

Schematising (morpho)syntactic change in LFG: Insights from Arabic (de)grammaticalisation

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Previous work by Van Kemenade and Vincent (1997); Butt and King (2001) (and references therein); Butt and Lahiri (2002); Vincent and Börjars (2010); Börjars et al. (2016) have shown that LFG presents some advantages in modelling (de)grammaticalisation and diachronic change. Building on this work we contribute an analysis of grammaticalisation in two major constructions in vernacular Arabic involving aspectual auxiliaries, which demonstrate the interaction of both lexeme-based and constructional grammaticalisation discussed in Vincent and Börjars (2010) and which instantiate both f-structural and c-structural changes. As we explore the diachronic developments of these constructions we highlight the importance of a part of the grammaticalisation path common to both, while also accounting for the contrasts.

The data indicative of grammaticalisation is rich and varied in vernacular Arabic. There *is* a small tradition of work on grammaticalisation in Arabic, but is overwhelmingly descriptive, and largely avoids addressing issues from any theoretical perspective. While previous accounts of diachronic change in LFG have been able to rely on historical written sources, such a method is not an option here, because there is no longstanding written tradition for the vernaculars. To conduct such research on change we employ a comparative approach. By studying the cross-dialectal synchronic diversity that exists, we explore and seek support for hypotheses about diachrony and look towards future directions for changes and splits.

We concentrate on two constructions in Arabic. We argue that along their (distinct) grammaticalisation paths these unrelated constructions each involve an instance of **a shared structural reanalysis** from an f-structure ADJ to an f-structure XCOMP: the shift from adjunct to argument status being a grammaticalisation path well attested for Indo-European (see e.g. Kiparsky (1995)). Beyond this f-structural commonality in the course of grammaticalisation, the c-structural aspects differ, suggesting that a theoretical framework for modelling grammaticalisation and change needs to allow these to vary independently (as in LFG). The synchronic endpoints of the constructions under discussion also differ. This notably concerns the f-structure status of the auxiliary, where one involves predicate loss and the other maintenance of a PRED value (see Falk (2008)).

The first case of grammaticalisation is the progressive discussed from an LFG perspective in Camilleri and Sadler (2017). The progressive auxiliary (*gāʔda*) is derived from its lexical counterpart meaning ‘sitting’, a common path of change (Bybee et al. (1994); Heine and Kuteva (2002)) (see (1)). The proposal is:

1. We have the lexical participle PRED ‘SITTING<SUBJ>’, co-occurring frequently with a circumstantial type of adjunct clause, with obligatory subject control ((↑SUBJ) = (↑XADJ SUBJ)).
2. A reanalysis takes place whereby as a result of added cohesion and potential sedimentation as a result of frequent collocation, the a-structure is extended: PRED<SUBJ, XCOMP> (NB: (↑SUBJ) = (↑XCOMP SUBJ)).
3. Potentially a loss of the SUBJ’s thematicity takes place next, resulting in a raising-type structure: PRED<XCOMP>SUBJ (NB: (↑SUBJ) = (↑XCOMP SUBJ)): the ‘sitting’ PRED starts bleaching and broadens its meaning into something that refers to a wider spatial location (Kuteva, 1999).
4. Eventually what is left of the stative meaning of ‘sitting’ is merely the temporal unboundedness. There is loss of PRED status and emergence of the PROG reading. The XCOMP PRED becomes the structure’s main (and sole) f-structure PRED, with the auxiliary participating as a functional co-head in the same f-structure.
5. In different vernaculars we demonstrate that a copula function has developed from both stages 3 and 4 above.

We contrast the grammaticalisation of the PROG construction with grammaticalisation of the (somewhat exotic-looking) universal perfect construction in (2), recently identified in Hallman (2016) for Syrian, where we draw on novel data. We will show that the main predicate here is in fact *il/l-* a preposition-derived verbal (auxiliary) element, with non-canonical realization of its SUBJ.

The universal (continuous) perfect refers to a stative reading of the perfect which does not assert any completiveness, in contrast to an existential (experiential) perfect, which denotes a past eventuality (which may have current relevance), completed at reference time. The universal perfect expresses endurance

of the state - ‘PERFECT of persistent situation’ in Comrie (1976)’s terminology. For English stative predicates, the universal perfect reading arises in the presence of a durational adjunct: contrast *I have lived here* (existential/experiential) with *I have lived here for five years* (universal). In contrast, in vernacular Arabic, the universal perfect construction in (2) (but **not** the existential perfect) involves a predicate *il/l* (phonological variants), a preposition meaning ‘to’ in its lexical use, and which is also used for (some types of) possessive constructions (Arabic lacks a *have* verb). We will argue that the Arabic universal perfect is derived from a (non-garden variety) possessive construction, illustrated in (3) (as opposed to that in (4)), which has a NP as the theme argument providing a temporal interval of sorts, and an XADJ with a SUBJ structure-shared with the SUBJ of the matrix (*-ha*, ‘her’). Hence, (2) is an instance of a ‘possessive perfect construction’ (Heine and Kuteva, 2006), and partly displays a grammaticalisation path found in Romance and Germanic but said to be rare beyond European languages. We will demonstrate the affinity between the Arabic data and the developments that took place in Celtic languages (Irish and Breton, but not in Welsh), where a perfect construction has grammaticalised from Goal and Locative type possessive schemas using prepositional predicates. Concretely, the grammaticalisation path which we will argue for is:

1. We have a Preposition coding the goal/possessor argument: PRED<OBJ>
2. A possessive (have) construction (e.g. (3-4)) emerges. This results in a change from a prepositional-to-verbal predicate which remaps the goal/possessor onto a SUBJ GF. In structures of the type in (3), the temporal extent NP argument maps onto an OBJ. A purpose adjunct clause is additionally available: PRED< SUBJ, OBJ > + XADJ (constructional control: (\uparrow SUBJ) = (\uparrow XADJ SUBJ)).
3. Universal Perfect appears. This entails the reanalysis of the purpose adjunct along with an a-structure extension: PRED<SUBJ, OBJ_θ, XCOMP> (NB: (\uparrow SUBJ) = (\uparrow XCOMP SUBJ)). We believe that at this point, as the a-structure is extended, the temporal extent is consequentially reanalysed as a [+T] OBJ_θ. Once this reanalysis takes place, the modes of expression for the durational interval broaden, allowing association with a PP. The second argument thus alternates between being a OBJ_θ or an OBL. We hypothesise that this is the point where what was once a verbal predicate expressing a possessive relation now bleaches and functions as an auxiliary that becomes the locus of the PERFECT interpretation.
4. Universal Perfect: Further grammaticalisation - Loss of SUBJ thematicity: PRED<OBJ, XCOMP> SUBJ (NB: (\uparrow SUBJ) = (\uparrow XCOMP SUBJ)). In some dialects this change is coupled by a loss of agreement/inflection or phonological erosion.

The development of the auxiliary does not proceed further in the direction of PRED loss. Rather, support for a bi-clausal f-structure analysis comes from two observations: the requirement for a temporal extent is imposed by the auxiliary, and the second argument may be a closed clausal arguments. (5) represents one such instance, where the COMP happens to be introduced by the COMP FORM *u* which introduces circumstantial ADJ clauses elsewhere in the grammar. We take this to be reminiscent of the original XADJ function of this clause. A COMP GF is also what we end up with in those dialects where the SUBJ’s loss of thematicity is accompanied by a loss of agreeing inflectional, in favour of the use of the default 3SGM form.

With evidence from the grammaticalisation of two constructions in Arabic we observe the importance of the XADJ-to-XCOMP change. The argument-extension that results serves as a crossroads for change, i.e. different directions of change can split out of it, and it can itself function as the trigger of additional changes, such as changes in the GF of other arguments. While part of the grammaticalisation path is the same, the end result is the emergence of two aspectual auxiliaries and constructions with considerably different f-structures.

