A Flexible Exclusive Operator: The Case of the Hebrew *be-sax ha-kol* (≈ *all in all*)[1]

Dina Orenstein – *Bar Ilan University*
Yael Greenberg – *Bar Ilan University*

Abstract
We offer a unified analysis of the Hebrew *be-sax ha-kol* ('all in all'), according to which it is a scalar exclusive particle, under a modified definition of exclusives we develop. We claim that *be-sax ha-kol* differs from classical exclusives particles like *only* in that it is more flexible with respect to the set of alternatives to its prejacent. In particular, it can operate not only on "Roothian" alternatives to the prejacent, but also on different interpretational versions of the prejacent. We show how this proposal accounts for the fact that unlike *only*, *be-sax ha-kol* can trigger not only a clearly 'exclusive' reading, but also an 'approximative' one. We discuss the projective behavior of the prejacent of *be-sax ha-kol* in this reading, and the fact that it is infelicitous with L(ower)–scale adjectives.

1. Introduction

The Hebrew particle *be-sax ha-kol*, literally "in sum the whole" (roughly translated as *all in all*) is challenging as it can induce both an exclusive reading (similar to *only*), as in (1) and an approximative reading (similar to *more or less*), as in (2):

(1)
Rina be-sax ha-kol pkida/ben 5
Rina be-sax ha-kol clerk/son 5
"Rina is be-sax ha-kol a clerk/5 years old" ("All in all, Rina is a clerk/5 years old" /≈ Rina is only a clerk/5 years old)[2]
(2)
ha-xeder be-sax ha-kol naki / yaveS
The.room be-sax ha-kol clean/dry
The room is be-sax ha-kol clean/dry (≈ The room is more or less clean/dry (i.e., it is not maximally clean / dry*)*

This paper proposes a unified analysis of *be-sax ha-kol*. We propose that *be-sax ha-kol* is always an exclusive operator under a new schematic definition of exclusives, which is a modified version of previous scalar approaches to exclusives like *only*. We further suggest that unlike *only* and its Hebrew correlate *rak*, *be-sax ha-kol* is not restricted to operate on the classical scale of Roothian alternatives to the prejacent, but can also operate on alternative INTERPRETATIONS of the prejacent.

[1] Research on this project was supported by ISF grant # 490 / 09 on the semantics, pragmatics and focus sensitivity of focus sensitive particles in Hebrew. Thanks to the audience of Sub17 in Paris and of IDL2 in Barcelona for instructive comments.
[2] Note that the even under this reading there are some minor differences between *be-sax ha-kol* and *rak*, which, for space reasons, we will not elaborate on now.

The paper is structured as follows: In section 2 we present and motivate our core definition of exclusives, which is inspired by previous theories of exclusives with some modifications. In section 3 we show how applying the definition of exclusives to *be-sax ha-kol* yields both the exclusive and the approximative readings. We further show that it can account for the interpretation and distribution of the approximative reading of *be-sax ha-kol*. Finally, in section 4 we summarize, and suggest some directions for further research.

2. The Core Definition of Exclusives

The core definition of exclusives we propose is inspired by the tradition of scalar accounts of *only*, according to which *only p* does not lead to a rejection of ALL alternatives to p, but only to rejecting stronger alternatives on some scale. Note that the scale can be entailment based (as in (3)), or evaluative, non-entailment-based (as in (4)) (e.g. Beaver & Clark 2008):

(3) *Only 30 students arrived.*
(4) *Mary is only a clerk.*

In particular, our definition, given in (5), is inspired by proposals in Zeevat 2003, Beaver & Clark 2008, Orenstein & Greenberg 2010, Orenstein 2011, Kadmon & Sevi 2011, and Roberts 2011, with some modifications:

(5) A core definition of exclusive operators:
EXCLUSIVE p: (Assume that pc is a salient proposition in the context)
Presupposition: $\forall p_c[p_c \in ALT_{Sc}(p) \wedge \exists w_1\ w_1 R_c w_0 \wedge w_1 \neq w_0 \wedge p_c(w_1)] \rightarrow p_c >_s p$
"Every salient proposition, which is a member of a salient scaled set of alternatives to p, and which is true in an accessible world different from w_0, is stronger than p"
Backgrounded Prejacent: $p(w_0)$
"p is true in w_0"
Assertion: $\forall p'\ p' >_s p \rightarrow \neg p'(w_0)$
"Every alternative proposition p' which is stronger than p is false in w_0"

We will now motivate the modified/new components of the definition. In particular, we will discuss (a) the fact that mirativity is not encoded into the definition, but subsumed by the use of unspecified accessible worlds. (b) The need for an explicit presupposition concerning the stronger potential alternatives, and (c) The status and the projective behavior of the prejacent.

2.1. Mirativity

Previous scalar analyses of *only* proposed that part of the function of *only* is to reject expectations in the common ground that stronger alternatives than p hold. Specifically, Zeevat 2003 suggests that *only* is a mirative particle which weakly presupposes that stronger alternatives are expected to be true. Similarly, B&C 2008 explicitly claim that the main function of *only* is a discourse function, to reject expectations in the common ground that stronger alternatives than p hold (though they do not encode this component into their formal definition).

This view seems to be supported by the observation that e.g. (6) strongly implies that more than 30 students were expected to arrive:

(6) *Only 30 students arrived.*

The felicity contrast in (8) (B&C 2008) further supports this claim:

(7) *I expected 50 students but only 40 arrived.*
(8) #I expected 40 students but only 50 arrived.

In (7) the expected alternative is stronger than the prejacent, so the sentence is felicitous. By contrast, (8) is infelicitous because the expected alternative is weaker than the prejacent.
Nonetheless, mirativity, or expectation rejection is not encoded into our definition of exclusives in (6), because although in many cases *only* indeed seems to reject expectations, this is not always the case. For example, in (9) (from Orenstein 2011) *only* can be used felicitously without rejecting expectations:

(9) *Context: My mother and I are organizing a weekend for the whole family. We discuss where each sub family will stay:*
"Danny (my brother) has four children so he will stay in this apartment, but Esti (my sister) has only three children, so she can stay in the smaller apartment."

As we both know the number of children my sister has, there is NO EXPECTATION that she has more children. (Clearly, there is a stronger alternative in the background but it is not an expectation). Instead, it seems that the stronger alternative in (9) is true in worlds which are similar to our world, but which differ from it in that Esti has more children (e.g. four, as her brother has). I.e. (9) implies the counterfactual in (10):

(10) *If Esti had 4 children too, she would get a big apartment* (but she only has 3).

We suggest, then, a modalized version of the presupposition, which subsumes the 'mirativity' suggestions (cf. Orenstein 2011). I.e., we suggest, more generally, that exclusives presuppose that their prejacent is weaker than all salient POTENTIAL alternatives, i.e. those which are true in an accessible world. This can be a world of expectations / a counterfactually accessible world, etc.

2.2. The need for an explicit presupposition rejecting the stronger potential alternatives

Roberts (2011) also claims that mirativity is not part of the semantics of *only*. She supports this claim with the observation that a speaker of e.g. (11) need not expect more people to arrive, and may in fact expect a positive answer to his question:

(11) *Did only Lucy come to the party?*

Roberts further claims that the apparent mirativity effect can be derived pragmatically. In particular, she proposes the following:

"*In asserting a particular value on a given scale, why use only, with its asserted content 'not stronger', if you didn't believe there was a stronger possible answer to the QUD? To put it another way: There's no need to deny the existence of stronger true answers if the proffered answer is the strongest on a previously given scale over the possible answers." (p. 43)*

Roughly, Roberts' claim is that asserting that p is the strongest true alternative would be trivial in a scenario in which there is not a possible higher alternative to start with. Thus, there is no need to explicitly presuppose stronger potential alternatives.
Indeed, this account makes the right predictions regarding sentences like (12):

(12) #*I have 50 students in my class and only 50 students came.*

In (12) no stronger alternative than the prejacent is possible, so the contribution of the assertion of *only* is trivial, so we get infelicity.

However, we believe that an explicit presupposition of stronger alternatives (true in an accessible world) is still needed, given data like (13) and (14):

(13) #*There are 50 students in the class. I expected 30 to come to the meeting, but only 40 students came.*
(14) #*John has at least 40 students, but only 40 students came.*

Unlike (12), in both (13) and (14) stronger alternatives than p (*40 students came*) are in principle possible, so the contribution of the assertion is NOT trivial. But, nonetheless the use of *only* is infelicitous. We propose that this is because in both cases we have a salient potential alternative which is NOT stronger than p: in (13) the salient alternative *30 students arrive* is weaker than p, and in (14) *40 students arrive* (the salient part of *at least 40 students arrive*) is as strong as p (but not STRONGER). Thus, it seems that the use of *only* indeed presupposes the existence of salient stronger alternatives (true in an accessible world).

Finally, notice that if several alternatives are salient, then all of them have to be stronger than p[3], as illustrated by comparing (15) and (16):

(15) *Mira has three kids, Paul has four kids, but Jim has only two kids.*
(16) #*Mira has two kids, Paul has four kids, but Jim has only three kids.*

(16) is infelicitous because one of the salient alternatives in the sentence is weaker than p.
We conclude, then, that the semantics of exclusives needs an explicit requirement that all salient potential alternatives are stronger than p.

2.3. The status of the prejacent

Though in previous work (Orenstein 2011) we took the prejacent to be implied (following McCowly 1981 and van Rooij and Schultz 2005), we now follow Roberts (2011) in assuming

[3] We thank Malte Zimmerman for pointing this to us.

that the prejacent is entailed but *not at issue* (and more specifically, *backgrounded*). Let us discuss one important motivation for this decision, concerning the projective behavior of the prejacent.

The status of the prejacent of *only* has been in debate for many years. Various theories have been suggested to account for its inconsistent projective behavior in various constructions. It seems that none of the approaches discussed in the literature can cover the wide range of phenomena. Roberts 2011 examines the status of the prejacent within the framework of the ongoing research of projective meaning in general. Contemporary research of various types of projective materials (e.g. Simons et al. 2010) suggests that materials which are *not at issue* project. Roberts proposes that the prejacent of *only* is entailed but *not at issue* (and in particular *backgrounded*), and hence, should in principle project.

It is important to note here, however, that although due to its *not at issue* status the prejacent of *only* is indeed expected to project, Roberts emphasizes that it TENDS to project, but does not always do so. For example, on the one hand, the prejacent of (17) (*20 students arrived*) projects in the members of the family of sentences in (17):

(17) *Only 20 students arrived.*
a. *Not only 20 students arrived.*
b. *Did only 20 students arrive?*
c. *It's possible that only 20 students arrived.*

However, in (18) (from Beaver and Clark 2008) the prejacent *This is a shoot them up pointless movie* doesn't project:

(18) *And contrary to what many say I found the level of violence high but not excessive. This isn't only a "shoot'em up" pointless movie; there's more than just stage blood.*

Roberts (2011) suggests that the prejacent in (18) does not project because it conflicts with the explicit information given in the context:

"In (18), the writer is clearly arguing that the movie in question is worthwhile, hence it would be inconsistent for the prejacent of the second clause 'this is a shoot'em up pointless movie' to project from under negation (p. 25)".

But as a matter of fact, the prejacent of (18) does not project even when no context is provided. That is, if the negated (19) is uttered out of the blue, we do not infer that "This is a shoot'em up pointless movie" (but rather – that this is, e.g. a 'deep' movie):

(19) *This isn't only a shoot'em up pointless movie.*

Why, then, doesn't the prejacent of (19) project? We suggest that the projective behavior of the prejacent does not only depend on whether it conflicts with context, as illustrated in Roberts 2011, but can be predicted and accounted for in a more systematic and general way. Our observation is that the survival of the prejacent depends on the entailment relations that exist

between the alternatives in the scale (cf. Orenstein & Greenberg 2011).[4] In particular, in cases where no conflict with context is found, we observe that the prejacent of *only* tends NOT to project with non-entailment scales, and systematically projects with entailment scales. This general observation is further supported by a particular one: unlike *only,* the prejacent of exclusive particles which are limited to evaluative, non-entailment scales (like the Hebrew *stam* and the English *merely*) usually do not project.

Now this observation can be accounted for by extending Roberts' basic idea that the prejacent fails to project when it conflicts with the context, to cases in which the prejacent is in conflict with the questioned / negated etc. assertion. As we will show now, by definition, conflict with the asserted material cannot occur with entailment scales, but it may occur with non-entailment, evaluative scales.[5]

Here is an example of a sentence with a non-entailment scale with a possibility operator (based on Beaver & Coppock (to appear)):

(20) *It's possible that this is only a shoot'em up pointless movie.*

In (20) the truth of *This is a shoot'em up pointless movie* does not project. Crucially, this is so, even though no context is provided, so there seems to be no conflict with context. The reason for the non projective behavior here is that the content of the prejacent does conflict with the possibility raised by *It's possible*. Using a possibility operator on the asserted exclusive component amounts to raising the possibility that there ARE, in fact, stronger alternatives than the prejacent, e.g. that *This is a movie with deep dialogue*. But, the known truth of the prejacent (*This is a pointless shoot them up movie*) conflicts with this possibility. Hence, the prejacent does not project.

This explanation is further supported by the interesting projective behavior seen in (21) (From Beaver & Clark (2008)):

(21) *She isn't only a blond bimbo with no brains.*

We observe that in (21), although the prejacent as a whole does not project, part of it does. In particular, hearing (21) we still assume that she is blond, but do not assume she has no brains. I.e. (21) seems to give rise to something like "she is a smart blond girl". We can account for this varied projective behavior in the following way: negating the assertion of *only* that she is not more than *a blond bimbo with no brains* amounts to asserting that she is more than that, e.g. "*She is intelligent*". Because being intelligent conflicts with the truth of the prejacent "being a bimbo with no brains", it does not project. On the other hand, being blond does not conflict with being intelligent, hence it can safely project.

In contrast, with entailment based scales no such conflict can occur. Consider, for example, (22):

[4] A similar observation has been independently made by Beaver & Coppock (to appear).
[5] Beaver & Coppock (to appear) attempt to explain this observation, but their analysis can only cover negated exclusives.

(22) *It's possible that John only has 4 children.*

Here, raising the possibility that John has, in fact, more than 4 children, e.g. 5 children, does not, and in fact, cannot conflict with the known truth of the prejacent (*John has 4 children*). Hence, the latter can safely project.

Thus, we predict that, unlike what we find with non-entailment-based scales, the only case where the prejacent of *only* fails to project with entailment-based scales is where this prejacent conflicts with external, contextually supplied information (as in Roberts' examples). Following Roberts 2011, then, we propose that the prejacent of exclusives is entailed but *not at issue,* and hence tends to project, unless it conflicts with another piece of information, given the patterns described above.

This concludes our discussion of the core semantics of exclusives. We now turn to show how this semantics is applicable to sentences with the Hebrew *be-sax ha-kol.*

3. Applying the core definition of exclusives to *be-sax ha-kol*

In this section we show that the core definition of exclusives proposed in (6) above can account for the interpretation and felicity constraints of *be-sax ha-kol*. First, the definition of exclusives in (6) accounts nicely for the interpretation of *be-sax ha-kol* under the exclusive reading, just as it does for *only*. For example, applying our definition to sentences with *be-sax ha-kol*, as in (23), would easily explain why it has an exclusive reading:

(23)
Rina be-sax ha-kol bat 5
Rina be-sax ha-kol daughter 5
Rina is be-sax ha-kol 5 years old (≈ Rina is only 5 years old)

However, the more interesting story concerns the interpretation and felicity constraints of the approximative *be-sax ha-kol*. In the remainder of this section we will focus on this approximative reading, and show how it can be derived from the core definition of exclusives and a minimal assumption about the difference between the types of alternatives that *rak* (*only*) and *be-sax ha-kol* are compatible with.

3.1. The approximative reading of *be-sax ha-kol*: Some observations

There are three types of observations that we want to be able to explain. Namely, observations concerning the interpretation, distribution, and projective behavior of (the approximative) *be-sax ha-kol*.

3.1.1. Interpretation

Consider again (2), repeated here,

(2)
ha-xeder be-sax ha-kol naki
The.room be-sax ha-kol clean
The room is be-sax ha-kol clean

Intuitively, (2) raises two inferences: the first is that the room is not maximally clean. Compare, for example, (24) and (25):

(24) *ha-xeder be-sax ha-kol naki aval yeS avak al haxalon*
The.room be-sax ha-kol clean but there.is dust on the table
The room is be-sax ha-kol clean, but there is dust on the table
(25) *#ha-xeder legamrei naki aval yeS avak al haxalon*
the.room completely clean but there.is dust on the.table
The room is completely clean, but there is dust on the table

In (25) where it is said explicitly that the room is maximally clean, the continuation with the 'but' clause is infelicitous, but in (24) the 'but' clause is felicitous because being *be-sax ha-kol clean* implies that the room is NOT completely clean.

The second inference is that the room is still considered clean. This makes *be-sax ha-kol* similar to e.g. *approximately* and different from e.g. *almost*. For example, Amaral & del Prete (2008) bring the infelicity of conversations like (26) to support their claim that sentences with (the Italian counterparts of) *around / more or less / approximately* are compatible with the truth of their prejacent, whereas (the Italian counterpart of) *almost* is not. I.e., *almost p*, but not *approximately p* entails *not p*:

(26) A: *Leo arrived around 3 p.m.*
B: *#That's false, actually Leo arrived at 3 p.m.*

In this sense, *be-sax ha-kol* behaves just like *around / more or less*, and unlike *kim'at (almost)* in being compatible with the truth of p. This is supported by the contrasts in (27) and (28), as well as by (29) (see also Greenberg & Ronen (2012) for similar observations and a detailed analysis of *more or less* vs. *almost*):

(27) A*: ha-xeder kimat naki*
A*: the.room almost clean*
A*: The room is almost clean*
B*: That's not right. The room is clean.*
(28) A: *ha-xeder be-sax ha-kol naki*
A: *the.room be-sax ha-kol clean*
A: *The room is be-sax ha-kol clean*
B: #That's not right. The room is clean.
(29) A: *Is the room clean?*
B1: *(lo, aval) kim'at* – "(No, but) almost"
B2: *(#lo aval) / paxot o yoter be-sax ha-kol* - "(#No but) more or less / *be-sax ha-kol*"

3.1.2. Projective behavior

Under the approximative reading, the prejacent of *be-sax ha-kol* does not project. For example, the question in (30) does not imply the truth of the prejacet (*The room is clean*):

(30) *ha-xeder be-sax ha-kol naki? (with rising intonation)*
The-room be-sax ha-kol clean
Is the room be-sax ha-kol clean?

3.1.3. Felicity

On the approximative reading, *be-sax ha-kol* is better with U(pper) closed than with L(ower) closed adjectives (using Kennedy &McNally's 2005 terminology). This is illustrated in (31) and (32):

(31) *ha-xeder be-sax ha-kol naki / #meluxlax*
The-room be-sax ha-kol clean / #dirty
The room is be-sax ha-kol(≈ more or less) clean / #dirty

(32) *ha-xulca be-sax ha-kol yeveSa / #retuva*
The-shirt be-sax ha-kol dry /# wet
The shirt is be-sax ha-kol (≈ more or less) dry/#wet

3.2. The proposal: *be-sax ha-kol* is an exclusive which is flexible with respect to the characterization of alternatives

To account for the various observations of the approximative *be-sax ha-kol*, we propose that, even under this reading *be-sax ha-kol* is an exclusive particle, with the core semantics we proposed in (5) above, and repeated here:

(5) Presupposition: $\forall p_c[p_c \in ALT_{Sc}(p) \wedge \exists w_1\ w_1 R_c w_0 \wedge w_1 \neq w_0 \wedge p_c(w_1)] \rightarrow p_c >_s p$
Backgrounded Prejacent: $p\ (w_0)$
Assertion: $\forall p'\ p' >_s p \rightarrow \neg p'\ (w_0)$

Crucially, however, we propose that unlike exclusives like *only* and *rak, be-sax ha-kol* is more flexible with respect to the types of alternatives in the scale. In particular, unlike the alternatives to the prejacent with *only* and *rak*, which are independent propositions, distinct from the prejacent, with *be-sax ha-kol* the alternatives can also be different interpretational versions of the prejacent itself. Comparing the implications yielded by *rak* in (33a) and those yielded by *be-sax ha-kol* in (33b) supports this intuition:

(33) *Context: John and Mary booked a room in a hotel for their important guests and asked that the room will be clean, large, with view to the sea. After John checks the room he tells his wife:*
(33a) *ha-xeder rak naki*

the room only clean
The room is only clean

The implication of (33a) is that the room is clean, but not more than that: it is not large, and does not have view to the sea. I.e., the alternatives to *The room is clean* are: *The room is clean and large / The room is clean and large and has view to the sea.* These are classical 'Roothian' alternatives, i.e. propositions which are identical to the prejacent, except from the focused element *(clean*), which is replaced by expressions of the same type.

Now suppose that in the same context John utters the minimally contrasting (33b), with *be-sax ha-kol*:

(33b) *ha-xeder be-sax ha-kol naki*
the. room be-sax ha-kol clean
The room is be-sax ha-kol clean

(33b) has two possible readings, the 'exclusive' and the 'approximative' and hence two possible implications: First, similar to (33a) with *rak,* it can imply that the room is clean, but not more than that, i.e. not clean and large etc. However, it can also imply that the degree to which the room is clean is high enough to be considered 'clean', but not more than that: not maximally/ very clean. I.e., the intuitive alternatives to *The room is clean* under this reading are: *The room is very clean / The room is maximally clean,* etc.

Let us now turn to make this intuitive idea more precise and to account for the observations in section 3.1.

3.3. Accounting for the observations concerning the approximative reading of *be-sax ha-kol*

3.3.1. Accounting for the interpretational observations

Remember that under the approximative reading, (2) is true if the room is (a) not maximally clean, but (b) is nonetheless considered clean. To account for this interpretational effect we will assume that with the approximative reading, all alternatives are different versions of the prejacent, which in the case of (2) is (34), and more formally (35) (following, e.g. Kennedy & McNally 2005):

(2) *The room is be-sax ha-kol clean*
(34) *The room is pos clean*
(35) ***∃d d ≥ stand (clean) ∧ clean (the room) (d)***

We further propose that the different alternative interpretations of (2) result from the potential variability in the characterization of *stand* in (2b). That is, we will assume that all alternatives in the approximative reading are of the form of (2b), where *stand (clean)* is given different values.[6]

[6] Alternatively, we can keep *stand* fixed, and assume that the different alternatives are derived by using (21b) with different precision standards, which can be modeled using e.g. sets of 'similar' alternatives (Morzycki 2011),

Applying the core definition of exclusives to this type of alternatives, then, we will proceed by examining the contribution of each component in the definition to the characterization of (2b). Let us start with the presupposition, repeated here:

Presupposition: $\forall p_c[p_c \in ALT_{Sc}(p) \wedge \exists w_1\ w_1 R_c w_0 \wedge w_1 \neq w_0 \wedge p_c(w_1)] \rightarrow p_c >_s p$

In our case, $\mathbf{p_C}$ should be a salient proposition of the form of the prejacent, as in (35), and it should be true in an accessible world w_1:

(35) ∃d d ≥ stand (clean) ∧ clean(the room) (d)

Remember that the scale of *clean* is U(pper) closed. Kennedy & McNally 2005 and Kennedy 2007 indeed take the standard with U(pper) closed adjectives to be the MAXIMAL ENDPOINT of the cleanness scale.[7] Following their suggestion we can take $\mathbf{p_c}$ to be is as in (36):

(36) ∃d d ≥ max (clean) ∧ clean(the room) (d) = *clean (the room) (d_{max}) "The room is maximally clean"*

Taking $\mathbf{p_c}$ to be *clean (the room) (d_{max})* can indeed satisfy the 'saliency' requirement (the maximal endpoint in the scale is clearly salient), as well as the required truth in an accessible world (e.g. a world where the room is expected to be maximally clean) or another (cf. McNally 2011, Sassoon & Toledo 2011). However, given Kennedy & McNally 2005 and Kennedy 2007, satisfying the requirement that this salient proposition $\mathbf{p_c}$ is higher than the prejacent **p** may seem problematic, because these theories seem to suggest that the standard for upper closed adjectives is *always* the maximal endpoint of the scale. If this is indeed the case, then the presupposition seems self-contradictory, because the salient proposition *clean (the room) (d_{max})* is required to be stronger than the interpretation of the prejacent which is again *clean (the room) (d_{max})*, i.e. stronger than (what appears to be) itself.

We suggest that it is this potential problem which forces a re-interpretation of the prejacent, where the standard is lower than maximal. Put in other words, the prejacent is now re-interpreted as in (37):

(37) Backgrounded (re-interpreted) prejacent: ∃d d ≥ stand (clean) ∧ stand(clean) < max(clean) ∧ clean(the room) (d)

Notice that interpreting the prejacent as in (37) can be justified in several ways. First, although the maximal endpoint is clearly the most salient in the scale, there are recent theories (e.g.

different granularities (Sauerland & Stateva 2007). See Orenstein & Greenberg 2012 for an explication of this direction.

[7] However, our theory is also compatible with the assumption that the standard of U(pper) closed adjectives can be (also) contextually given, based on a rule-based characterization (McNally 2011), or a comparison with potential counterparts of the object (Sassoon & Toledo 2011).

McNally 2011, Sassoon & Toledo 2011) which independently propose that U(pper) closed adjectives like *clean* can be many times interpreted with respect to contextual standards (lower than the maximal endpoint). Second, even given Kennedy & McNally 2005 and Kennedy 2007 the fact that U(pper) closed adjectives are interpreted w.r.t. the maximal endpoint results from the "principle of interpretive economy", i.e. the fact that when information encoded in the lexical semantics of the adjective (i.e. the fact that the scale has a maximal endpoint) competes with contextually supplied information (e.g. a contextually supplied standard), language users will choose the former. Thus, even if we continue to follow these theories, we can assume that the exclusive semantics of *be-sax ha-kol* forces the language user to ignore the principle of "interpretive economy", and to re-interpret *The room is pos clean* w.r.t. a contextual standard, lower than the maximal, as in (37) (otherwise, the presupposition and the backgrounded prejacent will contradict each other, as explained above).

Finally, let us consider the contribution of the assertion, repeated here, to the interpretation of (35):

Assertion: $\forall p'\ p' >_s p \rightarrow \neg p'\ (w_0)$

Remember that given the approach developed here, all alternatives are of the form in (35), and the variation is due to the difference in the characterization of *stand (clean)*. The prejacent p, now interpreted as in (37), says that the degree to which the room is clean is equal to or higher than the standard for cleanness, and this standard is lower than the maximal degree of cleanness. The assertion now adds the information that any proposition of the form of (35), where the standard of cleanness is higher than the one used for the prejacent, is false. Suppose now that there are two standards we are considering: the maximal endpoint, according to which the room is 100% clean, and a lower standard, according to which the room is clean if it is at least 90% clean. Given this lower standard, the room is considered clean if it is 90% clean, and of course, also when it is 100% clean (given the 'equal to or higher than the standard' component in the interpretation of *pos*). But given the contribution of the assertion, interpreting (35) using the higher standard must be false in w_0. Since using this higher standard dictates that the room is 100% clean, we indirectly get the result that in w_0 the degree to which the room is clean is at least 90%, but NOT 100%. Thus, by lowering the standard of cleanness of the room (given the presupposition of exclusives), and at the same time requiring that the sentence interpreted under a higher standard is false, we indirectly lower the actual degree of cleanness of the room, while at the same time keeping it high enough to be considered 'clean'.[8] The interpretational effect observed in section 3.1.1., then, is accounted for.

3.3.2. Accounting for the projective behavior

[8] Again, an alternative approach will keep the standard fixed in all alternative versions of the prejacent, and will vary the precision standards used. Given this strategy, all alternatives will be of the form "The room is maximally clean", but the actual prejacent will end up being reinterpreted as "The room is maximally clean" in an imprecise way, following e.g. Kennedy & McNally's approach to the interpretation of *The theater is empty tonight* in a scenario where a few people are present in the theater, and using Lasersohn's 1999 'pragmatic halos' strategy (formalized by e.g. Morzycki 2011), or coarser granularities (as in e.g. Sauerland & Stateva 2007 or Sassoon). See Orenstein & Greenberg 2012 for details.

Let us turn now to the projective behavior of the prejacent in *The room is be-sax ha-kol clean.* As we have shown in section 3.1.3. above, the prejacent *The room is clean* does not project in the family of sentences. Remember that we take the prejacent of exclusives to be *backgrounded*, and therefore, it tends to project. If indeed *be-sax ha-kol* is an exclusive even when it has an 'approximative' reading, how can this fact be explained?

As discussed in detail above, the projection of the prejacent with e.g. *only* is blocked when it is in conflict with something, either with contextual information or with the negated / questioned, etc. assertion. We have further shown that conflict with the negated or questioned assertion can happen with non-entailment scales (as in the *This is only a shoot'em up pointless movie* example from Beaver & Clark, discussed above). But such conflict cannot take place with entailment scales.

Crucially, however, in our case, where all alternatives are of the form *The degree to which the room is clean is equal to or higher than the standard of cleanness,* the relevant scale is entailment-based (e.g. *The room is 100% clean* entails *The room is at least 90% clean*). Hence, negating / questioning the assertion should NOT conflict with the prejacent. For example, questioning the assertion in our case amounts to raising the possibility that *The room is pos clean* is interpreted under a standard HIGHER than the actual one, e.g. the possibility that *The room is 100% clean.* But this possibility is perfectly compatible with the *backgrounded* prejacent according to which *The room is at least 90% clean*. Thus, conflict cannot be the reason for the fact that the prejacent of *The room is be-sax ha-kol clean* does not project in the family of sentences.

A possible way to explain the non-projection of the prejacent with the approximative reading is to suggest, instead, that the reason is related to the fact that with the approximative reading the alternatives are crucially dependent on each other. In particular, whereas with *only* (and the 'exclusive' reading of *be-sax ha-kol*), the alternatives to the prejacent are independent propositions, distinct from the prejacent, we have argued above that with the approximative reading the alternatives are different interpretational versions of the prejacent. Moreover, we have seen that the interpretation of these alternatives in the presupposition, prejacent and assertion, influences each other. For example, in *The room is be-sax ha-kol clean* the presupposition influences the interpretation of the *backgrounded* prejacent (it forces the lowering of the standard for cleanness), which in turn influences the assertion (what counts as 'an alternative higher than the prejacent'). Hence the different levels of meaning (what is *at issue* and what is *not at issue*) influence each other, and are not distinguished. It may be that this is the reason for the fact that the *backgrounded* prejacent does not project under the approximative reading.

If this explanation is on the right direction, it further supports Roberts' (2011) general approach, which views projective behavior as less stable than what has been considered so far.

3.3.3 Accounting for felicity effects

So far we have seen that applying the definition of exclusives to (2), with the U(pper) closed

adjective *clean*, accounts for its interpretation, and possibly also for the non-projection of its prejacent.

On the other hand, we also saw above that the approximative reading does not come out felicitous when *be-sax ha-kol* appears with L(ower)-closed adjectives, as seen again in (38):

(38) *#Ha-xeder besax ha-kol meluclax*
The room be-sax ha-kol dirty
#The room is be-sax ha-kol dirty

Applying the definition of exclusives to (38) can account for this infelicity. Following Kennedy & McNally (2005), the salient standard for such adjectives is the minimal point in the scale (just above the zero point). In the case of (38), then, the presupposed salient alternative is *The degree to which the room is clean is equal to or higher than the minimal point,* and crucially, this alternative is required to be stronger than the prejacent, i.e. stronger than *The degree to which the room is clean is equal to or higher than the standard of dirtiness*. But, unlike what we saw with U(pper) closed adjectives like *clean*, in this case, using a different standard will not work: If the salient standard is the minimal degree of dirtiness, then no standard can be lower than it. Thus, there is no way to satisfy the presupposition, and the sentence is odd due to presupposition failure.

4. Summary and directions for further research

We proposed that the Hebrew *be-sax ha-kol* is always an exclusive operator, even when yielding an approximative reading.

A central part of our proposal is that all exclusive particles share a CORE SCALAR SEMANTICS**,** but that there are VARYING PARAMETERS which can lead to distinct behavior of various exclusive particles, both within and across languages (cf. Beaver & Coppock (to appear), Tomaszewicz (2012)).

In particular, the core definition for exclusives that we proposed includes three components: (a) A presupposition that the prejacent is weaker than all contextually salient potential alternatives (subsuming 'expected' alternatives). (b) The *backgrounded* prejacent true in the actual world (following Roberts 2011). (c) An assertion that the prejacent is the strongest true alternative (following B&C 2008, Roberts 2011).

We identified one varying parameter which distinguishes *rak* (*only*) and *be-sax ha-kol* (*all in all*), namely, the nature of the alternatives in the scale. Whereas *only* and *rak* require 'Roothian' alternatives different from p, *be-sax ha-kol* can also operate on different interpretational versions of p itself.[9]

[9] Notice that in previous work (Orenstein & Greenberg (2010)) we proposed two additional parameters, which distinguish the Hebrew *rak* (*only*) and *stam* (*merely*). The first is the nature of the 'strength' relation in the scale of alternatives (entailment based, or 'evaluative' strength). We have shown that *stam* is restricted to operate on evaluative scales only. *only* and r*ak*, on the other hand, are more flexible. But whenever both options are available, they prefer entailment based scales. The second parameter concerns the position of the prejacent in the scale (+ / -

The analysis presented above raises many directions for further research. Some such directions concern the compatibility of the approximative *be-sax ha-kol* with open-scale adjectives (e.g. *tall, expensive*), with multidimensional adjectives (*healthy, sick, smart*), and with other categories such as verbs and nouns. Another direction is the focus sensitivity of *be-sax ha-kol*. If this particle is focus sensitive even under the approximative reading, then its focus induced alternatives are not the standard Roothian alternatives. This is something which needs to be further examined. Another question concerns its 'degree of association with focus' (given Beaver & Clark's 2008 model).

Two directions we would like to examine more closely here concern the evidential, 'summing up' component of *be-sax ha-kol,* and its 'precise' reading, mentioned in the introduction.
Let us start with the first direction. Though our analysis seems to explain the approximative reading of *be-sax ha-kol* with U(pper) closed adjectives like *clean,* it is insufficient in accounting for the infelicity of (39) with the upper scaled adjective *closed*. Notice that other approximators, e.g. *paxot o yoter* (more or less) yield completely felicitous results in such a case:

(39) *ha-delet paxot o yoter* / ??*be-sax ha-kol sgura*
The.door more or less / be-sax ha-kol closed
The door is more or less / ??be-sax ha-kol closed

Crucially, though, *be-sax ha-kol* can yield an approximative reading with *closed* when we change the subject, as in (40). Similarly (41), which seems semantically similar to (39) is felicitous with *be-sax ha-kol*:

(40) *ha-heskem be-sax ha-kol sagur*
The.agreement be-sax ha-kol closed
The agreement is be-sax ha-kol closed
(41) *ha-petax be-sax ha-kol xasum*
The.opening be-sax ha-kol blocked
The opening is be-sax ha-kol blocked

To account for this contrast, we propose that in addition to the basic exclusive semantics of *be-sax ha-kol*, it has a 'summing-up' evidential component as well, which arises with the approximative reading.

In particular, making a statement with *be-sax ha-kol* should be based on evaluation of part-whole structure of the entity that the predicate applies to. Thus, evaluating the parts of the room can give us information about its degree of cleanness. Similarly, evaluating the parts of the agreement, can give us information about whether it is closed or not, and evaluating the parts of the opening can give us information about whether it is blocked or not. But evaluating the parts of the door will not give us information regarding its degree of closeness.

low). Here again, *stam* is more restricted than *rak*: its prejacent is located very low in the scale, whereas the position of the prejacent of *rak* is unrestricted (cf. Beaver & Coppock to appear, see also Tomaszewicz 2012).

Assuming that this intuition is on the right direction, it seems to be strongly derived from the literal meaning of *be-sax ha-kol* ("in sum the all"). Further research should attempt to make this intuition more precise, as well as to investigate whether a 'summing up' function is involved when *be-sax ha-kol* induces a 'regular' exclusive reading.

Let us turn now to the 'precise' reading of *be-sax ha-kol.* This reading, found when *be-sax ha-kol* interacts with numerals, seems different from both the exclusive and the approximative readings. Unlike the approximative reading, it implies that the cardinality of the objects denoted by the numeral is PRECISE. E.g., (42) implies that exactly 30 people came to the party:

(42) *higiu be-sax ha-kol 30 anaSim lamesiba*
came be-sax ha-kol 30 people to.party
be-sax ha-kol(all in all) 30 people came to the party

In addition, the reading in (42) can be also different from the 'exclusive' reading. In particular, although (42) seems to contain an exclusivity component, as it implies that "no more than 30 people came to the party", *be-sax ha-kol* in (43) does not behave as a typical exclusive as it is felicitous in a context in which the prejacent is WEAKER than the salient expectation in the context:

(43) *xaSavti Seyagiu 40 orxim aval basof higiu #rak/be-sax ha-kol 50*
I.thought that.would.come 40 guests but finally came #only/be-sax ha-kol 50
I thought that 40 guests would come to the party, but eventually #only/be-sax ha-kol 50 came.

It seems that our proposal above can account for this reading as well. In particular, we continue to assume that (a) *be-sax ha-kol* is an exclusive, with a core definition as in (6) above (rejecting potential salient stronger alternatives than p), and (b) that unlike *only* it is more flexible with respect to the kind of alternatives it can operate on. In particular, we assume that when interacting with numerals it can reject those stronger alternatives triggered by the internal semantic structure of numeral expressions. Roughly, the basic semantic meaning of a bare numeral expression such as *50 guests arrived* is *at least 50 guests arrived* (e.g. Horn 1972; van Rooij & Schultz 2006). Now the expression *at least 50 people arrived* contains POTENTIAL POSSIBLE propositions of the form *51 people arrived*, *52 people arrived*, etc. So in (43), for example, *be-sax ha-kol* rejects these stronger 'internal' alternatives and 'ignores' the weaker salient expected alternative *40 guests would come* present in the 'external' context (as in (43)).

More research needs to look at the interpretation of numerals with *be-sax ha-kol* in embedded and non monotonic contexts (see e.g. Spector to appear, Kennedy 2012).

References

Amaral, P. and Del Prete, F. (2011). Approximating the Limit: The Interaction between *Quasi* (*Almost*) and some Temporal Connectives in Italian. *Linguistics and Philosophy* 33 (2):51-115.

Beaver, D. and Clark, Z. (2008). Sense and sensitivity: How focus determines meaning. Oxford: Blackwell.

Coppock, L. and Beaver, D. (to appear). *Mere–ology*. In *Alternatives in Semantics*, edited by Anamaria Falaus, New York: Palgrave.

Greenberg, Y. and M. Ronen. (2012). *Three approximators which are almost / more or less / be-gadol the same*. A paper presented in IATL 28.

Kadmon, N. and Sevi, A. (2011). 'Without Focus'. In: *The Baltic International Yearbook of Cognition, Logic and Communication, Vol. 6, Formal Semantics and Pragmatics: Discourse, Context, and Models.*

Kennedy, C., and McNally, L. (2005). Scale structure, degree modification, and the semantics of gradable predicates. *Language*, 81, 345–381.

Kennedy, C. (2007). Vagueness and grammar: the semantics of relative and absolute gradable adjectives. *Linguistics and Philosophy, 30(1). 1–45.*

Lasersohn, P. (1999). Pragmatic halos. *Language,* 75, 522–551.

McCawley, James D. (1981). *Everything that Linguists Have Always Wanted to Know about Logic But Were Ashamed to Ask*. University of Chicago Press.

McNally, L. (2011). *The relative role of property type and scale structure in explaining the behavior of gradable adjectives*. Vagueness in Communication, 151–168.

Morzycki, M. (2011). Metalinguistic Comparatives in an Alternative Semantics for Imprecision. *Natural Language Semantics*, 19(1), 39–86.

Orenstein, D. and Greenberg, Y. (2010). The Semantics and Focus Sensitivity of the Hebrew (unstressed) *Stam*. Proceedings of IATL 26.

Orenstein, D. (2011). *besax hakol*: an exclusive account of an approximative reading. Proceedings of IATL 27.

Orenstein D. & Grenberg, Y. (2012). Exclusivity Across Domains with the Hebrew *be-sax ha-kol*. A talk presented in IDL2, Barcelona.

Roberts, C. (2011). *Only*: A case study in projective meaning. *The Baltic International Yearbook of Cognition, Logic and Communication*, 6: *Formal Semantics and Pragmatics: Discourse, Context, and Models.*

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

Tomaszewicz, B. (2012). *A family of exclusives in Polish*. A paper presented at the GLOW 35 workshop "Association with Focus", Potsdam.

van Rooij, R. & Schulz, K. (2005). *Only*: Meaning and implicatures. Expanded ms. of a talk at *Sinn und Bedeutung IX*.

Zeevat, H. (2003). Particles: Presupposition Triggers, Context Markers or Speech Act Markers. In Blutner, R. & Zeevat,H. (eds.), *Pragmatics and Optimality Theory*. p. 91-111. Palgrave.

Sauerland, U., and Stateva, P. (2007). 'Scalar vs. Epistemic Vagueness. Evidence from Approximators'. In *Proceedings of Semantics and Linguistic Theory (SALT)*17, Masayuki Gibson , and Tova Friedman (eds.), CLC Publications, Ithaca, NY.

Simons, M., Tonhauser, J., Beaver, D. & Roberts, C. (2010). What projects and why. In Nan Li & David Lutz (eds.), *Proceedings of Semantics and Linguistic Theory* (SALT) 20, 309–327. Ithaca, NY: CLC Publications.

Spector, B. (To appear). Bare Numerals and Scalar Implicatures.