Modification vs. Quantification: Evidence for the distinction based on verb gradation

Verb gradation can be distinguished in at least two different subtypes: extent gradation and degree (or inherent) gradation (cf. Bolinger 1972). Extent gradation consists of the specification of the duration or the frequency of an event. Inherent gradation can better be termed degree gradation. Leaving the specification of duration aside, the difference between extent and degree gradation is that in the first case events are quantified, while in the second case a lexical (gradable) property of the verb is specified with respect to its degree. Bosque & Masullo (1998) present a finer distinction between types of verb gradation; they are speaking of e.g. event quantification, durative quantification and inherent quantification (= degree gradation). All subtypes of verb gradation are assumed to be quantificational. It seems that Bosque & Masullo arrive at this position because they focus exclusively on Spanish data. In Spanish *mucho* can be used as nominal quantifier, but also for all kinds of verb gradation. In (1a) *mucho* modifies the frequency of Juan's taking the train, while in (b) the quantity of snow that is fallen is specified. Despite the fact that quantity is modified, it is not quantification over the event. In the event quantificational interpretation mucho requires a domain of quantification (e.g. last year) that also can be implicit. In (b) mucho only specifies the quantity of snow fallen in a single event and does not require a domain of quantification.

(1)	(a) Juan va mucho en tren.	(b) Nevó mucho.
	'Juan takes the train a lot'	'It snowed a lot
	(Examples taken from Gallego	& Irirtzun 2010: 3)

While Bosque & Masullo are generally speaking of quantification, other authors distinguish between the different subtypes of verb gradation. For example de Swart (1993) assumes that frequency adverbs (like *often*) are quantifiers, while degree adverbs (as *very much*) are modifiers and therefore both are of different semantic type. Doetjes (1997) investigates the selectional restriction of quantifying and grading elements and assumes that French *beaucoup*, which is similar to Spanish *mucho*, is a degree quantifier that either selects for a scalar quantity position or an inherently scalar grading position. The presence of a grading position is linked to the event argument of a predication.

Languages like German, Dutch and Russian substantiate the assumption that extent and degree gradation have to be distinguished. In the mentioned languages different adverbs are used for extent and degree gradation, as the German data in (2) indicate. In German *viel* (*much*) is an event as well as a nominal quantifier, while *sehr* (*very*) is only used for degree gradation. In (2a) *viel* is used for a modification of the frequency or duration of the event, while in (b) *sehr* specifies the intensity of her admiration. Languages like French use the same adverb (*beaucoup*) the event quantificational as well as the degree gradation reading (cf. example 4), nevertheless both readings to not entail each other.

(2)	(a) Sie hat ihn viel bewundert	(b) Sie hat ihn sehr bewundert
	'She has admired him often'	'She has admired him very much'

If it is the case, as assumed by de Swart, that extent and degree gradation are of different semantic type, one would expect this difference to show up in one way or other. In the talk I will present evidence that indicates that adverbs used for extent gradation actually behave different from adverbs used for degree gradation. This different behavior shows up in languages like German and Russian, but as well in languages like French; therefore this is arguing for a clear cut distinction between both types of processes.

The evidence I will present is twofold. First I will show that extent and degree gradation applies to different layers of the clause. The analysis will be presented in the framework of Role & Reference Grammar (e.g. Van Valin 2005), but could easily converted into other approaches like the one of Ernst (2002). In German adverbs are ordered from left to right,

adverbs with wider scope are on the left of adverbs with narrower scope. Based on the relative order of adverbs, it can be shown that in German *sehr* can follow event-internal locative adverbials (for this class of adverbs cf. e.g. Maienborn 2001), while *viel* has to precede them. In (3a) *aus der Nase (out of the nose)* can precede *sehr*, while (b) is not acceptable (the reverse order of *viel* and *aus der Nase* would be perfectly acceptable).

- (3) (a) Der Junge hat aus der Nase sehr geblutet
 - 'The boy has strongly bled out of his nose'
 - (b) ??Der Junge hat aus der Nase viel geblutet 'The boy has bled a lot/often out of his nose'

This indicates that *sehr* is an event-internal adverb, while *viel* is unsurprisingly an adverb with scope over the event. A second type of syntactic evidence is provided by French *beaucoup*, whose interpretation as an event quantifier or a degree modifier depends on its position in the sentence. If *beaucoup* is placed between the auxiliary and the main verb it is ambiguous between the degree and event quantificational reading, placed after the main verb it only allows for the degree reading, while placed after the direct object it only allows for the event quantificational reading.

(4) Il a (beaucoup) admiré (beaucoup) cette chanteuse (beaucoup) à l'opera 'He has (often) admired this chanteuse (very much) at the opera'

The second type of evidence consists in the interaction between grammatical aspect and the degree adverb. Aspect, a category at the nucleus layer, has scope over the degree adverb and therefore affects the interpretation. The French verb *pleuvoir (to rain)* is used in a perfective construction in (5a) and allows for the event quantificational and the degree reading. In the degree reading *beaucoup* specifies the amount of rain that is fallen as large. In (b) the verb is used in a progressive construction and allows only for the degree gradation interpretation. *Beaucoup* does not specify that the whole amount of fallen rain is large, but that to a certain part of the raining event it rains hard. The perfective and the progressive interpretation do not entail each other.

(5)	(a) Il a beaucoup plu	(b) Il est en train de beaucoup pleuvoir
	'It rained a lot'	'It is raining hard'

The goal of the talk is to provide evidence, which shows that a distinction between quantification and modification is reasonable with respect to the different types of verb gradation. In addition I will provide evidence that the distinction between quantification and modification obtains irrelevant whether a language uses different adverbs for event quantification and degree gradation as French and Spanish or the same as German, Dutch and Russian. To substantiate this claim I will provide additional data from further languages (e.g. Russian) in the talk with the goal of making the distinction between modification and quantification somehow clearer.

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