

Cross-categorial modification of properties in Hebrew and English

At the center of the study of gradable predicates is the question of whether these expressions should be analyzed as relations between individuals and degrees or as context-sensitive properties. The debate extends to modifiers of gradable predicates, which can be analyzed as operating on degrees or as operating on worlds and contexts (Klein 1980, Kennedy & McNally 2005). The Hebrew intensifier *mamaš* ‘really’ has a wide syntactic distribution and the ability to modify gradable and non-gradable properties alike, suggesting that some modifiers do not operate on degrees but rather have a more flexible semantics, in contrast with true degree modifiers, like *very* and *slightly*.

A survey of 934 tokens of *mamaš* ‘really’ from online corpora shows that it modifies a large number of expressions: gradable and non-gradable adjectives (1-2), adverbs (3), PPs (4), VPs (5), and NPs (6):

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| (1) | <i>ze haya sirton mamaš xamud</i>
this was video really cute
‘This was a really cute video.’ | Gradable Adjective |
| (2) | <i>hem mamaš meʔorasim</i>
they really engaged.3PL.M
‘They are really engaged.’ | Non-gradable Adjective |
| (3) | <i>ha-škiʔa mitraxešet mamaš ʔaxšav</i>
the-sunset happening really now
‘The sunset is happening right now.’ | Adverb |
| (4) | <i>ha-malon mamaš be-merkaz roma</i>
the-hotel really in-center Rome
‘The hotel is right in the center of Rome.’ | PP |
| (5) | <i>dani mamaš takaf ʔet moti</i>
dani really attacked ACC moti
‘Danny really attacked Moti.’ | VP |
| (6) | <i>eyn zahav hu mamaš mixre zahav</i>
spring gold is really mine gold
‘The Golden Spring (= Eyn Zahav Park) is a real gold mine.’ | NP |

When *mamaš* combines with a gradable predicate (1), it functions like *very*, boosting the degree of the gradable property (Kennedy & McNally 2005). When it combines with a non-gradable predicate (2-4), it acts as a PRECISIFIER or points to a prototypical or a clear case of whatever property it modifies. When it combines with a VP (5), it says something about the evidence or epistemic force of the proposition in addition to the high degree or intensity meaning.

Mamaš shares many characteristics with its English counterpart, *really*, in that both have a degree modifier reading as well as a propositional epistemic one. The degree reading is available when these expressions occur in a structure including a gradable (or a potentially gradable) predicate. Otherwise, they are used to comment on the truth or the appropriateness of the description of the property, relation, or event. The dual purpose of *really* convinced Paradis (2003) and Constantinescu (2011) that *really* has two structure-dependent meanings: It is a degree modifier or precisifier when it combines with predicates and an evidential marker or epistemic operator when it occurs at the sentential level. However, subjective modals and other expressions (e.g. *possibly*)

cannot be embedded in the complement of factive verbs, verbs of telling and in conditionals (Lyons 1977, Papafragou 2006, Portner 2009), as in (7), whereas *really* and *mamaš* can, as in (8).

(7) ?It is surprising that Superman **must** be jealous of Lois.

(8) **Context:** Danny is always even-tempered and restrained.
ze maftia še dani mamaš takaf ?et moti
 this surprising that dani **really** attacked ACC moti
 ‘It’s surprising the Danny really attacked Moti.’ever

I therefore argue that *mamaš* is better characterized as a modifier of properties (of individuals, situations, or propositions). Thus, all meanings (degree modification, precisification, and epistemic force) are accounted for with uniform semantics, in which *mamaš* and *really* take a property of individuals, situations, or propositions, and modify this property such that it is true in all possible contexts, as shown in (9) (cf. the analysis of *definitely* in Barker (2002) and of similar degree modifiers in Washo and Italian by Beltrama & Bochnak (2011)).

(9) Let C be the set of all possible contexts c .

Let P be a property of σ , σ is an individual, a situations, or a proposition.

$\llbracket \textit{mamaš} / \textit{really} \rrbracket = \lambda P \lambda \sigma \lambda c. P(\sigma) \text{ in } c \in C \text{ iff } \neg \exists c' [P(\sigma) \text{ in } c' = 0]$

When *mamaš* and *really* modify gradable predicates, as in *cute* in (1), the intensifying reading is derived from the semantics in (9), whereby the video is cute in all possible contexts because it is above the standard of cuteness is all of these contexts. When these modifiers combine with non-gradable predicates, as in *engaged* in (2), the prototypical meaning is derived by inferring that the property of being engaged applies in all possible contexts, even in the most strict ones, for example, in those scenarios in which being engaged requires having had a ceremony in the presence of family members, as is the case in some traditional societies. And when these expressions combine with VPs, they are ambiguous between modifying the situation and modifying the proposition. In (5), for example, if the attacking event is true is all possible contexts, it is appropriate to describe it as a clear case of an attacking event (and not, e.g., an annoying or bothering event) as well as infer that the speaker has sufficient evidence to confidently describe the event as such, thereby indirectly deriving the epistemic reading.

In conclusion, *mamaš* and *really* represent a class of vague modifiers of properties that exists side by side with true degree modifiers. While degree modifiers are constrained in their distribution due to their sensitivity to the scale structure of the gradable predicates they modify, non-degree modifiers have a wider distribution and a variable semantic contribution depending on the type of property they modify. The flexible semantics of non-degree modifiers generates the types of meanings discussed in this study, namely, intensification, precisification and epistemic force.

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