when the prejacent projects, the generalization does not, and when the prejacent does not project, the generalization does" (Tonhauser et al. 2019: 3).

It seems, then, that the swapped status of the positive and negative components of be-sax ha- kol_{excl} and be-sax ha- kol_{approx} is part of a more general pattern found in other constructions, where a change in the not-at-issueness status of one interpretive component leads to a change of the at-issueness status of another component. Whether this pattern is indeed due to the general requirement suggested in Bassi et al. (2019), and whether it applies to all constructions are questions which require further research and are beyond the scope of this paper.

6 CONCLUSION

(53)

In this paper we proposed that two readings –exclusive and approximative – of the Hebrew particle *be-sax ha-kol* are more closely related than they seem to be at first glance, in that under both the particle is a scalar exclusive, having a positive and a negative contribution, namely the truth of the prejacent and the exclusion of stronger focus alternatives. The difference between the exclusive and approximative readings, we suggested, results from a minimal difference in the overtness vs. covertness of the focus associate of *be-sax ha-kol*, respectively.

Specifically, we proposed that whereas the exclusive reading of *be-sax ha-kol* is derived in the usual way from its association with overt material, the approximative reading results from its association with the covert degree modifier *pos*, modifying gradable expressions. In this case the stronger alternative which is rejected is one where the focused *pos* is substituted with a maximality degree modifier, resulting in "x is pos A, but not maximally A".

In addition to accounting in a unified way for a wide range of distributional and interpretational observations regarding *be-sax ha-kol*, our analysis has implications regarding wider topics discussed in the semantics-pragmatics interface literature.

For example, we have shown that the approximative reading of *be-sax ha-kol* is only licensed when the scale associated with the gradable expression is upper-bound, but the standard on this scale is not necessarily maximal. This, we argued, supports a view where scale structure and standards can be dissociated (*pace* Kennedy & McNally 2005a, and like Rotstein & Winter 2004; McNally 2011; Toledo & Sassoon 2011).

We pointed out that be-sax ha-kol seems similar to other only-like and even-like operators cross linguistically which were reported to associate with covert material. An important implication of the paper, then, is that the ability vs. inability of focus sensitive particles to associate with covert focused material should count as one of the parameters along which focus sensitive particles vary. More generally, the behavior of be-sax ha-kol supports analyses (cf. Chierchia 2013; Liu 2017) where apparent ambiguities of focus particles are attributed to the type of alternatives operated over, rather than to two distinct semantic operations.

Indeed, we argued against taking *be-sax ha-kol* to be ambiguous between an exclusive and an approximative semantics. We supported this decision by pointing out differences between the approximative reading of *be-sax ha-kol* and that of true approximators (like *more or less*)

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which cannot be accounted for by an ambiguity-based analysis, but follow from our proposal. In this sense, our theory can also help sharpen the distinction between *true* and *derivative* approximators.

Another wider issue handled by our analysis concerns at- issueness and factors affecting it. We observed that the status of the interpretative components in the approximative reading of be-sax ha-kol – where the prejacent is at issue, and the exclusion of stronger alternatives is not-at-issue – is reversed relative to its exclusive reading and to typical exclusive particles like only. We examined two theoretical directions to capture this observation within our proposal. Given the first, this particle is associated with two closely related lexical entries, which differ minimally in terms of status, and given the second, there is a default lexical entry with one status, and the other status is derived pragmatically. Both directions are inspired by existing theories regarding at-issuenss. The first is inspired by a theory arguing for the mirror imaged status of components of only vs. p-exh, and the second by theories regarding the gradience and flexibility of status and its sensitivity to information structure. More research is clearly needed in order to decide between these two options. On both, though, it seems that the variability of the status of the components with be-sax ha-kol is not an isolated phenomenon, but part of a more general pattern. In this sense, understanding the behavior of be-sax ha-kol can contribute to a better understanding of (not)-at-issueness and the factors affecting it.

In future research we would also like to examine the connection between the internal composition of *be-sax ha-kol* ('the sum the whole') and its semantic effects. One such effect, pointed out in Orenstein & Greenberg (2013) for *be-sax ha-kol*_{approx} is an inference that the sentence is uttered based on some "summing-up" evidential basis. For example, uttering *The room is be-sax ha-kol*_{approx} clean seems to be based on checking the degree of cleanness in all parts of the room (e.g. under the sofa, at the windows, on the furniture, etc.), and summing the impression from all these parts. According to Orenstein & Greenebrg (2013), the fact that *be-sax ha-kol*_{approx} gives rise to this inference can explain felicity contrasts between (55) and (56): in (55) evidence that the door is closed cannot be based on examining parts of the door and summing up impressions about it. In contrast, one can sum up impressions about parts of the agreement document to see whether it is "closed".

- (55) ??ha-delet **be-sax ha-kol**_{approx} sgura. the.door be-sax ha-kol closed.'
- (56) ha-heskem **be-sax ha-kol**_{approx} sagur. the agreement be-sax ha-kol closed 'The agreement is be-sax ha-kol closed.'

Notice, though, that the full effects of be-sax ha-kol_{approx} cannot be reduced to this inference, as it cannot explain the negative component of this particle ("the maximal degree does not hold of the subject"), the felicity differences between pointal and non-pointal adjectives (cf. the discussion of *The tank is be-sax ha-kol*_{approx}, full/??empty in Section 3.4.2), and the similarity with the exclusive use of be-sax ha-kol. Capturing the intuition about this "summing-up" inference in a precise and compositional way, then, and clarifying its status is left for future research.

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