Aspect in counterfactuals from A(rabic) to Z(ulu)

keywords: counterfactual conditionals, tense, aspect, morphology

Languages commonly use past tense and imperfective aspect morphology to create counterfactual (CF) meanings (e.g. Iatridou 2000, Van Linden Verstraete 2007), with languages requiring imperfective a subset of those requiring past (Iatridou 2009). Little is understood about the nature of the distribution of imperfective in these CFs, however. We present a comparative analysis of aspect in Zulu and Palestinian Arabic (PA) CFs that sheds light on this attested cross-linguistic variation. While both languages use past tense in CFs, only Zulu requires imperfective aspect; both perfective and imperfective aspect are available in PA CFs but always receive ‘real’ aspectual interpretation. We argue that both languages have identical requirements and goals: to express CF through a past morpheme while also expressing ‘real’ temporal/aspectual content. The difference between the two languages can be understood in terms of two factors: (1) the specific feature bundling of tense/aspect morphology and (2) the availability of strategies to stack tense/aspect morphemes in CFs.

CFs in PA frequently involve a perfective morpheme as a CF marker (1a). To create a CF with an imperfective interpretation, an auxiliary verb structure is used to host a past tense morpheme (1b). We demonstrate that in all PA CFs, aspect morphemes receive ‘real’ aspectual interpretations.

\[
\text{(1) a. [law } \text{iṭaṣ} \text{] } \text{htaaz, mahrame}
\]
\[
\quad \text{if } \text{sneeze.PFV.3SM need.PFV.3SM tissue.F}
\]
\[
\quad \text{‘If he had sneezed, he would have needed a tissue.’}
\]
\[
\text{b. [law } \text{kaan } \text{yuṭ豪 ] } \text{kaan b-yihtaaz, mahrame}
\]
\[
\quad \text{if } \text{be.PAST.3SM sneeze.IMP.3SM be.PAST.3SM MOD-need.IMP.3SM tissue.F}
\]
\[
\quad \text{‘If he had been sneezing, he would have needed a tissue.’}
\]

In contrast, CFs in Zulu always include a past-imperfective morpheme, even when receiving a perfective interpretation (2). In some instances, however, as in (2b), Zulu allows additional aspectual morphology on the CF predicate, corresponding to the ‘real’ aspect of the CF.

\[
\text{(2) a. [ukuba } \text{be-ngi-thimula ] } \text{be-ngi-zo-dinga ithishi}
\]
\[
\quad \text{if } \text{IMP.1SG.sneeze IMP.1SG.FUT.need 5tissue}
\]
\[
\quad \text{‘If I had been sneezing, I would have needed a tissue.’}
\]
\[
\text{b. [ukuba } \text{be-ngi-thimul-ile ] } \text{be-ngi-zo-dinga ithishi}
\]
\[
\quad \text{if } \text{IMP.1SG.sneeze.PRF IMP.1SG.FUT.need 5tissue}
\]
\[
\quad \text{‘If I had sneezed, I would have needed a tissue.’}
\]

**Factor 1.** In PA, perfective morphology outside CFs always receives a past interpretation. By contrast, imperfective morphology is compatible with a range of temporal interpretations. We conclude that perfective morphology in PA is bundled with a past tense meaning, while imperfective morphology simply encodes aspect. In Zulu, we argue for the reverse situation: the be- morpheme (obligatory in CFs) always carries both imperfective and past interpretations outside CFs, while the perfective aspect morpheme is not coupled with tense. We argue that both languages simply require past tense to express counterfactuality. In PA, past can be communicated using perfective
aspect; while in Zulu, past comes coupled with imperfective aspect.

**Factor 2.** The second difference between the languages is the availability of tense/aspect stacking in CFs. In PA, there are two ways to encode past in CFs: either through perfective morphology on the main verb (1a) or by past morphology on auxiliary ‘be’ (kaan) (1b). When kaan is used in a CF, the main verb may bear either perfective (3) or imperfective morphology with a ‘real’ aspctual interpretation (1b).

(3) [law kaan ifianta ʃ] kaan htaaz mahrame
    if be.PAST.3SM s sneeze.PFV.3SM be.PAST.3SM need.PFV.3SM tissue.F
    ‘If he had sneezed, he would have needed a tissue.’

Zulu does not allow auxiliaries in CFs, eliminating one stacking strategy. However, we do find aspect morphology receiving its ‘real’ interpretation in Zulu CFs where the relevant aspect independently combines with the predicate in a different morphosyntactic location from the past-imperfective, as in (2b), exhibiting an additional perfective aspect. Thus, while PA transparently displays aspect in all CFs, Zulu exhibits a limited distribution of ‘real’ morphology in CFs. The auxiliary distribution further accounts for differences in the expression of ‘real’ tense in both languages: when PA employs past auxiliary kaan in a CF, a perfective-marked main verb can express ‘real’ past tense; in Zulu, the main predicate is incapable of hosting additional past morphology.

While PA and Zulu’s CF strategies look rather different on the surface, we propose that they in fact have identical requirements for constructing CF meanings. The differences they exhibit in CFs can be understood in terms of independent morphosyntactic differences between the languages regarding the coupling of tense and aspect and the distribution of auxiliaries. This analysis expands our understanding of the typology of CFs and provides a structural analysis of the morphosyntactic elements interacting to achieve CF meaning.

Word count: 750

**References**

