

## INCREASING Morphological Complexity

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**1. THE ISSUE.** In the principles-and-parameters approach to diachronic syntax, differences in grammatical structure between successive historical stages are derived from the resetting of a parameter value. In Roberts & Roussou's (2003) system, the locus of parameter change is the morphological expression of parameters. The non-convergence with the target grammar is brought about by the ambiguity or loss of a morphological trigger, which initiates the reanalysis of an input string in terms of a simpler representation. The directionality of change is therefore from morphology to syntax, with morphological change entailing the loss of formal marking. However, as Lightfoot (2006: 101) points out, the opposite scenario should be possible as well. In this paper, I show that Ancient Egyptian (Afroasiatic, ca. 2600 BCE-1200 CE) meets the profile of a richly recorded language "with INCREASING morphological complexity" and explore the consequences for a minimalist theory of syntactic change.

**2. CENTRAL HYPOTHESIS.** Instances of growing complexity in the inflectional component of grammar pose a challenge for cue-based models, since concurrent changes in word order and clause structure cannot be derived from structural simplification due to morphological erosion. Rather, the syntax must be allowed to change spontaneously, endogenously, without interface pressures from the morphology and the lexicon playing a decisive role (Reintges 2008, in press). However, the reverse situation does not hold true, since morphological change may be fed by independent syntactic change. I will defend the strong thesis that where morphological innovations proceed in a regularly and predictable way, we are dealing with *regular morphological change* that come forth from *regular syntactic change*. Thus, the directionality of change is from the syntax to the morphology.

**3. MAJOR TYPOLOGICAL SHIFTS.** A case in point for increasing morphological complexity is the restructuring of the tense/aspect/mood (TAM) system in the later periods of Ancient Egyptian. A salient aspect of its historical development is the word order change from a rigid head-initial VSO language to a flexible SVO language, which displays all the earmarks of discourse-configurationality. In terms of morphological typology, the language underwent a change from a predominantly *agglutinating* language with extensive use of affixation to an *isolating* language with a one-to-one correspondence between morphemes and words (Loprieno 1995). The diachronic tendency to replace synthetic patterns by analytic ones led to an overall increase of morpho-semantic distinctions, with the result that the inflectional systems of later stages are more elaborate and fine-grained than those of earlier stages.

Thus, compare the VSO pattern in Old Egyptian (ca. 2600-1990 BCE), in which the finite verb *ms-n* ‘has born’ contains the stem-external Perfect suffix *-n*, with the SVO structure in Coptic (ca. 350-1200 CE), in which the Perfect clitic *a* in pre-subject position is morphologically independent of the main verb *mise* ‘to deliver’.

- (1) Basic VSO structure with Perfect tense/aspect verb extension *-n* (Old Egyptian 2600-1990 BCE)  
**ms-n**      Nww    Mrjj-n(j)-Rʕ    hr    dʕrt-f      jʔb-t  
 bear-PERF    ocean    Meri-ni-Re      on    hand-POSS.3M.SG      left-F.SG  
 ‘The ocean has born (King) Meri-ni-Re on his left hand.’ (Pyramid Text 1701a/M)
- (2) Basic SVO structure with Perfect tense/aspect TAM clitic *a* (Coptic Egyptian 350-1200 CE)  
**a**      t-kʾaule      **mise**    ən-u-ʕeere      ən-shime  
 PERF    DEF.F.SG-camel    bear    PREP-INDEF.SG-girl    LINK-woman  
 ‘The she-camel delivered a daughter.’ (Mena, Miracles 10<sup>b</sup>:33-34)

From the perspective of major syntactic categories, Coptic verb stems are less finite and more nominal than their Old Egyptian counterpart, which is why they have traditionally been analyzed as infinitives. Due to the presence of nominal features, Coptic main verbs are no longer compatible with the exponents of tense, aspect, and mood distinctions, which are externalized outside of the verbal domain as auxiliary-like conjugation bases.

**4. STRONG VS. WEAK *vP*-PHASES.** The shift from synthetic > analytic morphology does not represent an isolated morphological change, but rather originates from the restructuring of the verbal-inflectional domain. I present a PHASE-based analysis (along the lines of Chomsky 2001 and subsequent research) of this syntactic change, which is cast in terms of the weakening of an originally strong *vP*-phase. Roughly following Boeckx & Grohmann (2007) and Rouveret (2008, in press), I take the *vP*-phase to be subject to parametric variation along the strong/weak distinction: in a strong *vP*-phase, the main verb is associated with the finiteness feature, while a weak *vP*-phase is characterized by the disassociation of the finiteness feature from the main verb.

Comparing Old Egyptian with Coptic, the *vP*-phase in Old Egyptian is originally strong and displays the following syntactic characteristics:

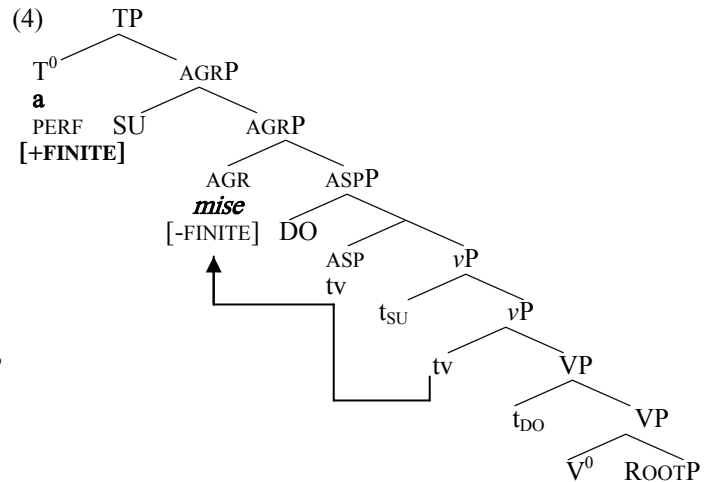
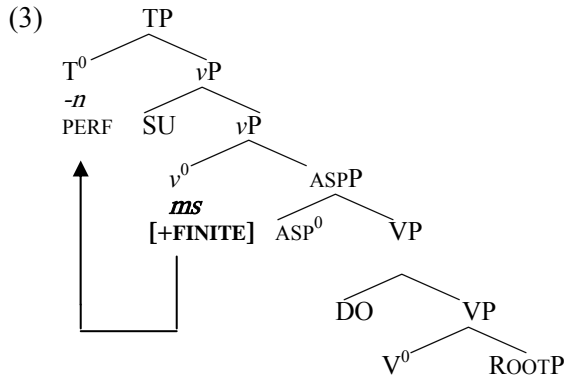
- (i) The verb is marked for finiteness within the *vP* domain, which also contains functional superstructure (aspect, voice).
- (ii) Both DP subjects and DP in/direct objects are licensed in-situ in the *vP* domain, which thus represents a case of ‘argument crowding’ in the sense of Alexiadou & Anagnostopoulou (2001).
- (iii) Movement of the finite verb to T(ense) is obligatory, but the movement domain may be extended to include left-peripheral positions(FOC(us), COMP (for Verb Second derivations); see diagram (3).

By contrast, the Coptic verbal domain can be characterized as a weak *vP* phase, with the following characteristics:

- (i) The main verb is not marked for finiteness within the *vP* domain, which consequently lacks *vP*-internal functional structure.
- (ii) The finiteness feature is associated with externalized TAM inflection words.

(iii) Both DP subjects and direct objects must leave the *vP* domain to be case-licensed in a *vP*-external Spec, AgrP and Spec, AspP.

(iv) Verb raising never exceeds the inflectional domain. As a result, the *vP* is vacated by both the main verb and its arguments; see diagram (4).



The architecture of the 'strong' *vP*-phase in Old Egyptian

The architecture of the 'weak' *vP*-phase in Coptic

**5. SYNTACTIC FACTORS UNDERLYING THE 'WEAKENING' OF THE *vP*-PHASE.** Several factors come into play, moting the shift from an originally strong to a weak *vP*-phase:

(i) The increasing productivity of multiple verb constructions at the expense of single verb constructions. Multiple verb constructions of the kind in (5) contain with two finite verbs in series, witness the double occurence of the Perfect tense/ aspect verbal extension.

- (5) Multiple verb construction (Early Middle Egyptian, 2000-1900 BCE)  
**ꜥḥꜥ-n**                      **ḥꜣꜣꜣ-n**                      kjj                      kjj  
 stand.up-PERF              embrace-PERF              other                      other  
 'Then one embraced the other.' (Coffin Texts IV 278d/Sq1C)

(ii) The reanalysis of Spec, TP (with  $\bar{A}$ -properties) as a canonical subject (A-)position. In example (6), the DP subject *jnb-w=s* 'its wall' appears following the auxiliary verb *juw* (< *juw* 'to come') and preceding the main verb *dm-n* 'scratch'. It binds a subject variable in the *vP*-internal subject position Spec, *vP*.

- (6) DP subject in Spec, TP, binding a subject variable (Classic Middle Egyptian, 1800-1750 BCE)  
**juw**                      **jnb-w=s**                      **dm-n**                      *t<sub>SU</sub>*                      pt  
 AUX                      wall-MP=POSS3FS              cratch-PERF                      sky  
 'Its (the temple's) walls scratched the sky.' (stela Louvre C3:6)

(iii) The rise of multiple verb constructions with infinitival verbal complements, which are governed by locative and directional prepositions.

- (7) *Infinitival tense, indicating present/past progressive (Late Egyptian, 1500-800 BCE)*  
**wn-jn** pʔ-ʃrj **ħr** **ħms** **ħr** **jr-t** hrw nfr  
 AUX-FOC DEF.MS-boy at sit.INF at make.INF day beautiful  
 ‘The young fellow sat down and spent a holiday (...)’ (Doomed Prince 7:14)

(iv) The activation of an articulated topic/focus field in Coptic, which creates extra configurational space to host the newly emerging evidential-modal and focus-marking patterns (8).

- (8) *Focusing Perfect in a wh-in-situ question (Coptic Egyptian 350-1200 CE)*  
**ənt-a** u βok e-pe.k-ħet ?  
 FOC-PERF what come to-DEF.SG.M=POSS2SG.M-heart  
 ‘What has come into your heart?’ (Apoth. Patr. ed. Chaîne no.139, 31:7)

**6. CONCLUSIONS.** The shift from synthetic to analytic morphology has a syntactic correlate in the shift from a strong to a weak *vP*-phase, in which the main verb carries no longer finiteness and TAM marking and the verb’s argument are no longer case-licensed in their MERGE-domain. Externalized TAM-markers have developed into the sole representation of finiteness and core propositional features. Due to the decline of finite verb movement to the C-domain, positions formerly activated by movement are lexicalized by TAMs. The dichotomy between non-finite main verbs and finite TAMs leads to an increase of morphological complexity, which manifests itself in the emergence of patterns that are entirely novel and already existing ones that are extended to new domains.

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