The semantics of *already* in Paraguayan Guaraní

While *already*-like expressions have received attention in the semantic literature for their focus-sensitivity and polysemy [1–4], less is known about their semantic properties cross-linguistically. We introduce data on the affix *-ma* in Paraguayan Guaraní (Tupí-Guaraní) (henceforth PG) and show that it is a counterpart of English *already*, with both aspectual and marginal uses. But, unlike English *already*, the aspectual *-ma* encodes change-of-state. We analyze *already* / *-ma* as referencing the discourse structure, following [5] on *but*, and synthesizing past accounts of *already* [1, 4].

PG *-ma* is a type of *already*. Previously, *-ma* has been described as a perfect [6,7], a perfective [8], a "iamitive" aspect [9,10], or an *already* [11,19]. We propose that *-ma* is *already* via diagnostics from [12]. Data were collected through fieldwork using standard semantic elicitation tasks [13].

First, both *-ma* and English *already* come with a **counterexpectational "earliness implication"**, where an eventuality *e* holds at an earlier time than anticipated (1). *e* can be either ongoing (1a) or completed (1b), indicating that *-ma* is not perfective.

(1) *Context: The weather forecast says it will rain tonight. It is noon now …*

a. *…and it's pouring.*
O-ky-**ma** (hína).
3.ACT-rain-*ma* (CONT)
'It is **already** raining.'

b. *…It rained at 9am and the rain has stopped.*
O-ky-**ma**.
3.ACT-rain-*ma*
'It **already** rained.'

Second, *-ma* is in **complementary distribution** with *gueteri* "still", its inverse [4], as in (2).

(2) Luis o-dipara(**#-ma**) gueteri.
Luis 3.ACT-run(-*ma*) still
'Luis is still (**#already**) running.'

Third, *-ma* and *already* exhibit **duality under negation** [1], as in (3). The scope of negation relative to *already* leads to truth conditions that are equivalent to its counterparts *still* and *not anymore*. In (3a) and (3b), *already*($\neg p$) is semantically equivalent to $\neg$*still*(p) (i.e., *not anymore*).

(3) a. I **already** don't go to school.
= 'I don't go to school anymore.'

b. Nda-ha-ve-i-**ma** eskuéla-pe.
NEG-go-more-NEG-*ma* school-LOC.
'I don't go to school anymore.'

Fourth, *-ma* and *already* result in **a change-of-state inference with stative predicates**. We demonstrate this through the contrast in (4): it is not possible to change from a preceding state of *not young* to *young*, per its lexical semantics [1], resulting in the oddness of (4a). (4a) is incompatible with an analysis of *-ma* as a perfect aspect, which would predict it to be felicitous.

(4) a. # Jagua i-mitã-**ma**.
dog 3.INACT-young-*ma*
Int.: 'The dog is **already** young.'

b. Jagua i-guaiguĩ-**ma**.
dog 3.INACT-old-*ma*
'The dog is **already** old.'

These four pieces of evidence thus support an analysis of *-ma* as an *already*-like expression.

Change-of-state entailments for PG *-ma* vs. English *already*. The aspectual uses of PG *-ma* and English *already* diverge in whether the inference from $\neg p$ to p is an entailment. The felicity of (5b) shows that English *already* doesn't entail a change-of-state [1], as Speaker A's husband has always been Paraguayan [14, 4]. In contrast, *-ma* is infelicitous here (5a). We propose that the aspectual uses of *already* cross-linguistically can likewise be divided into two types: (i) *already*s that don't entail a change-of-state (e.g., English *already*) and (ii) *already*s that do (e.g., PG *-ma*).

(5) *Context: Speaker A's husband was born in Paraguay, and he has been a citizen since birth.*
Speaker B: Now that you've applied for Paraguayan citizenship, is your husband also applying?
a. Speaker A: Ha'e Paraguái-gua(#-**ma**).
3.PRON Paraguay-ADJZ(-*ma*)
'He is (**#already**) Paraguayan.'
b. Speaker A: He is **already** Paraguayan.

Analysis of aspectual *already* and *-ma*. Aspectual *already* and *-ma* modify an AspP (of type $\langle i,t\rangle$). The proposed semantic entries are in (6): (6a)-(6b) differ in their at-issue entailments, but their presuppositions are identical. To model the counterexpectational "earliness implication", we encode sensitivity to the discourse structure, following [5] on counterexpectational *but*. (6a)-(6b) presuppose that there is an answer *p'* to a contextually-salient question *Q*, where *p'* implies that: (i) the asserted proposition *p* doesn't hold at the reference time *t*, and (ii) *p* will hold at a future time *t'*. To illustrate for (1a), consider a *Q* like "When will it start raining?", where *p'* is "It will start raining tonight." Here, *p'* implies both that it is not raining now and that it will rain later.

(6) a. $[\![\textit{already}^{\text{ASP}}_{\text{Q}}]\!]^{g,c} = \lambda p.\lambda t.\exists p'[\, p' \in Q \,\&\, p' \Rightarrow \neg p(t) \,\&\, \exists t'[\, t' > t \,\&\, p' \Rightarrow p(t')]]. \; p(t)$
b. $[\![\textit{-ma}^{\text{ASP}}_{\text{Q}}]\!]^{g,c} = \lambda p.\lambda t.\exists p'[p' \in Q \,\&\, p' \Rightarrow \neg p(t) \,\&\, \exists t'[t' > t \,\&\, p' \Rightarrow p(t')]]. \; p(t) \,\&\, \textsc{become}_t(p)$
c. $\textsc{become}_t(p)$:= t is the smallest interval s.t. $\exists t'[\text{RB}(t') = \text{LB}(t) \,\&\, \neg p(t') \,\&\, \exists t''[\text{RB}(t) = \text{LB}(t'') \,\&\, p(t'')]]$ [15,16]

The difference between the types of aspectual *already*s lies in their at-issue entailments. In PG, *-ma* entails both *p(t)* and a change-of-state from $\neg p$ to p (6b), implemented via the propositional BECOME operator [15, 16] in (6c). In English, *already* only entails *p(t)* (6a). This is what derives the contrast in (5): because no change-of-state occurred from $\neg p$ to p, *-ma* is infelicitous.

Analysis of marginal *already* and *-ma*. *Already* and *-ma* also have a marginal use, which occurs when the QUD is a multiple-*wh* question pairing individuals with the degrees to which a gradable predicate is true of them. Marginal uses signal that the predicate holds of the individual currently discussed, but not of another salient individual [2,4]. For example, in (7), the QUD is *Which watch is how expensive?* and *be expensive* holds for the second watch but not the first.

(7) *Context: You're at a store telling a friend how expensive each watch is.*
Reloj peteĩha nda-hepýi-ri. Reloj mokõiha hepy-**ma**. Ha reloj mbohapyha
watch first NEG-expensive-NEG watch second expensive-*ma* CONJ watch third
hepy-etereí-**ma**.
expensive-very-*ma*
'The first watch isn't expensive. The second watch is **already** expensive. And, the third watch is **already** very expensive.'

Marginal *already* and *-ma* attach lower than Asp, and modify an $\langle e,t\rangle$-type predicate. The proposed semantic entry, inspired by [4] but discourse-sensitive, is in (8). Like their aspectual uses, marginal *-ma* / *already* presuppose an answer *p'* to a contextually-salient question *Q*, but also require that *Q* is a subquestion within a strategy of inquiry S for answering the QUD [17]. We propose that a scalar ordering $\leq_\delta$ is imposed on S, in accordance with the order of individuals along the dimension δ determined by the predicate being modified (here, δ is cost). This is analogous to the ordering of alternatives for scalar *only* / *even* [18]. *Q* is higher on $S_{\leq_\delta}$ than another subquestion *Q'*. In (7), *Q* is "How expensive is the second watch?" and *Q'* is "How expensive is the first watch?".

(8) $[\![\textit{already}^{\text{MAR}}_{\text{Q},S_{\leq_\delta}}]\!]^{g,c} = [\![\textit{-ma}^{\text{MAR}}_{\text{Q},S_{\leq_\delta}}]\!]^{g,c} = \lambda P.\lambda x.\exists p'[\, p' \in Q \,\&\, Q \in S_{\leq_\delta} \,\&\, p' \Rightarrow \neg P(x) \,\&\, \exists y\, \exists Q'[\, y \neq x \,\&\, Q' \in S_{\leq_\delta} \,\&\, Q' <_\delta Q \,\&\, \exists p''[\, p'' \in Q' \,\&\, p'' \Rightarrow \neg P(y)]]]. \; P(x)$

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