

**Explaining the forces underpinning grammaticalization paths:
The progressive-to-imperfective shift in three varieties of Spanish**

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Abstract. We provide an account of the synchronic variation between the use of the Simple Present marker [Verb-*a*] and the Present Progressive marker [*estar* + Verb-*ndo*] in the expression of the *habitual* reading in Modern Spanish. Results from an acceptability judgment task in three distinct dialectal varieties (Rioplátense Spanish, Iberian Spanish, and Mexican Altiplano Spanish) show: (a) the presence of variation across dialects, (b) that this variation is constrained by a grammaticalization path, the Progressive-to-Imperfective shift, and (c) that a *generalization* process is already underway in all three different dialects but at different degrees of progress: more conservative in the Rioplátense and Iberian varieties, and less so in the Mexican Altiplano one. Specifically, our results show that whereas the Simple Present is the preferred form to express the *habitual* reading, the Present Progressive marker is already available to convey this reading in the three dialectal varieties. However, in Rioplátense Spanish and Iberian Spanish, this use is restricted to contexts that independently satisfy the presuppositional content of *estar* –the auxiliary in the Present Progressive periphrasis [*estar* + Verb-*ndo*]–, which requires the existence of alternative situations at which the prejacent does not hold. This restriction appears to be eroding in Mexican Altiplano Spanish, which is manifested as a loss in the context-dependence of the Present Progressive marker.

Keywords. grammaticalization; generalization; imperfective; progressive; Spanish, presupposition

1. Introduction. It has been observed across languages and language families that some changes in the associations between specific functional meanings and their corresponding linguistic markers are not random, but actually follow clear patterns. These patterns manifest and repeat in a cyclic fashion and are known as *unidirectional grammaticalization paths*: diachronic shifts that are understood to constrain, at least partially, language variation and its potential for change (Lehmann 1985, Traugott & Heine 1991, Bybee et al. 1994, Haspelmath 1999, *i.a.*). What are the mechanisms that support and trigger these changes and what are the representations on which these mechanisms operate? That is our main focus here. To address these questions, we investigate one grammaticalization path in particular, the Progressive-to-Imperfective shift, by examining the synchronic variation between the use of the Simple Present and the Present Progressive markers in the expression of the *habitual* reading across three different dialectal varieties of Modern Spanish.

The Progressive-to-Imperfective shift is usually construed as comprising three stages, which, although not clear-cut but gradual, cyclically manifest as follows: (1) **emergence**: when a language changes from having only one general imperfective marker expressing both *habitual*

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and *event-in-progress* readings¹ to recruiting a new marker to optionally express the *event-in-progress* reading, (2) **categorization**: when each marker becomes specific to a particular reading; namely, the new marker is the only available form to express the *event-in-progress* reading, while the old marker gets restricted to express the *habitual* reading by semantic blocking, and (3) **generalization**: when the new marker is reanalyzed as a general imperfective marker, so that it is able to express both readings, slowly pushing the old marker out of its traditional expressive domain, thus setting the stage for the recruitment of a new marker, leading again to *emergence* (Deo 2015).

Whereas evidence for the existence of these stages is robust, the mechanisms that bring one stage to the next are not well-understood. Modern Spanish, for example, currently presents two markers –the old Simple Present marker (Verb-*a*) and the newer Present Progressive marker (*estar* + Verb-*ndo*)–, both able to convey *event-in-progress* and *habitual* readings, as can be seen in (1) and (2) respectively:

- (1) a. Ana está fumando.
 Ana smoke.3SG.PROG
 ‘Ana is smoking’
 b. Ana fuma ahora.
 Ana smoke.3SG.IMPF now
 ‘Ana is smoking’
- (2) a. Ana fuma.
 Ana smoke.3SG.IMPF
 ‘Ana smokes’
 b. Ana está fumando últimamente.
 Ana smoke.3SG.PROG lately
 ‘Ana is smoking lately’

In (1a) the Present Progressive marker is the preferred form to express the *event-in-progress* reading, yet in (1b) the Simple Present marker, acting as a general imperfective marker, can still express this reading, thus evidencing an unfinished **categorization** process. At the same time, the Simple Present marker is the preferred form for the *habitual* reading (2a), yet, the Present Progressive marker can also express it (2b), evidencing a **generalization** process already underway. We thus have a 2x2 marker by meaning distribution with preference biases that suggest independent forces at work. In line with previous work, we propose that these independent forces are non-linguistic and encoded in principle-driven contexts of use. These are our specific questions: (1) What contextual factors make the use of the Simple Present marker still acceptable to express an *event-in-progress* reading? and (2), what contextual factors make the use of the Present Progressive marker already acceptable to express a *habitual* reading, thus triggering the move to the **generalization** stage?

1.1. THE LAST STEPS OF A **CATEGORIZATION** STAGE. Even though the distribution of the Simple Present and the Present Progressive markers to express the *event-in-progress* reading had been claimed to be one of free alternation (e.g., Comrie 1976, Bertinetto 2000), recent experimental work has shown that the distribution between these two markers is not random but context-

¹ For the purposes of this paper, we leave aside the *continuous* reading that these general imperfective markers express with stative predicates, such as in *Sally lives in Cape Town*.

dependent. Fuchs et al. (2019a) showed this contextually-determined pattern through an acceptability judgment task in three varieties of Spanish –Rioplatense Spanish, Iberian Spanish, and Mexican Altiplano Spanish. In this study, participants rated context-sentence pairs that intended to convey an *event-in-progress* reading. The sentences presented either the Simple Present marker, the Present Progressive marker, or the Simple Past marker (baseline condition). The contexts that preceded the sentences were of two kinds: they either guaranteed that the speaker and the hearer in the context-sentence pair shared perceptual access to the event described by the sentence predicate or they did not guarantee such shared perceptual access. The authors predicted that, when expressing an *event-in-progress* reading, contexts that guaranteed shared perceptual access between speaker and hearer would improve the acceptability of the Simple Present marker. They also predicted that if variation were to appear across dialectal varieties, it should do so respecting the directionality of the Progressive-to-Imperfective shift.

Results showed that the Present Progressive marker is the preferred form across the three different dialectal varieties of Spanish to convey the *event-in-progress* reading, and that the degree of preference for this marker does not vary with context. By contrast, in two of the dialectal varieties –Rioplatense Spanish and Iberian Spanish– the use of the Simple Present marker to express the *event-in-progress* reading is context dependent: when the context involves shared perceptual access between speaker and hearer to the event described by the sentence predicate, participants rate the Simple Present-marked sentences as significantly better than when the context does not guarantee shared perceptual access. In the case of Mexican Altiplano Spanish, this context effect was not found. Mexican Altiplano Spanish participants disprefer the use of the Simple Present marker to express an *event-in-progress* reading regardless of the type of context. This last result is consistent with an interpretation whereby the Mexican Altiplano variety is closer to a strict *categoricalization* stage; the stage where the expression of the *event-in-progress* reading becomes restricted to the use of the Present Progressive marker.

In subsequent work (Fuchs et al. 2019b), the authors presented an account whereby *shared perceptual access* is the nonlinguistic operationalization of a more general communicative goal: *perspective alignment*. They take *perspective* to be “the information that is perceptually available for a given individual from a particular point of view in space” (Roberts 2015: 3). Thus, they claim that *perspective alignment* reflects the intention of the speaker to bring the hearer’s point of view closer to her own. They argue that this communicative goal is grounded in two complementary cognitive constraints that are at odds during a communicative situation: Common Ground (Stalnaker 1978, 2002) and Theory of Mind (Wellman 1990, Gopnik 1993, de Villiers 2007, *i.a.*). While the Common Ground between speaker and hearer affords the speaker greater reliance on context, Theory of Mind forces them to be linguistically explicit, because the hearer does not experience context exactly like them. The choice of linguistic marker represents the optimization of these constraints to achieve this goal. Consequently, with respect to the experimental data reported in Fuchs et al. (2019a), they claim that a speaker is able to use the Simple Present marker to convey an *event-in-progress* reading only when *perspective alignment* is achieved independently by non-linguistic means, through shared perceptual access. This is the case for Rioplatense Spanish and Iberian Spanish. In the case of Mexican Altiplano Spanish, shared perceptual access does not seem to play a significant role anymore, so that the Simple Present marker has lost its ability to express an *event-in-progress* reading in this dialectal variety. On the other hand, all speakers across the three different dialectal varieties are able to use the Present Progressive marker regardless of shared perceptual access, thus evidencing that this marker is the preferred *linguistic* means to achieve this communicative goal.

1.2. THE BEGINNING STEPS OF A *GENERALIZATION* STAGE. The studies and experimental evidence reported in the previous subsection sketch an account of the contextual conditions that support the use of the Simple Present marker to convey an *event-in-progress* reading, revealing the forces operating in the rearguard of the grammaticalization path. This subsection provides the basis for our present concern, the *categorization-to-generalization* shift, the vanguard of the diachrony. We investigate the contexts of use that already allow the use of the Present Progressive marker to convey a *habitual* reading, and, in doing so, shed light on the mechanisms that drive this part of the cyclic diachronic change.

We test the proposal that the shift to *generalization* is driven by the lexicalized presuppositional content associated with *estar*, the auxiliary in the Present Progressive periphrasis. *Estar* is one of the copula verbs in Spanish. It differs from *ser*, the other copula verb in Spanish, in that it encodes a presupposition that restricts the prejacent (e.g., *Ana + fumar*), to a specific circumstance of evaluation. In doing so, it triggers the construal of alternative situations at which the prejacent does not hold (Maienborn 2005, Sánchez Alonso et al. 2017, Sánchez Alonso 2018). Consider (3), with *ser*, and (4), with *estar*, below:

(3) Ana **es** alta.
 Ana be(*ser*).3SG tall
 ‘Ana is tall’

(4) Ana **está** alta.
 Ana be(*estar*).3SG tall
 ‘Ana is tall’

Whereas in English both sentences are translated as ‘Ana is tall’, in Spanish there is a clear difference between (3) and (4). The sentence in (3) only establishes an attributive relation between the individual and the property denoted by the adjective. On the other hand, the sentence in (4) establishes the same attributive relation, but has an additional requirement: for it to be true at the current circumstance of evaluation, it requires the existence of alternative indices of evaluation at which the predicate does not hold; that is, Ana needs to not be tall at other times, worlds, contextual standards, etc. She could be wearing high heels, or could have grown some inches, but for (4) to be true in the actual world of evaluation, there needs to be a salient alternative index of evaluation at which (4) is false.

Focusing on the alternation between the Simple Present and the Present Progressive markers, we argue that the shift towards *generalization* of the Present Progressive marker is at least partially driven by the contextual demands of *estar*’s lexicalized presupposition. When the marker is conveying an *event-in-progress* reading, the meaning contrast is absolute: ‘now’, when the prejacent holds, in opposition to ‘not now’, when the prejacent does not hold. But if a new, *habitual* reading is to arise in this marker, contextual support that enables the construal of alternatives at which the prejacent does not hold is needed.

We also claim that greater informativity and expressivity are the drivers of the increased use of the Present Progressive marker. The Present Progressive marker (*estar + V-ndo*) is more informative and therefore expressive than the Simple Present marker because the Present Progressive marker conveys both the *habitual* reading *and*, due to the participation of *estar* as the auxiliary verb, the consideration of a set of rejected alternatives. This relative richness in meaning maximizes context-set restriction and proportionally increases the expressive possibilities of the construction. The greater expressivity of the marker leads to an increase in use across more

contexts, which in turn leads to a decrease in the context dependence of the marker. Overtime, the use of the Present Progressive marker becomes preferable to the use of the Simple Present marker, which conveys the *habitual* meaning alone. This difference in informational value and expressive possibilities is what underpins the observed encroaching of the Present Progressive marker over the Simple Present marker.

Our hypothesis is that the use of the Present Progressive marker to convey a *habitual* reading is facilitated by contexts that present alternative situations at which the embedded proposition does not hold. We test this hypothesis using an acceptability judgment task in three different dialectal varieties of Spanish. Directly below we present the specifics of the study.

2. Methods.

2.1. MATERIALS. We constructed a series of contextual vignettes, each involving a context-sentence pair. Each vignette featured a speaker and a hearer. Following the context section of the vignette, the speaker expressed an utterance to the hearer. This constituted the sentence section of the vignette. We operationalized *Context* as a variable with two categories: (a) *alternative-supporting*, containing contexts that presented alternative situations at which the prejacent did not hold, and (b) *alternative-neutral*, containing contexts that remained neutral with respect to the presuppositional content of *estar*, and did not saliently present alternative situations at which the prejacent did not hold. Following the context, the *Sentence* by the speaker displayed either: (a) the Simple Present marker, (b) the Present Progressive marker, or (c), the Simple Past marker, which worked as a baseline condition, given that we do not expect this marker to be able to convey a *habitual* reading. The study thus contained two independent variables: (1) context type (*alternative-supporting* or *alternative-neutral*), and (2) the marker type contained in the sentence made by the speaker (Simple Present, Present Progressive or Simple Past).

Sample stimuli of the *contexts* are given in (5), while sample stimuli of the *sentences* are given in (6):

- (5) a. ***Alternative-Neutral*** Context: Ana y Juan van juntos a la escuela. **Ana siempre llega tarde porque hay mucho tráfico, pero Juan siempre lo hace a tiempo.** Cuando Ana le pregunta cómo hace para llegar a tiempo, él le dice:
'Ana and John go to high school together. **Ana is always late because there is a lot of traffic, but John always makes it on time.** When Anna asks him how he gets there on time, he tells her.
- b. ***Alternative-Supporting*** Context: Ana y Juan van juntos a la escuela. **Ambos llegan siempre tarde porque hay mucho tráfico, pero últimamente Juan lo hace a tiempo.** Cuando Ana le pregunta cómo hace para llegar a tiempo, él le dice:
'Ana and John go to high school together. **Both of them are always late because there is a lot of traffic, but lately John makes it on time.** When Anna asks him how he gets there on time, he tells her.

(6)	a.	Vengo	en	bicicleta.	Simple Present
		come.1SG.IMPF	in	bicycle	
		‘I come here by bike’			
	b.	Estoy viniendo	en	bicicleta.	Present Progressive
		come.1SG.PROG	in	bicycle	
		‘I am coming here by bike’			
	c.	Vine	en	bicicleta.	Simple Past
		come.1SG.PRET	in	bicycle	
		‘I came here by bike’			

All sentences were declarative affirmative sentences that uniformly intended to convey a *habitual* reading. The sentences had first, second, and third person singular subjects distributed evenly. The task included 30 items per condition, which resulted in a total of 180 vignettes. Besides the 180 vignettes, there were 140 fillers (80 fillers from an unrelated experiment, and 60 fillers that presented an *event-in-the-past* meaning, so that the Simple Past marker was rated as acceptable, and the Simple Present marker was rated as unacceptable, to check that participants were not just giving high scores to the sentences that presented the Simple Present marker and low scores to the sentences with a Simple Past marker without paying attention). Yes-no comprehension questions were presented after 75% of the stimuli. All stimuli were pseudo-randomized in 10 lists of 32 stimuli each, for a total of 320 context-sentence pairs.

2.2. PROCEDURE. The questionnaire was administered online. Participants were presented with a vignette containing either an *alternative-supporting* context or an *alternative-neutral* context, and one sentence out of the three possible ones (i.e., either Simple Present-marked, Present Progressive-marked, or Simple Past-marked). They were asked to judge the acceptability of the context-sentence pair on a Likert scale from 1 to 5, with points defined on the scale. Five practice stimuli were presented before the experimental task, with clear instructions that required the participant to perform the task in a single sitting, without distractions. Subjects were compensated with 10 US dollars per hour, for an approximate duration of 2 hours.

2.3. SUBJECTS. Speakers of three different Spanish dialectal varieties performed the study (n = 120): 40 Iberian Spanish speakers from Madrid, Spain (20 female), 40 Mexican Altiplano Spanish speakers from Mexico City, Mexico (20 female), and 40 Rioplatense Spanish speakers from Buenos Aires, Argentina (21 female). All participants were between 18 and 35 years old, and had at least finished 12 years of schooling. All subjects lived in the aforementioned urban settings and had not lived in other Spanish-speaking states, provinces or countries for more than a year.

2.4. PREDICTIONS. There were three predictions for this study: (a) the Simple Present marker would still be the preferred form to express a *habitual* reading in all dialects and regardless of context type; (b) the acceptability of the Present Progressive marker would be modulated by the context presented before the sentence that contained the marker: *alternative-supporting* contexts would increase the acceptability of this marker in comparison to *alternative-neutral* contexts. Finally, (c) if variation across dialects were to be observed, it would follow the general direction of the diachronic Progressive-to-Imperfective grammaticalization path, showing that the use of the Present Progressive marker had become less context-dependent (i.e., had generalized to more contexts).

3. Results. After assessing whether participants correctly answered more than 85% of the comprehension questions, only 2 subjects were excluded from posterior analyses (one Rioplatense

Spanish speaker, and one Iberian Spanish speaker). We also checked the ratings in the two filler conditions, as a measure of sensitivity to the task. Simple Present-marked sentences that expressed an *event-in-the-past* meaning had low ratings across dialects (mean = 1.87, SE = 0.02)², while Simple Past-marked sentences that expressed this meaning were consistently rated high (mean = 4.76, SE = 0.01), showing that participants were paying attention to the intended task.

The experimental data was analyzed with a *linear mixed effect* analysis, using *lme4* in R (Bates et al. 2015). For model selection, we followed recommendations for linguistic analysis, and performed Likelihood Ratio Tests comparing the model with the effect under discussion against a model without it (Winter 2013). Post hoc tests were run in R with *multcomp* (Hothorn et al. 2008) and p-values were corrected by Tukey. Model-comparisons analyzed the effects of three independent variables –context, marker, and dialectal variety– on the participants’ ratings. As random effects, the models had random intercepts for subject and item, and by-subject random slopes for the effects of aspectual marker, and context, which was the maximal random effect structure justified by the data. Visual inspection of residual plots did not reveal any obvious deviations from homoscedasticity or normality.

The model with a fixed effect of the interaction between context, marker and dialect performed significantly better at explaining the data than the model without the effect ($\chi^2(12) = 52.032$, $p < .001$). Post hoc tests corrected by Tukey showed a main effect of context, favoring *alternative-supporting* contexts over *alternative-neutral* contexts ($\beta = 0.294$, $p < .001$), a main effect of marker, favoring the Simple Present marker over the Present Progressive marker ($\beta = 0.657$, $p < .001$) and confirming the preference of the Simple Present marker and the Present Progressive marker over the Simple Past marker at significant levels ($p < .001$). There was also a significant main effect of dialect, due to the comparison between Rioplatense Spanish and Iberian Spanish ($\beta = 0.153$, $p < .005$), and Rioplatense Spanish and Mexican Altiplano Spanish ($\beta = 0.202$, $p < .001$). No such effect was found in the comparison between Mexican Altiplano Spanish and Iberian Spanish ($\beta = 0.05$, $p = .516$).

Given the significance of the interaction term between context, marker and dialectal variety, we subset the data by marker to assess the source of the significant differences, and performed linear mixed effect analysis for each marker, analyzing the fixed effects of dialect and context. For the Simple Present marker, we found no main effect of context ($\chi^2(1) = 0.563$, $p = .464$) or dialect ($\chi^2(2) = 2.632$, $p = .268$). The same pattern emerged in the case of the Simple Past marker: no effect of context ($\chi^2(1) = 0.894$, $p = .344$) or Dialect ($\chi^2(2) = 4.472$, $p = .107$) was found. In the case of the Present Progressive marker, by contrast, we did find significant main effects of context ($\chi^2(1) = 73.258$, $p < .001$) and dialect ($\chi^2(2) = 49.489$, $p < .001$), and a significant effect of the interaction of context and dialect ($\chi^2(2) = 63.45$, $p < .001$). Given this interaction effect, we subset the data by dialect and analyzed the effect of context in the Present Progressive marker in each of the dialects under consideration. We found a significant effect in the case of Rioplatense Spanish ($\chi^2(1) = 35.216$, $p < .001$), in favor of *alternative-supporting* contexts over *alternative-neutral* contexts ($\beta = 1.243$, $p < .001$). The same effect was found in the case of Iberian Spanish, also favoring *alternative-supporting* contexts over *alternative-neutral* contexts ($\chi^2(1) = 70.795$, $p < .001$; $\beta = 1.258$, $p < .001$). No such effect was found in the case of Mexican Altiplano Spanish ($\chi^2(1) = 3.159$, $p = .0755$).

² All reported standard errors are calculated not over tokens, but over subject means.

A summary of results in terms of participants' ratings means by context, marker and dialectal variety is given in Table 1. Standard errors are given between parentheses. Conditions where we found significant differences are bolded. Figures 1-3 also present a summary of the results in these terms.

Marker	Context	Rioplatense	Iberian	Mexican
Simple Present	Supporting	4.54 (0.02)	4.64 (0.02)	4.64 (0.02)
	Neutral	4.60 (0.02)	4.64 (0.01)	4.62 (0.01)
Present Progressive	Supporting	4.62 (0.02)	4.17 (0.02)	4.35 (0.01)
	Neutral	3.34 (0.04)	2.88 (0.03)	4.31 (0.01)
Simple Past	Supporting	2.72 (0.04)	2.35 (0.02)	2.49 (0.02)
	Neutral	2.60 (0.04)	2.33 (0.02)	2.48 (0.02)

Table 1: Participants' ratings means by context, marker, and dialect. Standard errors in brackets.

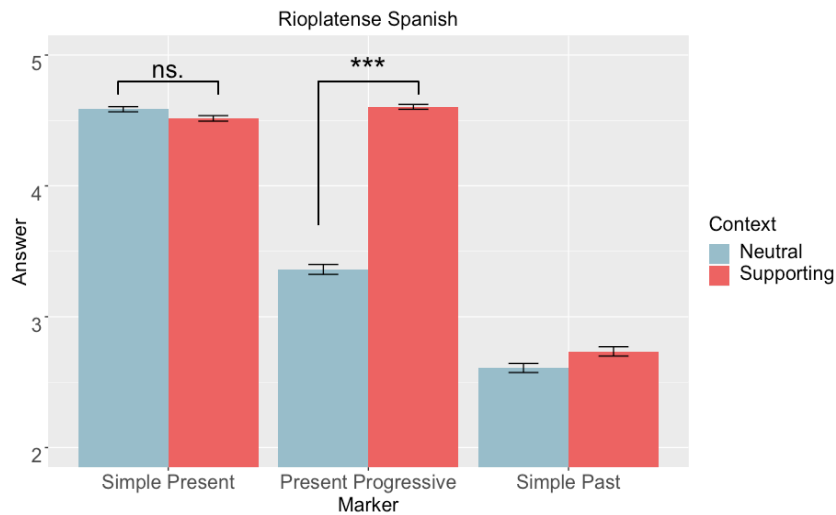


Figure 1: Rioplatense Spanish participants' ratings means by marker and contextual condition.

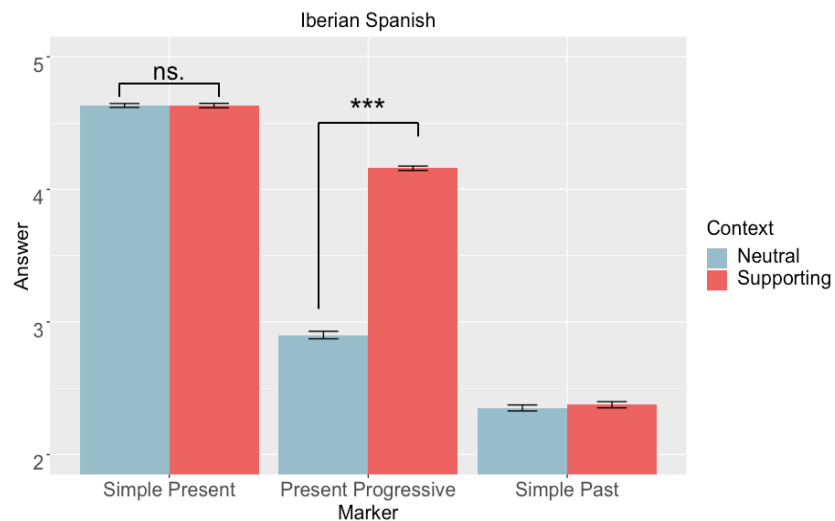


Figure 2: Iberian Spanish participants' ratings means by marker and contextual condition.

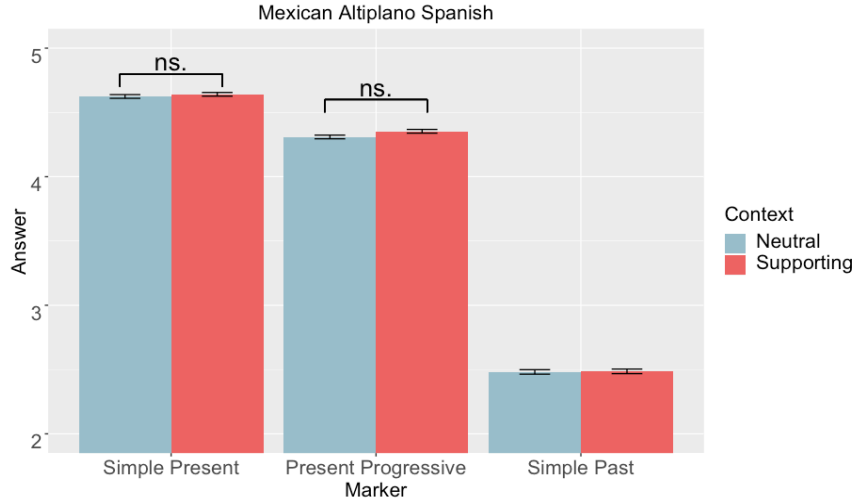


Figure 3: Mexican Spanish participants' ratings means by marker and contextual condition.

4. Discussion. Results show that in the three Spanish dialectal varieties, the Simple Present marker is still the preferred form to convey a *habitual* reading at significant levels. However, the Present Progressive marker is already available to express this same reading, at least in some contexts, confirming that a *generalization* process is already underway in all three varieties.

As for dialectal variation, the main finding is that context has an effect on the acceptability of the Present Progressive marker (expressing a *habitual* reading) in both Rioplatense Spanish and Iberian Spanish. The acceptability of this marker is enhanced when the context presents salient alternative situations at which the prejacent does not hold. Speakers of these varieties seem to be sensitive to whether or not *estar*'s presuppositional requirement is contextually satisfied. On the other hand, in Mexican Altiplano Spanish, though the Simple Present is still the preferred form for the expression of the *habitual* reading, we observe that the use of the Present Progressive marker for this reading is more acceptable than in the other dialectal varieties. Moreover, the use of this marker is no longer dependent on contextual support, so that it can be used in a broader set of contexts. This pattern suggests that speakers may be satisfying the presuppositional content of *estar* on their own without the support of explicit context, a possibility that is afforded by the general higher frequency of use of *estar* in this dialect (e.g., Sánchez Alonso 2018). We conjecture that the increase in use and frequency of this marker to convey the *habitual* reading in Mexican Altiplano Spanish has in a way conventionalized a default alternative situation at which the proposition does not hold; speakers of this variety can make use of this alternative even when not explicitly supported by contextual information.

The variation across dialects also appears as a reflection of the diachrony of these markers in the Progressive-to-Imperfective grammaticalization path: Mexican Altiplano Spanish seems a step further in the grammaticalization path, given the loss of context-dependence for the Present Progressive marker, but all varieties are manifesting a particular substage within the diachronic shift.

Altogether we conclude that both variation and change within the Spanish Imperfective domain, with respect to the *categoricalization-to-generalization* process, appear to be driven by the contrastive expressivity strength of the combined lexico-semantic properties that are associated with the Present Progressive marker.

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