A unified analysis of Vietnamese *mới* 'just/only' as a scale-sensitive particle

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Abstract. We present a unified analysis of the Vietnamese particle *mới* 'just, only' as an under-specified scale-sensitive exclusive particle, following work by Beck (2020) on German additive *noch* 'still'. The particle *mới* ranges alternatively over temporal or other focus-induced scales. In its aspectual guise, *mới* ranges over temporal scales, excluding all times before the reference time, whereas in its exclusive guise, *mới* operates over focus scales triggered by its focus-associate, thereby excluding all larger plural individuals containing the focused entity.

Keywords: aspectual, exclusive, scale-sensitive particle, focus, Vietnamese.

1. Introduction

There exist in Vietnamese a number of pre-verbal particles that operate at the functional level and that interact intimately with information structure. These particles are characterized in school grammars as 'adverbs that express categories of tense, status or degree' (Nguyen 1997: 87). In this paper we will be concerned with a specific preverbal particle that can function either as an aspectual particle (1a) or as a scalar exclusive particle (1b), equivalent to English 'just', and 'only' respectively. Examples are taken from Nguyen (1997:56).

(1) a. Anh ấy **mới** (vừa) bước chân ra ngoài. [aspectual *mới*]
he PRT step foot outside
'He <u>just</u> stepped outside.'
b. *Bây* giờ tôi **mới** biết. [exclusive *mới*]
now I PRT know
'It's <u>only</u> *now* that I know it.'

Next consider occurrences of *mới* in complex sentences. Please note that Vietnamese sentences allow only one preverbal particle, be it in serial verb constructions, or in complex sentences. In the former case, the particle is placed preceding the primary verb; in the latter it occurs preverbally in the main clause, as in (2) and (3). These sentences exhibit subject drop and convey a deontic/dispositional meaning with universal modal force, expressing conditional perfection, cf. (2) from Nguyen (1997: 157), and (3), a proverb.[1] For ease of exposition, we provide the two translations (i) and (ii) for (2) and (3), respectively.

(2) Có biên lai **mới** lấy được sơ - mi.
exist receipt only-then take get shirt
'You can't get your shirt until you produce the receipt.'
i. 'You must produce the receipt in order to get your shirt.'
ii. 'Only if the receipt exists you will get your shirt.'

[1] Truong (1970) analyzes *mới* in bi-clausal sentences such as (2) and (3) as equivalent to *alors seulement* in French and interchangeable with the future marker *sẽ*. He provides a correlative analysis for (3) as indicated by its French paraphrase 'Qui veille longtemps, saura alors seulement la longueur des nuits' (Truong 1970:375). We take this syntactic analysis as plausible, leaving for the future its comprehensive syntactic study.

 In: P. G. Grosz, L. Martí, H. Pearson, Y. Sudo, and S. Zobel (eds.) *Proceedings of Sinn und Bedeutung 25*, pp. 823–840. University College London and Queen Mary University of London.

(3) Thức lâu **mới** biết đêm dài. (Proverb)
stay.awake long PRT know night long
'One cannot know how long is the night until one stays awake long.'
i. 'One must stay awake long in order to know that the night is long.'
ii. 'Only if one stays awake long, one knows the night is long.'

This paper provides a unified analysis of aspectual and exclusive instances of the Vietnamese particle *mới*, namely of *mới*$_{ASP}$ 'just/recently' and *mới*$_{EXC}$ 'only'. The paper is structured as follows. Section 2 discusses syntactic-semantic properties of aspectual and exclusive *mới*. Section 3 argues that the duality of this particle as 'aspectual' and 'exclusive', respectively, is only apparent and in fact involves instantiations of the same underlying scalar exclusive particle. Section 4 presents a unified analysis of *mới* in terms of conventional association with focus. Section 5 extends the account to deontic/dispositional sentences. Section 6 concludes with some general typological claims and outlooks.

2. Syntactic- semantic properties of *mới*$_{ASP}$ and *mới* $_{EXC}$

This section first introduces the basic syntactic and information-structural properties of the two occurrences of *mới* in 2.1 and 2.2. Sub-section 2.3 then shows that aspectual *mới* only occurs with telic predicates, as evidenced by aspectual coercion effects with lexically atelic predicates.

2.1 Syntactic similarities and differences

Both aspectual *mới*$_{ASP}$ and exclusive *mới*$_{EXC}$ surface in preverbal position. As a first approximation, it is plausible to assume that they both adjoin to the vP domain, following the subject in SpecTP in the syntactic configuration given in (4).

(4) [$_{TP}$ SUBJ$_1$ [$_{vP}$ *mới* [$_{vP}$ t$_1$ VP]]] (to be revised!)

Clauses with exclusive and aspectual *mới* are syntactically different, however. Cao (1998: 629-633) reports that the sequence in (5) is three-way ambiguous, as indicated by the English equivalents in (5i-iii).

(5) Sinh viên **mới** học ngôn ngữ học.
student PRT learn linguistics
i. 'New students learn linguistics.'
ii. 'The students have *just started* to learn linguistics.'
iii. '*Only students* learn linguistics.'

Ignoring the first irrelevant reading where the particle serves as an attributive adjective 'new', the second and third reading are information-structurally different: In (5ii), the subject 'student' with aspectual 'just' is neutral w.r.t information structure, and it is preferably construed as the topic of the clause. By contrast, the subject of (5iii) must be construed as a narrow focus adjacent to the particle *mới*. For this reason, it is of note that the bare NP *sinh viên* 'student' receives a definite interpretation as topic, as shown by the translation in (5ii), but an indefinite interpretation as focus, as indicated by the English paraphrase (5iii).

More generally, different information structures are tied to different syntactic and semantic properties, and vice versa, as illustrated in (6) and (7). In (6B), the subject constituent *Nam* must be interpreted as the contrastive topic in the given context, making the exclusive subject focus interpretation in (6Biii) infelicitous. The exclusive object interpretation in (6Bii) is grammatically ruled out in the absence of focus fronting. In (7), the context sets up the fronted object *tao* 'apples' as the narrow focus of (7B), thereby ruling out the aspectual reading in (7Bi) (and the subject focus reading): (7B) only allows for the exclusive object reading in (7Bii):

(6) A: Everyone has eaten something. What about Nam? (Nam = Contrastive Topic)
B: Nam **mới** ăn táo.
Nam PRT eat apple
i. 'Nam has just eaten the apples/apples.' (aspectual OK)
ii. * 'Nam eats only apples.' (*exclusive OBJ focus)
iii. # 'Only Nam eats apples.' (#exclusive SUBJ focus)

(7) A: Nam doesn't eat bananas, pineapples,… then, what does he eat? (OBJ = FOC)
B: Táo$_1$ Nam **mới** ăn t$_1$.
Apple Nam PRT eat
i. * 'Nam has just eaten the apples/apples.' (*aspectual)
ii. 'Nam eats only apples.' (exclusive OBJ focus OK)
iii.* 'Only Nam eats apples.' (*exclusive subject focus)

Such data show that occurrences of exclusive *mới* are dependent on (vacuous) syntactic focus fronting, giving rise to non-canonical word orders in sentences with focus-fronted objects.

2.2 Semantic differences

The data in (5) to (7) furthermore show that there is a tense/aspect contrast between utterances with exclusive *mới* and with aspectual *mới*: the former convey a generic non-past interpretation whereas the latter always express an episodic perfective reading. We argue that this difference has nothing to do with the presence of *mới* per se. Instead, it follows from an independent property of the syntax-semantics interface in Vietnamese. Tran (2021) shows that obligatory focus fronting of bare NP arguments, such as in (7B), is correlated with referential unboundedness (non-quantization) of the entire VP-predication. The effect is a generic (non-past) interpretation, via Smith & Erbough's (2005) pragmatic constraints for temporal resolution. The general effect in the absence of *mới* is illustrated in (8), taken from Tran (2021:16), with the bare object NP in situ in (8a) and focus-fronted in (8b):

(8) a. Nam cất **tiền** vào tủ.
Nam put money enter cupboard
i. 'Nam **put** the money into the cupboard.'
ii. 'Nam will put/puts money into the cupboard.' (less likely)
b. **Tiền** (thì) Nam cất vào tủ.
money PRT Nam put enter cupboard
i. 'Nam **will put/puts** money into the cupboard.'
ii. *'Nam put the money into the cupboard.'

In natural discourse, it is more appropriate to interpret (8b) as expressing a present or future-oriented generic event, or a habit, whereas (8a) is preferably construed as denoting an episodic bounded event in the past. Tran (2021) proposes that temporal reference in tenseless Vietnamese – in the absence of overt aspectual markers – is mainly resolved on the base of lexical aspect and the default pragmatic principles of Smith & Erbaugh (2005), such as, e.g., their Bounded Event Constraint; cf. also Lin (2006) on Mandarin. On Tran's analysis, focus fronting blocks the aspectual composition of the remnant VP-denotation as bounded, thereby yielding an atelic VP-denotation ranging over (temporally) unbounded events, hence non-past by default. In a movement analysis, this can be modelled by binding the trace of the fronted constituent in the vP-domain. Alternatively, there may be no focus movement and hence no trace variable to begin with: following CG-analyses of reordering (e.g., Jacobson 1996), the VP may be base-generated with an unsaturated argument position for the focus constituent (λx_1….), thereby giving it its non-quantized, unbounded interpretation. The focus constituent would then be externally merged in the left periphery, thereby saturating the open internal argument position. Turning back to the interpretation of *mới*, the semantic-pragmatic reflex of focus fronting in (7B) is to allow for an unbounded generic non-past reading, which is incompatible with the telic semantics of aspectual *mới*; see below. As a result, the particle can only be interpreted as an exclusive particle operating on the focus-scale triggered by the fronted focus constituent *apple.* Alternatively, focus fronting, presumably to a TP-adjunction site, may apply before the adjunction of the particle via LATE MERGE (Lebeaux 1991). The syntactic and semantic differences between aspectual and exclusive *mới* are summarized in (9):

(9) a. [$_{TP}$ (SUBJ) [$_{vP}$ *mới*$_{ASP}$ [$_{vP}$ SUBJ V OBJ]]] (ASP)
b. [NP$_{OBJ,1}$ [$_{TP}$ (SUBJ) [$_{vP}$ *mới* $_{EXCL}$ [$_{vP}$ λx_1 SUBJ [$_{VP}$ V t_1]]]]] (EXCL, OBJ$_{FOC}$)
c. [SUBJ$_1$ [$_{TP}$ t_1 [$_{vP}$ *mới* $_{EXCL}$ [$_{vP}$ t_1 V OBJ]]]] (EXCL, SUBJ$_{FOC}$)

As shown in (9a), aspectual *mới* adjoins to vP containing the object NP. Aspectual composition is determined in the vP domain, thereby giving rise to a bounded event interpretation. This satisfies the requirement that aspectual *mới* must adjoin to aspectually bounded vPs; see below. Importantly, aspectual *mới* does not interact with narrow (fronted) constituent foci. By contrast, exclusive *mới* adjoins to the vP-remnant resulting from focus fronting (or non-saturation). The canonical surface word order of subject focus, and the non-canonical word order of object focus involve distinct derivations: in the former, object focus moves from the VP complement position to the TP- adjunction site (9b), whereas subject focus moves from Spec,vP to Spec TP, before moving to the TP-adjunction site in (9c). Unlike aspectual *mới*, exclusive *mới* requires aspectually unbounded vPs, thereby making focus fronting obligatory.

2.3 Aspectual coercion

As a phase particle (Löbner 1990), aspectual *mới* can only combine with change-of-state predications, which are inherently bounded/telic. Therefore, aspectual *mới* can freely combine with achievement predicates, as this predication type is phasal in making reference to ¬ϕ- and ϕ-states. It is of note that achievement predications over events, such as (1a), involve a momentary change from a ¬ϕ-state to a ϕ-state (von Stechow 2009). By contrast, vP-denotations expressing unbounded or atelic lexical aspects/Aktionsarten (e.g., states,

activities, …) must be coerced into achievement predications in order to be able to combine with aspectual *mới*. Corroborating examples are given in (10a-c) below:

(10) a. Trung **mới** biết tiếng Đức.
Trung PRT know German
i. 'Trung has just learnt (begin to know) to speak German.' (recent acquisition)
ii. 'Only Trung speaks German, (not Bac Trung...).'
a'. Trung biết tiếng Đức.
'Trung know German.'
b. Nam **mới** giống mẹ.
Nam PRT resemble mother
i. 'Nam has just resembled mother.' (resemblance recently observed.)
ii. 'Only Nam resembles mother, (not his brother, sister).'
b'. Nam giống mẹ.
'Nam resembles mother.'
c. Nam **mới** ăn táo.
Nam PRT eat apple
i. 'Nam has just eaten the apples.' (The eating is completed.)
ii. 'Only Nam eats apples, (not Bac, Trung…).'
c'. Nam ăn táo.
'Nam ate the apple(s).'

In (10ab), two atelic states (*speaking German*, *resemble mother*) are coerced into inchoative and perceptual achievements, respectively, cf. (10ai, 10bi). Although (10ab) are both perfectly grammatical, the coerced reading of (10ai) is pragmatically more acceptable than that of (10bi) out of the blue. (10a') and (10b') show the basic predicates without coercion in the absence of *mới*. Finally, in (10c), the activity *eat apple(s)* is likewise coerced into a resultative accomplishment predication with *mới*, cf. (10ci), whereas the atelic activity interpretation remains unaffected with exclusive *mới* in (10cii) in appropriate contexts. However, as shown in (10c'), the VP receives a default telic accomplishment interpretation even in the absence of *mới*. This leaves open the possibility that aspectual *mới* in (10c) directly combines with a telic accomplishment predication, thereby putting the focus on the reaching of the result state.[2]

3. A unified account of aspectual and exclusive *mới* as scale-sensitive exclusives

This section presents the unified analysis of aspectual and exclusive *mới* as scale-sensitive exclusive particles, following a recent account of the additive *noch* 'still' in Beck (2020). Sub-section 3.1 introduces the basics of Beck's analysis for additives, before sub-section 3.2 extends this analysis to exclusive particles. In sub-section 3.3, we apply the analysis to aspectual *mới*, and sub-section 3.4 adds some observations on aspectual *mới* under negation. Sub-section 3.5 concludes with the analysis of focus-sensitive exclusive *mới*.

[2] Because of this, combinations of aspectual *mới* with accomplishment predicates (eat the apples, build a house, write a novel) inevitably come with an inference that the expressed event is completed. This completeness inference is easily cancellable as a pragmatic implicature in the absence of *mới* in (ia), but not so in (ib) with *mới*. The continuation in (ib) is only licit on an inchoative reinterpretation of the underlying accomplishment reading.

(i) a. Nam viết thư, nhưng chưa xong.
Nam write letter, but not.yet finish.
'Nam wrote a letter, but hasn't finished it yet.'

b. Nam **mới** viết thư, nhưng chưa xong.
Nam PRT write letter, but not.yet finish
'Nam **started to** write the letter,but hasn't finished yet.'

3.1 A scale-sensitive additive particle: the case of *noch* 'still'

The Vietnamese particle *mới* exhibits syntactic and semantic similarities to German *additive noch* 'still'. Beck (2020) analyses *noch* as an underspecified scale-sensitive particle that ranges alternatively over temporal or other (focus-) scales, depending on its syntactic position. The basic lexical entry of *noch* is given in (11), for *x* of variable types, from Beck (2020: ex.18).

(11) $[\![\text{noch/still}]\!] = \lambda S.\lambda x^*.\lambda x.\lambda P_{<x,t>}: x^* <_S x \ \& \ P(x^*).\ P(x)$

According to Beck, *noch/still* combines with a scale S, an anaphoric element x*, an argument x and a predicate P. Denoting an identity function, the particle does not change the assertion that the predicate is true of the argument – *P(x)*. Its semantic contribution consists in adding the presupposition that the anaphoric antecedent *x** precedes its associated argument *x* on the relevant scale, and that the predicate is also true of the value of the antecedent: *P(x*)*. The second condition is responsible for the additive nature of *noch*: P(x) & P(x*)

Importantly, the entry in (11) leaves room for *noch/still* to vary its meaning depending on its syntactic construal. For instance, in (12a) *noch/still*, or to be more precise, *noch/still* plus the accompanying antecedent variable t* and the argument t, adjoins to AspP, as shown in (12b). Here, the predicate P from (11) is supplied by (imperfective) $[\![\text{AspP}]\!]$, a time interval of type <i,t> . The scale is the temporally ordered scale, $still_{<,}$, with a precedence relation on the sequence of temporal intervals.

(12) a. Es regnet noch. (Beck's 2020 ex. 20b)
'It is still raining.'

b. $[_{TP}$ PRES $[\lambda t\ [_{AspP}\ [\text{still}_{<,}\ t^*\ t\ [\ _{AspP}$ IPFV $[_{VP}\ \lambda e$ rain e]]]]]; with $[\![\text{PRES}]\!] = t_{now}$
Simplified structure: $[_{AspP}\ [\text{still}_{<,}\ t^*\ t\ [\ _{AspP}$ ipf $[_{VP}\ \lambda e$ rain e]]]]

c. Interpretation:
i. $[\![(12a)]\!]$ is only defined if $t^* < t_{now}$ & $\exists e\ [\ t^* \subset \tau\ (e)$ & rain (e)];
i.e. (12a) presupposes that there was rain at a time immediately before now.
ii. $[\![(12a)]\!] = 1$ iff $\exists e\ [\ t_{now} \subset \tau\ (e)$ & rain (e)]
i.e. (12a) asserts that there is a raining event ongoing at t_{now}

Unlike in (12a), where *noch* functions as a phase/aspectual particle, in (13a) it associates with the focused temporal adverb *1967*, with which it forms a syntactic constituent. This is shown in (13b). The additive presupposition is satisfied if there is a time interval earlier than 1967 (1966, 1965, 1964, …) at which the predicate P, *λt. pubs close at 6pm in t*, holds. The assertion in (13c) says that the topic time t_{TOP} is included in 1967 and the predicate P holds at t_{TOP}.

(13) a. **Noch 1967$_F$** schlossen die Kneipen in Neuseeland um 18 Uhr.
still 1967 closed the pubs in New Zealand at 6 pm.
'In 1967, closing time for pubs in NZ was still 6 pm.' (ex. 62 in Beck 2020)
$\Rightarrow$ after 1967, pubs in NZ didn't close at 6 pm.'

b. $[\text{still}_{<,}\ t^*\ t\ 1967]$ [pubs close at 6pm]]

c. $1967(t_{TOP})$ & $\text{pubs\_close\_at\_6pm}(t_{TOP})$

Note in passing that (13a) triggers an additional pragmatic exhaustivity inference, as the temporal adverb is focused. (14) shows the general scheme for this EXH-implicature of *noch*

with focused time adverbs, according to Beck: *noch* forms a constituent with the adverb, and the alternatives triggered by the focused adverb are targeted by the covert focus-sensitivity EXH-operator in (14a), thereby excluding all later alternatives (14b).

(14) Exhaustive interpretation of *noch*-Adv:
a. [EXH [$_{\phi}$ [still$_{<,}$ t* t Adv $_{F}$] P]]
b. implicature: $\forall$t'[t $_{topic}$ < t' & Q (t') $\rightarrow$ $\neg$ P (t')]
'In later time periods, not P.'

3.2 Extending the analysis: *mới* as a scale-sensitive exclusive particle

We propose to extend Beck's analysis of scale-sensitive additives to *mới*, which is analyzed as a scale-sensitive *exclusive* particle. Exclusive *mới* differs from additive *noch/still* in at least two respects (see §3.4 for a third difference). First, *mới* is not anaphoric and therefore has one argument less than *noch/*still. Secondly, *mới* does not trigger a presupposition, but it directly adds to the truth-conditional meaning of its clause by excluding all stronger elements on a scale of logical entailment; see Beaver & Clark (2008), Velleman et al. (2012), Coppock & Beaver (2013): the essential semantic function of exclusives of the form 'only p' consists in ruling out all logically stronger (= more informative) propositions entailing the prejacent *p* as false. The notions of informativity and entailment thereby correspond to positioning on different types of scales; see below. Drawing on these considerations, Velleman et al. (2012) analyze *only* as a scale-sensitive propositional operator that is defined in terms of two focus operators MIN$_S$ and MAX$_S$, where the subscript S refers to the current context, as in (15).

(15) $[\![$ *only* $]\!]$ = λw.λp: MIN$_S$ (p) (w). MAX$_S$ (p) (w)

The operators MIN$_S$ and MAX$_S$ are defined in (16), where CQ$_S$ indicates that the context S includes a Current Question and a salient partial ordering over the alternatives in CQ$_S$ specified by the relations $_S>$ and $\geq_S$.

(16) a. MIN$_S$ (p) =λw. $\exists$q$\in$ CQ$_S$ [q(w) $\wedge$ (q $\geq_S$ p)]
b. MAX$_S$ (p) = λw. $\forall$q$\in$ CQ$_S$ [q $>_S$ p $\rightarrow$ $\neg$q(w)]

MIN$_S$ in (16a) specifies that there is a true answer to CQ$_S$ that is at least as strong as the prejacent *p*, i.e. among the elements on the contextually given scale, *p* must be minimally true. MAX$_S$ in (16b), by contrast, specifies that all logically stronger elements higher on the scale are false, thereby making the prejacent *p* the strongest true element on the scale. Given (16ab), the meaning of exclusive *only* in (15) presupposes that the prejacent p is (minimally) true, whereas it asserts as part of its truth conditions that the prejacent p is the strongest true CQ-alternative, or the highest true element on the contextually given scale.

Generalized exclusive particles such as English *only* can associate with different types of contextually salient scales (Beaver & Clark 2008). For instance, English *only* can associate with partially ordered scales as in (17a), with fully ordered scales as in (17b), with pre-ordered scales as in (17c), or with (fully ordered) temporal scales in (17d). Of particular interest to us are the partially ordered scale in (17a) and the temporal earliness scale in (17d).

(17) a. Only NAM$_F$ went home

~~Nam⊕Tran⊕Anh~~ PARTIALLY ordered scale
~~Nam⊕Tran~~
Nam

b. Nam read only FIVE$_F$ books

~~seven~~ FULLY ordered number scale
~~six~~
five

c. Nam met only the deputy minister

~~President~~ PRE-ORDERED scale
~~Minister~~
Deputy minister

d. Nam arrived only at 5AM

~~3am~~ FULLY ordered earliness scale
~~4am~~
5am

As for the relation of informativity/entailment and scale-structure, consider the correlation of partially ordered scales and informativity in (17a). The alternatives to the denotation of the focus constituent *Nam* are placed on a partially ordered scale, such that Nam < Nam⊕Tran < Nam⊕Tran⊕Anh. Replacing the focus constituent *NAM$_F$* with elements higher on the scale results in logically stronger statements entailing the prejacent *λw. Nam went home in w*:

(18) Nam⊕Tran went home → Nam went home

Why is the temporal scale in (17d) construed as an earliness scale? This also follows from informativity and the obligatory combination of temporal-aspectual *only* with achievement (or accomplishment) predications expressing a phasal change from not-ϕ to ϕ. What is relevant is the reaching of a result state ϕ at some temporal interval i.[3] Once a result state has been reached, it will continue to hold forever after. In other words, having reached the result state at a time *t'* entails being in this result state at all later times *t* (*t'*<*t*), as illustrated in (19):

(19) At 4AM, Nam is in the result state of having arrived (= Nam arrived at 4am) → At 5am, Nam is in the result state of having arrived and so on….

Below, we will argue that it is this temporal entailment scheme that is at play in the evaluation of aspectual *mới* in Vietnamese. There, we will make direct reference to scales for reasons of simplicity. Let us now discuss possible lexical restrictions on the scale selection of exclusive particles and the scalar underspecification of *mới.* Recall that whereas English *only* is fully underspecified regarding its association behavior with scales, other English exclusives (*merely, exclusively*) are lexically restricted to associate with pre-ordered scales (*merely*) and fully ordered scales (*exclusively*), respectively. In a parallel manner, *mới* is also underspecified in

[3] See, e.g., Musan (2001) and Fischer (2019) for the relevance of the notion of result state in the semantic analysis of the German *Perfekt*.

that it can associate at least with partially ordered scales (exclusive focus *mới*) and fully ordered temporal scales of earliness (with aspectual *mới* and bounded achievement predications).[4]

A natural question at this point is what is the operative connection between the propositional operator and the local syntactic construal with a (fronted) narrow focus constituent? Unlike Beaver & Clark (2008) and Velleman et al. (2012), we do not treat exclusive *mới* as an operator on unstructured propositions (*only*(p)). Rather, the Vietnamese exclusive particle associates with the parts of a structured proposition (von Stechow 1991). In the case of exclusive *mới*, the parts of the structured proposition correspond directly to the bi-partition resulting from focus fronting. Accordingly, after schönfinkelization, *mới* denotes n-place functions of variable type that take a focus constituent and a background as semantic arguments; see also Beck on *noch*.[5] Given that the exclusive operator takes its focus and background argument separately from the bipartite syntactic configuration in (20a), it follows that logical entailment relations and thus relative placements on a scale are computed over the output of the background function applied to the focus argument and its alternatives, cf. (20b). (21) illustrates for (17a) above:

(20) a. $[\ XP_{FOC,1}\ [\ EXCL\ [\ \lambda x_1.\ YP_{BG}\ ]]]$
b. An alternative y to $[\![XP_{FOC}]\!]$ is higher on the relevant scale than $[\![XP_{FOC}]\!]$, and hence excluded by EXCL, if and only if $[\![YP_{BG}]\!](y) \rightarrow [\![YP_{BG}]\!]([\![XP_{FOC}]\!])$;
i.e. iff the background predicate P applied to y entails the background predicate applied to the denotation of the focus constituent.

(21) a. [only [NAM_{FOC}]] [went $home_{BG}$]
b. $[\![$ went home $]\!]$(nam$\oplus$tran) $\rightarrow$ $[\![$ went home $]\!]$(nam)
c. EXCL exludes *nam⊕tran* as a true focus alternative to *nam*.

In light of the foregoing considerations, the lexical entries for the two instantiations of scale-sensitive *mới* are as shown in (22). Deviating from the analysis of *only* in (15), we follow Rooth (1996) and Krifka (2006: 109) and take the truth of the prejacent (*P(t)*, *P(x)(t)*) to be asserted rather than presupposed. The reasons for this will become apparent in sub-section 3.4.

(22) a. $[\![\text{mới}_{ASP}]\!] = \lambda P_{<it>}\ .\ \lambda t.\ P(t)\ \&\ \forall t'\ [t' >_S t] \rightarrow \neg P(t')$, where t is saturated by t_{TOP}, and $>_S$ is the temporal precedence scale 'earlier than'

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[4] In addition, exclusive *mới* can also associate with fully ordered numerical scales, but in such cases a subtle contrast in interpretation is perceived between ex situ and in situ focus. The *in situ* version in (i), taken from Cao (1998: 488), conveys a perfective flavor in addition to the exclusive reading. Because of this, it is natural to continue with 'but he/she was already tired'. Note also that it is preferable to have an existential verb-derived particle *có* adjoin to the focus. The *ex situ* variant in (ii), by contrast, is temporally neutral, expressing a habitual, generic reading, and it disallows the existential verb-derived particle. Naturally, (ii) cannot be followed by 'but he/she was already tired'.

(i) **Mới** đi có *mười cây số*.
PRT go PRT ten kilometer
'He/She/They has/have covered only ten kilometers.'

(ii) (*Có) *mười cây số* mới đi.
PRT ten kilometer **PRT** go
'He/She can cover as much as ten kilometers.' / 'He/She covers only ten kilometers.'

The differences in telicity or boundedness correspond again to the presence or absence of overt focus fronting as discussed in connection with (8) above.

[5] See also Coppock & Beaver (2013), who show that the meaning of propositional *only* can always be converted into a 2-place function of type <<ep,p>,<ep,p>> by way of Geaching.

b. ⟦ mới$_{EXC}$ ⟧ = $\lambda P_{<e,it>}. \lambda t.\lambda x.\ P(x)(t) \ \& \ \forall y\ [y >_S x] \rightarrow \neg P(y)(t)$, where '$>_S$' stands for the partially ordered inclusion scale in the domain of plural individuals

Notice, again, that the entries in (22ab) lack one argument compared to additive *noch* in (11) above since exclusives do not presuppose the existence of alternative times or individuals. In the next three sub-sections, we will lay out in more detail the analysis of aspectual and exclusive *mới* as scale-sensitive particles.

3.3 Aspectual *mới*: Association with the temporal scale

As indicated in (22a), aspectual *mới*$_{ASP}$ operates on temporal scales. It combines a temporal predicate with a (covert) pronominal temporal argument that receives its value (= the topic time) from an assignment function *g*, and it yields an assertion (i.) that the predicate holds of this topic time, and (ii.) that the predicate does not hold for any temporal interval preceding the topic time: this effectively results in the exclusion of earlier points in time that are higher on the earliness scale. Given that t_{TOP} is by default the utterance time, the scalar component makes salient the 'present perfect' reading in sentences containing aspectual *mới*$_{ASP}$.

As for our initial example (1a), repeated, (22a) allows for the semantic derivation of aspectual *mới* with the achievement predication *step outside* and the LF-structure in (23). Following the analysis in von Stechow (2009), the achievement predicate has the (simplified) phasal meaning in (24). The compositional semantic derivation of (1a) is shown in (25): [6]

(1) a. Anh ấy **mới** (vừa) bước chân ra ngoài.
he PRT step foot outside
'He just stepped outside.'

(23) [t_{TOP} [*mới* [$_{vP}$ he step outside]]]

(24) ⟦ step outside ⟧ = $\lambda x.\lambda t$: x is not outside before t. x is outside at t (simplified)

(25) $⟦(1a)⟧^g = ⟦$ *mới*$_{ASP}⟧(⟦$ he step outside $⟧)(⟦ t_{TOP} ⟧^g)$

= $[\lambda P_{<it>}.\lambda t.\ P(t) \ \& \ \forall t'[t' >_S t] \rightarrow \neg\ P(t')](\lambda t$: g(3) ¬outside before t. g(3) outside at t)(t_{TOP})

= 1 iff g(3) is outside at t_{TOP} & g(3) is not outside at any moment preceding t_{TOP}; defined iff g(3) is not outside at any moment preceding t_{TOP}.

The reason why aspectual *mới* can freely combine with telic achievement (or accomplishment) predicates is that this predication types is phasal, making reference to ¬ϕ- and ϕ-states. Crucially, though, the ¬ϕ-component is asserted by *mới*, but only presupposed by the achievement vP (von Stechow 1989). By contrast, aspectual *mới* is semantically incompatible with atelic predicates (*know*, *resemble*, *eat apples*), which refer to eventualities extending over time. With t_{TOP} normally set to the instantaneous utterance time (Smith & Erbaugh 2005), it follows that parts of temporally extended eventualities must be located before t_{TOP}, resulting in a contradiction to the temporal exclusion semantics in (22a). This triggers aspectual coercion to inchoative or resultative (accomplishment) readings in (10a-c).

[6] The analysis of aspectual *mới* as underlyingly exclusive is reminiscent of König's (1981, 1991) treatment of German aspectual *erst* as an exclusive particle. Thanks to Mira Grubic (p.c.) for pointing this out.

3.4 Further Observations: Behavior of aspectual *mới* under higher clausal negation

This sub-section presents more evidence for the conjunctive analysis of aspectual *mới* in (22a). Recall that on our analysis, aspectual *mới* states that the prejacent is true at the (present) topic time (A) and that it was not true at any earlier point in time (B) as part of its truth conditions. The conjunctive A&B analysis therefore predicts for the three readings in (27) to be logically possible with aspectual *mới* under a higher matrix negation, as in (26). Of the three logically possible readings, only (27i) and (27ii) are actually available, whereas (27iii) is ruled out as logically contradictory (assuming a single event). The availability of (27i, ii) is illustrated by the felicitous continuations in (26ab).

(26) **Không** phải là Nam **mới** đến.
NEG right/true C Nam PRT arrive.
'It is not true that Nam just arrived.'

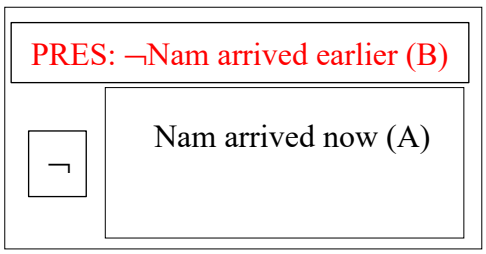
a. Nam đến cách đây hai giờ.
Nam arrive ago two hour.
'Nam arrived two hours ago.'

b. Nam chưa đến.
Nam not.yet arrive
'Nam has not arrived yet.'

(27) NOT (A = Nam arrived now ∧ B = ¬ Nam arrived earlier)
i. Nam didn't arrive now, but he arrived earlier (not A & not B) => (26a)
ii. Nam didn't arrive now, and he hasn't arrived earlier (not A & B) => (26b)
iii. Nam arrived now, and he arrived earlier (A & not B)

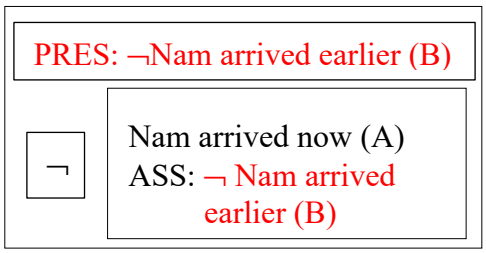
The felicity of (26a) on the interpretation (27i) with both sub-propositions negated raises the question of why such sentences would not induce a presupposition failure. After all, they seem to incur a violation of the presupposition of the change-of-state verb, namely that 'Nam hasn't arrived earlier'; cf. (24). In response to this problem, we follow Abrusan (2016) and propose that (26a) involves presupposition cancellation under negation: If the same meaning component B (here: Nam hasn't arrived earlier) is both asserted and presupposed, and if the asserted/entailed meaning is negated, then the presupposed meaning component must be negated. This mechanism of presupposition cancellation rules out the semantic structure in (28b) in favor of (28c), giving rise to (27i).[7]

(28) a.



(= (26b)/(27ii))

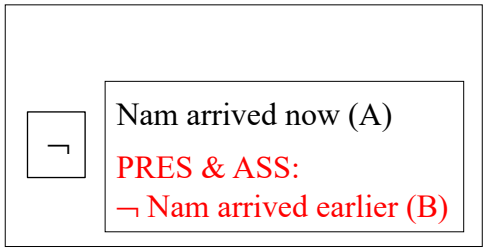
b. *



[7] Mira Grubic (p.c.) points out that the same behavior can be observed with the German aspectual particle *gerade* 'just'. German (i) with aspectual *gerade* is ambiguous in the same way as its Vietnamese counterpart in (26), giving rise to the two interpretations in (27i) and (27ii).

(i) Es stimmt nicht, dass Nam gerade angekommen ist.
it be.correct not that Nam just arrived is
'It is not true that Nam has just arrived.'

c.



⇒ Nam didn't arrive now, but earlier (26a)/(27i)

3.5 Exclusive-focus *mới*: Association with partially ordered scales

Turning to the interpretation of exclusive *mới*, its lexical entry in (22b) allows for the semantic derivation of (7) with the LF in (29a). The semantic derivation is shown in (29b).

(29) a. [$_{FocP}$ apples$_1$ [~~Nam~~ t$_{TOP}$ [*mới* [λx$_1$ Nam eat ~~apples$_1$~~]]]]

b. ⟦(7)⟧= ⟦*mới*$_{EXC}$⟧(⟦λx$_1$ Nam eat ~~apples$_1$~~ ⟧) (⟦t$_{TOP}$ ⟧^{g}) (⟦apples$_F$ ⟧)
= [λP$_{<e,it>}$.λt.λx. P(x)(t) & ∀y [y >$_S$ x]: ¬P(y)(t)] (λx.λt. Nam eats x at t)(t$_{TOP}$)(apples')
= 1 iff Nam eats apples at t$_{TOP}$ & Nam eats nothing more than apples at t$_{TOP}$.

As argued above, the obligatory EXCL-reading of *mới* with focus fronting follows from an independent semantic factor. Tran (2021) shows that remnant vPs after overt extraction denote semantically unbounded (Verkuyl 1993) or non-quantized events, such that overt movement triggers only future-oriented or generic interpretations, cf. (30a) vs (30b) with fronting:

(30) a. *Nam* *ăn* *táo.*
Nam eat apple
'Nam ate the apples/the apple.'

b. *Táo* [*Nam* *ăn* ~~*táo*~~].
apple Nam eat
'Nam eats/ will eat apples (not pears).'

Importantly, such unbounded eventualities are incompatible with the inherently bounded semantics of aspectual mới: the interpretive effect of fronting appears to be so strong that coercion of the remnant vP-meaning into a bounded accomplishment is impossible. Alternatively, focus fronting of the object NP *táo* 'apple' may make the scale of alternative foodstuffs so salient that the aspectual construal is blocked for pragmatic reasons.

We conclude the discussion of aspectual and exclusive *mới* by looking at the interaction of the two instances of scale-sensitive *mới* with a temporal adverb. In (31a), aspectual *mới* associates with the vP containing the temporal adverb *hôm qua* 'yesterday' in its canonical sentence-final position. As with all other instances of aspectual *mới*, the vP-event must be construed as telic/bounded, such that the writing of the paper is necessarily complete. As a result, the continuation in (31a.i) is infelicitous, and it can only be rescued by coercing the interpretation of the *mới*-clause into an inchoative reading, cf. (31a.ii); see also FN2. In (31b) by contrast, exclusive *mới* associates with the focus-fronted temporal adverb in sentence-initial position, and the vP-event is construed as atelic – same as with all other instances of focus fronting: Nam began writing the paper yesterday, but it is not finished yet.

(31) a. Nam **mới** [$_{vP}$ viết bài **hôm qua**] nên hôm nay chưa xong.
Nam PRT write paper yesterday so today not-yet finish
i. #‘Nam has just written the paper yesterday, so today he has not finished it yet.’
ii. ‘Nam started to write the paper yesterday, so today he has not finished it yet.’
b. **Hôm qua** Nam **mới** [$_{vP}$ viết bài] nên hôm nay chưa xong.
yesterday Nam PRT write paper so today not.yet finish
‘Nam did not start writing the paper until yesterday, so today he hasn’t finished it yet.’

In short, (31b) readily licenses the incomplete reading, whereas (31a) is odd on the telic interpretation induced by aspectual *mới*. In section 4, we will discuss whether it is possible to further unify the two instances of scale-sensitive *mới*. This unification would involve analyzing both as instances of a generalized focus-sensitive particle that conventionally associates with different focus domains, namely aspect focus and narrow XP-constituent focus.

4. A further unification: *mới* as a generalized focus-sensitive particle?

Examples (6) and (7) above showed the information-structural and syntactic differences between *mới*$_{ASP}$ and *mới*$_{EXCL}$. These distinctions are summarized again in (32), and they will be illustrated further below.

(32) i. *mới*$_{ASP}$: incompatible with narrow constituent focus; canonical word order
ii. *mới*$_{EXCL}$: requires narrow constituent focus; focus fronting

Because of (32i), aspectual *mới* is infelicitous in answers to *wh*-questions with narrow constituent focus, except as a second occurrence focus: *mới*-answers to *wh*-questions are hence infelicitous unless *mới* is already present (as a SOF) in the question (33a). The same holds for VP-questions (33b):

(33) a. Q: Trong số các sinh viên ai #**(mới)** đi? Nam **mới** đi và Trung cũng vậy.
who among PL student who PRT leave Nam PRT leave and Trung also so
‘Who among the students (just) left?’ ‘Nam just left, and so did Trung.’
b. Q: Nam !?**(mới)** làm gì vậy? Nam **mới** làm vỡ cái bình.
Nam PRT do what PRT? Nam PRT make break CL vase
‘What did Nam (just) do?’ ‘Nam just broke the vase.’

Conversely, the aspectual particle *mới* is felicitous in TAM-focus contexts, sometimes resembling verum, as illustrated by its occurrence in verum corrections with – what appears to be – tense focus in (34a); in yes/no-questions in (34b); and in so-called promise-contexts in (34c); see Zimmermann & Hole (2008), Zimmermann (2016) for discussion.

(34) a. A: Thật không hay là Nam vẫn còn đây. Nó chưa đi.
true not good C Nam still remain here. He not.yet leave
‘It is not good that Nam is still here. He has not left yet.’
B: Không, Nam **mới** đi.
not Nam PRT leave
‘No, Nam just left.’

b. Q: Nam đi chưa? / Nam đi rồi hay chưa đi?
Nam leave not.yet / Nam leave already or not.yet leave
'Did Nam leave? / Has Nam already left, or has he not (yet left)?'
A: Nam mới đi.
Nam PRT leave
'Nam just left.'

c. Nam hứa đi và quả thật nó **mới** đi.
Nam promise go and in fact he PRT leave
'Nam promised to go and in fact he just left.'

The different selection properties of *mới*$_{\text{ASP}}$ and *mới*$_{\text{EXCL}}$ in (32) to (34) can be made to follow directly from focus structure. To this end, we could treat *mới* as a particle that conventionally associates with focus in the sense of Beaver & Clark (2008) and Rooth (1992, 1996). Generalizing the analysis from sub-section 3.2 of exclusive *mới* as a focus operator selecting for structured propositions, see also Krifka (1991), we can assign the meaning in (35a) to instances of aspectual *mới*, which all seem to involve temporal scales induced by tense focus, such that FOC∈ {i: i a temporal interval}

(35) a. $[\![\text{mới}]\!] = \lambda BG_{<\sigma,t>}.\ \lambda FOC_{<\sigma>}.\ BG(FOC) \,\&\, \forall X\ [X >_S FOC]: \neg BG(X)$

However, assuming that *mới*$_{\text{ASP}}$ and *mới*$_{\text{EXCL}}$ both attach to vP, i.e., below T, as we did in (9) above, we still require a tense-intensionalized version of (35a) in order to account for instances of *mới*$_{\text{EXCL}}$ with fronted constituent focus:

(35) b. $[\![\text{mới}]\!]^{\text{INT}} = \lambda BG_{<\sigma,it>}.\ \lambda t_{<i>}.\ \lambda FOC_{<\sigma>}.\ BG(FOC)(t) \,\&\, \forall X\ [X >_S FOC]: \neg BG(X)(t)$

Notice that treating *t* as a mere contextual parameter on the interpretation function will be of no help in achieving a unified lexical entry for both instances of *mới* on a tense-focus construal of aspectual *mới*. Whereas this would allow for deletion of the additional *t*-argument in (35b), such a move would also result in the deletion of the focus argument in the tense focus case in (35a), thereby again blocking a unified analysis.

In view of this difficulty, a possible solution would consist in treating aspectual *mới*$_{\text{ASP}}$ as expressing *aspect focus* on change-of-state events instead of tense focus in the temporal domain. Same as temporal intervals, events can be ordered on an earliness scale $>_S$ that is constructed depending on temporal intervals associated with the even in question. Drawing on the informal discussion of temporal entailments in sub-section 3.2, and again following Musan (2001), we propose that an event *e'* occurs earlier than *e*, i.e., it is higher on the event-earliness scale $e' >_S e$, if and only if the result state of *e'*, *Res(e')*, obtains earlier than the result state of *e*, *Res(e)*.[8] The corresponding strength entailment is likewise defined in terms of result states, as in sub-section 3.2. With the new notions of event scales and event entailments in place, we can redefine the meaning of aspectual *mới* as in (36a). After application of ∃e-closure in (36b), the *mới*-clauses in (34a-c) will thus come out true if and only if there is a stepping-outside event

[8] As discussed in Musan (2001), with telic achievements and accomplishments, the result state *Res* obtains at the time at which the event is completed, whereas with atelic states and activities the result state obtains immediately after the beginning of the state or activity. In sum, telic events will be placed higher on the earliness scale if their result state obtains earlier in time, whereas atelic events are placed higher if their event time begins earlier.

of Nam within the contextually given reference time *t*, and if there was no earlier stepping outside of Nam in *t*.

(36) a. $[\![\text{mới}_{\text{ASP}}]\!]^t$ = $\lambda P_{<vt>}.\lambda e.\ P(e) \ \&\ \forall e'\ [e' >_S e]: \neg P(e')$
$\Leftrightarrow$ $\lambda P_{<vt>}.\lambda e.\ P(e) \ \&\ \neg\exists e'[e' >_S e] \wedge P(e')$
b. ∃e-closure $\Rightarrow$ 1 iff there is a P-event e in t and there is no earlier P-event e' in t!

Moreover, assuming that both instances of *moi* are generated in Asp, and taking up a proposal by Cable (2013: 234) that event arguments are base-generated in the specifier of AspP, aspectual *mới* would operate on the syntactic bi-partition structure in (37), thereby making it syntactically fully parallel to its focus-fronted counterpart *mới*$_{\text{EXCL}}$.

(37) [$_{\text{Asp}}$ e$_{\text{FOC}}$ [*mới* [$_{\text{vP}}$ predication$_{\text{BG}}$]]]

To conclude, on the assumption that aspectual *mới* conventionally associates with a focused event argument in AspP, both surface instantiations of *mới* have the focus-sensitive lexical entry in (35a), with *t* a mere contextual parameter on the interpretation function. Treating *t* as a contextual parameter, to be pragmatically resolved, is moreover consistent with the status of Vietnamese as a grammatically tenseless language (Tran 2021). Finally, the unified analysis would account for why instances of aspectual *mới* often translate as 'only now'.

5. Universal modal *mới*

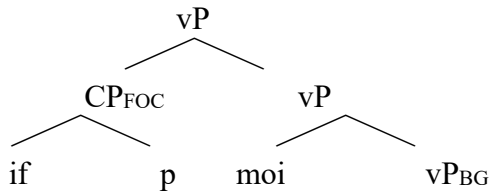
The underlying exclusive nature of *mới* is further supported by the fact that it occurs in the bi-clausal expression of deontic/dispositional statements with universal modal force. The effect is a conditional with *conditional perfection* semantics (*only if* …). Parallel facts on the modal recycling of exclusive particles are reported for Masalit (Leffel 2012) and Hausa (Grubic & Mucha 2020), and, more generally, in the discussion of conditional perfection (Geis and Zwicky 1971, Herburger 2015, Traugott et al. 2009, among others)

(38) a. [Thức lâu]$_{\text{F}}$ **mới** [biết đêm dài]$_{\text{BG}}$. (Proverb)
stay.awake long PRT know night long
'Only if one stays awake long, one knows the night is long.'
b. [Có biên lai]$_{\text{F}}$ **mới** [lấy được sơ – mi]$_{\text{BG}}$. (Nguyen 1997: 157)
exist receipt PRT take get shirt
'Only if the receipt exists you will get your shirt.'

The analysis of *mới* from (22) and (35a) above extends directly to such implicit conditional constructions, given the following assumptions: First, *mới* takes the backgrounded consequent proposition *q* (<st>) and the (*if*-conditionalized) focused antecedent proposition P (<st,st>) as its complements: the QUD of such sentences is the following: *Under which antecedent conditions p will the consequent q hold?* Second, *mới* operates directly on logical entailment scales. Third, a disjunction in the downward monotonous conditional antecedent entails the individual parts: $[p \vee r] \rightarrow q \Rightarrow p \rightarrow q$. The excluded higher scalemates on the logical entailment scale are all logical disjunctions: $p \vee r \rightarrow q$, $p \vee s \rightarrow q$, $[p \vee r \vee s] \rightarrow q$, etc.

The syntax of modal exclusive *mới* is shown in (39) (with a covert *if*-conditionalizer), and the meaning of modal exclusive *mới* is provided in (40):

(39)



(40) $[\![\text{mới}_{\text{MOD}}]\!] = \lambda q_{<st>}.\lambda P_{<st,st>}.\lambda w.\ P(q)(w)\ \&\ \forall Q\ [Q >_S P]: \neg Q(q)(w)$
(with $Q >_S P$ iff $Q(q)(w) \rightarrow P(q)(w)$, for any q and w)

The LF of (38a) is given in (41a), the individual meaning components *q* and *P* are specified in (41b), and the full interpretation is shown in (42):

(41) a. [[$_{\text{CP,F}}$ Thức lâu] [*mới*$_{\text{MOD}}$ [$_{\text{vP,BG}}$ biết đêm dài]]]
b. q = λw. one knows the night is long in w; P= $\lambda q_{<st>}.\lambda w.\ \forall w' \in R(w)$: one stays awake long in w' → q(w')

(42) $[\![(38a)]\!] = [\![\text{mới}_{\text{MOD}}]\!]\ ([\![\text{biết đêm dài}]\!])\ ([\![\text{COND thức lâu}]\!])$
$= [\lambda q_{<st>}.\lambda P_{<st,st>}.\lambda w.\ P(q)(w)\ \&\ \forall Q\ [Q >_S P]: \neg Q(q)(w)]$
(λw. one knows the night is long in w)
$(\lambda q_{<st>}.\lambda w.\ \forall w' \in R(w)$: one stays awake long in w' → q(w'))

= 1 iff for all w-accessible worlds w', such that if one stays awake long in w' then one will know that the night is long in w', and there are no stronger alternatives in *{p: if p then one will know the night is long}* that are true in w'.

The presence of modal *mới* thereby rules out disjunctions of *p* with any other proposition in the antecedent of the conditional. For instance, modal *mới* negates or excludes the alternatives in (43a-c), according to which there would be other propositions, or state-of-affairs, from which q would also follow, and all of which are stronger than the prevalent proposition in (43d):

(43) a. If [one stays awake long or one watches TV series] one knows the night is long.
b. If [one stays awake long or one reads informative books] one knows the night is long.
c. If [one stays awake long or talks to smart people] one knows the night is long.
d. If [one stays awake long] one knows the night is long.

In effect, implicit conditionals with modal *mới* 'only' assert that *p* is the only way of bringing about *q*, same as their perfected conditional counterparts with exclusive *only* in English.

As a final remark, notice that the functional roles of BG and FOC are reversed in the case of modal *mới*, when compared to the focus-sensitive entry in (35a). With modal *mới*, it is the focus interpretation that functionally applies to the backgrounded meaning, not vice versa. This would seem to call for a further weakening of the meaning (35a) in terms of a disjunctive specification, as in (44):

(43) $[\![\text{mới}]\!] = \lambda BG_{<\sigma,t>}.\lambda FOC_{<\sigma>}.[BG(FOC) \vee FOC(BG)]\ \&\ \forall X >_S FOC: [\neg BG(X) \vee \neg X(BG)]$

6. Conclusion

We analyzed the Vietnamese particle *mới* as a generalized scalar particle that associates syntactically with a focus and a background constituent. Semantically, it functions as a focus-sensitive operator conventionally associating with focus and operating on contextually given scales. As an aspectual particle, *mới* associates with tense or aspect focus and operates on the scale of temporal precedence. As an exclusive particle it operates on the inclusion scale over the domain of plural individuals. We showed that Vietnamese *mới* exhibits striking parallels to the flexible scale-sensitive behavior of the scalar exclusive particle *only* in English (Beaver & Clark 2008, Coppock & Beaver 2013), as well as to the additive scale particle *noch/still* in German and English (Beck 2020). Instances of aspectual *mới* require telic achievement or accomplishment predications as semantic complements, i.e., predications with an inherent result-state as part of their meaning, and they yield a *resultative perfect* effect in the sense of Dahl and Hedin (2000) and Fischer (2019). Finally, modal *mới* operates on the scale of strictly logically stronger propositions. Given that the scalar particle bears the same form as the adjective *mới* 'new', a gradable adjective, it is plausible that the scalar particle *mới* is developed from this gradable adjective, which also operates on semantic scales. This is in line with the assumption in Beck (2020) that the notion of *scale* is not a grammatical concept, but a general cognitive concept that can have an impact on the grammar and semantics at various levels.

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