VSO AND SVO WORD ORDER
IN MIDDLE EGYPTIAN[*]

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1 Introduction

The goal of this paper is to investigate clausal architecture, and the interaction of syntax with agreement, in Middle Egyptian. Specifically, I focus on how the dominant VSO word order (Verb-Subject-Object) and the alternative SVO word order (Subject-Verb-Object) in Middle Egyptian are derived and related. Ultimately, I argue for a Verb-to-Tense raising analysis of VSO clauses, and a tenseless analysis of SVO clauses. Additionally, I account for an agreement asymmetry between the two word orders: lack of agreement in VSO order and rich agreement in SVO order, a pattern that is also attested in most dialects of Arabic.

Before sketching the outline of the analysis to come, a bit of background is necessary on Ancient Egyptian and Middle Egyptian in particular. Middle Egyptian was the second out of five stages of Ancient Egyptian (Old Egyptian, Middle Egyptian, Late Egyptian, Demotic, Coptic), and was spoken from approximately 2000-1300 B.C.E. Although it is no longer a living language, it is well attested in a variety of texts: historical records, literary narratives, letters, etc. (see Loprieno 1995: 5-6 for some discussion of text types). It was written using hieroglyphs, and

the examples in this paper will be in the standard transliteration system used by Egyptologists. An example of hieroglyphs and the transliteration system is in (1).

(1)   a.
         b. *b3ḥ*

(1)a is an example of the hieroglyphic script. Reading from right to left, it contains a *jabiru* bird with its forward wing extended and a coil of rope, which together represent the Egyptian word for "spirit." The transliteration of this word is in (1)b, read left-to-right and pronounced among Egyptologists as [bax]. The [a] is just for ease of pronunciation since vowels were not recorded in hieroglyphic orthography, a consequence of Egyptian's root and pattern morphology (much like Hebrew and Arabic). The aleph symbol *3* that is conventionally pronounced as [a] probably represents either a glottal stop or some kind of liquid (Peust 1999: 127-128).

   The unmarked word order of Middle Egyptian is VSO, as shown in (2).

(2)   *iw*   *rḫ.n*   *ḏdi*   *sḫr*   **VSO, No Agr**
         PARTICLE   learn-PAST   Djedi   plan
                        V   S   O
         Djedi learned the plan.[1]

There is no subject-verb agreement in the VSO word order pattern, i.e. the form of the verb is invariant with respect to the person, number and gender of the subject (The particle *iw* is required in most matrix declarative clauses. It does not play a large role in the analysis below and is subsequently omitted for clarity).

   One of Greenberg's (1966) correlates of VSO word order is the availability of an alternative SVO word order. In many cases, the SVO word order is associated with

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[1]   Gloss abbreviations: 1 – first person; 3 – third person; ADV - adverbial clitic; CAUS - causative; FEM - feminine; INF - infinitive; M – masculine; NOM – nominative; PASS - passive; PAST - past tense; PAST.CTG - contingent past tense (Depuydt 1993); PL - plural; PROS - prospective; S –singular; STAT - stative.

discourse configurationality, in that the preverbal subject is topicalized or focused (see e.g. Macaulay 2005 on Chalcatongo Mixtec). In Middle Egyptian, however, SVO word order is associated with a particular inflectional paradigm: verbs inflected for stative aspect.

(3) *ḏdi*   *rḫ.w*   *sẖr*   **SVO, Agr**
    Djedi   learn.STAT-3ms   plan
    S   V   O
    Djedi knows the plan.

In (3) the verbal root is the same as in (2), *rḫ* "to learn." However, in (3), *rḫ* has been inflected for stative aspect, and has the sense of "to know," as in "to be in a state of having learned." [2] Also, unlike in the VSO word order, subject-verb agreement is realized. The verb in (3) has the agreement suffix -*w* (third person masculine singular).

This paper aims to address three puzzles presented by the data. The first puzzle concerns how the VSO order of (2) derived, and it is discussed in Section 2. I will argue that, like in many other VSO languages, verb-initial order is the result of V-to-T raising, as shown by typological, historical and synchronic evidence.

The second puzzle concerns the seemingly arbitrary correlation between SVO word order and stative aspect, and it is addressed in Section 3. The crucial fact is that stative clauses are tenseless, that is, (3) can be translated as either "Djedi knows the plan" or "Djedi knew the plan." I assume provisionally that tenseless clauses lack TPs, so V-to-T raising cannot occur in the stative. The verb thus remains beneath the subject, resulting in SVO order.

The final puzzle, discussed in Section 4, is how to explain the agreement asymmetry that is associated with word order. I take a partially traditional approach to agreement, proposing that the specifier-head relationship (where agreement is licensed between a head and its specifier; Chomsky 1986, Kayne

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[2]   Despite the verbs in (2) and (3) looking identical in transliteration, a difference in their vocalic melodies has been reconstructed; see Section 3.1.

1989, and much subsequent research) is a necessary condition for subject-verb agreement in Middle Egyptian. Barring anything unexpected, the verb and the subject will be in a specifier-head relationship in the SVO order, but not in the VSO order. However, more needs to be said concerning the VSO order to prevent the verb and the subject from agreeing when they are in a spec-head relationship at an incomplete stage of the derivation. This is prevented by positing that agreement occurs post-syntactically at Phonological Form (henceforth, PF), following recent work by Bobaljik (to appear). Agreement thus only occurs after each phase (Chomsky 2000, 2001, 2004) is sent to PF, and not at each stage of the derivation. This generates the observed pattern of facts correctly for both the VSO and SVO word orders.

The overall pattern is reminiscent of another Afroasiatic language: Arabic. In many varieties of Arabic, the dominant word order is VSO, there is an alternative SVO word order, and there is an agreement asymmetry which favors the SVO order. Much Arabic research of the past two decades focuses on this pattern, especially the agreement asymmetry (Mohammad 1989, 2000, Benmamoun 1992, 2000, Fassi Fehri 1993, Aoun, Benmamoun and Sportiche 1994, Harbert and Bahloul 2002, Benmamoun and Lorimor 2006, Soltan 2006, and many others). In Section 4.3, I briefly discuss the Arabic facts and the analyses that have been proposed to account for them.


2. V-to-T Raising in Middle Egyptian

2.1 Background: On Deriving VSO Word Order

As presented above, the primary word order in Middle Egyptian is VSO.

(4)   *rḫ.n*   *ḏdi* *sḫr*   (repeated from (2))
        learn-PAST Djedi plan
        Djedi learned the plan.

VSO word order is inherently problematic for syntactic theory because standard theories of phrase structure assume that a verb and its complement always form a single constituent, namely, a Verb Phrase (VP).

(5)

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              VP
            /    \
          V      Complement
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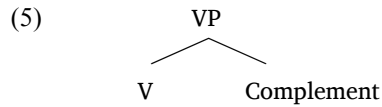
A structure like (5) (all things being equal) will result in word orders of VO or OV, depending on whether the VP is right- or left-headed. However, in VSO languages like Middle Egyptian, the subject intervenes between the verb and its complement, which is not predicted by the structure in (5). This is a sign that either movement has occurred, resulting in the separation of the verb and the object, or that a VP like (5) does not exist in the syntax of these languages.

For many verb-initial languages, the existence of a VP like (5) has, in fact, been clearly established (Arabic: Mohammad 2000; Celtic languages: Anderson and Chung 1977, McCloskey 1983, 1991, Sproat 1985, Hendrick 2000; St'át'imcets Salish: Davis 2005; Niuean: Woolford 1991, Massam 2000; Chamorro: Chung 1983, and others). However, most of the tests used to establish VP constituency (movement, VP ellipsis, VP coordination) are not easy to replicate in Middle Egyptian. Nevertheless, since evidence for a VP has consistently emerged in other VSO languages, it is reasonable to assume that similar conclusions hold for a VSO language in which it has not so far been possible to run the relevant experiments. I assume Middle Egyptian has a VP like (5) henceforth.

Assuming that a VSO language has conventional VPs raises the issue of how the surface order is derived. Many different kinds of proposals have been made in the literature, including lowering of the subject into the VP (Chung 1990, Choe 1987), raising of the verb head to a higher functional projection (originally proposed in Emonds 1980), and raising of the whole VP into a specifier position after the object (and any other complements) have vacated it (Massam 2000, Lee 2000; see also Carnie and Guilfoyle 2000 and Carnie, Harley and Dooley 2005 for discussion and comparison of the proposals). Perhaps the most common analysis is the verb

raising analysis, where the verb raises and adjoins to a higher functional head, usually either to C (complementizer) or to T (tense) (see e.g. Sproat 1985, Chung and McCloskey 1987, Fassi Fehri 1989, McCloskey 1996). A schematic tree of this style of analysis is in (6).

(6)
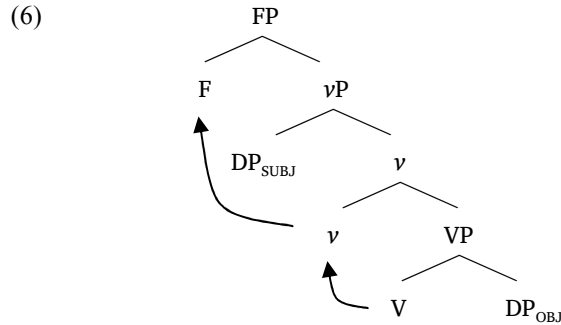
The verb raises up to some functional head (F), first raising to *v* to satisfy the Head Movement Constraint (Travis 1984).[3] In the course of the movement, the verb crosses the subject, and VSO order is the result. This is the kind of analysis that I will ultimately adopt for the derivation of Middle Egyptian VSO order.

2.2 Verb Raising in Middle Egyptian

There is much evidence that suggests that there is verb raising in Middle Egyptian, and, moreover, that the verb raises to T. I examine some of the evidence for V-to-T raising in this section, including diachronic, synchronic and typological data.

First, there is some historical evidence from the work of Reintges (2005) that the stage of Egyptian immediately prior to Middle Egyptian (Old Egyptian) had V-

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[3]   It is standard syntactic practice to introduce the subject in a separate functional projection (often called *v*P) that dominates the lexical VP projection. For argumentation supporting this position and further details, see Chomsky 1995 and Kratzer 1996.

to-T raising.[4,5] To take an example, in Old Egyptian, there is a low negation particle *w* used to express sentential negation. The crucial observations are that the verb appears above the low negation particle, and the subject below.

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[4] Reintges (2005) also proposes V-to-C raising and V-to-F raising (F = unspecified functional head) for Middle Egyptian in certain contexts. I do not address these proposals.

[5] Technically, in Reintges 2005, it is claimed that both Old and Middle Egyptian had verb raising, since the object of study is both languages. However, almost all of the evidence for verb raising there is taken from Old Egyptian. The single Middle Egyptian argument parallels evidence from coordination data originally used by McCloskey (1991) for Irish, but it is ultimately inconclusive. The primary observation is that *v*Ps can only be coordinated in Irish if they contain identical verbs. This is understandable if verb movement is obligatory, since Across The Board movement would have to occur out of the coordinated VPs, and only identical elements can be moved out of coordinated constituents (otherwise the movement would violate the Coordinate Structure Constraint; Ross 1967). At first, Middle Egyptian seems to be similar to Irish.

(i) *sḏr.n*   [*kꜣ.w.s   rḫs*]*v*P   [*smn.s   npd*]*v*P
     spend.night-PAST bull-PL-her   slaughtered fowl-her cut.up
     Her bulls spent the night slaughtered, and her fowl cut up.
     Coffin Texts V 97g/T1Be (Reintges 2005: (34))

It seems that the verb *sḏr.n* "spent the night" has undergone ATB movement out of coordinated *v*Ps. However, as McCloskey notes (1991, fn. 6), it could be argued that this general kind of example is an instance of Gapping (Ross 1970, Hankamer 1971), rather than coordination of constituents. McCloskey argues that this is not the case for the Irish data because the relevant examples do not have Gapping intonation, and because more than two remnant constituents can be in the coordinated clause, which is not usually allowed in Gapping (Hankamer 1971 et seq.). For (i), though, neither of these arguments are applicable. Intonation is not recoverable, and there are, in fact, two remnant constituents, so it could be a licit Gapping example. (i), therefore, cannot necessarily support a verb-raising analysis.

(7)   *šsp*   *w*   *ḥmn*   *sf̱t̠t.f*
       accept.PROS   NOT   Hemen   offering-his
       Hemen will not accept his offering.
       Mo'alla Inscription, 8, III.5 (Reintges 2005: (33))

The negation particle is presumably the head of its own projection ΣP/NegP, which is conventionally placed between TP and *v*P. This works out well for a verb raising analysis. The subject can be below negation in the specifier position of *v*P, whereas the verb can be above negation in T (A similar argument was made in work on verb raising in French in Emonds 1978 and Pollock 1989). However, the low negation particle *w* had almost entirely disappeared by the time Middle Egyptian was recorded. In his grammar, Gardiner (1957: 267) calls *w* an "ancient and exceedingly rare word" and notes that only one example has ever been found in Middle Egyptian texts. The position of the verb with respect to low negation thus cannot be used as direct evidence for verb raising in Middle Egyptian, but it is indicative nonetheless that V-to-T raising is attested immediately before Middle Egyptian. Moreover, Old Egyptian and Middle Egyptian are similar to the point of mutual readability; there are few major syntactic differences between the two languages (negation is one of them). Thus, it would not be unusual for verb raising to have been retained in Middle Egyptian, even if the direct evidence for it was lost.

     Fortunately, a different kind of direct evidence for verb raising can be found in Middle Egyptian itself, drawing on the position of V with respect to Tense and Complementizer morphemes. I assume that T and V are separate morphemes in the syntax, i.e. verbs do not enter the syntactic derivation inflected for tense. However, it is often the case that V and T combine and become part of the same complex head, which is then realized as an inflected verb. This occurs in Middle Egyptian.

(8)   *rḫ.n*   *d̠di*   *sḫr*   (repeated from (2))
       learn-PAST   Djedi   plan
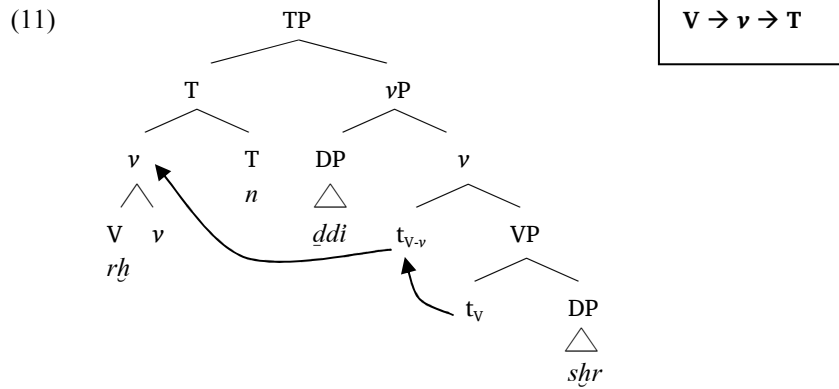   Djedi learned the plan.

In (8), the verb *rḫ* is the host for the past tense suffix *-n* and they form one morphosyntactic unit.[6] However, in order for V and T to combine, V must move to T, or T must move to V. In English, where verbs are also inflected for tense, T lowers to V post-syntactically (Bobaljik 1994, Embick and Noyer 2001). However, this cannot be the relevant process for Middle Egyptian since if tense lowered onto the verb, the verb would have to be in a head position below T (*v* or V). This would incorrectly place it below the subject in Spec,*v*P, resulting in SVO order (as found in English). Rather, the second option must be in play in Middle Egyptian---V must have raised to combine with and adjoin to T.

If the verb has raised to T, though, it is possible that it has raised one step higher to C, as in some previous verb raising analyses (see e.g. Sproat 1985). However, when there is a complementizer in C, there is still VSO order, i.e. the verb remains high. This is unexpected if the verb itself is presumed to raise to C. An attested example is in (9) with the complementizer and the verb in boldface.

(9)　　*iw.k*　　　　*rḫ.ti*　　　　**ntt**　**ḏd.n**　　　*ʾIdw*　　*r*　　*sꜣ.f…*
　　　　PARTICLE-you　know.STAT-2s　**that**　**speak-PAST**　Idou　about　son-his
　　　　You know that Idou spoke about his son…
　　　　Oriental Institute Museum 13945, Line 1

In (9), the verb *ḏd.n* "spoke" is still initial in the embedded clause. This indicates that the verb is probably not in C, especially when compared to languages like

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[6]　In the older Egyptology tradition, the suffix *-n* indicated perfect aspect, and Reintges (2005) follows this tradition, calling *-n* a "perfect marker" (52). However, as Loprieno (1995: 75) has observed, several recent grammars (e.g. Callender 1975) and studies of the Egyptian verbal system (e.g. Doret 1986, Eyre 1989) characterize the suffix *-n* as a simple past tense, and I adopt this position as well. Reintges (2005: 65) later says that "[t]ense is morphologically expressed by means of suffixes, which need to be attached to a verbal host. Verb raising is a precondition for combining the functional features of Tense with the lexical-semantic features of the verbal root." This seems to indicate that verb raising is motivated by the need for the verb to combine with a tense suffix, which is what I propose, but it is unclear whether the suffix referred to is the suffix *-n*.

German, which do have V-to-C movement and where verbs cannot remain in high position with a complementizer also present. Since the verb is not in C, then, but at least as high as T, I conclude that the verb has raised to adjoin to T.[7]

The verb raising analysis is additionally supported by independent research on Arabic. As mentioned in Section 1, Arabic has VSO and SVO word orders, and an agreement asymmetry between the two just like Middle Egyptian. In almost all of the research on Arabic word order, it has been assumed or concluded that VSO is derived by the verb raising to T (see e.g. Fassi Fehri 1993: 19-27, Mohammad 2000: 83, Shlonsky 1997: 7). Granted, Modern Standard Arabic and Middle Egyptian are very different languages, but the genetic connection and the similarity between the two sets of facts lends more support to a V-to-T raising analysis of Middle Egyptian VSO.

I conclude that VSO word order is derived by V-to-T raising in Middle Egyptian, and (11) contains a sample V-to-T raising derivation.

(10)   *rḫ.n*   *ḏdi*   *sḫr*   (repeated from (2))
         learn-PAST   Djedi   plan
         Djedi learned the plan.

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[7]   Technically, verbs and complementizers could co-occur and the verb could still be in C. The verb would simply move one step farther up and right-adjoin to the C (see discussion of this issue for Irish in McCloskey 1996). However, there is no evidence that the complementizer is a prefix or that the complementizer and the verb form a prosodic unit -- the complementizer is a fully independent word.

(11)

$$V \rightarrow v \rightarrow T$$

Derivationally, the construction of (11) proceeds as follows. First the verb and its DP direct object are merged, forming a VP, and then the v head is merged as sister to VP. Next, the verb raises to v, and the DP subject is merged in the specifier position of vP. Finally, a T head is merged, the v-V complex raises to T, and the derivation is complete with the result of VSO order. The [EPP] feature on T is inactive or absent since otherwise SVO order would result.[8] I am assuming that head movement takes place in the (narrow) syntax, despite recent suggestions that head movement should be relegated to the PF level (Chomsky 2000, Mahajan 2000, 2001, et al.). Matushansky (2006) has extensive arguments against a (solely) PF account of head movement, and although I do not adopt her replacement proposal, it does appear that head movement need not be a PF operation.

In the next section, I investigate the syntax of clauses with SVO order, i.e., clauses containing verbs with stative aspect. I will demonstrate that the verb does not raise all the way to T, but does undergo a partial raising to v, which still results

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8   In Reintges 2005 (69-72), it is argued that the [EPP] feature must be inactive in the basic cases, but that it can be optionally active in certain VSO clauses. In these cases, the subject raises to Spec,TP and the verb raises to F. However, almost all of the empirical evidence for the two movements is not from Middle Egyptian. A considerable amount of evidence for an inactive EPP has been marshaled by McCloskey (2001) for Irish, but similar evidence has yet to be found for Middle Egyptian.

in it remaining below the subject. Moreover, I contrast my analysis with a proposal for the syntax of stative clauses developed in Reintges 2005.

3. SVO Word Order and Statives

3.1 Initial Generalizations and Tenselessness

A basic example of a clause with SVO word order is in (12).

(12)   *ddi*   *rḫ.w*   *sḫr*   (repeated from (3))
        Djedi   learn.STAT-3MS   plan
        Djedi knows the plan.

An attested example is in (13).

(13)   *iw.i*   *grt*   *rḫ.kwi*   *nb*   *n*   *d.t*   *tn*
        PARTICLE-I   ADV   learn.STAT-1s   lord   of   estate-FEM   this
        Now, I know the lord of this estate.
        Eloquent Peasant B1, 46-47[9]

In (13), the pronominal suffix subject *-i* "I" precedes the verb, and the verb has a first person subject agreement suffix *-kwi*. The particle *grt*, which I have roughly translated as "now," is an adverbial second position clitic, and can be ignored for the purposes of word order (see section 4.2 for more specific discussion on this point).

   A closer examination of the morphology and semantics of stative verbs in Middle Egyptian is necessary before considering the syntax. In English and other Indo-European languages, stative aspect (in the sense of Vendler 1967) is listed in the lexicon for certain verbs (e.g., *know, recognize, fear,* etc.). In Middle Egyptian,

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[9]   I use the new numbering of the Eloquent Peasant introduced by Parkinson (1991).

however, stative aspect is realized morphologically by a unique vocalic melody that any verb root can, theoretically, be inflected with. To give a sense of the semantics, the non-stative (eventive) and stative meanings of several different verb roots are given in (14). The examples are from Reintges 2005, which contains a study of the semantics of various verb classes in the stative.

(14)   <u>Root</u>   <u>Eventive</u>   <u>Stative</u>
           ꜥḥꜥ   'to stand up'   'to be standing'
           msi   'to give birth to'   'to be born'
           wr   'to become great'   'to be great'

Intransitive verbs like ꜥḥꜥ "to stand up" have a resultative interpretation in the stative: the result of standing up is being in a state of standing. Transitive verbs like msi "to give birth to" are also associated with a resultative interpretation, often best translated as a passive (a stative transitive verb can also be interpreted as the "process" part of an accomplishment, e.g. "is in a state of giving birth"). Adjectival verbs like *wr* "to become great" have an inchoative reading in the eventive, but a purely stative reading (being in a state of X) in the stative.[10]

A stative verb is essentially comprised of three morphemes: the stative vocalic melody, the lexical consonantal root, and an agreement suffix. The vocalic melody

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[10]   In the philological literature, stative verbs are the subject of controversy. There has been some debate whether the stative is actually two distinct verb forms (one being a perfect, the other a "pseudoparticiple," although the labels here have varied), with the difference indicated by some variation in the writing of the agreement suffixes. Kammerzell (1990, 1991) and Schenkel (1994) are the major proponents of the two-verbs analysis, whereas Borghouts (2001) argues for the one-verb analysis and proposes an alternative, phonological explanation for the writing variation. Depuydt (1995) and Vernus (1997) question whether the writing variation even has any grammatical cause. In any case, it does not matter for the present account whether the stative is actually one verb form or two. If they each exist, both forms are clearly tenseless and thus both would have SVO word order (see immediately below for discussion of this connection). I treat the stative as a single unified verb form in this paper for the sake of simplicity.

that realizes stative aspect was not represented in the hieroglyphs, and is accordingly not in the transliterations here, but it has been reconstructed with some certainty from later stages of Egyptian and contemporary transcriptions into other languages (see Loprieno 1995: 77-78, Ray 2004). I simply assume the presence of the stative melody in the relevant examples and gloss the verbs as statives. An example of the melody and the combination of morphemes that make up a stative verb is in (15).

(15)   Root + /a i u / + Agreement
        ḳrs + /a i u/ + *-ti* → *ḳarisu.ti* "is buried.3FS"

For present purposes, the central generalization about stative verbs is that they can have either a past or a present tense interpretation, i.e. they are tenseless (Gardiner 1957: 238, 245, Allen 2000: 205). They are never attested with tense morphology, and they can appear in contexts where they must be interpreted as past, and where they must be interpreted as present. An example of two statives that must have a present tense interpretation is in (16); the statives are in boldface.

(16)   *m   rdi   ib.ṯn   m   s3.i*
        NEG   cause   heart-your.PL in   back-my
        Don't worry about me (more literally, Don't let your heart be behind me.)

        mṯn   snb.kwi   ꜥnḫ.kwi
        PARTICLE   be.healthy.STAT-1s   be.alive.STAT-1s
        Look, I am healthy and I am alive.
        Heq. L2, 2[11]

(16) is from the second letter of the Heqanakht letter archive (James 1962, Allen 2002), and was written by a priest named Heqanakht to his household. In the

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[11]   The stative clauses in (16) and (17) do not have overt subjects, which is fairly common for first person statives. Reintges (1997, 2005) analyzes this as pro drop, which seems likely because of the rich inflection.

second line of (16), practical considerations force a present tense interpretation of the stative ꜥnḫ.kwi "be alive" since Heqanakht was alive at the time of writing the letter. Moreover, context heavily favors a present tense interpretation of the earlier stative *snb.kwi* "be healthy." Heqanakht is trying to reassure his household that he is doing well, so the most natural interpretation of the stative is that Heqanakht is in fact healthy at the time of writing.

A very similar example of two statives that must have a past tense interpretation is in (17).

(17)   *špss.kw(i)*   *ꜥꜣ.kw(i)*
         be.wealthy.STAT-1s   be.great.STAT-1s
         I was wealthy and I was great.
         British Museum 614, 11

(17) is from a funerary stela for a man named Tethi. The text is written as if Tethi were already dead and speaking in the first person from the afterlife. At this point in the stela, it describes his accomplishments before his death. These accomplishments must precede the time of utterance/writing of (17) if Tethi is supposed to be already dead when uttering/writing it, so the most reasonable interpretation of the two stative verbs is past tense.

It is clear, then, that stative verbs can be interpreted as either past or present tense. However, stative verbs cannot receive a future tense interpretation from the context unless additional morphology is present, which may initially seem to indicate that they are only ambiguous between a present and past tense interpretation, and not tenseless in all respects. However, this is not problematic if future "tense" is not a tense, but understood as either irrealis mood or a possibility modal. An example of a stative clause with a "future tense" interpretation is in (18).

(18)   *wn.sn*   *ḫw.Ø*   *mk.w*

        bePROS-they   be.exemptSTAT-3MS   protect-3MS

        (I will cause that) they will be exempted and protected.

        Urk IV 2030, 9 [12]

The extra morphology is the prospective form of the verb "to be" *wn* that precedes the subject. The prospective is a particular vocalic melody that is often described as indicating modality, and since the main verb already has a (stative) vocalic melody, it must appear on the auxiliary verb "to be." Since future "tense" seems to be some kind of modality here, it can still be maintained that stative clauses are tenseless (albeit not mood-less).

    Having established that stative clauses are tenseless, the key issue now is how the tenselessness of stative verbs is reflected in their syntax. Two proposals for tenseless syntax immediately come to mind, and they are in (19).

(19)   Proposal A: Tenseless clauses do not contain a Tense Phrase (TP).

          Proposal B: Tenseless clauses contain a TP with a phonologically null, semantically underspecified head.

Proposal A denies the existence of a tense node or tense projection in the syntax, whereas Proposal B basically claims that it is present, though its role is vastly reduced. Distinguishing between these two proposals is surprisingly difficult, whether approaching the problem from a semantic or a syntactic perspective, and worth some brief discussion.

    The literature on tenselessness and tenseless languages is mostly semantic (see e.g. Baker and Travis 1997, Bohnemeyer 2002, Shaer 2003, Ritter and Wiltschko 2004, 2005, Bittner 2005, Matthewson 2006, Lin 2006 and references therein), and much of this research seems to endorse Proposal A, with no TP present (see especially Shaer 2003 and Lin 2006). However, the evidence used to support these

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[12] It is common for the third person masculine singular agreement suffix to be null.

analyses is semantically subtle, and difficult to locate in a dead language. Moreover, since the research is understandably focused on the semantics, there are not many explicit syntactic claims about the presence or absence of a TP projection (and sometimes such claims are deliberately avoided: see e.g. Matthewson 2006: 680).

In terms of syntax, there is some relevant work on the presence or absence of TP in Benmamoun's work on "verbless" copular clauses in Arabic (Benmamoun 2000, to appear). Benmamoun proposes several syntactic tests for the presence of TP in a particular clause, including whether the is nominative Case (assigned by finite T) and whether there can be expletives (licensed by an [EPP] feature on T). Unfortunately, though, these tests are mostly inapplicable to Egyptian for independent reasons, like the lack of case marking (see Loprieno 1995: 55 for how Egyptian lost the proto-Afroasiatic case markers) and the fact that expletives are null (i.e., there is no evidence T has an [EPP] feature at all). It must therefore remain unsettled whether Proposal A or Proposal B is correct for the syntax of statives.

However, this is not a hindrance to constructing an analysis since both proposals can provide an understanding of the correlation with SVO word order. In Proposal A, there would be no T to motivate V-to-T raising, and in Proposal B, the T morpheme would be sufficiently different from other T morphemes so that it would be reasonable for it not to motivate verb raising. For concreteness, I adopt Proposal A provisionally since it renders the syntax slightly clearer, but leave open the question of which analysis is ultimately correct. In the next section, I explore the syntax of stative clauses under the assumption that they do not contain a TP.
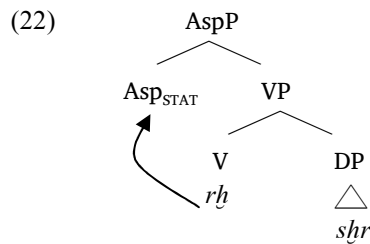
3.2 The Syntax of Statives

To demonstrate the syntax of statives, I will derive the following example.

(20)   *ḏdi*   *rḫ.w*   *sḫr*   (repeated from (3))
   Djedi   learn.STAT-3MS   plan
        Djedi knows the plan.

The derivation begins with the verb root and the direct object being merged and forming a VP.

(21)

```
           VP
          /  \
         V    DP
         rḫ    △
              sḫr
```
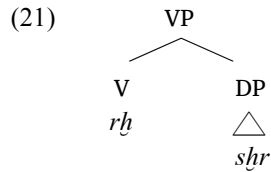
I classify the stative vocalic melody as an Aspect (Asp) head that projects an AspP. Following Travis (in prep.), I assume a difference in the syntax between situation aspect (Aktionsart), which includes aspectual verb classes like stative, and viewpoint aspect, which is basically the imperfect/perfect distinction. Situation aspect morphemes are merged close to the VP, below *v*P (Inner Aspect in Travis' terms), whereas viewpoint aspect morphemes are merged above *v*P (Outer Aspect). Since stative is Inner Aspect, then, the next step in the derivation is the merging of the stative vocalic melody as an Asp head, sister to VP. The verb then raises and adjoins to Asp to combine with the vocalic melody.

(22)

```
              AspP
             /    \
        Asp_STAT   VP
          ↑       /  \
          |      V    DP
          rḫ     rḫ    △
                      sḫr
```

Since *rḫ* is a transitive verb, the next portion of the derivation to be merged is transitive *v*. The V-Asp complex head raises to adjoin to *v*.

(23)
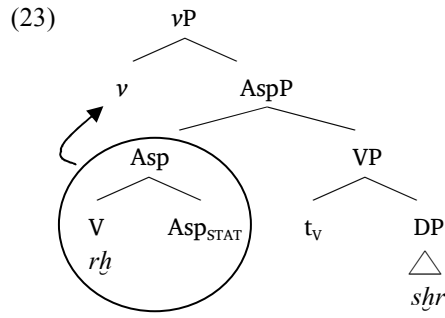
Finally, the external argument *ḏdi* "Djedi" is merged in the specifier position of *v*P.

(24)

V → Asp → *v*
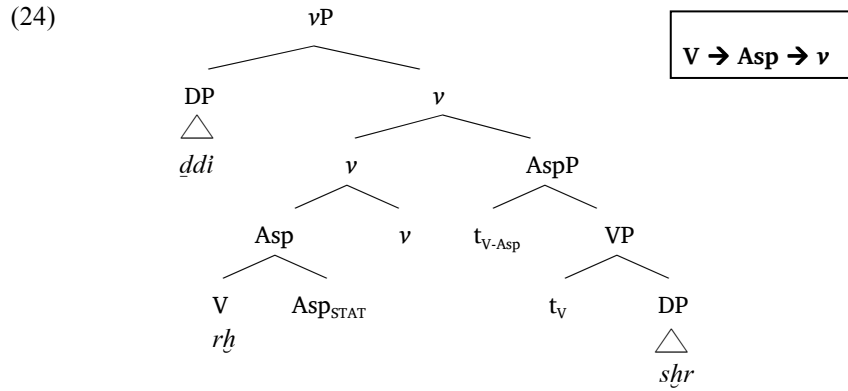
The structure in (24) makes the correct predictions. SVO word order results since the subject is higher in the structure (Spec, *v*P) than the verbal complex (in *v*). Since there is no T morpheme, there is no reason for the verb to raise any higher than *v*. The correlation between stative aspect and SVO word order is due to the fact that stative clauses are tenseless and, under the analysis pursued here, lack a tense morpheme to motivate V-to-T raising.[13]

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[13] I am not claiming that tenseless languages cannot have VSO word order (indeed, some do, like Tagalog). The Middle Egyptian data is straightforward in the sense that stative clauses have no TP and the verb does not raise, two facts which are easily connected. However, a different higher functional projection of some kind may trigger verb-raising in

In the next section, I compare my analysis to the analysis of stative clauses developed in Reintges 2005.

VSO tenseless languages (as in the analysis of Tagalog proposed in Aldridge 2004), or it may be that these languages contain a null T (as in Proposal B above) that has whatever morphosyntactic property that triggers verb-raising. Essentially, tenselessnesss does not force the verb to remain low, it simply allows for it in the unmarked case, so to speak, exemplified by Middle Egyptian.
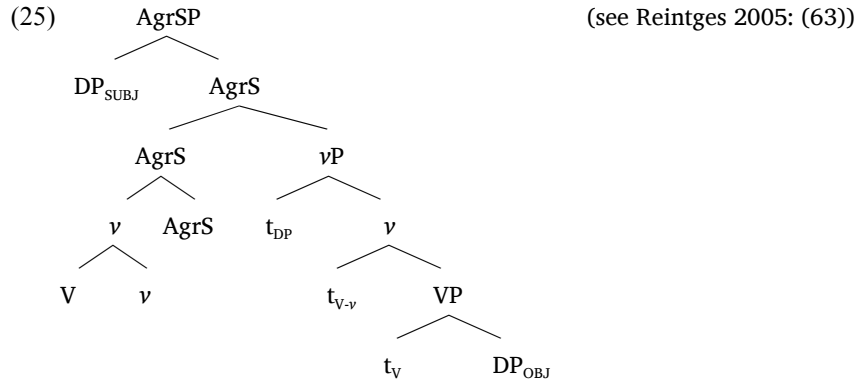
3.3 The AgrS Analysis

As part of his extensive and substantial work on Old and Middle Egyptian word order, Reintges (2005) proposes an analysis of stative clauses that is slightly different from my analysis. The main difference between the accounts is that the suffixes that I have been calling agreement morphemes are for Reintges AgrS (subject agreement) portmanteau morphemes that express both agreement and stative aspect (I will henceforth refer to Reintges' analysis as the AgrS analysis). The argument for fusing agreement and stative aspect morphology is as follows. Following his earlier work (Reintges 1994), Reintges assumes that aspect is expressed by stem alternations: imperfect aspect is expressed by reduplication of the final root consonant and perfect or neutral aspect is expressed by no specialized stem morphology. It is clear that stative verbs do not undergo the imperfect stem alternation, which he explains by claiming that the semantics of stative aspect and imperfect aspect are incompatible. However, he further argues that the semantics of stative aspect and perfect aspect are also incompatible. The stem for the stative, then, must be neutral, and stative aspect must be expressed some other way, i.e. through the agreement suffix.

However, as I have argued, stative aspect does not necessarily have to be expressed as part of the agreement suffix -- there is another piece of the morphology that can realize it, namely, the vocalic melody associated with stative verbs, as proposed in Sections 3.1 and 3.2. Moreover, even if aspect is usually expressed by stem alternations, Travis' (in prep.) work explicitly separates situation aspect (e.g. stative) and viewpoint aspect (e.g. imperfect) syntactically, so it would not be surprising for them to be realized as different kinds of morphemes.

I return to these issues below, but first it is worth looking closer at the details of the AgrS analysis. The AgrS head that realizes both agreement and stative aspect has several features: [+stative] and [+finite], which are interpretable, as well as [EPP] and a set of phi-features, which are uninterpretable. SVO order results from two movements. First, the verb raises to AgrS "to combine the interpretable semantic features on the AgrS-node with a verbal root" (Reintges 2005: 81). Second, the DP subject agrees with and checks the phi-features on AgrS, and also

checks the [EPP] feature on AgrS by moving to the specifier position of AgrSP. The resulting tree is in (25).

(25)   AgrSP   (see Reintges 2005: (63))

The main effect of the tree diagram shows:
- DP$_{SUBJ}$ and AgrS under AgrSP
- AgrS and vP under AgrS
- v and AgrS under AgrS; V and v under v
- t$_{DP}$ and v under vP
- t$_{V\text{-}v}$ and VP under v
- t$_V$ and DP$_{OBJ}$ under VP

Similarly to my analysis, the verb raises out of the VP and there is no TP.[14] Unlike my analysis, the DP subject also moves, and there is no AspP. The differences boil down to the presence and effects of the AgrSP, and I argue below that neither aspect of AgrSP is supported by conclusive evidence.

The main effect of the AgrSP is the movement of the verb and the subject to AgrS and Spec,AgrSP respectively. Reintges presents evidence for the double movement from adverbial particles, and from pronominal direct and indirect objects, but neither clearly demonstrate that movement has occurred.

Looking first at the evidence from adverbial particles, Reintges assumes that certain adverbial particles left-adjoin to vP. Verbs appear to the left of adverbs such as *rf*, which can be roughly translated as "indeed."

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[14] It is unclear whether the lack of TP is related specifically to tenselessness in the AgrS analysis, especially since the AgrS head has a [finite] feature. Reintges does not discuss this issue in detail.

(26)   *iw.in*   *rf*   *šḫty*   *pn*   *r*   *spr*
        come-PAST.CTG   ADV   peasant   this   in.order.to   petition.INF
        Indeed, this peasant came in order to petition …
        Eloquent Peasant B1, 83

In (26), the adverb *rf* is between the verb *iw.in* "came" and the subject *šḫty pn* "this peasant," where one would expect a *v*P-adjoined adverb. However, in Middle Egyptian grammars (e.g. Gardiner 1957: 184-189, Callender 1975: 57), these adverbs are traditionally described as enclitic particles since they never begin a sentence or stand alone. If the description is correct, then the adverbial clitic *rf* must have the verbal stem *iw.in* "came" as its leftward host in (26). This means that the surface position of *rf* may just be a result of its cliticization onto the verb, however that is ultimately formalized.

   Moreover, Grandet and Mathieu (2003: 223-226) propose that these adverbs are second position clitics. Compare (26) with (27).

(27)   *ist*   *rf*   *in.n.sn*   *mni.w.t.sn*
        PARTICLE   ADV   bring-PAST-they   bead.necklace-PL-FEM-their
        Then, they indeed brought their bead necklaces.
        Sinuhe B268

In the earlier example in (26), *rf* follows the verbal stem *iw.in* "came," but in (27), it precedes the verbal stem *in.n.sn* "they brought."[15] If rf were truly adjoined to *v*P, then the verb in (27) would be below or within *v*P. A more plausible explanation is that, following Grandet and Mathieu, *rf* is truly a second position clitic, and that the initial particle *ist* provides enough prosodic or syntactic material to register as the first position after which the clitic appears. Examples like (26) therefore do not

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[15]   The subject pronoun -*sn* (along with all other subject pronouns) is traditionally classed as a suffix on the verb, and thus is part of the verbal stem. However, it is **not** an agreement suffix, but an incorporated pronoun. For discussion, see Reintges 2005:52-59 and Kramer 2006.

prove that the adverbs are left-adjoined to *v*P. They only indicate that the verbal stem is the first prosodic or syntactic unit in the clause.[16]

In stative clauses, these adverbs do in fact behave as if they were 2P clitics, appearing between the subject and the verb.

(28)   *imw   grt   mni.Ø   r   dmi.k*
         boat   ADV   moor.STAT-3MS   at   town-your
         Now the boat is moored at your town.
         Heq. L1, V2-3

In (28), the particle *grt*, roughly translated as "now," appears in second position between the subject *imw* "boat" and the stative verb *mni* "to be moored." This has no bearing on the AgrS analysis per se (assuming either a syntactic or prosodic account of 2P clitics), but Reintges presents further data where the particle actually appears after the subject and the verb.

(29)   *gm.n(.i)*   [AgrSP *ḥḳꜣ   jꜣm   šm.Ø   **rf**   r   tꜣ   ṯmḥ*]
         find-PAST-I   ruler Yam   go.STAT-3ms   ADV   to   land Libyan
         I found the ruler of Yam departed to the land of the Libyan.
         Urk. I 125: 15-16 (Reintges 2005: (64))

Reintges assumes that this is an Exceptional Case Marking (ECM) construction, and argues that since *rf* appears below the subject *ḥḳꜣ jꜣm* "ruler of Yam" and the

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[16] There is some evidence that the particle *rf* was not a second position clitic in Old Egyptian and archaicized Middle Egyptian (Edel 1955: 412, Shisha-Halevy 1986, Reintges 1997: 290-291).   The particle derives from an earlier prepositional phrase *ir=f* "concerning him." In Old Egyptian and archaic Middle Egyptian, the personal pronoun co-varies in phi-features with the subject of the sentence, so it may have been some kind of PP adjunct. However, in Middle Egyptian, the whole phrase became "frozen" as *rf* independent of the phi-features of the subject, and it seems to have been re-analyzed as a second position clitic, in accord with the already existing large group of adverbial second position clitics.

stative verb *šm* "departed" in (29), both subject and verb must be above the *v*P level in AgrSP. However, this example is Old Egyptian and I have found no similar examples in Middle Egyptian (see also footnote 16 on how *rf* may have been a different kind of element in Old Egyptian). Occasionally, particles can be found below the verb in Middle Egyptian statives, as in (30), but only when there is a null subject (pro drop in the first person with stative verbs is not uncommon, see footnote 11).

(30)   *ḏd.k(w)i*   *ri*   *n.f*
        speak.STAT-1s   ADV   to-him
        I spoke to him.[17]
        Sinuhe B45

(30) is not evidence for the AgrS analysis since the placement of the particle *ri* is predictable under a second position account that is based on prosody. The null subject has no phonological realization, so the first prosodic unit is the verb and the particle can attach directly thereafter. Therefore, there is no evidence for the movement of the verb and the subject into AgrS from the placement of adverbial particles in Middle Egyptian.[18]

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[17]   It is unclear what the stative aspect is contributing to the verbal semantics here. This example is classified as one of the rare "independent" uses of the stative that were archaic even in Old Egyptian (Gardiner 1957: 238) and that have inspired some philologists to divide the stative into two verb forms (see footnote 10). Note also that the adverbial particle agrees in phi-features with the subject ($r.i$ = to me), another archaic characteristic (see footnote 16).

[18]   It is worth noting that even if evidence were found for particles appearing below an overt subject and a stative verb in Middle Egyptian exactly as in (29), there would still be reason to be skeptical because (29) may not be an ECM construction. If either Raising-to-Object or Control were instead the correct analyses, the behavior of rf is predictable under a 2P account. In either of those cases, the DP *ḥḳȝ jȝm* "ruler of Yam" would be in the object position of the matrix clause, and there would plausibly be a clausal boundary (TP or CP) between it and the stative verb *šm*. If this were the case, then *rf* would be in second position within the embedded clause.

Turning now to the evidence for the AgrS analysis from pronominal objects, the argument for movement to AgrSP here relies crucially on Reintges' (2005) earlier conclusion that direct objects undergo Object Shift. The empirical generalization behind this is that pronominal direct objects appear closer to the verb than their non-pronominal counterparts, as shown in (31).

(31)   a. *m33 ḏdi   miw*   b. *m33   sw   ḏdi*
            see Djedi cat   see   him   Djedi
            Djedi sees the cat.   Djedi sees him.
            Non-pronominal, VSO   **Pronominal, VOS**

Reintges claims that, in clauses like (31)b, the pronoun *sw* "him" is in a functional projection above *v*P (recall that the subject is in Spec, *v*P). This account is at first not useful for stative clauses since, as Reintges acknowledges, there is no evidence for pronominal objects being in a different position than non-pronominal objects.

(32)   *iw   niw.t   rḫ.Ø   st*
        PARTICLE city.FEM   know.STAT-3ms it
        The city knows it…
        Urkunden IV, 437

The pronoun *st* "it" in (32) could simply be in its base position within the VP. However, Reintges produces evidence from indirect objects to demonstrate that shifting occurs. This evidence is relevant because, in canonical VSO clauses, pronominal indirect objects act similarly to direct objects and shift closer to the verb than their non-pronominal counterparts, as shown in (33).

(33)   a. *ḥ33.tw   ꜥḳw   n   s3-nb-niwt*
           measure-PASS   salary for Sanebniut
           (When) a salary is measured for Sanebniut...
           Heq. L2, 5b-6
           Non-pronominal, V S IO

    b. *ˁnḫ*   *n.i*   *s*   *pn*

      live.2 for-me   man this

      (As) this man lives for me…

      Heq. L2, 40

      Pronominal, V IO S

Indirect objects also shift past a non-pronominal direct object. (34) is the canonical order with indirect object following direct object, and (34) has the shifted indirect object.

(34)   a. *sḏd.i*   *b3.w.k*   *n*   *ʾIty*

        recount.PROS-I power-PL-your to   sovereign

        I shall recount your powers to the sovereign.

        Sh. S, 139

        Non-Pronominal IO, V DO IO

    b. *sft.i*   *n.k*   *k3*   *4*

      slaughter.PROS-I for-you   bull   4

      I will slaughter four bulls for you.

      Sh. S, 144-145

      Pronominal IO, V IO DO

Reintges provides an example where a pronominal indirect object has shifted past a direct object in the stative clause, indicating that Object Shift does happen in stative clauses.[19]

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[19] I have repeated Reintges' example, which is technically Old Egyptian. There is no indication that the same pattern would not hold in Middle Egyptian, given that its pronominal ordering is almost identical to Old Egyptian, but there have been some difficulties finding an example. This may be because statives often do not take objects in Middle Egyptian, so the probability of finding an example with both a non-pronominal

(35) *s-ḥȝ.k(wi)*   *n.f* *ḥtp* *pn*
    CAUS-descend.STAT.1s to-him altar this
    I sent him (lit. caused to descend to him) this altar.
    Urkunden I 108: 1-2 (Reintges 2005: (65b))

However, it is highly unusual for Object Shift to target indirect objects, and Reintges' earlier discussion concerns only direct objects. If the movement of the indirect object is not Object Shift, though, the almost identical movement of direct and indirect object would have to be accounted for by separate mechanisms, which is undesirable.

 As an alternative, I have argued in recent work (Kramer 2006) that that both direct and indirect objects are similar to Romance pronominal clitics that attach directly to verbs. The connection to Romance is further supported by the fact that both the direct object and the indirect object can shift, appearing in a fixed order with the indirect object closer to the verb, just as in many Romance languages (albeit on the other side of the verb than in Romance languages like French).[20]

(36) a. *Jean le lui donne.* b. *rdi n.f st ḏdi*
    Jean it to.him gives   give to-him it Djedi
   Jean gives it to him.   Djedi gives it to him.

The body of research on Romance pronominal clitics is vast, and what kind of analysis the Middle Egyptian facts will end up receiving is still uncertain. The main point is that there is a plausible alternative to indirect objects undergoing Object

---

   direct object and a pronominal indirect object is fairly slim. If one is never found, then of course the objection to the argument here becomes much simpler (and less interesting).

[20] The internal complexity of the indirect object clitic may seem to set it apart from Romance clitics. However, it is likely that the pronoun incorporates into the prepositional stem, with the result being a single complex P head that can undergo similar processes to a D.

Shift, so (35) does not definitively indicate that the verb and the subject have raised out of the *v*P domain.

Overall, then, the evidence for the verb and the subject moving past the *v*P is inconclusive. However, there is also no evidence proving beyond a doubt that the verb and the subject must remain low, as in my analysis. The difference between the two analyses, then, reduces to the sheer presence of the AgrS projection, which does not seem necessary if it is assumed that the stative inflection is an Asp head, as I have argued above. Consider a version of the AgrS analysis which includes AspP, adopting my assumptions about the stative inflection. The derivation would be as in (37), where both the verb and the subject raise into the AgrSP, but the verb makes an additional "stop" through an Asp head to combine with the stative aspect morphology.

(37)
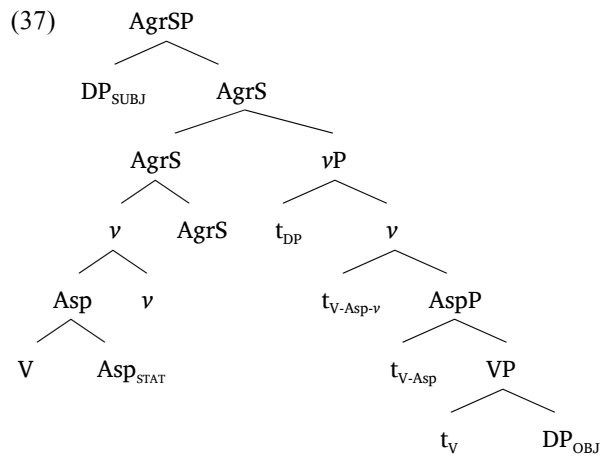
This seems like a minor change, but if the AgrS head is separated from the stative morphology, its role in the derivation is significantly reduced. I will argue in Section 4 that there is a way to implement agreement without recourse to a separate projection in the syntax (as has been argued for more generally by Iatridou (1990) and Chomsky (1995: 349-355), among others), so the AgrS projection would not be strictly necessary for agreement to occur. Moreover, the

AgrS projection introduces a problem concerning agreement. In any account of the agreement facts, agreement must not only be predicted in SVO clauses, but explicitly prevented in VSO clauses. In the earlier version of the AgrS analysis, it is plausible that VSO clauses do not have agreement because they cannot contain the stative-associated AgrS morpheme (assuming there is only one AgrS morpheme in Middle Egyptian). However, this argument does not go through if the stative morphology is separated from the AgrS morpheme. There is no reason why an AgrS projection could not be part of the structure of a VSO clause, so there is no longer any reason why there is no agreement in VSO clauses.

In sum, there is no evidence for the movement of the verb and subject past vP, and if it is true that the stative inflection is an Asp head, then there is no evidence for an AgrS projection in stative clauses. Since I have argued that the stative inflection is in fact Asp, I thus consider the AgrS analysis not a plausible account for stative clauses. However, it is crucial to note once more that the AgrS projection is essentially the only difference between my analysis and the AgrS analysis. In both analyses, there is no TP to trigger verb-raising, but the verb does move high enough to enter into a spec-head relationship with the subject. In the next section, I discuss how my analysis exploits this spec-head relationship to successfully capture the agreement asymmetry between SVO and VSO orders.

4. Agreement

Recall that there is subject-verb agreement in SVO clauses (statives) but not in VSO clauses. The relevant examples are repeated below.

(38) *ḏdi*   *rḫ.w*   *sḫr*   **SVO, Agr**
      Djedi learn.STAT-3ms plan
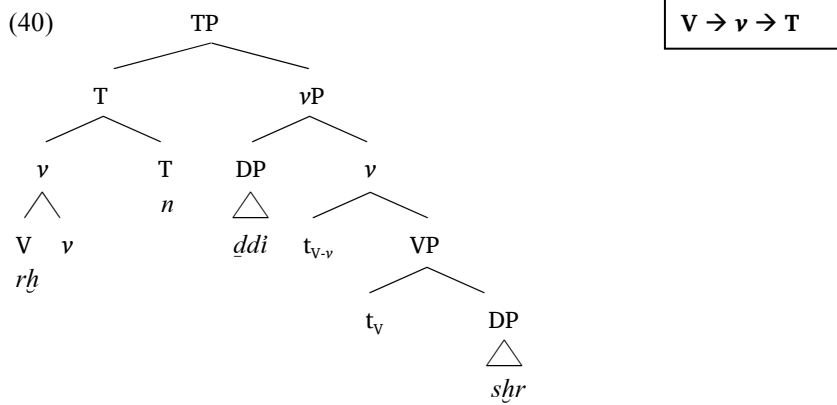   Djedi knows the plan.

(39) *rḫ.n*   *ḏdi*   *sḫr*   **VSO, No Agr**
      learn-PAST Djedi plan
      Djedi learned the plan.

Since the presence of agreement seems dependent on word order, the most satisfactory account will connect the two phenomena in such a way that the syntax of VSO clauses prevents agreement, and the syntax of SVO clauses allows it.

At first glance, the most natural step would be to appeal to the specifier-head relationship (Chomsky 1986, Kayne 1989, and much subsequent research), or more specifically, a specifier-head relationship between the verb head V and the DP subject. In the syntactic derivations developed in the previous sections, a stative verb is in a specifier-head relationship with its subject (the subject in Spec,vP and the verb in v), whereas an eventive verb is not (it is in T, whereas the subject is lower in Spec,vP). However, recent work in Minimalist syntax (Chomsky 2000, 2001, 2004) aims to eliminate the spec-head relationship as a privileged relation in the grammar. Instead, agreement is a relation between a Probe (a functional head) and a Goal (a DP) within a local c-command domain, where the Goal checks the uninterpretable phi-features of the Probe. This move has been controversial, though, and Koopman (2003ab, 2005, 2006) and others (Zwart 2006) have argued for the centrality of the specifier-head relation and other structural conditions on agreement. The account I ultimately endorse for Middle Egyptian incorporates elements of both kinds of work -- it crucially relies on a specifier-head relationship between the verb and the subject, but since I assume agreement is primarily a feature-copying operation that occurs at PF, the specifier-head relationship is only relevant when the derivation is sent to PF. This account is best motivated by examining how the "purely" Minimalist and "purely" spec-head accounts fail in accounting for the data, and I begin with an attempt to explain the agreement asymmetry using tools from Minimalist syntax and proceed to develop the combined analysis. The section closes with some discussion of how the analysis here contrasts with analyses of the Arabic agreement asymmetry.

4.1 A Minimalist Account

For reference, the structure of a VSO clause is repeated in (40). [21]

(40)

[tree diagram:]

TP branches into T and vP.
T branches into v and T.
v branches into V (rh) and v.
T has n below it.
vP branches into DP (ddi) and v.
v branches into $t_{V\text{-}v}$ and VP.
VP branches into t_V and DP (shr).

[boxed:] V → v → T

The verb raises to T, crossing the subject and resulting in VSO word order. A straightforward Minimalist account incorrectly predicts that agreement should be possible in (40). In the Minimalist approach outlined by Chomsky (2000. 2001, 2004), agreement is captured by the relation Agree which, in the case of subject agreement, holds between a T (Probe) and a DP (Goal). The DP has semantically interpretable phi-features, the T has semantically uninterpretable phi-features, and the latter must be "checked" (valued) by the end of the derivation or else the derivation will crash. [22] Agree (and the related operation Match) is a way of

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[21]   The verb stem rh is probably capable of being broken down into a root and a vocalic melody, similar to the analysis of stative verbs. At this point, the meaning of the vocalic melody is not well established, but I do not think it changes the predictions of the analysis for there to be another layer of functional structure between TP and vP whose head position the verbal complex passes through on the way to T. The verb and the subject would still not be in a spec-head configuration at the points of Spell-Out, and, as we will see below, this is what is crucial.

[22]   In order for Agree to hold, both the Probe and the Goal must be active, i.e. have uninterpretable features. Just as T has uninterpretable phi-features, then, the DP is taken

checking these features. Presumably, at PF, the valued phi-features are spelled-out as agreement morphology. The crucial point of the derivation is when T is merged -- it immediately begins looking for a Goal to check its phi-features. However, it can only see a limited part of the structure below it, i.e. only the elements that have not yet been sent to the PF interface.

In Chomsky 2000, 2001and 2004, Spell-Out (in the sense of sending to PF) is cyclic and proceeds by phase, where *v*P and CP are phases. For example, after a *v*P is constructed, its sister (VP) is sent to PF, and the syntactic elements within VP can no longer undergo (narrow) syntactic operations. Importantly, the *v* head and the specifier position of *v*P are **not** spelled out at this point and remain available. Considering this, when T is merged, it can see only as far down in the tree as *v*, and must find an element there to check its phi-features. The incorrect prediction for the Middle Egyptian data stems from the fact that the subject DP in (40) is still visible to T since it is in the specifier position of *v*P. Even though the VP will have been sent to PF at that point, the subject is still available, so it should be licit for T to have its phi-features checked by the subject and for agreement to be realized. This is clearly not the correct prediction.

Granted, there are several attempts that could be made to salvage the Minimalist account. For example, the Agree relation could hold between T and DP, but never be morphologically realized. However, this is at best unsatisfying. There is simply no morpheme that ever corresponds to subject agreement in VSO clauses, and this is true across all verb declensions and all persons, numbers, and genders of the subject. It is suspicious for a licit agreement relation to never surface across many different morphological variables -- even extremely impoverished agreement systems usually have at least one combination of factors where the agreement is realized (e.g. the 3rd person present tense in English). Another alternative for the Minimalist account would be for the feature make-up of T be completely defective,

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to have uninterpretable Case features. T can then check these Case features (through Agree) and assign nominative Case to the DP. However, I will not discuss the issue of Case in any further detail here because of the paucity of evidence for Case/case in Middle Egyptian. There is no recoverable case morphology on nouns or pronouns, as noted in Section 3.1.

that is, lacking all phi-features. Leaving aside the question of how the subject might receive Case (see footnote 22), this proposal is unsatisfying because of the kind of T morpheme it would require in stative clauses. Stative clauses would, in fact, require a TP since Agree holds between T and DP, and the nature of the required T morpheme would be highly suspect.[23] It would be semantically bleached (to account for tenselessness) and phonologically null, and thus have little effect at either the PF or LF interfaces. However, it would be rich in the kind of features that drive the syntax, i.e. uninterpretable phi-features, to account for the agreement. From the beginning of Minimalist work (see e.g., Chomsky 1995: 219), linguistic elements that are not interpreted at either interface, but are syntactically indispensable, were regarded as questionable or illegitimate. The fact that this proposal requires the stipulation of such an element is a serious drawback.

In sum, then, a straightforward Minimalist account cannot account for the agreement facts, and an account where T lacks phi-features has several theoretical problems. I proceed to discuss a spec-head account of the agreement facts, and propose my alternative, in section 4.2.

4.2 Spec-Head and Agreement

The specifier-head relationship has been understood as the central licensing configuration for agreement by a variety of authors, including Kayne (1989), Koopman (1992), Mahajan (1989) and Chomsky (1991), but its special status has been questioned in favor of the Agree relation between a Probe and a Goal. However, in recent work, Koopman (2003ab, 2005, 2006) has reasserted the centrality of the specifier-head relationship as a necessary condition for agreement, arguing that it is agreement by Merge (when the specifier is merged with the

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[23]   If the requirement that Agree hold between T and DP was relaxed, it could be proposed that the phi-features needed for Agree were on *v* or Asp. However, in either case, the structural configuration for Agree would not be correct. The Probe is usually taken to c-command the Goal, and *v* and Asp are too low in the structure to c-command the DP subject.

phrase containing the head) and thus a licit and fundamental operation of Minimalist syntax.

The Middle Egyptian data initially support this view. As discussed above, when there is a specifier-head relationship, there is agreement, and when there is no such relationship, there is no agreement. However, it is necessary to take a closer look at how Koopman defines agreement by spec-head.

(41)   **Agreement Condition**
         If Y agrees with XP, XP and Y are or have been in a Spec head relation *in the course of the derivation.*
         (Koopman 2006: (2); italics mine)

The crucial part of the Agreement Condition in (41) is that the specifier-head relationship can hold at any point during the derivation. Considering the derivation of Middle Egyptian VSO order, then, the verb and the subject are, in fact, in a specifier-head relationship about halfway through the derivation, so agreement should be predicted. The relevant stage is when the subject is merged in the specifier position of vP. The verb has at that point raised to v, resulting in the structure in (42).

(42)

$$v\text{P}$$

DP$_{\text{SUBJ}}$ v

                v VP

        V v t$_v$ DP$_{\text{OBJ}}$
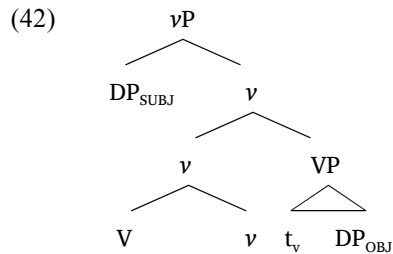
The subject and the verbal complex are in a specifier head relationship, so according to Koopman's definition, agreement should be realized on the verb. Even if, for some reason, the verb remained within the VP and did not move upwards until T was merged, it still would have to pass through v to conform with the Head

Movement Constraint (Travis 1984) and that would place it in a specifier-head relationship with the subject.

Before laying out my solution to this problem, it is necessary to briefly review my assumptions about the grammar. I assume a conventional Y-model where syntactic structure is sent to the phonological (PF) and semantic (LF) interfaces.

(43)   Syntactic derivation (narrow syntax)

Morphology

PF   LF
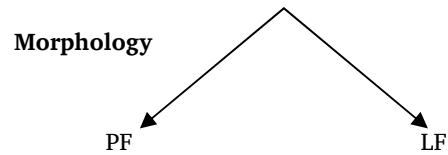
On the way to Phonological Form (on the PF branch), there is Morphology, a level at which morphological operations occur. I adopt the Minimalist perspective on the relationship between syntax and morphology, i.e. that the derivation is sent to PF cyclically by phases. I also adopt the Distributed Morphology framework for the structure of PF and morphological operations (Halle and Marantz 1993), which posits (among other assumptions) that hierarchical structure persists from the syntax to the first stage of the Morphology. These assumptions set the stage for tackling the problem of the agreement asymmetry.

The puzzle is essentially how to reconcile the satisfying structural explanation provided by the specifier-head relationship with the fact that not all specifier-head relationships are apparently relevant. To balance these factors, I propose the following two constraints on agreement (or at least, agreement in Middle Egyptian; see below).

(44)   i. Agreement occurs in Morphology, and is a feature-copying operation.
        (Bobaljik to appear[24])

        ii. For XP and Y to agree, XP must be in a spec-head relationship with Y.
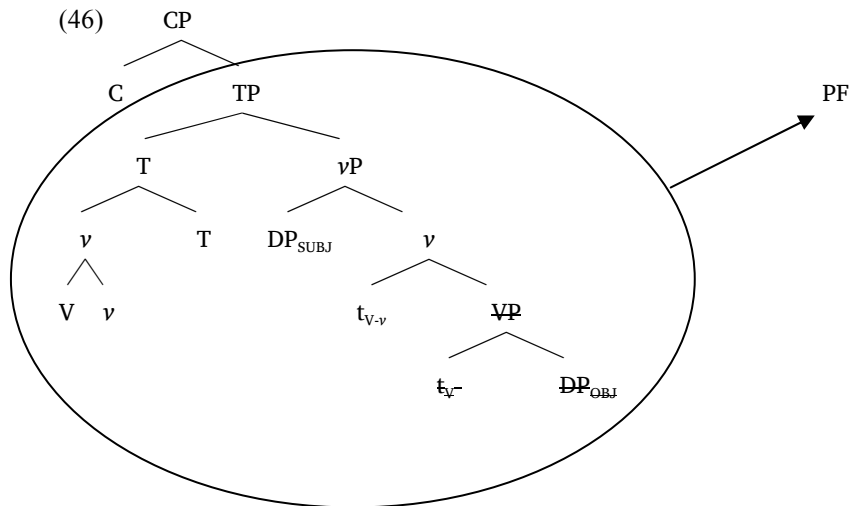
The cumulative effect of (44) is that, in order to agree, two elements must be in a specifier-head relationship at PF. This generates the right predictions for the VSO word order in Middle Egyptian: at each point when a phrase is sent to PF, the verb and the subject are never in a specifier-head relationship.

For example, looking at the VSO case, the first phase that occurs in the derivation of a sentence like (40) is vP. Once the vP phase is built, the sister to v (VP) is sent to PF. Since I assume that the verb raises immediately to v when v is merged, the VP that is spelled-out at that point contains only a trace of the verb and the DP direct object.

(45)
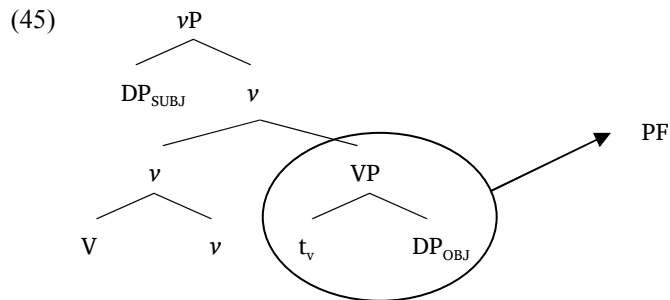
The next phase built is CP, i.e., the entire sentence (assuming all sentences are CPs). When the sister to C (TP) is sent to PF, the verb has already moved up to T (this happens as soon as T is merged), so the verb and the subject are not in a specifier-head relationship.

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[24] Bobaljik (to appear) has proposed that agreement is at PF, but his primary evidence comes from facts about morphological case. Since Middle Egyptian has no (recoverable) morphological case, I do not discuss his account in detail beyond noting its independent corroboration of one of my assumptions.

(46)

```
              CP
            /    \
           C      TP
                /    \
               T      vP
             /  \    /  \
            v    T  DP_SUBJ   v
           / \            /  \
          V   v        t_{V-v}   VP
                             /  \
                          t_V-    DP_OBJ
```

PF

(Struck-through material has already been sent to PF). Since the verb and the subject are never sent to PF in a specifier-head relationship, they never satisfy the conditions that are necessary for agreement. Therefore, there is no agreement in VSO clauses.

It is worth noting that, in (46), the subject and the trace of the *v*-V complex head are in a spec-head relationship. However, it is reasonable for this relationship not to be valid for any processes that occur at PF since traces do not have any effect on the phonology or the morphology. Their purpose is only to syntactically and semantically provide information on where a moved constituent originated. Since traces are not needed at PF, it is most economical to assume that they are not present at all, and are perhaps deleted as part of the Spell-Out process. Assuming this is the case, after the TP in (46) is sent to PF, there will no longer be a spec-head relationship involving the subject at all.

Looking next at the SVO order, the account of agreement developed so far generates the correct array of facts. It has not been established whether AspP is a phase, but it makes no difference for the present derivation. I assume it is not, to keep the derivation simple. The first phase to be constructed, then, is *v*P.

(47)
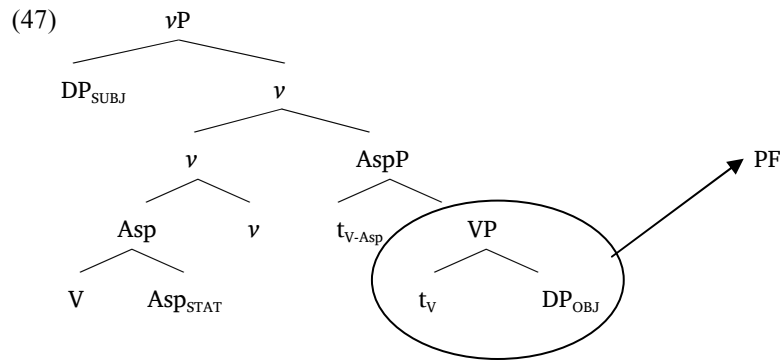
After *v*P is constructed, the clausal sister of *v* (AspP) is spelled-out. AspP contains only a trace of the complex Asp-V head, a trace of the verb, and the DP direct object. The agreement occurs after the next phase is constructed, the CP.

(48)
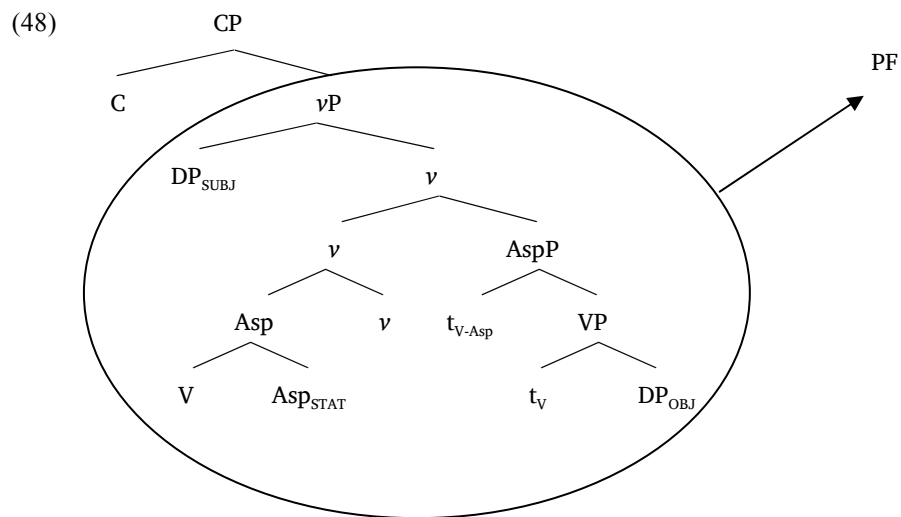
After the CP is constructed, the *v*P is sent to PF/Morphology. The DP subject and the verbal complex are in a specifier-head relationship in *v*P, so agreement is correctly licensed.

Overall, then, this account of agreement makes the correct predictions about the data. In the VSO word order, the verb and the subject are never in a spec-head relationship in the portions of the derivation that are successively sent to PF, so there is no agreement. In the SVO word order, the subject and the verb are ultimately in a spec-head relationship.

Before continuing, it is worth discussing more precisely the process of agreement at PF, beyond the claim that it essentially involves feature copying. One recent formalized account of agreement at PF has been developed in work within the framework of Distributed Morphology (Halle and Marantz 1993, Embick and Noyer 2007; but see also Bobaljik to appear). In this line of work, agreement at PF consists of two operations: insertion of an Agr node (a dissociated morpheme, in the sense of Embick 1997), and the copying of phi-features from the DP subject onto the Agr node.[25] In the Agr-insertion rules that have been proposed so far, Agr nodes are adjoined to T, but since stative clauses may lack a TP entirely, I will phrase my account in terms of V. Specifically, as a first pass, I propose that an Agr node is inserted and adjoined within the verbal complex by the following rule:

(49)   Agr Insertion (Take 1)
         V   →   [V-Agr] when V is in a spec-head relationship with a DP

The spec-head structural condition on Agr-insertion prevents Agr from being inserted in VSO clauses, since V is never in a spec-head relationship with a DP in material that is sent to PF. After Agr is inserted, the phi-features from the subject DP are copied onto it by the following rule.

(50)   Feature Copying (Take 1)
         Copy phi-features onto Agr from the closest c-commanding DP.

---

[25]   Note that features are not copied directly from the DP onto the verbal head -- the Agr node "mediates" between the two because agreement is realized as a separate morpheme.

It is unclear how cross-linguistically viable this formulation is, but it seems sufficient for now to state Feature Copying as simply as possible, and (50) does effectively ensure that the DP in the specifier position has its phi-features copied onto the Agr that is attached to V. When the material is phonologically realized, then, there is an agreement suffix attached to the verb that covaries in phi-features with the subject, exactly as expected.

In this account of PF agreement, though, the spec-head locality requirement is on the Agr Insertion rule. One could imagine another way to configure the analysis with the locality requirement as a direct part of the feature-copying rule.

(51)   Feature Copying (Take 2)
         Copy the phi-features of a DP in Spec, XP onto an Agr node in X.

The Agr-insertion rule could accordingly be more general.

(52)   Agr-Insertion Rule (Take 2)
         V → [V-Agr]

It seems intuitively more desirable to have the locality requirement on the feature-copying operation -- it is reasonable to restrict the distance over which features can be copied, and the Spec-head relationship has always been loosely understood as a kind of locality restriction, not a condition on morpheme insertion. However, this would predict that an Agr node would actually be inserted on V in VSO clauses, although it could not have any features copied into it since there would be no DP above it in Spec, TP. The choice between "Take 1" and "Take 2" is therefore a trade-off between a proliferation of empty Agr nodes ("Take 2") or a slightly less clean formulation of Feature Copying ("Take 1"). [26]

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[26] There is a way to avoid the proliferation of empty Agr nodes, but it is problematic. Instead of referencing the V head, the Agr-insertion rule could reference the stative aspect morpheme, e.g. Asp_{Stat} → [Asp-Agr], and this would keep Agr from appearing at all in non-stative clauses. However, this seems to make the agreement asymmetry more

In favor of the "Take 1" analysis, it is worth noting that although the Feature Copying rule in (50) does not reference Spec-Head agreement, it does have a locality requirement, albeit an arbitrary and purposefully general restriction at this point. On the other hand, in favor of "Take 2," Distributed Morphology accounts of PF agreement tacitly assume a completely parasitic relationship between Agr-insertion and feature-copying, i.e. that Agr will always be inserted where it can receive copied features. However, this is not a necessary consequence of anything in the account. Indeed, if there are locality restrictions on Feature Copying, we might expect certain cases where Agr is inserted but feature-copying is blocked, and such cases do seem to occur in natural language as cases of default agreement. For Middle Egyptian, then, we would say that the empty Agr that is inserted in the VSO case receives default agreement, and it is a particular quirk of Middle Egyptian that the default agreement morpheme is null ($\varnothing$).[27]

At this point, it is crucial to differentiate default agreement from one of the potential Minimalist accounts of VSO clauses discussed above where Agree holds between T but agreement is never realized. My original objection to the Minimalist account was that it is suspicious for every single combination of phi-features to be realized as a null morpheme across all variations of person, gender and number. The Distributed Morphology analysis, however, does not run into this problem. After failing to receive copied features, the Agr node would be assigned one particular combination of features that are the default agreement pattern, and that one combination simply happens to be phonologically null.

Overall, the "Take 2" analysis seems stronger and more interesting than "Take 1." The spec-head restriction is incorporated into the grammar in a more satisfying fashion, and it raises interesting issues about default agreement. Future work can hopefully find an empirical basis to distinguish the two analyses.

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arbitrary (there's no inherent reason for agreement just to be associated with stative aspect) and downplays the Spec-Head relationship considerably.

[27] To the best of my knowledge, this is reasonable empirically. There is no evidence that default agreement is not null in Middle Egyptian. Granted, usually, default agreement is 3rd person singular masculine, but recall that 3rd person masculine singular agreement on statives is often null (see footnote 12 and examples (18) and (28)).

However, it is crucial to realize that the basic intuition that underlies the asymmetry is the same for both. Both analyses easily instantiate the two basic assumptions that are needed for Middle Egyptian agreement: agreement is at PF, and limited to when the verb and the subject are in a spec-head relationship.

However, an apparent counterexample to the spec-head requirement has already been seen in this paper. As shown in (13) and (28) above, second-position clitics can intervene between the subject and the verb in a stative clause, but the verb still agrees with the subject. If the second position clitics are sensitive to prosodic structure, though, this is not problematic. Presumably, the morphophonological process that results in them being in second position occurs after the operations that result in agreement. In effect, they would not be between the subject and the verb until after the operations associated with agreement had occurred. This ordering has actually been independently proposed. Many of the mechanisms that have been developed to account for second position clitic behavior (Local Dislocation: Embick and Noyer 2001, and Prosodic Inversion: Halpern 1995) occur very late in the derivation, i.e. after Vocabulary Insertion. However, Agr Insertion and Feature Copying have been proposed to occur before Vocabulary Insertion (see e.g. Embick and Noyer 2007). It is thus plausible to believe that the agreement process takes place before the second position clitic arrives in second position.

To conclude, the agreement account sketched above is traditional in some ways (appealing to Spec-Head), but more novel in others (agreement occurring in the morphology). How universal the account is remains a matter for future research. Nevertheless, its basic assumptions are non-controversial. The specifier-head relationship has been known to be a favored agreement configuration for decades, and characterizing agreement as a phenomenon that is conditioned by hierarchical structure but ultimately a morphological operation seems reasonable. Most importantly, though, this account succeeds in capturing the original intuition that structure is responsible for the difference in agreement between the two patterns. When the verb has raised out of a spec-head configuration, it can no longer realize agreement.

A starting point for future research on the universality of this account could be the well-known observation that agreement in a Spec-Head configuration is typically richer than other agreement configurations (as noted by e.g. Chomsky (2004), drawing on work by Guasti and Rizzi (1999) and Chung (1998)).[28] There could be a split between agreement that occurs in the morphology (requires Spec-head, rich) and agreement that occurs in the syntax (requires c-command, not necessarily rich), roughly in the spirit of Chung's (1998) division of agreement into two separate components, one morphological and one syntactic. In Middle Egyptian, for whatever reason, agreement would be limited to the morphology, so it requires a Spec-head relationship and is either rich or non-existent. In other languages, though, there may be looser restrictions on when agreement can occur, resulting in more complexity in how and when agreement is realized. Additionally, my account may shed light on why a Spec-Head relationship results in richer agreement cross-linguistically. If the Spec-Head relationship is required for some of the operations that realize agreement at PF, it seems intuitively appropriate for it to be the favored configuration for phonologically rich realization of agreement.

4.3 The Arabic Agreement Asymmetry

In this section, I briefly return to the Arabic agreement asymmetry, both to compare the present analysis to the Arabic literature and to investigate whether the present analysis can be extended to the Arabic data. I begin with some basic data from Standard Arabic.

(53)   a. *Ɂakal-at*   *ṭ-ṭaalibaat-u*   VSO / Partial Agr
             eat.PAST-3FS the-students.FP-NOM

         The students ate.

         b. **Ɂakal-na*   *ṭ-ṭaalibaat-u*
             eat.PAST-3FP   the-students.FP-NOM

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[28] Thanks to Jim McCloskey (p.c.) for bringing this to my attention.

(54) a. *ṭ-ṭaalibaat-u*   *ʔakal-na*   SVO / Full Agr

the-student.FP-NOM   eat.PAST-3FP

The students ate.

b. **ṭ-ṭaalibaat-u*   *ʔakal-at*

the-student.FP-NOM   eat.PAST-3FS   (Benmamoun 2000: 121)

In (53), the verb precedes the subject and does not agree in number (although it does agree in gender). In (54), the subject precedes the verb and there is full agreement. The fact that VSO word order has partial agreement (instead of no agreement at all) is one of the major differences between the Arabic and Middle Egyptian facts. The other difference is that, in Arabic, SVO word order is a result of information structure. Semantically, Arabic preverbal subjects are interpreted as topics against which the event of the rest of the clause occur, and syntactically, they display many of the properties of clitic-left-dislocated elements (e.g. extraction cannot occur across a preverbal DP; see Soltan 2006 for detailed argumentation on both of these points). Unlike in Middle Egyptian, there is no difference in the inflection of the verb and no tenselessness in SVO clauses. These fundamental differences can lead to an analysis of Arabic that is substantially different from the Middle Egyptian analysis here, especially as developed in work by Soltan (2006). However, it is worthwhile to begin with some earlier analyses of the Arabic asymmetry that do share some properties with the current analysis.

The main property that is shared between the Middle Egyptian analysis and many Arabic asymmetry analyses is reliance on spec-head agreement (see e.g. Aoun, Benmamoun and Sportiche 1994 et seq., Mohammad 1990, 2000, Benmamoun 2000). In a sense, this is the natural result of looking at an agreement asymmetry between preverbal and postverbal word orders. However, many of these approaches have serious drawbacks independent of their use of spec-head agreement. In Mohammad 1990, 2000, there is partial agreement in the VSO order because there is a null expletive in Spec,TP, which forces third person singular agreement. However, null expletives are grammatically suspect because they have

no effect at the interfaces (cf. the discussion of T in Section 4.1; Soltan 2006: 242). In Aoun, Benmamoun and Sportiche 1994, the verb raises one projection higher than T which causes number agreement to be "lost." However, as Soltan (2006:242-243) points out, the mechanism of agreement loss is ad hoc at best.

Soltan (2006) considers these drawbacks to indicate that a spec-head approach cannot be viable. Whether they are or not is arguable, but Soltan also adduces compelling empirical evidence against a spec-head approach for Arabic. When a postverbal subject is in a coordination structure, then the verb agrees partially with only the first conjunct, a phenomenon known as first conjunct agreement.

(55)   *ʒaaʔa-t   Hind-u   wa Zayd-un*
         came-3FS   Hind-NOM and Zayd-NOM
         Hind and Zayd came.
         (Soltan 2006: 243; Hind is a female name and Zayd is a male name)

Even if the postverbal subject were at some point in a spec-head relationship with the verb, there would be no straightforward way to have it only agree with the first conjunct. This indicates that there are probably serious difficulties with a spec-head approach to the Arabic agreement asymmetry.

However, it does not necessarily indicate that spec-head is not the right approach for Middle Egyptian. The analysis in this paper does not rely on null expletives or agreement loss, instead using an independently proposed idea (agreement is at PF) to account for the asymmetry. Moreover, there is no evidence for first conjunct agreement in Middle Egyptian, so there are no major empirical challenges to spec-head, either. It should be noted, though, that the version of the specifier-head relation that I assume is not completely conventional. In order to accommodate a tenseless structure where the verb still carries agreement, I assume the specifier-head relationship holds between DP and V, not DP and T. However, this alteration does not change the fundamental nature of the relationship.

One consequence of the Middle Egyptian analysis relying on spec-head agreement is that the analysis is not easily applicable to the Arabic facts. However,

the most current analysis of Arabic (Soltan 2006) is not applicable to Middle Egyptian regardless of spec-head because of the fundamental difference in how the SVO word order is derived in both languages. In Soltan's Minimalist analysis, the preverbal "subject" is actually base-generated in Spec,TP (which is an A'-position, i.e. this is clitic left-dislocation). There is a null *pro* in Spec,*v*P, and *pro* and T are in an Agree relationship.

(56)   [$_{TP}$ DP T [$_{vP}$ *pro v* [$_{VP}$ V…]

Full agreement surfaces on T because of the "*pro* identification requirement," an independently proposed constraint on all null pronominals that they must be identified at the interface (where identification means that a full set of phi features is associated with *pro*). Thus, the presence of agreement is intimately connected to the fact that this is a clitic left-dislocation structure.

    In Middle Egyptian, though, it is clear that the SVO word order correlates with a particular verbal inflection, and not topicality. It would be highly coincidental for every single stative clause to involve clitic left-dislocation. Moreover, it is possible for a stative verb to have an indefinite, nonspecific subject.

(57)   *ḏ*ꜥ   *pr*.Ø
          storm   come.up.STAT-3MS
          A storm came up.
          Sh.S, 32

In (57), the subject *ḏ*ꜥ "a storm" is arguably indefinite and nonspecific (the example is from a narrative about a sea journey), and indefinite, nonspecific subjects are generally dispreferred as topics. It is even ungrammatical to have the preverbal subject be indefinite and nonspecific in Arabic SVO word order (Soltan 2006: 248-249). Further research is needed on Egyptian information structure and specificity to prove that the subject in (57) is not a topic, but initial results indicate that Middle Egyptian and Arabic have very different syntactic structures for SVO clauses.

From a broader perspective, both the most current Arabic analysis and the analysis here posit distinct underlying structures for the SVO and VSO word orders, and appeal to special properties about the SVO structure to explain agreement. They are thus unified in the basic approach to the problems posed by the data. However, the analyses differ greatly on how the SVO word order is derived (tenselessness vs. clitic left-dislocation), and how agreement is formalized in the grammar (spec-head vs. Agree).

5. Conclusion

In this paper, I have successfully derived and related the VSO and SVO orders of Middle Egyptian, and explained the agreement asymmetry that holds between the two patterns. I have demonstrated that VSO order is derived through V-to-T raising, and that SVO word order occurs in stative clauses because they are tenseless. Stative clauses lack TPs, and without T, there is no longer any motivation for the verb to raise higher than *v*, i.e. it remains below the subject and SVO word order results. I have also argued against Reintges' (2005) AgrS-based account of stative clauses, demonstrating that it cannot predict the agreement patterns properly and that it requires unnecessary movement. I developed a novel account of agreement as a series of morphological operations that are sensitive to hierarchical structure, specifically, the spec-head relationship. If portions of the derivation are sent to PF cyclically, in accordance with Chomsky's (2000, 2001, 2004) phases, then the right pattern of agreement is predicted. At the relevant stages of the derivation in the VSO structure, the subject and the verb are not in a specifier-head relationship, whereas they are in such a relationship at the relevant stages of the SVO structure. The analysis was shown to differ from current analyses of the agreement asymmetry in Arabic, due to the fundamental differences in the derivation of SVO word order in the two languages.

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