'Only' in Imperatives

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1 Imperatives

Imperatives are well-known to show quantificational inhomogeneity. Commands like the one in (1), warnings, wishes, requests and advices are related to necessity. Permissions like the one in (2), and concessives are related to possibility (e.g. Davies 1986; Donhauser 1986; Platzak & Rosengren 1997).

(1) Close the door!
   □ close(addressee, door)

(2) Take an apple (if you like)!
   ◊ take(addressee, apple)

Quantificational inhomogeneity effects also occur in imperatives with the focus particle *only*, see (3) & (4). Although for some speakers the permission reading preferably comes with *just* rather than with *only*, *only* is certainly possible both in the permission and in the command reading.[1] (3B) is a command to paint no tables but the round table. (4B) is a permission to paint no tables but the round table.

[1] In Haida & Repp (2011a,b) we discussed some data which indicated that for some speakers the position *only* takes in the imperative makes a difference. Whereas imperatives with clause-initial *only,* see (3B) &(4B) in the main text, easily receive a command or a permission reading some speakers of British English report that imperatives with *only* in the post-verbal position illustrated in (i) are only felicitous as commands.

(3) A: Oh, I feel like doing something really useful today. I think I'll paint the tables over there.

    B: Only paint the [ROUND]_FOC table!

(4) A: You've asked me to paint those tables but I'm really tired and don't feel like doing something really useful today.

    B: (OK.) Only paint the [ROUND]_FOC table!

Current theories of imperatives like Kaufmann's (Schwager 2006, Kaufmann 2012) or Portner (2010) reject ambiguity of the imperative operator as a source for the quantificational inhomogeneity effect. Essentially, they assume that the effect is due to the same operator occurring in different contexts, so that the utterance of an imperative will have different effects on the subsequent development of the common ground. In this paper we show that the occurrence of the focus particle *only* in an imperative is not an innocent addition: the role of focus alternatives for the interpretation of *only* and the presupposition triggered by the particle require a very careful evaluation of these theories. Kaufmann's approach as a truth-conditional account enriched with pragmatic conditions makes clear predictions for the interpretation of imperatives with *only*. We shall argue that these predictions produce a favourable outcome. Portner's discourse update approach which assumes that next to the common ground there are additional semantic-pragmatic objects (so-called To-do Lists), requires some stipulations for which it remains to be seen whether they can be motivated by independent considerations. Furthermore, we argue that Portner in general must allow quantificational elements to scope over the update operator, which requires a broader empirical and theoretical discussion of whether this is an appropriate assumption.

The paper is structured as follows. Section 2 introduces the theory of Kaufmann and discusses imperatives with *only* in this framework. Section 3 does the same for Portner's approach. Section 4 discusses the scope interaction of the focus particle with speech act operators other than the imperative operator. Section 5 concludes.

2   The imperative operator as a graded necessity modal

2.1   Schwager / Kaufmann

Kaufmann (in Schwager 2006; Kaufmann 2012) suggests that imperatives always contain a graded necessity operator that comes with a number of presuppositions, which inter alia contribute to the performative effect of imperatives. The most important presupposition for the permission case, which we shall discuss below, is the authority

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(i)   Paint only the round table!

In Haida & Repp (2011a,b) we suggested that this restriction can be explained if we assume that clause-initial *only* may c-command the silent imperative operator or be c-commanded by it, whereas post-verbal *only* due to its low syntactic position cannot c-command the imperative operator. We shall not discuss this issue here as more empirical work is required to substantiate the data base.

presupposition, which says that the conversational backgrounds are such that they are under the epistemic authority of the speaker: the beliefs of the authoritative speaker with respect to the common ground and its ordering are taken to be true so that the proposition put forward by the authoritative speaker is not evaluated for addition to the common ground but is straightaway made part of the common ground (= self-verification).

The different uses of imperatives (as commands, wishes, advices) are mainly put down to different ordering sources of the necessity operator, such as *what the speaker commands* for commands, or *what the speaker wants* for wishes. Let us first consider commands. For these, the modal base of the necessity operator is formed by the mutually joint beliefs of speaker and addressee, i.e. the common ground. The ordering source is, as just indicated, what the speaker commands. Example (1) from above is interpreted as follows.

(1)   Close the door!
      In all the worlds conforming best to what the speaker commands the addressee closes the door.
      It is presupposed that the speaker has epistemic authority over modal base and ordering source (, that it is possible that the addressee closes the door, that the interlocutors accept the ordering source...).

For permissions, which are possibility-like, Kaufmann suggests that the necessity operator comes with the addressee's wishes as ordering source. The modal base is again the common ground. Importantly, permissions are highly restricted with respect to the contexts they can occur in. The imperative in (2) from the introduction can be used felicitously as a permission in a context like the following:

(2) Take an apple!

(5) Context conditions for permission reading
      (i)   CG $\subseteq$ addressee wants to take an apple
      (ii)   CG $\subseteq$ addressee is prohibited by the speaker to take an apple
      (iii)   CG $\subseteq$ addressee wants to please the speaker (which is incompatible with taking an apple)

We see that the context is one where the wishes of the addressee are not all compatible with each other. So there is not the one ideal world where all his/her wishes can come true. Still, there are worlds that better conform to his/her wishes and there are worlds that conform to his/her wishes less. There are two types of optimal worlds: those where the addressee takes an apple and where the speaker is displeased, and those where the addressee does not take an apple and the speaker is pleased. Furthermore, the common ground contains non-optimal worlds where the addressee does not take an apple and the speaker is displeased anyway. The common ground does not contain worlds where the addressee takes an apple and the speaker is pleased due to the prohibition to take an apple. In this context the speaker utters (2).

(2) Take an apple!
= 'In all the worlds of CG that conform best to the wishes of the addressee the addressee takes an apple.'

This is false in the current context. Schwager (2005, 2006)[2] suggests that due to the authority presupposition, i.e. the presupposition that the speaker has authority over the conversational backgrounds, (2) must be taken to be true. This obviously produces an inconsistency. Since the addressee is a cooperative interlocutor s/he revises her beliefs about the common ground. S/he adds worlds where the addressee takes an apple and the speaker is pleased. These worlds are then the optimal worlds. The new common ground does not entail the prohibition for the addressee to take an apple anymore. Note that the revision of the common ground is a belief revision: the addressee changes his/her beliefs about what would please or displease the speaker. It is not a revision of the wishes of the addressee. The speaker could not have authority over these wishes.

2.2   Imperatives with *only* and graded necessity

Let us investigate next how Schwager (2005, 2006) would account for imperatives with *only*. We shall start with the permission reading. Here is example (4) from the introduction, which is a permission to paint no tables but the round table. The context, partly explicitly given in (4A), is summarized in (6):
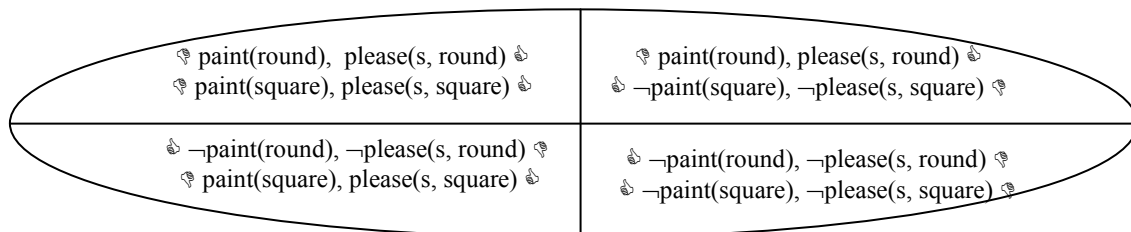
(4)   A: You've asked me to paint those tables but I'm really tired and don't feel like doing something really useful today.
        B: (OK). Only paint the [ROUND]$_{FOC}$ table!

(6)   CG before the utterance of (4B):
        (i)   CG $\subseteq$ addressee is required to paint the tables
        (ii)   CG $\subseteq$ addressee wants: not to paint the tables
        (iii)   CG $\subseteq$ addressee wants to please the speaker (which is incompatible with not painting the tables)

Since we are dealing with quantification here we need to pay special attention to the relation between painting individual objects and pleasing the speaker. If the speaker requires the addressee to paint *the tables* (in the situational context), then for everyone of these tables, the addressee is required to paint it, and for everyone of these tables, the speaker can be pleased with the addressee *a* because *a* paints the table, or s/he can be displeased with *a* because *a* does not paint the table. Likewise, if the addressee does not feel like painting *the tables* this means that s/he does not feel like painting any of these tables. To illustrate, imagine a context with two tables, a round one and a square one, see figure 1, where *paint(round)* means that the addressee paints the round table, and *please(s, round)* means that the addressee pleases the speaker with respect to painting the round table. In this context there are four (types of) worlds, which are all equally optimal according to the addressee's wishes. For none of these (types of) worlds is it the

case that the set of wishes fulfilled in it is a proper subset of any of the other three types. The thumbs-up and thumbs-down in figure 1 mark whether a proposition is a fulfilled wish or not.

Figure 1: CG ordered by the addressee's wishes in the context for example (4):

👎 paint(round), please(s, round) 👍 👎 paint(square), please(s, square) 👍	👎 paint(round), please(s, round) 👍 👍 ¬paint(square), ¬please(s, square) 👎
👍 ¬paint(round), ¬please(s, round) 👎 👎 paint(square), please(s, square) 👍	👍 ¬paint(round), ¬please(s, round) 👎 👍 ¬paint(square), ¬please(s, square) 👎

Now the speaker utters (4B), which says that in all the worlds that conform best to the addressee's wishes the addressee paints the round table and no other table. This is false but by authority it must be taken to be true. What is the expected revision of the common ground in this case? We could assume that the addressee adds worlds where s/he paints the round table and no other table with the speaker still being pleased. However, the new worlds are only better than the worlds in the upper semi-circle: worlds are only better than others if they make 'desired' propositions true that are not true in the other worlds but do not make 'desired' propositions false that are true in the other worlds. So with this type of revision there would be three types of optimal worlds: the worlds in the bottom semi-circle and the new worlds. (4B) is still false.

So far, we have not considered the presupposition of the focus particle. Let us assume that (4B) comes with the presupposition *the addressee paints the round table.* By presupposition accommodation this restricts the common ground to those worlds where the addressee does actually paint the round table: the worlds in the upper semi-circle. So the worlds in the bottom semi-circle are excluded from the common ground. This means that the update that we just sketched is actually the right update. It introduces worlds where it is no longer prohibited not to paint all the tables, but where the addressee paints the round table (which satisfies the presupposition), and these are indeed the optimal worlds.

It seems that this account can handle imperatives with *only* that have a permission reading. What about commands? Here is again example (3) from the introduction.

(3) A: Oh, I feel like doing something really useful today. I think I'll paint the tables over there.
  B: (OK, but) only paint the [ROUND]_{FOC} table!

The imperative in (3B) expresses that all the worlds that conform best to what the speaker commands, make true that the addressee paints no table but the round table. We classified this as a command to paint no tables but the round table. Another way of looking at this example is to classify it as a prohibition reading: the addressee is prohibited to paint any other table but the round table. This is insubstantial here,

however, since Kaufmann analyzes prohibitions essentially as commands where the speaker commands the addressee not to make an event happen.

2.3   Presupposition troubles

Above we argued that the presupposition of *only* is an important ingredient in the derivation of the permission reading in the account proposed by Schwager (2005, 2006). Let us next consider the presupposition of *only* in the command reading, viz. (3B). As it turns out, the presupposition seems to cause a problem in this case. Note that, intuitively, the addressee in (3) is not <u>required</u> to paint the round table. Rather s/he is <u>allowed</u> to paint the round table. If we assume – as before – that the presupposition of *only* imposes a condition on the common ground we cannot capture this intuition: the common ground would only contain worlds where the addressee paints the round table. So the addressee would actually be required to paint the round table.

One might wonder if the presupposition of *only* that we have assumed so far is the right one. We have assumed that the presupposition of *only* projects outside the imperative. Maybe this is wrong. Let us assume for the sake of the argument that the presupposition would be *In all the worlds that conform best to the speaker's commands the addressee paints the round table.* This is not given in the present context. If the addressee accommodates this presupposition s/he is (again) required to paint the round table, which goes against intuitions.

Note that a non-projecting presupposition would pose a problem in the permission reading. There the presupposition would read: *In all the worlds that conform best to the addressee's wishes the addressee paints the round table.* Again, this is not given in the context. It seems that the accommodation of this presupposition should consist of a removal of the worlds where the addressee does not paint the round table from the set of optimal worlds. But this is like a revision of the wishes of the addressee. This might be co-operative but it is an unlikely form of co-operation. Also, we would not want to assume that an authoritative speaker has authority over the wishes of the addressee. So we propose that the presupposition of *only* indeed projects to the global level. A look at other presuppositions corroborates this. Consider (7).

(7) Check out the cafeteria in the main building!

(7) can only be uttered felicitously if there is one and only one cafeteria in the main building. So the presuppositions of the definite are not restricted to the optimal worlds.

So why is the addressee in (3) not required to paint the round table even though the imperative comes with the presupposition that the addressee paints the round table? We suggest that (3B) is an imperative in a modal subordination context (see Kaufmann 2012 for a discussion of imperatives in modal subordination contexts). The imperative is evaluated with respect to a subset of the common ground, i.e. those worlds where the addressee will actually paint (the) tables: if the addressee paints tables s/he is required to paint only the round table and no other table. We can see that this is the right approach if we add a response by speaker A to the example in (3):

(3') A: Oh, I feel like doing something really useful today. I think I'll paint the tables over there.

B: Only paint the [ROUND]$_{FOC}$ table!

A: Ok. IF I do some painting.

In the response to B, A says that s/he will paint the round table and no other table provided s/he does any painting at all. S/he says that there is indeed no general requirement to paint the round table but that this requirement only holds for worlds where s/he paints. Compare this to an imperative without a presupposition like the one of *only*. In this case, A's response sounds inadequate.

(8) A: Oh, I feel like doing something really useful today. I think I'll paint the tables over there.

B: Don't paint the [SQUARE]$_{FOC}$ table!

A: #Ok. IF I do some painting.

We conclude that Kaufmann's account in the Schwager (2005, 2006) version can handle both permission and command imperatives with *only* provided that *only* scopes under the imperative operator, and provided that the presupposition of *only* projects to the global level except in cases of modal subordination, where the subordinating context filters the presupposition.

3   Imperatives and To-Do Lists

3.1   Portner

Portner (2004, 2010) suggests that imperatives do not add information to the common ground but add tasks (= *requirements*) to a To-do List. The imperative operator in Portner's view is an update operator which tells the addressee: add to your To-do List the following requirement... A To-do List imposes an ordering on the worlds that are compatible[3] with the common ground. Permission readings arise from conflicting requirements on the To-do List. Let us illustrate this with example (2) from the introduction, viz. *Take an apple!*. We already heard in section 2.1 that the context in which an imperative is interpreted as a permission typically contains a prohibition. So a To-do List before the utterance of (2) could look as given in (9). When the addressee hears the imperative s/he will update his/her To-do List to the one in (10).

(9) To-do List of addressee *a* before the utterance of *Take an apple!*
  - *a* doesn't take an apple
  - *a* cleans the kitchen

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[3] Portner takes the common ground to be a set of propositions. We will stick to the equivalent view here that the common ground is the set of worlds in the intersection of these propositions.

(10) To-do List of addressee *a* after the utterance of *Take an apple!*
- *a* doesn't take an apple
- *a* cleans the kitchen
- *a* takes an apple

The new To-do List is inconsistent and therefore offers a choice. The common ground ordered by the To-do List contains two types of optimal worlds: those where the addressee cleans the kitchen and where s/he does not take an apple, and those where the addressee cleans the kitchen and where s/he takes an apple.

3.2   Imperatives with *only* and To-do Lists

Let us start with commands and consider again example (3).

(3)   A: Oh, I feel like doing something really useful today. I think I'll paint the tables over there.
        B: Only paint the [ROUND]$_{FOC}$ table!

There are no specific contextual requirements for uttering commands. Prima facie it seems then that the To-do List (whatever it looks like, assuming that it does not contain the prohibition only to paint the round table) will be updated to contain the requirement for the addressee to paint no table but the round table. We will show below that things are not quite that easy.

Before, however, let us consider the permission example in (4), repeated once more below for convenience. The addressee's To-do List before the utterance of (4B) looks like in (11). After the utterance of (4B) it looks as given in (12).

(4)   A: You've asked me to paint those tables but I'm really tired and don't feel like doing something really useful today.
        B: (OK.) Only paint the [ROUND]$_{FOC}$ table!

(11) To-do List of *a* before the utterance of (4B)
- *a* paints (all) those tables

(12) To-do List of *a* after the utterance of (4B)
- *a* paints (all) those tables
- *a* paints no table but the round table

Again, the addressee has a choice. However, if we assume that in this particular context there are three tables there is a problem. The problem is that the corresponding ordering of worlds does not correspond to our intuitions about the permission reading. According to this ordering the addressee is required to paint all tables OR just the round table. Intuitively, however, worlds where the addressee paints the round table and e.g. the square table are also good for the speaker and hence permitted.

So it seems that quantificational elements like *only* require some closer attention. In a discussion of an example with a universal quantifier, see (13), Portner (2010) remarks that it might be interesting to consider the option that quantificational elements take

scope over the imperative operator. Still, he suggests that the problems arising from the presence of the universal quantifier in this example can be solved without this assumption. Let us look at the problem and Portner's solution for it.

(13) Carry rocks every day! [. . .Tuesday comes along . . .] Tomorrow, take the day off!

After the first imperative is uttered the To-do List is something like (14).

(14) To-do List of *a* after *Carry rocks every day!*
- For every day, *a* carries rocks

When the second imperative in (13) is uttered, *the addressee takes Wednesday off* is added to the To-do List. The addressee now has a choice of, on the one hand, taking Wednesday off and even never carry rocks again, and, on the other hand, of carrying rocks every day. This is clearly not what the speaker of (13) had intended. To solve this problem, Portner suggests that To-do Lists can be expanded by logical inference. So the list in (14) can be extended to something like (15):

(15) To-do List of *a* expanded by inference
- For every day, *a* carries rocks
- *a* carries rocks on Monday
- *a* carries rocks on Tuesday
- *a* carries rocks on Wednesday
- ...

Now, the utterance of the second imperative in (13) produces an inconsistency with only the fourth requirement on the To-do List. The permission reading arising is the one that the speaker intended.

In what follows we argue that quantifiers in general should not end up on the To-do List. Rather, quantifiers must scope over the imperative operator and consequently over the To-do List. For instance, the first imperative in (13) must be interpreted as indicated in (16b), and the To-do List must be updated to the one in (16c).

(16) a. Carry rocks every day!
b. For every day *x*, update the To-do List with: carry rocks on *x*.
c. To-do List of *a* after utterance of *Carry rocks every day!*
- *a* carries rocks on Monday
- *a* carries rocks on Tuesday
- *a* carries rocks on Wednesday
- ...

The difference between our proposal and Portner's is that Portner allows inferences to be drawn from, and added to, the To-do List whereas we do not. Why do we take a different position than Portner? Assume a To-do List like the following:

(17) To-do List of *a*
- *a* doesn't take an apple

From the requirement on this list we can draw the inference *the addressee does not take an apple or the addressee takes a pear*. By what Portner says, it should be possible (and even required) to add this inference to the To-do List. Assume next that an authoritative speaker addressing *a* utters the imperative *Take an apple!*. As a consequence the To-do List looks as follows:

(18) To-do List of *a*
- *a* doesn't take an apple
- *a* doesn't take an apple or *a* takes a pear
- *a* takes an apple

There is an inconsistency now between the first and the third requirements on the list. As a result there are two types of optimal worlds. In the first type of worlds the addressee (i) does not take an apple and (ii) does not take an apple or takes a pear. In the second type of worlds the addressee (ii) does not take an apple or takes a pear and (iii) takes an apple. In the first type of worlds the addressee can meet the two requirements by not taking an apple. In the second type of worlds the addressee can meet the two requirements by taking an apple and a pear. So the choice is between not taking an apple on the one hand, and taking an apple and a pear on the other. This outcome is not what would be normally expected from the utterance of the *Take an apple!* in the context in (17). Note that the problem is more severe than this particular example suggests because we can add any kind of proposition to the To-do List by disjunctive inference. This also concerns things for which it cannot be plausibly argued that they are implicitly prohibited in permission contexts like one could argue in the case of taking a pear. Consider touching one's earlobe or looking to the left. These can be added to the To-do List by disjunctive inference, so that the addressee's taking an apple as a reaction to the imperative *Take an apple!* would have go along with the addressee also touching his/her earlobe or looking to the left. This is certainly not what the imperative means. So the assumption that inferences can (must) be drawn from, and added to, To-do Lists makes the wrong predictions. This means that the quantification problem Portner set out to solve this way cannot be solved like this. We therefore suggest that quantifiers must generally scope over the imperative operator in this framework.

Let us examine what happens when *only* scopes over the update operator – which is what we claim it does – and let us return to our painting example. With *only* having wide scope, the imperative in (19a) should be interpreted as given in (19b). However, this is not the meaning of the imperative. (19b) is an empty update instruction. It does not instruct the addressee to do something. We must therefore assume that the *only* that scopes over the imperative operator has a meaning like the one given in (20).

(19) a. Only paint the [ROUND]$_{FOC}$ table!
b. For all table shapes P ≠ round, do not update the To-do List with: *a* paints a table with that shape P.

(20) ⟦ only [IMP φ(α$_{FOC}$)] ⟧ = ∀x∈ Alt(⟦α$_{FOC}$⟧) [⟦IMP⟧(¬⟦φ(x)⟧)]

The meaning of (19a) then is the one given in (21a). For the permission context (4), the updated To-do List then looks as given in (21b). We see that there is a choice to paint individual tables other than the round table.

(21) a For all table shapes P ≠ round, update the To-do List with: don't paint a table with that shape P.
    b. To-do List before utterance of (19a) (full bullets), and after (empty bullets), in the permission context
        • *a* paints the round table
        • *a* paints the square table
        • *a* paints the triangular table.
        ○ *a* doesn't paint the square table
        ○ *a* doesn't paint the triangular table

Commands can be treated in the same way with wide scope of *only*. In the command context the To-do List does not contain the first three requirements. So after the utterance of the imperative, there are only prohibitions with respect to painting the square table and the triangular table on the To-do List. This seems to be the desired result. We shall return to the issue of scope interactions with speech act operators in section 4.

3.3   Presupposition troubles

In our discussion of Kaufmann's account we suggested that the presupposition of *only* needs to project out of the imperative. How do presuppositions interact with To-do Lists? Presuppositions impose conditions on the common ground. To-do Lists impose an ordering on the common ground. So it seems that the common ground should contain worlds that are compatible with a given presupposition, and that these worlds are ordered with respect to the To-do List. For instance, example (7) above (*Check out the cafeteria in the main building!*), adds the requirement on the To-do List that the addressee check out the one and only cafeteria in the main building, which presupposes that the common ground only contains worlds where there is one and only one cafeteria in the main building.

The case of *only* is somewhat more complicated. Recall that we just argued that *only* must scope over the imperative operator in Portner's framework. In the case of *Only paint the round table!* the presupposition of *only* therefore plausibly is that there has been an update of the To-do List with *Paint the round table!* so that the To-do List already contains the requirement *the addressee paints the round table*. Let us call this presupposition *update presupposition*. This presupposition creates a problem for the command reading. Recall from the discussion in the previous section that the To-do List before the utterance of the command does not contain any (relevant) requirements. The imperative adds the requirements *the addressee doesn't paint the square table* and *the addressee doesn't paint the triangular table*. By accommodation of the update presupposition the requirement *the addressee paints the round table* is added. Painting the round table becomes a real requirement (and not just an option) because it is not in conflict with any other requirement. This is against our intuitions as laid out above in section 2.3. Note that the modal subordination account that we proposed in that section

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does not work with the update presupposition of *only* but with an 'ordinary' presupposition, viz. that the common ground entails that *the addressee paints the round table*. Modal subordination in Kaufmann's account has the effect that this ordinary presupposition imposes a condition on a subset of the common ground. However, as we have just laid out the update presupposition is not a condition on the common ground. So modal subordination does not have the same effect in Portner's account.

There is a way out of this problem, which consists in extending the stipulation about the meaning of *only* to its presupposition. Just as the negation does not apply to the entire scope of the focus particle but only to the proposition embedded under the speech act operator, the presupposition can also be assumed to 'ignore' the speech act operator. Consequently it imposes a restriction on the common ground, as presuppositions do in the ordinary case, and does not interact with the To-do List directly. This discrepancy between the scope of the particle and the contents of the presupposition requires further research.

Since To-do Lists are ordering sources let us briefly return to Schwager (2006) and investigate the role of the presupposition of *only* with respect to the ordering source in commands in her account. As laid out in section 2.1 the ordering source for commands is *what the speaker commands*. With the speaker having epistemic authority over the conversational backgrounds – which, recall, is a presupposition of the imperative operator – s/he knows what is in the ordering source, i.e. what s/he may or may not command. For instance, if Andreas is in Sophie's office she is probably entitled to command him to leave her office. She is certainly not entitled to command him to go home. If she issues the latter command Andreas may point out the presupposition failure, basically telling her that she does not know what she is entitled to command. So it is a plausible assumption that the proposition embedded under the imperative operator is in the ordering source. Therefore, in our painting example *the addressee paints only the round table* is in the ordering source. The presupposition takes effect when the ordering source is evaluated with respect to the modal base of the imperative (which in the modal subordination context discussed above is the subset of the common ground where the presupposition is satisfied). There are no complications comparable to those in Portner's account here.

4   Scope over speech act operators

One of the main differences between Kaufmann's and Portner's frameworks with respect to the focus particle *only* is whether or not the focus particle scopes over the speech act operator. We argued that in Portner's account *only* necessarily scopes over the imperative operator. For Kaufmann we showed that *only* can scope under the imperative operator. We did not investigate the other option since this was not required to account for the data. Let us investigate how plausible it is to assume that *only* indeed takes wide scope (if that is what is required by a framework).

Krifka (2001), who mainly investigates questions, proposes that quantifiers can scope over speech act operators. He argues that only universal quantifiers can scope over speech acts. The reason is that the algebra for speech acts only contains conjunction, and not disjunction or negation. The way we have defined *only* is universal quantification. So it is expected that *only* can scope over a speech act operator. This also means that *only* should be able to scope over the question operator yet this prediction

does not seem to be borne out. (22) illustrates how the universal quantifier *every guest* scopes over the question operator. (23) illustrates that *only* cannot do this in the same way.[4]

(22) Which dish did every guest make?   (Krifka 2001: 3)
= For every guest *x*, which dish did *x* make?

(23) Who will only paint the [ROUND]$_{FOC}$ table?
≠ For all table shapes P ≠ round, who will not paint a table with that shape?
≠ For only the round table, who will paint it?

This, however, is expected considering that Krifka argues that the wide-scope quantifier needs to be topical. This is clearly not given here. Neither is *only* a topic nor is the associate.

It is worth pointing out in this context that German has a modal particle which is homophonous with the German focus particle *nur* ('only'), and which can occur in questions, see (24). (24) is ambiguous between a reading where the speaker asks who will paint the round table and no other table, and a reading where the speaker has thought about all sorts of answers for the question who will paint the round table, but cannot come up with an answer that is appropriate. The ambiguity is resolved by intonation. The first reading requires a falling (= focus) accent on *runden* ('round'), the second reading does not require this accent but usually comes with an accent on the question word or on the finite verb.

(24) Wer wird nur   den runden Tisch streichen?
      who has   only the round   table painted
i. Who will only paint the [ROUND]$_{FOC}$ table?
ii. Who (on earth) will paint the round table?

Bayer & Obenauer (2011) suggest that *only* does its ordinary job of elimination of alternatives here: it eliminates the values for the *wh*-variable that the speaker has been able to consider. This is not quite the meaning that *only* would have if it scoped over the speech act operator. Still, it comes close to a paraphrase like *The only thing I want to know (now) is who will paint the round table*. We will leave the case of questions as an open research issue here.

Consider next the case of assertions. For these, the assumption that *only* may scope over the speech act operator seems to deliver the right result (even though *only* is not a topic).

(25) John only painted the [ROUND]$_{FOC}$ table.
= For all table shapes P ≠ round: Update the common ground with: John did not paint the P table.

If we assume that the presupposition is an update presupposition, i.e. if it is presupposed that there has been an update of the common ground with the proposition *John painted*

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[4] (23) is probably best in a quiz context where the behaviour of various candidates is to be predicted by other candidates.

the round table the common ground will only contain such worlds. Together with the meaning of the assertion of (25) this will have the effect that the common ground only contains worlds where John painted the round table and no other table. If the presupposition is an ordinary presupposition the effect it has is the same. So for assertions it does not actually make a difference whether the presupposition is an update presupposition or an ordinary presupposition. Furthermore, leaving the topic issue aside, both wide scope and narrow scope of *only* with respect to the speech act operator seem to deliver the same meaning in this case.

The result of this brief discussion is somewhat undecided. There is no direct evidence for the assumption that *only* scopes over speech act operators in the general case but neither is there direct counterevidence. If Krifka's topic assumption is correct *only* should not take wide scope. We leave the details of this to further research.

5   Conclusion

We have investigated the meaning contribution of the focus particle *only* to the command reading and the permission reading of imperatives. We have shown that both the theory of Kaufmann and that of Portner can explain the basic facts, viz. that in the command reading the addressee is required not perform the actions induced by the focus alternatives, and in the permission reading s/he is allowed not to perform these actions. We have paid special attention to the presupposition of *only*, which emerges as a permission in the command reading and as a requirement in the permission reading. We have argued that in the approach of Kaufmann the presupposition facts follow from the standard assumptions with regard to presupposition projection. This result can be put down to the fact that, at its core, the imperative semantics of Kaufmann is a standard truth conditional semantics. The semantics of Portner, in contrast, traverses the boundary of truth conditional semantics and context change semantics. In Portner's theory the essence of an imperative is that it induces an update operation, which is not a truth conditional operation. We have argued that as a consequence *only* in imperatives cannot be a purely truth conditional operator since it must take scope over the update operator. We have proposed a lexical entry for imperative-*only* which seems to account for the observed facts in a descriptively adequate way. Future research must show if the stipulations necessary in Portner's framework can be motivated on independent grounds.

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