Problems of Projection and the Copula Cycle
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Like negative markers, copula verbs can be seen to undergo regular, unidirectional change or grammaticalization and renewal. I refer to this regular changes as a copula cycle, following Katz (1966). The sources of copulas include demonstratives, location verbs, verbs of change, and adpositions/adverbs. Copula verbs have many functions cross-linguistically, such as linking subjects with locational and adjectival predicates. The diversity of what copulas are sensitive to in their clausal environment involves permanent/non-permanent, location/identity, and realis/irrealis and these characteristics reflect what they derive from. Copulas are always grammaticalized forms that usually still have a more fully lexical counterpart in the same stage of the language. I will use a broad definition that includes copulas with shades of modal and aspectual meanings.

Demonstratives show relatively rapid change. The examples will be taken from Chinese, Egyptian, Arabic, Amerindian, and various creoles. A demonstrative –*te* is used as copula in (1) from Zoque, a Mixe-Zoque language of southern Mexico, in (2) from Chinese where in older Chinese the demonstrative and copula co-occur, and in (3) from Arabic where *huwa* is also still used as masculine singular demonstrative.

(1)   *Te'   tuwi   kanaŋbü**de***   Zoque
        te'   tuwi   0-kanaŋ=pü=te
        DET dog   3B-old=REL=PRED
        'The dog is old' (Faarlund 2012: 141-2)
(2)   ***Shi   shi**   lie   gui***   Old Chinese
        DET   PRED violent ghost
        'This is a violent ghost.' (Peyraube & Wiebusch 1994: 398)
(3)   *ana   **huwa** l-qalbu   l-basharii*
        1S   PRED DET-heart   DET-human
        `I am the human heart.' (Cantarino, 1974: 434)

In this talk, I will focus on demonstratives by looking at their features and their structure as they are reanalyzed. These changes from demonstratives to copulas are relevant to current theoretical frameworks, in particular to the Minimalist Program (Chomsky 1995 and later). In this framework, there is an emphasis on features but which are universal is still debated. By looking at the features that change, in this case locational features, I contribute to that debate (see also van Gelderen 2011). I argue that the demonstrative (and verbs) have semantic and interpretable features that are reanalyzed as grammatical features. Depending on the semantic features of the original source (person, number, location, duration), the copula will be used for one of the many classes of copulas, third person pronouns for equational copulas.

The structural representation of a copula most often involves a Pred(icate)Phrase, the head of which is involved in theta-marking of the Theme that bears the grammatical subject role (see Bowers 1993 and Baker 2003, for instance, who argues that the Pred makes the predicative function of nouns and adjectives possible). I will follow this and will formulate the changes from demonstratives to Pred as instances of Specifier to Head change (see van Gelderen 2004; 2011a; Lohndal 2009). Current developments in the

Minimalist Program (Moro 2000; Chomsky 2013; 2014) enable a formulation of the change from specifier to head as symmetry avoidance. The merge of a phrasal subject with a phrasal predicate, i.e. {XP, YP}, results in problems because the labeling algorithm at the interface level cannot find an unambiguous head/label through minimal search. These problems can be resolved by movement of the XP or YP (or by feature-sharing). There is another mechanism that could resolve labeling problems, namely the change from phrase to head where the XP in {XP, YP} is reanalyzed as X. This change would eliminate one of the offending phrases. One would therefore expect change towards the form {X, YP} to be common. This is in fact the case.