

New

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Abstract

The modifier *new* gives rise to intriguing interpretations, some of them reminiscent of the intrasentential context dependence found in implicit domain restriction with different kinds of quantifiers or the superlative. I give an analysis where the adjective stem maps an implicitly modified (or even itself implicit) noun onto a measure relation combining with a positive, a comparative or a superlative formative in standard ways.

Keywords Temporal adjectives · domain restriction · event-dependent modifiers

1 Introduction

Moltmann (1996) drew attention to the reading of the adjective *new* in (1) which she called “event-related”.

(1) John used a new pen.

On this reading, *new* “does not mean ‘recently having come into existence’, but ... ‘recently having participated in the event described by the verb ...’.” She formalized the sentence on this reading as in (2).

(2) $\exists e \exists x (used(e, John, x) \& new\ pen(e, x, [pen]))$

What was intended is probably something along the lines of (3).

(3) $\exists e \exists x (use(x)(j)(e) \& pen(x) \& \neg \exists e' (\tau(e') < \tau(e) \wedge use(x)(j)(e')))$

Here what *new* contributes is the conjunct $\neg \exists e' (\tau(e') < \tau(e) \wedge use(x)(j)(e'))$, which “contains a variable bound by the event quantifier that is part of the meaning of the same sentence” – $\exists e$.¹ For this reason, Moltmann calls *new* (along with *first*) an **event-dependent modifier**.

¹This is supposed to explain the lack of event-related readings with strong determiners: *John used the new pen*, e.g., would have a presupposition with an unbound event variable.

That *new* contributes that conjunct is easily said but far less easily done. One needs a compositional treatment that allows for (1) to be understood in two different ways, maybe more. The treatment must also take into account that *new* occurs in the comparative and the superlative beside the positive, and that it can also occur in predicative and pseudo predicative function:

- (4) The newest extrasolar planet was discovered on July 31, 2009.²
- (5) Mary is new in the church, and already sings in the church choir.³
- (6) Mary is new and does not know what to expect when she enters the classroom.⁴

I will present an analysis where the interpretation that Moltmann (1996) termed event-related results from an implicit modification of the head noun, in a close parallel to the analysis of the superlative proposed by Heim (1999) and to quantificational domain restriction more generally. It will turn out, however, that “event-related” is not a very appropriate term; it is more a matter of **intrasentential contextual determination**.

2 Attributive positive *new*

Let us first consider a couple of real-world examples of the critical reading:

- (7) I went to confession with a new priest.⁵
- (8) I kissed a new man last night.⁶

Clearly, *a new priest* is in (7) not a priest who had only just become a priest but one with whom I had not gone to confession before. By the same token, *a new man* is in (8) not a man who had not been a man for long, it is one that I had never kissed until last night.

What characterizes these cases is that the interpretation of the *new* NP is affected by most or all of the intrasentential context, including the verb.

Those cases coexist with cases where ‘less’ of the intrasentential context affects the interpretation – down to just the head noun.

- (9) The gallery staff painted the wall a new color.⁷

²<http://www.universetoday.com/36530/newest-planet/>

³<http://baptistwaypress.texasbaptists.org/files/2011/10/LivingFaithTeaching.pdf>

⁴<http://csefel.vanderbilt.edu/kits/wwbtk12.pdf>

⁵<http://forums.catholic.com/showthread.php?t=684209>

⁶<http://river-phoenix.net/msg/th/?t=22297>

⁷<http://prtl.uhcl.edu/portal/page/portal/ALR/Publications/eConnections/>

- (10) Now Mandy has moved into a new flat, enrolled on a college course, and has started a small hairdressing business.⁸
- (11) Having decided to buy a piano, the next question is whether to buy a new one or a used one.⁹

The question is how more or less of the sentence around the *new* NP makes its way into its interpretation.

2.1 Heim (1999) on Superlatives

The cases where close to all of the surrounding material is relevant, like (8), are reminiscent of what Szabolcsi (1986) called **comparative superlatives**.

- (12) John climbed the highest mountain.

On one reading, John only climbed the highest mountain anybody climbed. Many, like Farkas and É. Kiss (2000), have assumed a scope ambiguity, but Heim (1999) argues that it is “just a case of context-dependency”.

- (13) *John climbed [the [[C -est] [high mountain]]]* (LF for (12))

The intension of an adjective stem like *high* maps a property P to a function from degrees g to sets of individuals x (ignoring times and worlds):

- (14) $\llbracket high \rrbracket = \lambda P \lambda g \lambda x$ x is a P and x is at least g high

- (15) $\llbracket high\ mountain \rrbracket = \lambda g \lambda x$ x is a mountain and x is at least g high

Now if $\llbracket C \rrbracket^c$ = the set of mountains climbed by somebody relevant,

- (16) $\llbracket C -est \rrbracket = \lambda R_{d(et)} \lambda x$ there is a g such that $R(g)(x)$ and x is the only mountain climbed by anybody relevant such that $R(g)(x)$

and $\llbracket the \llbracket C -est \rrbracket \llbracket high\ mountain \rrbracket \rrbracket$ denotes the at least g high mountain such that any mountain climbed by anybody relevant is at least as low as g .

Note that the C parameter – Heim calls it a “covert deictic element” – is an argument of the superlative formative.

This method for interpreting *the highest mountain* could be a model for interpreting *a new mountain*. But we must decide where to posit the covert element: with the positive formative, or with the adjective stem? Or even *with its head noun argument*?

⁸www.newcastle.gov.uk/wwwfileroot/legacy/nhf/Casestudies.pdf

⁹http://www.marthabeth.com/new_or_used.html

2.2 Domain Restriction

Cases like (8) remind us not only of cases like (12) but also of cases like (17):

(17) Almost all tickets were sold at checker 4. (Eckardt 1999: 167)

This sentence is understood as saying that almost all tickets *that were sold* were sold at checker 4. – In turn, cases like (17) have in common with cases like (18) that the extension of the noun or more generally NP is intersected with the value of a contextually determined property.

(18) Most mice died.¹⁰

This is usually described as a process of quantificational domain restriction, encoded in the meaning of some determiner or other quantificational word. This, again, can take the form that the restrictor is explicitly represented by a covert element, as suggested by (19a), or the form that it is implicit, as suggested by (19b) (again, worlds and times are ignored):¹¹

(19) a. $\llbracket \textit{every } R_1 \rrbracket^c = \lambda P \lambda Q P \cap c(R_1) \subseteq Q$
 b. $\llbracket \textit{every} \rrbracket^c = \lambda P \lambda Q P \cap \mathcal{R}(c) \subseteq Q$

Some have suggested that the restrictor could be associated with the noun itself. Kratzer (2004) describes it in terms of resource situation arguments:

(20) $\llbracket \textit{mouse} \rrbracket = \lambda x \lambda \rho \textit{mouse}(x)(\rho)$

The argument ρ could be saturated by a situation containing just the mice in Griffith’s experiment. Stanley and Szabo (2000) describe the association between nouns and restrictors in terms of a covert sister to N (actually, the second member of a node N pair where the first member is the overt noun, and actually, itself a pair of a type $e(et)$ element and a type e element):

(21) $\llbracket \langle \textit{mouse}, f(i) \rangle \rrbracket_c = \llbracket \textit{mouse} \rrbracket_c \cap c(f)(c(i))$

In outlining an analysis of the adjective stem *new* and its positive form *new* below, I will be assuming this general mode of implicitly modifying a noun, except that the restrictor is not explicitly represented but implicitly given:

(22) $\llbracket \textit{mouse} \rrbracket_{w,t}^c = \textit{mouse}_{w,t}^c \cap \mathcal{R}(c)_{w,t}$

Here \mathcal{R} is a function from contexts to properties.

¹⁰<http://prezi.com/dcvbxmlmrhmv/dna-the-stuff-of-life/>

¹¹See von Stechow 1998 for a discussion of the options.

2.2 Stem and Positive

Let us assume a time interval evaluation index, on a par with the world (the world will be disregarded though). Events will be treated as a separate sort, but states will be equated with times.

The adjective stem *new* can be defined thus:

$$(23) \quad \llbracket new \rrbracket_t^c = \lambda P \lambda g \lambda x \text{ age}_t(P)(x) \leq g \text{ and } P_t(x)$$

where $\text{age}_t(P)(x)$ is the largest span $t - t'$ for a $t' \leq t$ such that $P_{t'}(x)$ ($t' \leq t$ is to mean $t' = t$ or $\text{end}(t') < \text{start}(t)$, and $t - t'$ is to mean $\text{start}(t) - \text{start}(t')$). For the composition with the head noun, we use what we agreed on in (22).

$$(24) \quad \llbracket new \ man \rrbracket_t^c = \lambda g \lambda x \text{ age}_t(\lambda t' \text{ man}_{t'} \cap \mathcal{R}(c)_{t'})(x) \leq g \text{ and } (\text{man}_t \cap \mathcal{R}(c)_t)(x)$$

Let us delay determination of \mathcal{R} until we have a clear picture of the meaning of the intrasentential context. To complete the DP, we need to first choose a positive formative. There are two: one *relativist*, used for relative adjectives, one *extremist*, used for adjectives like *empty* or *full* (cf. Kennedy 2007: 30ff.).

$$(25) \quad \llbracket +_r \rrbracket_t = \lambda m_{i(d(et))} m_t(\text{standard}(m))$$

$$(26) \quad \llbracket +_e \rrbracket_t = \lambda m_{i(d(et))} m_t(0)$$

What we have in (8) is the extremist positive, (26). Then we get:

$$(27) \quad \llbracket +_e \ new \ man \rrbracket_t^c = \lambda x \text{ age}_t(\lambda t' \text{ man}_{t'} \cap \mathcal{R}(c)_{t'})(x) \leq 0 \text{ and } (\text{man}_t \cap \mathcal{R}(c)_t)(x)$$

$$(28) \quad \llbracket a +_e \ new \ man \rrbracket_t^c = \lambda P \text{ some } x \text{ age}_t(\lambda t' \text{ man}_{t'} \cap \mathcal{R}(c)_{t'})(x) \leq 0 \text{ and } (\text{man}_t \cap \mathcal{R}(c)_t)(x) \text{ and } P(x)$$

Let us now build the AspectP. Syntactically, it looks like this:

$$(29) \quad \llbracket \mu_2 [\text{Aspect}_{\text{perfective}} [I \ kiss \ x_2]] \rrbracket$$

The variable x_2 and its binder μ_2 (to be interpreted as lambda abstraction) result from Quantifier raising of the object $a +_e \ new \ man$. The intension is:

$$(30) \quad \llbracket \mu_2 \text{Aspect}_{\text{perfective}} I \ kiss \ x_2 \rrbracket = \lambda t \lambda x \text{ some } e \subset t \text{ kiss}(x)(i)(e)$$

This is a good candidate for the piece of context that is to fill $\mathcal{R}(c)$ in (28). The intension of (8) minus the past tense and the time adverbial *last night* is obtained by abstracting over t and applying (28) to the value of (30) at t :

$$(31) \quad \llbracket a +_e \text{new man} (\mu_2 \text{Aspect}_{\text{perfective}} I \text{kiss } x_2) \rrbracket = \lambda t \text{ some } x \\ \text{age}_t(\lambda t' \mathbf{man}_{t'} \cap (\lambda t \lambda x \text{ some } e \subset t \mathbf{kiss}(x)(i)(e))_{t'})(x) \leq 0 \text{ and} \\ (\mathbf{man}_t \cap (\lambda x \text{ some } e \subset t \mathbf{kiss}(x)(i)(e)))(x) \text{ and} \\ \text{some } e \subset t \mathbf{kiss}(x)(i)(e)$$

Past tense relative to t will now apply to this intension, yielding for any t :

$$(32) \quad \llbracket \text{Tense}_{\text{past}} (a +_e \text{new man} (\mu_2 \text{Aspect}_{\text{perfective}} I \text{kiss } x_2)) \rrbracket_t = \\ \llbracket \text{Tense}_{\text{past}} \rrbracket_t(\llbracket a +_e \text{new man} (\mu_2 \text{Aspect}_{\text{perfective}} I \text{kiss } x_2) \rrbracket) = \\ \lambda t^* \text{ some } x \text{age}_{t^*}(\lambda t' \mathbf{man}_{t'} \cap (\lambda x \text{ some } e \subset t' \mathbf{kiss}(x)(i)(e)))(x) \leq 0 \\ \text{and } (\mathbf{man}_{t^*} \cap (\lambda x \text{ some } e \subset t^* \mathbf{kiss}(x)(i)(e)))(x) \\ \text{and some } e \subset t^* \mathbf{kiss}(x)(i)(e) \text{ and } t^* < t$$

Finally, applying this to *last night*, we obtain the truth value 1 iff last night (was before now and) contained an event of me kissing some object who was a man (kissed by me) and had not earlier been (a man and) kissed by me. This is the interpretation we want.

The definite article will lead to a trivial interpretation if the property \mathcal{R} is set to the intension of AspectP in the context:

(33) I kissed the new man last night.

(34) Last night I kissed the man I kissed last night and had not kissed before last night.

Therefore (33), or generally any similar sentence with a strong determiner, does not display a reading where the noun is implicitly modified by AspectP. Note, however, that once this phrase is itself made a presupposition, these readings reappear.

(35) Did you enjoy kissing the new man last night? /
After I kissed the new man last night I felt bad.

3 Comparative, superlative, predicative; *old*, and creation

In this section I consider how the meaning of the stem *new* defined in (23) fits together with non-positive formatives and with a predicative function. I also show how *old* can be defined as the antonym of *new* (and combined with $+_e$ or $+_r$) to derive ‘former’ as a possible interpretation. And finally, I discuss a problem arising with verbs of creation and provision in a language like German (not so much English, where *another* is often used instead).

From here on it will be rudimentary though.

3.1 Comparative and Superlative

(23) is compatible with simple analyses:

$$(36) \quad \llbracket -er \rrbracket_t = \lambda x \lambda m_{i(d(et))} \lambda y \text{ some } g \ m_t(g)(y) \text{ and not } m_t(g)(x)$$

$$(37) \quad \llbracket -est \rrbracket_t = \lambda m_{i(d(et))} \lambda x \text{ some } g \ m_t(g)(x) \text{ and no } y \neq x \ m_t(g)(y)$$

Interesting complexities arise, though.

Note, for example, that in (4) the recency of the extrasolar planet being discovered must be anchored not to July 7, 2009, but to the utterance time, so that the **age** function must be read *de re* with respect to the time index.

3.2 Predicative and Pseudo Predicative

The predicative use of *new*, as in (6), can be treated as an exceptional use, patterned on the standard attributive use in the following sense: the head noun is empty but it is still there as a covert element, denoting the property that assigns the total set of individuals to every times. And like any overt head noun, it is implicitly modified by a contextually determined property $\mathcal{R}(c)$. At any time t , the intersection between I and $\mathcal{R}(c)_t$ is $\mathcal{R}(c)_t$.

In (6), $\mathcal{R}(c)$ is evidently close to the meaning of the noun *teacher*.

In (5), *new* appears to modify something which is not a noun but a PP. I call this use a pseudo predicative use.

3.3 Antonymy

Larson and Cho (2003) point out that *old* can mean *former*. But how?

$$(38) \quad \text{If you've secretly hung onto those old love letters or find yourself tempted to reignite the spark with an old flame, you're not}$$

If, standardly, *old* is defined on the basis of *new* plus negation, we get:

$$(39) \quad \llbracket +_e \text{ old flame} \rrbracket_t^c = \lambda x \ \mathbf{age}_t(\lambda t' \ \mathbf{flame}_{t'} \cap \mathcal{R}(c)_{t'})(x) > 0 \text{ or not } (\mathbf{flame}_t \cap \mathcal{R}(c)_t)(x)$$

Let $\mathcal{R}(c)$ be empty here ($\mathcal{R}(c)_t$ is systematically the total set of individuals). Three scenarios can be identified, where (ii) does not constitute a reading:

- (i) a flame who has been a flame for a while,
- (ii) not a flame present or past,
- (iii) a former flame.

3.4 Verbs of Creation and Provision (i.a.)

Quite often in German, *neu* would seem to be redundant:

- (40) Hoffentlich hast Du noch alles im Haus, um fix einen neuen Kuchen zu backen.¹²

If *neu* means ‘that hasn’t been a (baked) cake before’, this is already entailed by the verb. In fact, however, *neu* is here used in a sense similar to *another*.

This could be explained through the presupposition of narrow focus on *neu* – that there is a P cake in the discourse for some alternative P (old?). This focus effect might be conventionalized in German but not in English.

References

- Eckardt, Regine (1999)** “Focus with Nominal Quantifiers”, in P. Bosch and Rob van der Sandt (eds.) *Focus: Linguistic, Cognitive, and Computational Perspectives*, Cambridge: CUP, 166–186.
- Farkas, Donka and Katalin É. Kiss (2000)** “On the comparative and absolute readings of superlatives”, *Natural Language and Linguistic Theory* **18**(3): 417–455.
- von Fintel, Kai (1998)** “The Semantics and Pragmatics of Quantifier Domains”. Vilem Mathesius Lectures, Praha.
- Heim, Irene (1999)** “Notes on Superlatives”. Ms., MIT.
- Kennedy, Chris (2007)** “Vagueness and grammar: the semantics of relative and absolute gradable adjectives”, *Linguistics and Philosophy* **30**: 1–45.
- Kratzer, Angelika (2004)** “Covert Quantifier Restrictions in Natural Languages”. At semanticsarchive.net.
- Larson, Richard and Sungeun Cho (2003)** “Temporal Adjectives and the Structure of Possessive DPs”, *Natural Language Semantics* **11**: 217–247.
- Moltmann, Friederike (1996)** “Domain-related Dynamic Semantics and the Weak-Strong Distinction”. Ms., CUNY, Dept. of Philosophy.
- Stanley, Jason and Zoltán Szabó (2000)** “On quantifier domain restriction”, *Mind and Language* **15**, 219–261.
- Szabolcsi, Anna (1986)** “Comparative Superlatives”, *MIT Working Papers in Linguistics* **8**, 245–265.

¹²“Ich könnte meinen Hund erhängen” (<http://www.polar-chat.de/topic.64404.html>). In English, *bake a new cake* tends to mean to bake a new kind of cake, try a new recipe.