

Negative DPs and Scope Diminishment: Some Basic Patterns*

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1. Introduction

A-chains, like the one in (1a), have been claimed to allow reconstruction of the indefinite DP into its clause of origin because of the possibility for the interpretation in (1c), in addition to (1b) (May (1977), (1985), Barss (1986), Hornstein (1995), Fox (1995), Romero (1997), Johnson & Tomioka (1997), von Stechow and Iatridou (2002), Sauerland & Elbourne (2002)):

- (1) a. A Canadian_i is likely t_i to win
b. There is a Canadian who is likely to win
c. It is likely that some Canadian or other wins¹

Reconstruction in A-chains, however, has also been disputed. Lasnik (1999) observes that NegDP subjects in derived positions cannot be interpreted in the lower clause, as in (c), but have only the “high” readings in (b). We call this “Lasnik’s empirical claim”.

- (2) a. No one is certain to solve the problem
b. No x, x is certain to solve the problem
c. *It is certain that no one will solve the problem

Since he considers that the mechanism responsible for such scope reversals would be A-reconstruction, Lasnik argues that subject NegDPs do not undergo reconstruction in A-chains (“Lasnik’s narrow claim”). Furthermore, from cases such as these and others, Lasnik (1999) draws the conclusion that there is no reconstruction in A-chains in general (“Lasnik’s broad claim”).

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¹ From now on, we will often be using the more neutral term “scope diminishment” instead of “(A-)reconstruction” to not preempt the issue of the mechanism that yields (1c).

We disagree with Lasnik’s broad claim and refer the reader to the aforementioned literature on A-reconstruction for cases where this phenomenon is exemplified. We also disagree with Lasnik’s empirical claim. We will show that with a well-defined subset of predicates, NegDP may be interpreted below the scopal element (ScE) that it linearly precedes. In short, we will see cases where the overt order is NegDP ScE, yet the interpretation is ScE>NegDP. However, even though we disagree with Lasnik’s empirical claim, we agree with his narrow claim that NegDPs do not undergo A-reconstruction. Table 1 summarizes the different points:

Table 1. s

Lasnik 1999		This paper
empirical claim	NegDPs never scope under the modal they are the subject of	we disagree
narrow claim	subject NegDPs do not reconstruct in A-chains	we agree
broad claim	there is no reconstruction in A-chains in general	we disagree

2. The Scope of Subject NegDP

We begin by showing the validity of Generalization A:

Generalization A:

The scope of a subject NegDP with respect to scopal predicates such as modals, raising, and ECM predicates reflects the relative scope of these predicates with respect to the marker expressing sentential negation.

- (a) When these predicates scope above negation, they will also scope above subject NegDP.
- (b) When they scope under sentential negation, they will scope under subject NegDPs.

2.1 Subject NegDP and Deontic Modals²

In English, the relative scope of modals and sentential negation varies with the choice of modal (Cormack & Smith (2002)). As shown in (3-4) for deontic modals, some modals unambiguously scope below negation (from now on “Neg>Mod modals”), while others unambiguously scope above negation (from now on “Mod>Neg modals”)³.

² We assume a raising analysis for deontic modals (Bhatt (1997); Wurmbrand (1999)). We do not include epistemic modals because of complications due to the Epistemic Containment Principle (von Stechow and Iatridou (2002)). To our knowledge, the interaction of NegDP with epistemic modals does not contradict any of our conclusions.

³ The reason for these scopal properties remains mysterious, though we can exclude linear order. Among the class of modals which scope under negation, *have to* and *need to* occur to the right of negation, while *can* occurs to the left of negation.

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Neg > Modal modals	Modal > Neg modals
have to	must
need to	should
can	ought to
may (deontic)	

- (3) a. John doesn't have to/need to leave Neg>Modal
 b. He cannot/ may not go to this party
- (4) a. John must not go to this party Modal>Neg
 b. John should not go to this party
 c. John ought not to go to this party

The relative scope of the modal and negation perfectly matches the relative scope of the modal and a subject NegDP: a Neg>Mod modal also scopes below a subject NegDP, in (5), while a Mod>Neg modal, also scopes above a subject NegDP, in (6).

NegDP > Modal	Modal > NegDP
have to	must
need to	should
can	ought to
may (deontic)	

Interpretation: NegDP>Modal

- (5) a. No student has to/needs to leave (=All are allowed to stay)
 Not: It is required that no student leaves
 c. No student can/may leave (=All are required to stay)
 Not: It is permitted that no student leaves

Interpretation: Modal>NegDP

- (6) a. No student must leave (=All are required to stay)
 Not: All are allowed to stay
 b. No student should/ought to leave (=All should/ought to stay)
 Not: All can stay

The correlation between the relative scope of sentential negation and the relative scope of NegDP seems to be completely general⁴. It persists when NegDP originates as an embedded object, in (7). As predicted, NegDP is interpreted over *have to* and under *must*:

- (7) a. No student₁ has to [t₁ be arrested t₁] NegDP>modal
 b. No student₁ must [t₁ be arrested t₁] Modal>NegDP

⁴ So if there is a speaker who, for example, interprets *must* under a subject NegDP, that would counterexemplify the current pattern only if this speaker interprets *must* over sentential negation.

In short, Generalization A has been shown to hold with deontic modals. Note, however, that when we have a Mod>Neg modal, the subject NegDP appears to have undergone scope reversal: its linear order has it **before** the modal and it is interpreted **under** the modal. This is in contradiction to Lasnik's *empirical* claim. Nevertheless, we do not take these cases of scope reversal to imply that NegDP reconstructs and that A-movement is undone. For one thing, scope diminishment in A-chains is generally optional, and yields ambiguity, while the relative scoping of a subject NegDP with a particular modal shows no ambiguity. In addition, if scope reversal in (6) were produced by A-chain reconstruction, particular choices of modals should have no effect, and we'd expect identical readings with the two groups of modals. As we said earlier, the relative scope of negation and modals is subject to an unknown principle, which probably has little to do with the general mechanism of reconstruction in A-chains. Therefore, the facts above, reproduced in the domain of Raising and ECM predicates in the subsections below, while incompatible with Lasnik's *empirical* claim, are still compatible with his *narrow* claim.

2.2 Subject NegDP and Raising Predicates

In this section we show that Generalization A also holds of the relationship between subject NegDPs and Raising Predicates. The predicate *certain* scopes under sentential negation (8). Given Generalization A, we correctly predict that it should also scope under a subject NegDP.

- (8) a. It is not certain that he will win \neq It is certain that he will lose
 b. No one is certain to win NegDP>certain
 Not: It is certain that nobody will win

The predicates *appear* and *seem*, on the other hand, do permit scope reversal. NegDP in (9) can be interpreted below the matrix predicate:

- (9) a. No doctor appears to be present
 "It appears that no doctor is present"
 b. No doctor seems to be present
 "It seems that no doctor is present"

The difference between *certain* and *appear / seem* has to do, again, with the interpretive position of sentential negation. *Appear* and *seem* are Neg-raisers. As Neg-raising predicates, they allow matrix negation to be interpreted within the embedded clause in general (Horn (1989), Gajewski (2005)), but *certain* does not. This is seen in (10) to (8):

- (10) a. It does not seem that he will win = It seems that he will lose
 b. It does not appear that he will win = It appears that he will lose

The scoping of NegDP below the predicate in (10) correlates with the general interpretive position of negation: NegDP interacts with a Raising predicate exactly the way sentential negation does. Raising predicates, therefore, further support Generalization A. Once again, scope reversal appears to be possible, contra to Lasnik's *empirical* claim. However,

here too scope reversal follows from mechanisms governing the scope of sentential negation which have little to do with A-reconstruction. So Lasnik's *narrow* claim stands.⁵

2.3 Passivized ECM Verbs

Passivized ECM verbs also support Generalization A. To the extent that subject NegDPs scope over these ScEs, Generalization A predicts that these SCEs will scope under matrix negation. This is confirmed in (12).

- (11) a. No Mersenne number was proven to be prime (from Lasnik 1999)
 ≠It was proven that no Mersenne number is prime
 b. No theory was shown/demonstrated to be false
 ≠It was shown/demonstrated that no theory is false
- (12) a. This theory was not proven/shown/demonstrated to be false
 ≠This theory was shown to be true
 b. The butler was not proven/shown/demonstrated to be guilty
 ≠The butler was shown to be innocent

In short, *prove*, *show* and *demonstrate* are not Neg-Raisers. The ECM verb *believe* and its passive counterpart, on the other hand, are Neg-raisers (13a,b). Generalization A predicts, accordingly, that scope reversal should be possible too, and it is, in (14c):

- (13) a. I do not believe him to be a fool = I believe him to not be a fool
 b. He is not believed to be home = he is believed to not be home
 c. No student is believed to have witnessed that crime = It is believed that no student witnessed that crime

⁵ Even though we will leave the intricacies of the study of *likely* for some other occasion, here are a few quick words about the interaction between subject NegDP and *likely*: We have found that speakers are divided as to what *likely* means. This can be detected when they are asked what *not likely* means. For some speakers *likely* means having probability larger than 50%. For these speakers, *not likely* does not mean *unlikely*, as not having probability higher than 50% does not mean having probability lower than 50%. That is, (ia) can be used when one thinks that Sue's chances are equal to others'. For such speakers then, *likely* is not a Neg-raising predicate and negation only scopes over it. The predication that Generalization A makes for these speakers is that a subject NegDP will only scope over *likely*. This is borne out:

- (i) a. It is not (particularly) likely that Sue will win ≠ It is likely that Sue will lose
 b. No one is (particularly) likely to win ≠ It is likely that no one will win

However, for speakers for whom *not likely* can also mean *unlikely*, Generalization A predicts that the subject NegDP can scope under *likely*.

- (ii) a. It is not likely that Susan will win = It is likely that she will lose
 b. Nobody is likely to solve this problem = It is likely that nobody will solve it

Passivized ECM verbs thus pattern just like raising-to-subject verbs in allowing the subject NegDP to be interpreted below its surface position just in case the predicate is a Neg-raiser and sentential negation can independently be interpreted low.

2.4 Interim Conclusion

We have shown that a subject NegDP can be interpreted below the ScE it is the subject of. This possibility tracks mechanisms that are unrelated to scope diminishment in A-chains and so has no direct bearing on A-reconstruction of NegDPs. This means that even though Lasnik's *empirical* claim is incorrect, his *narrow* claim seems correct.

3. Negative Split in English

We have seen that the subject NegDP cannot undergo A-reconstruction *in toto*. However, a NegDP may contain two semantic ingredients, negation and a (narrow scope) indefinite. What we will see is that the negative ingredient of the NegDP has its interpretive position fixed as established in section 2 but the indefinite part *can* undergo scope diminishment. Whether this scope diminishment is represented by the same mechanisms that are responsible for (1c) remains to be seen. Our focus here is on the kind of facts which motivate scope diminishment, and we remain neutral as to whether the mechanism responsible for scope diminishment in (1c) is syntactic A-reconstruction or something else. The reader can pick his/her favorite theory of scope diminishment for the basic case in (1c) and take this discussion to be about *that* theory of scope diminishment.

Neg-Split has been primarily studied in Dutch and German, and refers to the situation in which the two ingredients of a NegDP may scope somewhat independently of each other (see Jacobs (1980), Rullman (1995), Kratzer (1995), Geurts (1996), De Swart (2000), Potts (2000), Potts (2002), Zeijlstra & Penka (2005), Penka (2007), Zeijlstra (2007); for Neg-split in English, see Larson, Den Dikken & Ludlow (1996), Potts (2000)). In the following example in Dutch, the split reading is the most salient:

- (14) Ze mogen geen eenhoorn zoeken (Dutch; Rullman 1995)
 They are allowed no unicorn seek
- a. There is no unicorn x such that they are allowed to seek it (de re)
 - b. What they are allowed to do is seek no unicorn (de dicto)
 - c. They are not allowed to seek a unicorn (split)

When we look at subject NegDPs --in contrast to the much-discussed object cases like (14)— and we observe split readings, an obvious possibility is that the indefinite has undergone some form of scope diminishment:

- (15) **Overt order:** NegDP Modal V object; **Interpretation:** Neg Modal \exists V object

3.1 Scope Diminishment of the Indefinite under Neg>Mod Modals

The two sets of readings for (23) are given in (24) and (25).

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- (16) a. No student has to/needs to leave
b. No student may/can leave

Neg> \exists >Modal: No split (de re interpretations)

- (17) a. There is no student x such that x has to/needs to leave
b. There is no student x that x is allowed to leave

Neg>Modal> \exists : Split interpretations

- (18) a. It is not required that a student leaves
b. It is not allowed that a student leaves

In order to show that the sentences in (16) do have the split readings in (18) we need to show that there are contexts in which only the Split reading is true. To individuate the Split reading, we exclude De Re in two kinds of contexts. Assuming that De Re readings presuppose the existence of entities satisfying the descriptive content of NegDP, De Re is excluded in (19) via a contradiction in content, since books which have not yet been written at the time of the utterance could not be presupposed to exist (modeled after Fox 2000). Therefore, to the extent that (19) is grammatical, it only has the Split reading⁶.

- (19) No book about Nixon has to/needs to be written next year
Split: It isn't required that a book about Nixon is written

The above argumentation is confirmed in existential constructions, another context which individuates Split readings (modeled after Penka 2007). In existential constructions, the indefinite component is necessarily interpreted below the matrix predicate, while the negation component is interpreted below the predicate or above it, depending on choice of modal. Consider a scenario in which a nurse is allowed to administer a medication by herself, without the presence of a doctor. The lack of a requirement for the presence of a doctor can be conveyed with a Neg-split reading, and so predicted to be possible with Neg>Mod *has to/needs to*, but not with Mod>Neg *must/ought to/should* (see fn. 6).

- (20) a. There has to be no doctor present for the nurses to administer the medicine
Neg-Split: It isn't required that a doctor is present
b. There must be no doctor present for the nurses to administer the medicine
No Neg-Split occurred

⁶ It should be clear that the issue of Neg-split with scope diminishment of the indefinite arises only with subject NegDPs of Neg>Mod modals. A NegDP subject of a Mod>Neg modal undergoes the apparent scope reversals described in section 2, due to negation-specific properties, not general A-reconstruction mechanisms. The Negative part of Subject NegDP scopes under the modal and so per force, on the same side of the modal as the indefinite part. A Neg split would be possible only if Negation could be interpreted up again. This clearly doesn't happen, possibly due to a generalized constraint against covert operations undoing other covert operations:

- (i) No book about Nixon must be written
*Split: It isn't required that a book about Nixon is written

The absence of split readings with Mod>Neg modals provides one more argument for Generalization A.

The above context differs from one where there *is* a requirement for a doctor to be absent. Crucially, in this case the desired reading has both negation and the indefinite scoping below the modal, something which is correctly predicted to be possible for Mod.>Neg modals *must/ought to/should* (see section 4 for the Neg>Mod modals in this context):

- (21) There must be no doctor present during the interrogation =
it is required that no doctors are present

3.2 Interim Conclusion

We started out with Generalization A, according to which the scope of Subject NegDPs with respect to modal predicates is identical to the relative scope of sentential negation. This yielded cases of apparent scope reversals, contra Lasnik's *empirical* claim, but the nature of these reversals was such that it did not falsify Lasnik's *narrow* claim. We have also shown that there are cases where while a subject NegDP does not scope under a modal *in toto*, its indefinite component does. Though not proven here, it is certainly possible that scope diminishment of the indefinite part of NegDP is due to the same general mechanisms that interpret the indefinite in the lower clause in (1c). If this is the case, then we do see some cases of A-reconstruction even with NegDPs. Lasnik's *narrow* claim, then, reduces to the position that the Negative part of a subject NegDP does not reconstruct. But why not?

If we interpret the pattern behind Generalization A, a possible answer comes to mind. Generalization A, in effect, tells us that the negative component of a subject NegDP behaves with respect to scopal predicates just as sentential negation does. If the Negative part of NegDPs *is* sentential negation, it is trivial that Generalization A should hold.

The literature on Neg-split contains a variety of proposals on how to derive this phenomenon. We can divide them into two main camps: I. NegDP is a negative quantifier, and the existence of "Neg-split readings" is a function of the semantics of NegDP (de Swart, Geurts) and II. NegDP corresponds at LF to two independent constituents: a negation and an indefinite DP (Jacobs, Rullman, Penka, Zeijlstra). Setting aside differences within each camp along with specific details of implementation, we will group them together as the 'semantic camp' and the 'decomposition camp' and focus on differences regarding NegDP scope. For the semantic camp, NegDP is a generalized quantifier, and as such is interpreted like any other non-negative quantifier. In particular, wide scope is delivered by QR. The leading intuition within the decomposition camp, on the other hand, is that NegDP is an indefinite of sorts, and its scope is determined by a separate (sentential) negation. To the extent that the scope of sentential negation and the scope delivered by QR are distinct, the two approaches fare differently.

It is clear that Generalization A, as well as its satellite scope diminishment facts, find a natural home in the decomposition camp, where a NegDP is said to contain negation. Can our patterns be captured within the semantic camp? Possibly, though some additional assumptions would be necessary. For example, the semantic camp would have

to explain Generalization A by appealing to something other than the presence of sentential negation in NegDPs. It could be stated, for example, that modals scope in particular ways with respect to anything that contains negation in some abstract form. More specifically, since De Re readings are derived by QR, QR would have to be excluded from applying with Mod>Neg modals. It seems, though, that once these additional mechanisms are introduced, the motivation for having QR as responsible for De Re is weaker. See also footnote 8 for another challenge that might distinguish the two camps.

In section 3.3 we briefly show that scope diminishment of the indefinite part of NegDP is also observable with the other scopal elements that we have discussed, namely Raising predicates and passivized ECM verbs. In section 4 we turn to object NegDPs.

3.3 Scope Diminishment of the Indefinite under Passivized ECM and Raising Predicates

The prediction from the previous discussion is that Neg-split readings should be possible with subject NegDPs of the predicates *was proven, shown, demonstrated, expected, certain* (and *likely*; see fn 5), as these predicates satisfy the precondition for Neg-split that they scope under sentential negation. We have already seen that in sentences such as (22), the entire NegDP does not reconstruct *in toto*. However, they do allow Split readings with indefinite reconstruction:

- (22) a. No Mersenne number was proven to be prime
b. No butler was shown/demonstrated/proven to be guilty

De Re: Neg > \exists > Predicate

- (23) There is no specific butler who was shown/proven/demonstrated to be guilty

Split: Neg > ECM verb > \exists

- (24) It was not shown/proven/demonstrated that there is a guilty butler

To see that the readings are distinct we first isolate the De Re readings by creating a context in which the De Re reading would be true and the Split reading would be false. We know that the guilty party was a butler. However, there are 4 butlers in the manor and we do not know which of the four the culprit is. In this context, (22b) is indeed fine:

- (25) No butler was proven/demonstrated/shown to be guilty but the murderer is definitely a butler.

To isolate the Split reading we exclude De Re via a contradiction in content, as in section 3.2. This works more easily for the subset of Predicates which future-shift their complements, *is expected* and *likely*. If at the time of the utterance the cheetahs referred to in (26) haven't yet been born, they couldn't be presupposed to exist, and De Re is excluded. To the extent that the sentences in (26) make any sense, it could only be on their Split readings:

- (26) No cheetah is expected/likely to be born in this zoo next year
 Split: It isn't expected/likely that a cheetah will be born in this zoo

Ideally, we should at this point expand the discussion to include all the other Raising predicates on our list. However, considerations of space prohibit us from doing this. We should also point out that there may be additional constraints on reconstruction that interfere and complicate the data, like the one suggested for *certain* in von Stechow and Iatridou (2002), fn. 27. These qualifications notwithstanding, scope diminishment of the indefinite component in NegDP is in principle possible, even if reconstruction of the NegDP *in toto* is not.

4. Object NegDPs

In this section, we see that the intuition behind Generalization A also holds for NegDPs in object position. Setting aside finer distinctions relating to the scope of the indefinite component of a NegDP (Neg-split), the scope of the negative component of an object NegDP matches the scope of the negative component of a subject NegDP: object NegDPs scope under a Mod>Neg modal (27), while, the negative component of object NegDPs with Neg>Mod modals can scope over the modal (28)⁷.

Mod>Neg modals:

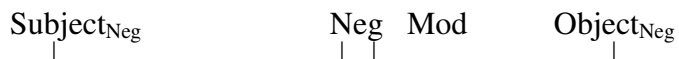
- (27) You must do no homework tonight
 = You must go without homework
 ≠ It is not required that you do homework tonight
 ≠ No homework is such that you must do it

Neg>Mod modals:

- (28) You have to/need to do no homework tonight
 = It is not required that you do homework tonight
 = There is no homework that you are required to do

Generalizing, then, across subject and object NegDPs, it appears that the negative component of a NegDP is interpreted where sentential negation is interpreted per choice of modal. The position of Neg in (29)-(30) is its scope position, not its syntactic position, and the lines, accordingly, indicate scope of NegDP, not movement:

(29) Neg > Mod modals:



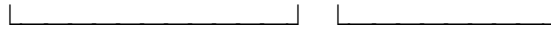
(30) Mod>Neg modals:



⁷ We should point out that we have encountered English speakers who do not like NegDPs in object position in general.

⁹ For Penka 2007, all sentences with NegDPs contain covert negation and NegDP is a non-negative indefinite licensed by covert negation.

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There is one complicating case, however. Consider the following sentence:

(31) In order to see how others live, he has to/needs to get no new toys for a while

In (31), the modal can scope over the (negative component of the) object NegDP even though we are dealing with a Neg>Mod modal. The schema below captures the general picture. The terms *Subject_{Neg}* and *Object_{Neg}* stand for the negative component of a NegDP in subject and object position respectively. It is the grey cell (representing (31)) which is not covered by Generalization A:

Type of Modal wrt sentential negation	Interpretive possibilities of (Negative component of) NegDP
Mod>Neg	Mod > Subject _{Neg}
	Mod > Object _{Neg}
Neg>Mod	Subject _{Neg} > Mod
	Object _{Neg} > Mod
	Mod > Object _{Neg}

The negative component of the object NegDP is not interpreted in the position where sentential negation is interpreted with this class of modals and so it is not covered by Generalization A. What do we do with this case? Several options exist:

A. One could follow Penka 2007 and argue that there are several positions where (covert⁹) negation can appear in the sentence. The cases in the grey cell would contain covert negation below the modal. The negative component of the object NegDP is, in fact, interpreted in the position of *some* negation, but one that happens to be below that of the known sentential negation.

(32) Subject Modal (Verb) Negation_{covert} Object NegDP

One challenge facing the approach would be to restrict the distribution of such covert negations. For example, a covert negation should not be permitted to appear above a subject NegDP of a Mod>Neg, or we would get an equivalent “grey cell” for that class of modals, which as far as we know, we do not get.

B. One could capitalize on the Raising analysis of modals and argue that the difference between the grey cell in the table and the cell just above it (which represents (28)) lies in the fact that the clause embedded under the modal provides one additional position for the interpretation of the negative component of the object NegDP. Consider (33a-b), where NEG represents the interpretive position of Negation (underlined because it is not a constituent):

(33) a. Subject_i NEG Modal [t_i verb Object_{NegDP}]

- b. Subject_i Modal [t_i NEG t_i verb Object_{NegDP}]

With Neg>Mod modals, (33a-b) yield different readings because the (negative component of) the object NegDP has two NEG positions above it in which it can be interpreted¹⁰. If the negative component of the object NegDP is interpreted in NEG of (33a) the sentence is interpreted as in (28). If it is interpreted in NEG of (33b), the sentence is interpreted as in (31), yielding the grey cell.

What are the conditions under which the object NegDP has access to the higher NEG? This could be an option that is freely available, due to the transparent nature of the embedded infinitival. Alternatively, one might consider the possibility that some sort of restructuring takes place, giving the object of the embedded clause access to the higher clause. We will not choose here between these alternatives. The subject NegDP cannot avail itself of the embedded NEG because at spell-out it finds itself already in the higher clause, so it has access only to the position of negation in the higher clause. The alternative, in which the subject is lowered covertly into the lower clause and then interpreted at the position of NEG of the lower clause would have to be excluded, possibly along the lines mentioned in footnote 5, but definitely by the fact that the negative component of subject NegDPs never undergoes A-reconstruction.

C. David Pesetsky (p.c.) raises the possibility that a NegDP, in addition to the various meanings it has been given by the Neg-split literature, might also be an NP with the cardinality marker “zero”: *five students, three students, zero students* or *no students*. If this is correct then the interpretations in (31) (the grey cell) would be the result of *no/zero new toys* being interpreted in situ, that is this DP would not seek out any position of negation. This in turn, would result in *zero/no new toys* getting interpreted under the modal.

The challenge for this approach is the question of *zero/no NP* in subject position. A sentence like (34a) (=6a), should be able to mean that zero/no students have the obligation to leave. It should therefore be compatible with a continuation like the one in (34b):

- (34) a. No student must leave
 b. #No student must leave but several of them are allowed to.

We have not found this reading to be generally available, unless one places contrastive stress on *must*, contrasting it with a modal of different force.

We will not decide between options A-C here, though it seems to us that B seems to us to face fewer problems. However, we would like to close with some observations that might help decide the matter in the future. The sentences in (28) and (31) (the obstreperous grey cell) differ in whether we perceive them as negative or not. The sentences where the (negative component of the) object NegDP scopes over the modal

¹⁰ If the Modal is of the Mod>Neg variety, we will not be able to distinguish these two cases, as both (33a,b) yield a scopal order in which the modal is interpreted above the negative component of the NegDP.

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are “perceived” as negative. The sentences where the (negative component of the) object NegDP is interpreted under the modal, are “perceived” as affirmative. Two tests confirm this.

Test #1: Elliptical second conjunct

If the first conjunct is perceived as containing sentential negation, the second conjunct is of the form “and neither does...” (or “but he does...”). If the first conjunct is perceived as affirmative, the second conjunct is of the form “and he does too...” (or “but he doesn’t”). Application of this test shows that (28)/(35a) is perceived as affirmative, but (31)/(35b) as negative.

- (35) a. Sue has to do no homework tonight and neither does Bill
b. Sue has to get no new toys for a while and Bill does too/*and neither does Bill

As predicted, in a context where ambiguity is more easily imaginable, a different second conjunct can push the interpretation in a different way. So while in (35a) both Sue and Bill are allowed to stay homework-less, in (36) they are prohibited from doing homework:

- (36) Sue has to do no homework tonight and Bill does too.

Test #2: Tags

If the (negative component of the) object NegDP is interpreted over the modal, the tag is positive. If it is interpreted under the modal, the tag is negative:

- (37) Bill has to/needs to do no homework tonight, does he/*doesn’t he?
(Bill is allowed to remain without homework)
- (38) In order to understand how the other half lives, Bill has to get no new toys for a while, doesn’t he/*does he?
(Bill has to stay without new toys)

The above two tests may prove helpful in understanding the difference(s) between (28) and (31)¹¹. However, one should in parallel investigate the general conditions under which a sentence is perceived as negative, including the cases of subject NegDPs, where we find speakers unable to decide as to the general polarity of the sentence with Mod>Neg modals. But we leave that for a future occasion.

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¹¹ In addition, it would be interesting to see these included in the Neg-split debate between the semantic camp and the decomposition camp. The latter might say that the polarity of the sentence is set by the negative component of the NegDP. It is less clear to us how the semantic camp would incorporate (42-45).

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