Covert A-movement in the Syntax and Lower Copy Realization: Evidence from Coptic Wh-in-situ

1. DESCRIPTIVE FACTS. Coptic [Ancient Egyptian, Afroasiatic, late 3rd-13th c. CE] can be classified as a whin-situ language that "wears its Logical Form on its sleeve". This generalization basically means two things. First, the standard way of forming information questions is wh-in-situ, whereby the questioned constituent occupies the same clausal position as the declarative counterpart in the corresponding answer. In the wh-in-situ direct object question below, the interrogative pronoun **u** "what" occurs in the complement position of the phonologically bound, construct state-marked verb **ər** 'to do'. This is the canonical direct object position, SVO being the language's basic word order.

Wh-in-situ direct object question with special relative marker **ant** (1)pa-ferre ənt ?a =k ər hinaï ur. na=n DEF.M.SG.POSS.1SG-child REL PERF =CL.2M.SG do.cs what to=CL.1PL thus "My child, what have you thus done to us?" (Luke 2: 48, ed. Balestri)

Second, the in-situ placement of the wh-phrase is a necessary but not a sufficient condition for an interrogative construal. For the wh-in-situ construction to be interpreted as a bona fide constituent question, the wh-in-situ element must be connected to the left periphery by means of a special relativizing morphology. The relative marker **ont** that marks the wh-in-situ interrogative recurs in the object relative clause (2). In Coptic, postnominal relative clauses are externally headed and have no other subordinating complementizer than the initial relative complementizer.

Resumptive direct object relative clause with special relative marker **ant** (2)[RC **ənt** pə-hoßi ?a pə–nu^{te} k^jalo: $=f_i$ na=n] DEF.M.SG-work to=CL.1PL REL PERF DEF.M.SG-God entrust.CS =CL.3M.SG "The work that God has entrusted to us" (Shenoute A. I.1 36: 5)

Chomsky (1977) provides a unified treatment of such apparently unrelated sentence patterns as whquestions and relative clauses as a natural class of operator–variable constructions. These are derived by an application of \bar{A} -movement. In a number of typologically diverse languages, \bar{A} -movement that takes place in the overt syntax leaves a footprint in a special morphology (Chung 1998; Georgi 2016). What makes the Coptic case special is that the morphology of extraction surfaces in a wh-in-situ context.

2. "PRONOUNCE LOWER COPY". To resolve the puzzle, Author, LeSourd & Chung (2006) exploit to full extent the "Copy Theory of Movement" (Chomsky 1995: 251-253), according to which A-movement leaves behind a full copy of the moved wh-phrase. This considered, UG should allow for the option of spelling out a lower instead copy of an Ā-chain instead of the highest one. On the PF approach to Coptic Ā-movement, wh-in-situ is derived by Ā-movement that happens in the narrow syntax, followed by the Spell-out of the lower wh-copy, which is dictated by a language-specific "Pronounce Lower Copy" algorithm. Yet, due to the morphological movement reflexes in the form of special relative marking, covert A-movement is not completely hidden from the researcher's view. As for the details of the derivation, I will argue that syntactically *covert* Ā-movement is contingent on a prior application of syntactically overt A-movement. On its way to Infl, the construct state-marked verb **ər** in example (1) drags the direct object wh-phrase u: along with it. The wh-phrase ends up in the specifier position of an [±telic] Asp(ect) projection in the Mittelfeld domain. This is the position in which the direct object receives structural accusative Case, which has repercussions for the aspectual interpretation of the clause as depicting a telic event. The covert A-movement part of the derivation is effectuated after verb movement to Infl and phrasal subject and direct object movement have been completed. The wh-in-situ object u: moves covertly from the Spec, AspP to its scope position in the left periphery of the whinterrogative sentence—a position that will be identified with the specifier of the unique Foc(us) projection. Covert A-movement that happens in the syntax feeds overt extraction morphology, with the special relative marker **ont** being merged into the head of the FocP.

3. SCOPE ASYMMETRIES IN EMBEDDED WH-IN-SITU. Coptic wh-in-situ is not restricted to root clauses, as in French, but it also permissible in embedded contexts, as in Mandarin Chinese. The scope asymmetries between finite and non-finite (infinitival) CP complements adds a new facet to the picture. In finite CP

complements, which are headed by the quotative complementizer $t^{f}e$ 'that', the embedded wh-in-situ takes the embedded scope. As a result, the [Main Clause [Finite Wh-in-Situ Clause]] construction must be interpreted as an indirect question. Factive propositional attitude verb like **eime** 'to know' that select declarative as well as interrogative complements, are amply attested as matrix verbs, while non-factive verbs appear to systematically absent.

(4) Finite CP complement embedded scope of the embedded wh-in-situ

alla marə =n Eime [t^fe ero=s e =sna ər But OPT =CL.1PL know.ABS for=CL.3F.SG COMP[+FIN] REL =CL.3F.SGFUT do..cs Ta nim] POSS.ADJ.F.SG Who

"But let us find out about it (the coat) whose one it is going to be." (John 19: 24, ed. Balestri) The narrow scope of the partitive wh-phrase **ta nim** 'that one of whom' is evidence that the covert \bar{A} movement operation has not crossed a CP boundary. Instead, the wh-phrase as a whole has undergone pied-piping to the specifier of the embedded focus projection. The special relative marker **e** surfaces in the embedded CP to the left of the finite complementizer $t^{f}e$.

(5) [CP alla marə=n eime ero=s [CP [C' [C° $\mathbf{t}^{f}\mathbf{e}$] [FocP. ta-nim [Foc' [Foc° \mathbf{e}] [TP Ø] [IP=k na ər ta-nim]]]]]]]]]]

There is an eye-catching asymmetry here with infinitival complements, which are introduced by the prepositional complementizer e- 'to'. The embedded wh-in-situ take matrix scope, with the result that the entire construction [Main Clause [Infinitival Wh-in-Situ Clause]] must be interpreted as a direct question. The special relative maker surfaces in the main clause where the scope of the embedded wh-in-situ lies. In the direct object control sentence (6), the matrix volitional verb **wof** 'to want' is inflected for the construct state, which proves the complement status of the adjacent infinitival CP. The infinitival clause itself contains the 1st pers. sing. causative infinitive **tra** 'to let', which governs the embedded subject position with a co-referential null subject. In all other person-gender-number contexts, the embedded subject controller. The embedded lexical verb **ka eßol** 'to release' appears in the construct state, dragging the interrogative pronoun **nim** 'which one' along with it. This leads to the splitting up of the wh-partitive phrase **nim həm pe-snau** 'which is stranded within the vP domain.

(6) Infinitival CP complement with matrix scope of the embedded wh-in-situ

e =tetən wof [<u>e</u> tra pro_{1sg} nim ka nɛː=tən =CL.2PL REL want.ABS COMP[-FIN] leave.cs Who for=CL.2PL CAUS.INF.CL.1SG eßol həm pe-snau] DEF.M.SG-two PCL From

"Whom do you want me to release for you from the two?" (Matthew 27: 21, ed. Horner)

Shlonsky & Soare (2011) argue that although wh-infinitives are syntactically impoverished, they nonetheless provide an escape hatch for \bar{A} -movement across a clause boundary. Coptic infinitival clauses are structurally less challenged, with additional positions available for both the causative infinitive and the embedded infinitival subject. All the same, they crucially lack an embedded focus projection, which could provide a final landing site for the fully or partially moved wh-in-situ constituent. The only scope position available for \bar{A} -movement is the Spec,FP position of the higher main clause. And so, the obligatory matrix scope of infinitivally embedded wh-in-situ receives a cogent syntactic explanation. The structure in (7) abstract away from further complications that arise from pronominal dative shift and aspectual particle (e β oI) placement.

I will present additional evidence from island sensitivity and absence of intervention effects that point into the same direction: syntactically covert \bar{A} -movement of the wh-in-situ element that feeds overt extraction morphology in the form of special relative markers.

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