

Crosslinguistic differences on the Present Perfect Puzzle: an experimental approach

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Introduction. The *present perfect puzzle* states that “the present perfect does not go with an adverbial referring to the past” (Klein 1992: 526), so the *Simple Past* has to be used instead:

(1) Chris **has left / left* York **today at six**. (adapted from Klein 1992: 546, (ex.45))

Yet other languages (French, Italian, German) do allow their corresponding PERFECT markers to combine with past referring adverbials (e.g., Squartini & Bertinetto 2000), showing that this constraint does not hold crosslinguistically. The Dutch PERFECT *Voltooid Tegenwoordige Tijd* is also not affected by it, as (2a) shows. Rather, as (2b) exemplifies, the PERFECT is said to be preferred over the PAST form in such contexts (van der Klis et al. 2021).

(2a) Chris *heeft* York **vandaag om zes uur verlaten**. ‘Chris *has* York **today at six left**’

(2b) *Chris *verliet* York **vandaag om zes uur**. ‘Chris *left* York **today at six**’

Peninsular Spanish appears to reflect an intermediate point in its availability to combine with past-referring temporal adverbials (e.g. Harris 1982):

(3) Chris se *ha ido / #fue* de York **hoy a las seis**. ‘Chris *has left / left* York **today at six**’.

(4) Chris se **ha ido / fue* de York **ayer**. ‘Chris *has left / left* York **yesterday**’.

As (3) indicates, Spanish is not subject to the *present perfect puzzle* as long as the temporal adverbial (*hoy a las seis* ‘today at six’) creates the relation $E=R \subseteq \text{day}(S)$. That is, when the event E is temporally located within the day of utterance S, the Spanish PERFECT form –the *Preterito Perfecto Compuesto*– can be used. Conversely, when the event E is anchored to a past reference time R before the day of utterance S, as in (4), with the adverb *ayer* ‘yesterday’, only the (Perfective) PAST –the *Preterito Indefinido*– is allowed. This has led some authors to define the Spanish PERFECT as a hodiernal marker (e.g., Schwenter 1994).

Other work in English has provided indications that *deictic* temporal adverbials (i.e., adverbials whose reference is calculated with respect to the speaker’s time/space center of reference) behave differently with respect to their (in)compatibility with the PERFECT (e.g., Hitzeman 1995). Different from (1), the *Present Perfect* seems to be able to combine with deictic past-time referring adverbials that include the speech time S, like *this afternoon*, as (5) shows:

(5) Chris *has left / left* York **this afternoon**.

To our knowledge, the role of deixis in the acceptability of the Spanish and Dutch PERFECT forms has not been studied. Here we experimentally test the acceptability of different past time adverbials with the PERFECT and PAST markers of English, Spanish, and Dutch. We consider a twofold distinction of temporal adverbials. First, (3) and (4) indicate variation between adverbials related to the day of utterance and those that are not. Second, (1) and (5) drive a distinction between deictic and non-deictic adverbials. Finally, (2a) and (2b) suggest that Dutch prefers its PERFECT over the PAST across the board.

Method. We investigate English, Spanish, and Dutch use of PERFECT and PAST markers in combination with different temporal adverbials distinguished by two variables: (i) **+/-T**: In +T cases, adverbials relate to day (S) by being included in it (e.g., *this morning*) or including it (e.g., *this month*). This is a broader notion of strict hodiernality that intends to incorporate the ‘extended now’ (e.g, Portner 2003). Conversely, -T adverbs, such as *last month*, do not include or are included in day (S); (ii) **+/-D**: In +D adverbs, the temporal reference of the adverbial is deictic in nature. For example, to place *yesterday* on the timeline, we need information about the speaker’s current temporal location. Conversely, -D adverbials, such as *in November*, can be placed on the timeline independently from the speaker’s center of reference.

We ran an online acceptability judgment task using a 2x2x2 design with three independent variables (+/-T, +/-D, and marker). We created 64 stimuli (+96 fillers) in a Latin Square design. 160 subjects per language rated sentences on a 5-point Likert scale. Each stimulus was displayed separately and was accompanied by an introductory context. All sentences presented an

achievement to control for lexical aspect. An example item in English is shown in (6):

(6) Peter and Theresa are planning to go to a concert next weekend. Peter offers to go get the tickets later today, but Theresa tells him: I *purchased / have purchased* mine **this morning / at midnight / last month / in November**. It was cheaper that way.

Results. Mean acceptability scores are reported in Table 1. Linear mixed-effect analysis (random intercepts: subject and item) show in English a significant effect of T*D*Marker ($\chi^2(2) = 6.373$; $p < .05$). In all T/D adverbial combinations, there is a significant effect of marker favoring the PAST over the PERFECT. There seems to be a less categorical difference in the +T,+D condition, but a post-hoc test still shows the effect of grammatical marker ($\beta = 0.394$; $p = .035$). Interestingly, if we subdivide +T,+D adverbials by considering whether the adverb includes the day (S) or is included in it, we find that in the first case the difference across markers is still significant ($\chi^2(1) = 6.7711$; $p < .01$) and favors the PAST ($\beta = 0.5931$; $p < .001$), but when it comes to adverbs included in the day (S), the difference disappears ($\chi^2(1) = 0.5942$; $p = .4408$; PERFECT = 4.25; PAST = 4.38). Spanish presents a significant interaction of T*Marker ($\chi^2(1) = 47.12$; $p < .001$), with no effect of deixis. In -T adverbials, there is a main effect of grammatical marker ($\chi^2(1) = 57.07$; $p < .001$), favoring the PAST ($\beta = 1.353$; $p < .001$), but crucially, in the +T condition, there is no significant effect of marker ($\chi^2(1) = 0.016$; $p = .90$). Finally, Dutch only presents a main effect of marker ($\chi^2(2) = 32.117$; $p < .001$), favoring the PERFECT over the PAST in all conditions ($\beta = 0.8031$; $p < .001$).

Type of adverbial	Marker	English	Spanish	Dutch
+T, +D (<i>this morning</i>)	PERFECT	4.03	4.05	4.28
	PAST	4.42	4.31	3.37
+T, -D (<i>at midnight</i>)	PERFECT	3.34	4.33	3.78
	PAST	4.33	4.03	3.14
-T, +D (<i>last month</i>)	PERFECT	3.42	3.14	4.37
	PAST	4.51	4.53	3.58
-T, -D (<i>in November</i>)	PERFECT	3.44	3.21	4.07
	PAST	4.53	4.53	3.19

Table 1. Mean acceptability ratings per type of adverbial and tense-aspect marker in each language.

Discussion. Spanish speakers accept the PERFECT when the adverb is linked to the present. However, there is no preference for the *Preterito Perfecto* in +T conditions: the *Preterito Indefinido* receives similar ratings in these cases. English speakers prefer the *Simple Past* in all conditions but they accept the *Present Perfect* with deictic hodiernal adverbials, especially when the adverb is included in the day (S) (e.g., *this morning*). As expected, Dutch speakers prefer the PERFECT over the PAST across the board. In sum, our work provides evidence that both deixis and hodiernality play a role in PERFECT-PAST crosslinguistic variation. While Dutch allows the PERFECT to refer to past events unconstrainedly, Spanish restricts its use to events that are connected to the day of utterance, and English only allows it as far as these events are properly included in day (S) and are computed from the speaker's center of reference.

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