3

Verb-Subject (V-S) and Subject-Verb (S-V) relations

In Chapter 1 it was shown that BA involves six word orders containing all three grammatical relations (S, V and O). In addition, BA also uses word orders in which one or two grammatical relations combine to constitute a verbal sentence. These combinations are very closely related to the nature/selection features of the V determining which and how many phrases will be selected.

For example, intransitive V's select no object phrase (1); transitive V's select a noun phrase (NP) (2), a prepositional phrase (PP) (as direct object) (3), or a sentence (4); and ditransitive V's select an NP and a PP (5) or two NP's (6).

(1) דִּינָא יְתִב (Dan 7:10)

dijnâ´ - jetib

the court - he was seated

"The court was seated".

(2) וְאֻשַּׁיָּא יַחִיטוּ (Ezra 4:12)

weʾuššajjâ´ - jaxijthû

and the foundations - they are repairing

"And they are repairing the foundations".

(3) לְחַכִּימֵי בָבֶל אַל־תְּהוֹבֵד (Dan 2:24)

lexakkijmej - bâbêl - ʾal - tehowbed

the wise men of - Babylon - not - you execute

"Do not execute the wise men of Babylon".

(4) וְתִנְדַּעֹ דִּי קִרְיְתָא דָךְ קִרְיָא מָרָדָא (Ezra 4:15)

wetinda` - dij - qirjetâ´ - dâk - qirjâ´ - mârâdâ´

and you will find - that - the city - this - the city - the rebellious

"And you will find that this city is a rebellious city".

(5) יְהַב חָכְמְתָא לְחַכִּימִין (Dan 2:21)

jâheb - xôkmetâ´ - lexakkijmijn

gives - the wisdom - to the wise

"He gives wisdom to the wise".

(6) וּבָתֵּיכוֹן נְוָלִי יִתְּשָׂמוּן (Dan 2:5)

ûbâttejkown - newâlij - jitshâmûn

and houses your - rubble - he will have to turn

"And he will have turned your houses into rubble".

The combinations of grammatical relations originating from the nature/selection features of the V will be taken as the point of departure in order to expound systematically the nature of the word orders V-S, S-V, V-O, O-V, V-S-O, V-O-S, S-V-O, S-O-V, O-V-S, O-S-V as well as word orders with a double object. In this way the hypothesis that V movement can adequately explain the various word orders found in BA will gradually unfold.

This chapter will determine the way in which word order in sentences with intransitive V's can be derived. In BA, sentences with intransitive V's reveal V-S and S-V word order. Various classes of conjugation (Perfect, Imperfect and Participle)[1] as well as various kinds of sentences (for instance simple or complex sentences) will serve as further distinction in determining word order.

Once a suitable extension of V movement (3.2) and NP movement (3.4) has been motivated in the MP, V movement (3.3) and NP movement (3.5) in BA will be dealt with. Finally the derivation of the V-S and S-V word orders in BA will be discussed.

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1   The terms Perfect, Imperfect and Participle are used purely to express the nomenclature of the verb form.

3.1 Verb movement in MP

3.1.1   Verb movement

It has been suggested in the literature that languages rich in inflection consequently have V-to-Infl movement in their grammars (Lightfoot & Hornstein 1994: 8).[2] What is meant by this V-to-Infl movement which also involves the inflectional features of V?

In the MP the lexical heads are occupied by fully inflected forms (stems plus Infl-suffixes). These forms all reveal a feature associated with the Infl-suffixes. The functional heads are likewise occupied by features associated with Infl morphology (as opposed to Infl morphology itself). The features associated with the Infl morphology of lexical categories have to license those represented in the functional heads. The requirement that morphological features must be licensed necessitates the movement of lexical units to positions in the functional domain. The licensing of inflected units therefore implies the movement of inflected units to positions in the functional domain. Licensing therefore takes place by determining whether features associated with Infl morphology coincide with features represented in the functional heads. The Agr head contains V-features *inter alia* and these consequently have to be licensed against the Agr-adjuncted verb.

By way of explanation, Hoekstra & Zwart's (1994: 200) exposition on feature licensing is reproduced here:

All these features are twofold and are best illustrated by way of person congruence. A construction such as "I walk" reveals the presence of a feature (first person). This feature is represented in AgrS (previously Infl). This feature (first person) is morphologically represented twice in the sentence, first by the V "walk" and secondly by the S "I". "Walk" is a head while "I" is a noun. "I" has to be moved to Spec-AgrS.

Feature licensing, therefore, occurs twice: first between the head AgrS and "I" and secondly between the head AgrS and "walk". Chomsky (1992) calls the feature of AgrS licensed by the Spec ("I") the N-feature and the feature of AgrS licensed by the head ("walk") the V-feature. The congruence between "I" and "walk" is rendered

2   Cf the exposition of V movement in Chapter 2.

possible exclusively by the intervention of the functional head AgrS. Factually "I" and "walk" are not congruent at all, but each of them agrees with AgrS.

Chomsky (1992) accords to the N-features and the V-features a certain binary value. In what follows, the nature of these features is explained.

3.1.2   The nature of the features of functional categories

As indicated in Chapter 2, these features are divided into two groups, *viz* strong and weak. Both of these have been licensed in the course of a derivation and are eliminated in order to bring about congruence. The difference between them centres on the question of whether licensing should take place in the overt or the covert syntax: in other words, prior to or subsequent to spell-out. A strong feature has to be eliminated before spell-out by licensing it against another feature or category within the structure (in particular a substantive category). A strong feature not licensed prior to spell-out is visible on PF and causes the derivation to crash at that level. A weak feature, however, is not visible on PF and may occur unlicensed at that level. The licensing and elimination of weak features need not take place prior to spell-out, but may be postponed until the covert syntax. In fact it is a basic assumption that movement creating the structural configuration wherein the features of a category can be licensed should take place as late as possible in a derivation, and should happen only when the category itself may benefit in that one or more of its own features can be licensed thereby.

3.1.3   Implications for word order

Why is it then so important to know whether overt, syntactical V movement took place or not? Ouhalla (1994: 42) offers two reasons for this. First, V movement is directly responsible for the derivation of the order of S in relation to V, at least in some of the V-S-O languages. Secondly, it is also directly responsible for the derivation of the order of the Infl morphemes in the verbal complex. Moreover, V movement is also responsible for the derivation of the internal structure of the verbal complex (the order of the Infl morphemes), as well as the order of V in relation to its complements.

It is therefore common practice among linguists studying the derivation of word orders in languages to take overt V movement as an argument explaining a distinct word order for a specific language, and/or to classify several languages in terms of word order.[3]

3.2 Verb movement in BA

3.2.1   The grammatical relation V

The verb in BA has numerous overt inflectional features. The stem of the verb כתב (*ktb*) has always been lavishly supplied with affixes תִּכְתְּבוּן (*tiktebûn*), which may be prefixes תכתב (*ti-*), infixes כְּתֵב (*-te-*) or suffixes כתבון (*-ûn*), and which classify the verb as belonging to one of three types:

A. A particular stem formation

Stem formations in BA are mutually related and are traditionally tabulated as follows (7):

(7)

Stem formation	Active	Passive	Reflexive
Simple	*Qethal*	*Qethijl*	*Hitqethal*
Intensive	*Qaththel*		*Hitqaththal*
Causative	*Haqthel/ˊaqthel*	*Hôqthal*	
	Šaqthel		*Hištaqthal*

The name given to a stem formation is derived from the application of a particular verb pattern to the verb קטל (*qthl*).

B. The conjugation of a stem formation.

In BA the following classes of conjugation occur: Perfect, Imperfect, Imperative, Jussive, Infinitive and Participle.

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3   In addition cf *inter alia* Koopman & Sportiche (1991) who succeeded in describing a specific word order for English, French, Vata (Class 1 languages) and Italian and Japanese (Class 2 languages) by positioning the subject (VP-internal or VP-external). Ouhalla (1994: 43) uses V movement and the order of the subject to determine the word order in Arabic. Borer (1995) employs V movement to explain the change from V-S-O word order to S-V-O word order in Modern Hebrew.

A class of conjugation pertaining to a stem formation is recognisable by the various affixes added to the stem of the verb in order to designate it as a particular form, known as a class of conjugation or a formation of stem.

C. A specific feature of congruence (gender, number and/or person) in the class of conjugation, as applicable (8)-(13):

The verb כתב (*ktb*) in the Qethal active stem formation in the various classes of conjugation has the following forms:[4]

(8) Perfect - Qethal active

    (person, gender, number)

3 m.s.	כְּתַב	(*ketab*)	-	He wrote
3 f.s.	כִּתְבַת	(*kitbat*)	-	She wrote
2 m.s.	כְּתַבְתְּ	(*ketabt*)	-	You wrote
1 s.	כִּתְבת	(*kitbet*)	-	I wrote
3 m.pl.	כְּתַבוּ	(*ketabû*)	-	They wrote
3 f.pl.	כְּתַבָה	(*ketabâh*)	-	They wrote
2 m.pl.	כְּתַבְתּוּן	(*ketabtûn*)	-	You wrote
1 pl.	כְּתַבְנָא	(*ketabnâʾ*)	-	We wrote

(9) Imperfect - Qethal active

    (person, gender, number)

3 m.s.	יכְתֻב	(*jiktub*)	-	He will write
3 f.s.	תכְתֻב	(*tiktub*)	-	She will write
2 m.s.	תכְתֻב	(*tiktub*)	-	You will write
1 s.	אֶכְתֻב	(*ʾêktub*)	-	I shall write
3 m.pl.	יכְתְבוּן	(*jiktebûn*)	-	They will write
3 f.pl.	יכְתְבָן	(*jiktebân*)	-	They will write
2 m.pl.	תכְתְבוּן	(*tiktebûn*)	-	You will write
1 pl.	נכְתֻב	(*niktub*)	-	We shall write

---

4   Cf Bauer & Leander (1927: 88-170) for a complete and authoritative paradigmatic exposition.

(10) Imperative - Qethal active
      (person, gender, number)

2 m.s.	כְּתֻב	(*ketub*)	-	You (m.) write!
2 f.s.	כְּתֻבִי	(*ketubiʝ*)	-	You (f.) write!
2 m.pl.	כְּתֻבוּ	(*ketubû*)	-	You (m.pl.) write!

(11) Jussive - Qethal active
      (person, gender, number)

3 m.s.	יִכְתֻּב	(*jiktub*)	-	He write!
3 f.s.	תִּכְתֻּב	(*tiktub*)	-	She write!
3 m.pl.	יִכְתְּבוּן	(*jiktebûn*)	-	They (m.) write!
3 f.pl.	יִכְתְּבָן	(*jiktebân*)	-	They (f.) write!

(12) Infinitive construct - Qethal active

	מִכְתַּב	(*miktab*)	-	to write

(13) Participle - Qethal active
      (gender, number)

m.s.	כָּתֵב	(*kâteb*)	-	(He) wrote
f.s.	כָּתְבָה	(*kâtebâh*)	-	(She) wrote
m.pl.	כָּתְבִין	(*kâtebiʝn*)	-	(They)(m.) wrote
f.pl.	כָּתְבָן	(*kâtebân*)	-	(They)(f.) wrote

The Participle class of conjugation is by definition a verbal adjective. In BA syntactically the participle functions as a verb, noun or adjective.

The strong/weak feature distinction of Agr and T in BA will now be determined.

3.2.2   The nature of V-features in BA

There are *inter alia* complete sets of Perfect, Imperfect and Participle conjugation classes for each of the stem formations in (7). It is generally accepted that all these features are reflected in T and are therefore strong for the Perfect, Imperfect and Participle classes of conjugation.

Comparing (8) and (9) with (13), the features of congruence of a Participle class of conjugation appear to differ materially from those of Perfect and Imperfect classes of conjugation. A Participle only has gender and number, while the Perfect and Imperfect have person as well as gender and number. Hence, the V-features of AgrS in Participles are deemed to be weak, while the V-features of AgrS in the Perfect and Imperfect are considered strong. This may be illustrated by the sentence in (14), which comprises an Imperfect class of conjugation without any overt S:

(14) תִּפְּלוּן (Dan 3:15)

tippelûn

fall down you

"You fall down".

Morphology: Qethal stem formation, Imperfect class of conjugation, second person masculine singular of the verb נפל (npl).

The operation of projection creates a VP with a vacant position for an argument which will receive the Agent position (15):

(15)   VP2

          ↙   ↘
      e   VP1

                  ↓

          tippelûn
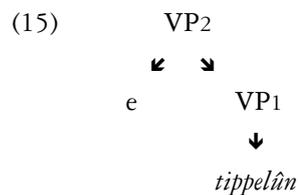
The SpecVP2-position is vacant[5] because the overt argument which could act in the Agent position (independently of the verb) is not present.

Even if the argument receiving the Agent position has not been overtly filled, the subject can be identified by the overt inflectional features of the verb (cf also Naudé 1993: 22 in this regard). The subject position is filled by an empty category designated as pro.[6]

5   Chomsky (1981: 335) mentions an unextended category, styled a zero category in order to distinguish it from an empty category like pro. Both are devoid of a phonological matrix, but the zero category is completely without content, whereas the empty category still has features.

6   A salient feature of a pro-drop language is that it lacks a pronominal subject in a finite clause. In these terms BA is a pro-drop language. This argument is an

Chomsky (1992: 14) following Rizzi (1982, 1986) shows that pro is licensed in a Spec-head relation for a strong V-feature on AgrS. It is accordingly presumed that AgrS reveals a strong V-feature.

The V-features of the Perfect and Imperfect classes of conjugation may be summarised as follows (16):

(16)

| T | - | V-features | = | strong |
| AgrS | - | V-features | = | strong |

V movement of the Perfect and Imperfect to T and AgrS is enforced in overt syntax/prior to spell-out because strong features on T and AgrS have to be licensed.

The V-feature of AgrS in the Participle conjugation class appear weak as is shown in the derivation (17):

(17) אֲנָה חָזֵה (Dan 3:25)

´anâh xâzeh

I - see

"I see".

Morphology: חָזֵה (*xâzeh*) - Qethal Participle masculine singular of the stem חזה (*xzh*).

Morphology: אֲנָה (*´anâh*) - Independent pronoun 1 singular.

In any other case than in the example of (14), *xâzeh* with a non-overt subject would be ungrammatical in BA (Naudé 1993: 22). The GT-operation with a participle takes place as follows:

The operation of projection creates a VP with a vacant position for an argument about to receive the Agent role. Merging positions, the NP *´anâh* in the empty VP2 position forms the Spec of *xâzeh* and *xâzeh* the head of VP:

empty NP indicated by pro. The fact that the subject may occur covertly is not the only feature distinguishing pro-drop languages from non-pro-drop langua-ges. A further feature is that the subject may occupy a post-verbal position (Haegeman 1994: 19-20). The empty category pro in (15) must be marked [+ pronominal] with the subsequent feature [- anaphoric] and pro is accordingly called a pure pronominal. Cf Waher (1991: 21-6). Cf in addition Naudé (1991, 1993) for an exposition of BA as a pro-drop language.

(18)

$$VP_2$$

'*anâh* VP_1

xâzeh
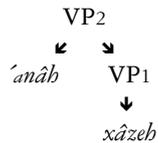
In cases where the argument receiving the Agent position is not overtly filled, the subject cannot be identified by the overt inflectional features of the Participle. Consequently an empty subject can never be licensed. In the case of the Participle a subject is required as a matter of necessity. In BA, AgrS with the Participle shows weak V-features. The V-features of the Participle conjugation class may be summarised as in (19):

(19)

T	-	V-features	=	strong
AgrS	-	V-features	=	weak

V movement from the Participle conjugation class to T is enforced in overt syntax/before spell-out in that the strong features of T have to be licensed. V movement from the Participle conjugation class to AgrS are not enforced because weak features are only licensed in covert syntax. Non-overt V movement does take place from T to AgrS on LF to license the weak N-features of AgrS.

3.3 Noun movement in MP

The same operations apply to NP movement as to V movement in MP. It is convenient to repeat the revelant operations here.

3.3.1 Nature and features

NP movement is primarily enforced by the strength/weakness of what are referred to as N-features. N-features are those used to license the corresponding morphological features of the maximal projections (XPs). Such features include *inter alia* those associated with NPs like Case features and j features (person, gender, number). The licensing of N-features takes place by way of Spec-head agreement and the Spec position of the functional head. It is brought about by the application of XP movement.

MP requires that once a feature is strong, it has to be licensed on PF for elimination prior to spell-out. The licensing and elimination of weak features does not take place prior to spell-out, but is postponed until the covert syntax.

3.3.2   The implications for word order

Where an NP (more specifically the S relation) reveals weak N-features, the question arises as to what sentence position (or S relation) the NP occupies.

Borer (1995: 527) indicates that in some languages the nominative case is available in the Spec of the highest projection (in this case the Spec-AgrSP), while in other languages a lower Spec position remains *in situ*.

Nouns are removed from the lexicon with all their morphological features including case and φ-features (Chomsky 1992: 41). Case features are licensed in their functional domain. In all languages with strong case features, overt movement for licensing takes place; in other instances it is postponed until LF. Case is not accorded by head government, but in a Spec-head relation (Chomsky 1992: 25).

3.4 Noun movement in BA

3.4.1   The grammatical S relation

In all the traditional expositions of BA the terms nominative, genitive and accusative are used to indicate the various syntactic functions of the noun, but in accordance with the overt morphological form of the noun, no trace of case can be found.[7] Take for instance the following examples where the same noun is used to perform various syntactic functions (20)-(23):

Noun	אִילָן	(ʾîjlân)	translation: tree
Noun determined	אִילָנָא	(ʾîjlânâʾ)	translation: the tree

As Subject

(20) רְבָה אִילָנָא וּתְקֵף (Dan 4:8)

rebâh - ʾîjlânâʾ - ûteqip

---

7   Aartum (1959: 7) shows that case particles also occurred in Proto-Semitic.

he grew large - the tree - and he grew strong

"The tree grew large and strong".

As Object

(21) גֻּדּוּ אִילָנָא (Dan 4:11)

goddû - ´ijlânâ´

cut down - the tree

"Cut down the tree".

In a genitive construction

(22) שָׁרְשׁוֹהִי דִּי אִילָנָא (Dan 4:23)

šârešowhij - dij - ´ijlânâ´

roots his - of - the tree

"The roots of the tree".

As antecedent in a relative construction

(23) אִילָנָא דִּי חֲזַיְתָ (Dan 4:17)

´ijlânâ´ - dij - xazajetâ

the tree - which - you saw

"The tree you saw".

In example (20), the subject *´ijlânâ´* takes no overt case and reveals no morphological difference whether used as an object or in the position of a genitive, and so on. From this it follows logically that S in BA in all probability have weak N-features on T.[8]

The subject in BA reveals number and gender features associated with inflectional morphology. Take the following examples (24)-(25):

(24)

מֶלֶךְ	(*mêlêk*)	masculine singular	translation: king
מַלְכִין	(*malkijn*)	masculine plural	translation: kings

(25)

מְדִינָה	(*medijnâh*)	feminine singular	translation: province
מְדִינָן	(*medijnân*)	feminine plural	translation: provinces

8   T licenses the tense of the verb and Spec-TP1 the Case of the subject (Chomsky 1992: 42).

All nouns in BA ending in הָ (*âh*), י (*ij*) or ו (*û*) are grammatically feminine. The masculine plural suffix usually ends in ין (*ijn*), and the feminine plural suffix in ןָ (*an*).

Since nouns are not fully inflected for ɸ-features (person being absent), BA reveals weak features on AgrS. In connection with this, BA's weak N-features on AgrS are supported by the non-overt presence of a pronominal subject (as mentioned in 3.2.1).

Apart from a noun such as *ijlânâ´* (20), capable of functioning as S, BA also has independent pronouns appearing as S in a sentence. These independent pronouns are as follows (26):

(26)

person	gender	singular	plural
1		אֲנָה (*´anâh*)	אֲנַחְנָה (*´anaxnâh*)
2	masculine	אַנְתָּה (*´anth*)	אַנְתּוּן (*´antûn*)
3	masculine	הוּא (*hû´*)	אִנּוּן (*´innûn*)
			הִמּוֹ(ן) (*himmow(n)*)
3	feminine	הִיא (*hij´*)	אִנִּין (*´innijn*)

Like nouns, independent personal pronouns are not indispensible to a sentence, as is shown in (14).[9] In contrast a Participle without an overt noun as in (17) may not be omitted. The enforced presence of the pronoun is mainly due to the Participle, which does not allow null subjects (Naudé 1993: 22). It is suggested that the pronoun also has N-features in view of its covert presence in the Perfect and Imperfect weak classes of conjugations.

The strong/weak distinction of N-features applying to the Perfect, Imperfect and Participle may be summarised as follows (27):

---

9   The pronoun is lacking where there is no contrast or emphasis to be expressed by the subject. This is in accordance with the principles of economy: the overt absence of the subject pronoun provides less tension than when it is present. Consequently the subject will only be present when overt presence justifies the exertion. Subject pronouns occur only where their presence is mandatory (Haegeman 1994: 21).

(27)

T	-	N-features	=	weak
AgrS	-	N-features	=	weak

NP movement is not licensed because weak features are only licensed in covert syntax. Non-overt NP movement to Spec-AgrS takes place in LF in order to license the weak N-features of AgrS and T.

3.5 Summary of features

The strong/weak distinction in the N- and V-features of the categories T and AgrS in BA may be listed as follows:

(28) Perfect/Imperfect

T	-	N-features	=	weak
T	-	V-features	=	strong
AgrS	-	N-features	=	weak
AgrS	-	V-features	=	strong

(29) Participle

T	-	N-features	=	weak
T	-	V-features	=	strong
AgrS	-	N-features	=	weak
AgrS	-	V-features	=	weak.

3.6 Derivation of word order in MP

MP supplies no word order parameter for the lexical domain, but it does incorporate the assumption that there is one single word order subjacent to all human languages, *viz* S-V-O.[10] The universal sequence is expressed in the general structure (30):

(30)

$$
\begin{array}{ccc}
 & XP2 & \\
\swarrow & & \searrow \\
S & & XP1 \\
 & \swarrow & \searrow \\
 & V & O
\end{array}
$$
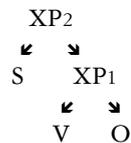
10   Bennis (1995: 11-2) provides a complete resume of the way in which the concept of a single subjacent word order for all languages was arrived at.

40

The word order at the LF level of representation is to a great extent common to all languages, but the PF representation differs from language to language. These differences in overt syntax prior to spell-out are determined by the morphological features from which functional categories are assembled, relating specifically to the strong/weak distinction in the N- and V-features of the categories T and Agr (31):

(31)

$$\text{AgrSP}_2$$
$$\text{(N-features)} \quad \text{NP} \qquad \text{AgrSP}_1$$
$$\text{(V-features)} \quad \text{AgrS} \qquad \text{TP}_1$$
$$\text{T}$$
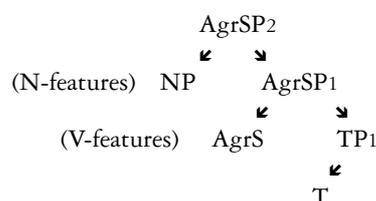
The derivation of V-S and S-V word order in BA will now be explained.

3.7 The V-S word order in BA

The following data in various types of sentences seem to support a V-S word order in BA (32)-(40):

Intransitive Verb

V as Perfect active in various types of sentences

Simple sentences

(32) אִתְיָעַטוּ כֹּל סָרְכֵי מַלְכוּתָא (Dan 6:8)

΄itjâ`athû - kol - sârekej - malkûtâ΄

they have deliberated - all - administrators - of the kingdom

"All the administrators of the kingdom have deliberated".

Complex sentences

(33) בֵּאדַיִן קָמוּ זְרֻבָּבֶל וְיֵשׁוּעַ (Ezra 5:2)

be΄dajin - qâmû - zerubbâbêl - weješûa`

then - they arose - Zerubbabel - and Jeshua

"Then Zerubbabel and Jeshua arose".

(34) עַד דִּי הִתְגְּזֶרֶת אֶבֶן (Dan 2:34)

`ad - dij - hitgezêrêt - ʾêbên

until - she was cut out - stone

"Until a stone was cut out".

(35) כָּל־קֳבֵל דְּנָה בַּהּ־זִמְנָא קְרִבוּ גֻּבְרִין כַּשְׂדָּאִין (Dan 3:8)

kôl - qobel - denâh - beh - zimnâ´ - qeribû - gubrijn - kashdâ´ijn

therefore - this - in him - the time - they came forward - men - Chaldeans

"Therefore at that time certain Chaldeans came forward".

V as Imperfect active in various types of sentences

Simple sentences

(36) תְּחֹתֽוֹהִי תַּטְלֵל חֵיוַת בָּרָא (Dan 4:9)

texotowhij - tathelel - xejwat - bârâ´

under him - she found shelter - beasts - of the field

"The beasts of the field found shelter under him".

(37) תְּנֻד חֵיוְתָא מִן־תַּחְתּֽוֹהִי (Dan 4:11)

tenud - xejwetâ´ - min - taxtowhij

let they flee - the beasts from - under him

"Let the beasts flee from under him".

Complex sentences

(38) וּבָתְרָךְ תְּקוּם מַלְכוּ אָחֳרִי (Dan 2:39)

ûbâterâk - teqûm - malkû - ´âxorij

but after you - she shall arise - kingdom - another

"But after you shall arise another kingdom".

V as active Participle in various sentences

Simple sentences

(39) נָפְלִין כָּל־עַמְמַיָּא (Dan 3:7)

nâpelijn - kôl - `amemajjâ´

fell down - all - the nations

"All the nations fell down".

Complex sentences

(40) בֵּאדַיִן נָפְקִין שַׁדְרַךְ מֵישַׁךְ וַעֲבֵד נְגוֹ מִן־גּוֹא נוּרָא (Dan 3:26)

be´dajin - nâpᵉqijn - šadrak - mejšak - wa`abed - nᵉgow - min - gow´ - nûrâ´

then - came out - Shadrach - Meshack - and Abednego - from - oven - of the fire

"Then Shadrach, Meshack and Abednego came out from the fire".

The syntactic derivation of sentence (32), representing (32)-(38), starts with a selection of substantive heads — the V *´itjâ`athû* and the NP *kol-sârekej-malkûtâ´* each of which fully inflected, with its particular morphological features (case, tense, and congruence) already added. *´itjâ`athû,* as an intransitive V, selects a single argument to receive the thematic role of Agent, *viz kol-sârekej-malkûtâ´.* The progress of the derivation runs as follows:

The operation of projection creates a VP. The VP and the NP are independent of each other (41):

(41)

VP	NP
↓	↓
´itjâ`athû	*kol-sârekej-malkûtâ´*

The operation of projection then creates a new VP with a vacant position for an argument to receive the Agent role (42):

(42)

VP₂
⤶ ⤷
e   VP₁   NP
          ↓   ↓
   *´itjâ`athû*   *kol-sârekej-malkûtâ´*
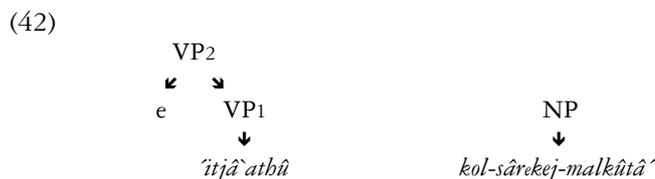
The operation of merging inserts the NP *kol-sârekej-malkûtâ´* into the vacant VP₂ position (43). The NP *kol-sârekej-malkûtâ´* forms the Spec of the V *´itjâ`athû* constituting the head of VP.

(43)

VP₂
⤶ ⤷
kol-sârekej-malkûtâ´   VP₁
                              ↓
   *´itjâ`athû*
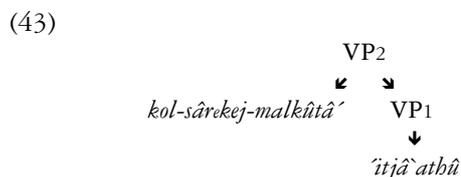
The licensing of the morphological features of *kol-sârekej-malkûtâ´* and *´itjâ`athû* in (43) is implied. At least two functional heads, *viz* T and AgrS, are selected, projected and combined with VP2 to constitute a single structure (44):

(44)

                AgrSP2
             ↙   ↘
        Spec   AgrSP1
                 ↙   ↘
            AgrS   TP1
                     ↙   ↘
                  T   VP2
                       ↙   ↘
    kol-sârekej-malkûtâ´   VP1
                            ↓
                     ´itjâ`athû
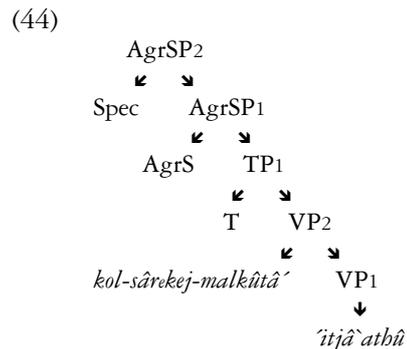
The strong/weak-distinction may now be illustrated by means of sentence (32), for example, and structure (44). Structure (44) contains two functional categories, AgrS and T, each of which has been assembled from N- and V-features. Structure (44) also has two substantive categories (the V *´itjâ`athû* and the NP *kol-sârekej-malkûtâ´*) which have to be licensed in the course of the derivation for interpretation on PF and LF. Licensing implies that these categories are moved to positions where their morphological features may be licensed. Whether these movements take place before or after spell-out depends on the strength of the morphological features of Agr and T.

The V-features of the functional category T, on the one hand, are strong in BA. This means that V *´itjâ`athû* moves overtly to T in order to license its features. *´itjâ`athû* moves to T prior to spell-out in an instance of head-to-head movement. The V-features of the functional category AgrS are also strong in BA and consequently necessitate a further overt movement of *´itjâ`athû* to AgrS to have its features licensed. The effect of the overt processing in these two instances is reflected in the structure of (45):

(45)

```
                           AgrSP2
                        ↙        ↘
                    Spec         AgrSP1
                              ↙        ↘
                  ´itjâ`athû           TP1
                                    ↙        ↘
                                  t_i        VP2
                                          ↙        ↘
                     kol-sârekej-malkûtâ´           VP1
                                                     ↓
                                                    t_i
```
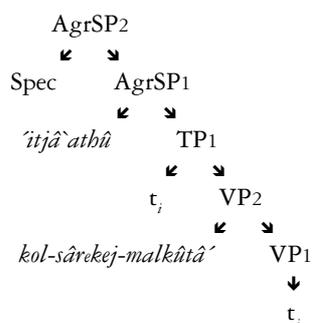
   The N-features of T and AgrS, on the other hand, are weak in BA. Hence, the implementation of the operation of procrastination means that the movement has to wait until spell-out. No overt NP movement takes place in (45) and the NP (subject) remains *in situ*.

   The result of V movement in structure (45) entails the revelation of V-S as the superficial word order.[11] Likewise, the syntactic derivation of sentence (39) representing (39)-(40), starts with a selection of substantive heads. In the case of the Participle conjugation class V *nâpelijn* requires one argument to receive the role of Agent *viz kôl-`amemajjâ´*. The respective processing of projection and merging operates until such time as structure (46) is established:

---

11   A covert NP movement to Spec-AgrS takes place in the LF component so as to license its word order. The NP movement is reflected as covert processing in structure (i):

(i)
```
                                AgrSP2
                             ↙        ↘
         kol-sârekej-malkûtâ´_j        AgrSP1
                                    ↙        ↘
                        ´itjâ`athû_i        TP1
                                         ↙        ↘
                                       t_i        VP2
                                               ↙        ↘
                                             t_j        VP1
                                                         ↓
                                                        t_i
```

(46)

$$
\begin{array}{c}
\text{VP}_2 \\
\swarrow \qquad \searrow \\
\textit{kôl-`amemajjâ´} \qquad \text{VP}_1 \\
\downarrow \\
\textit{nâpelijn}
\end{array}
$$
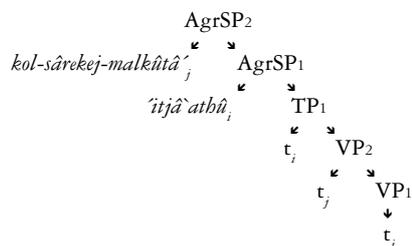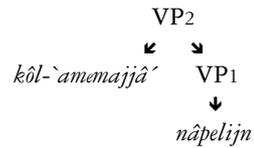
The morphological features of *kôl-`amemajjâ´* and *nâpelijn* have to be licensed on the two functional heads T and AgrS (47):

(47)

$$
\begin{array}{c}
\text{AgrSP}_2 \\
\swarrow \qquad \searrow \\
\text{Spec} \qquad \text{AgrSP}_1 \\
\swarrow \qquad \searrow \\
\text{AgrS} \qquad \text{TP}_1 \\
\swarrow \qquad \searrow \\
\text{T} \qquad \text{VP}_2 \\
\swarrow \qquad \searrow \\
\textit{kôl-`amemajjâ´} \qquad \text{VP}_1 \\
\downarrow \\
\textit{nâpelijn}
\end{array}
$$
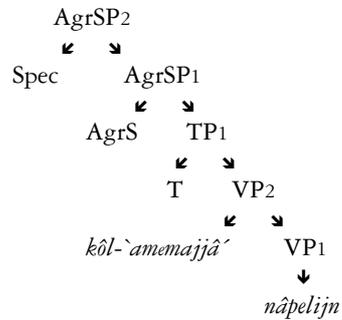
As far as the Participle is concerned, the V-features of category T are strong in BA, whereas the V-features of AgrS are weak, with the result that V *nâpelijn* has to move overtly to T in order to license its features. The effect of the single overt processing is revealed in structure (48):

(48)

$$
\begin{array}{c}
\text{AgrSP}_2 \\
\swarrow \qquad \searrow \\
\text{Spec} \qquad \text{AgrSP}_1 \\
\swarrow \qquad \searrow \\
\text{AgrS} \qquad \text{TP}_1 \\
\swarrow \qquad \searrow \\
\textit{nâpelijn}_i \qquad \text{VP}_2 \\
\swarrow \qquad \searrow \\
\textit{kôl-`amemajjâ´} \qquad \text{VP}_1 \\
\downarrow \\
t_i
\end{array}
$$
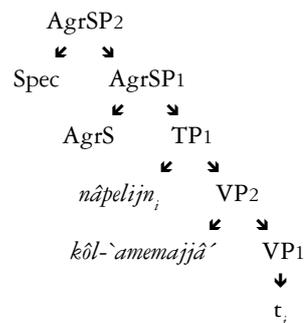
In the present structure no overt NP movement takes place and S remains *in situ*. As a result of V movement in structure (48), V-S is

revealed as the superficial word order.[12] Where the grammatical relations V and S feature in combination, with the intransitive V, the inference (A) is: in BA, V-S is the unmarked word order.

3.8 The S-V word order in BA

Once inference (A) has been accepted for BA, S-V must of necessity be a marked or unusual word order. On what grounds can such a statement be made?

On the one hand, the V-features of T and AgrS in BA are strong. Consequently overt V movement from T to the head of AgrS takes place in the PF component, as indicated in 3.7. On the other hand, the N-features of T and AgrS in BA are weak. Consequently covert NP movement to Spec-AgrSP2 takes place in the LF component in order to license its N-features, resulting in a V-S word order. In the S-V word order S is generated in a position to the left of V. The N-features of AgrS in BA are weak and consequently no overt NP movement to Spec-AgrS can take place. It is clear, however, that overt NP movement has to take place in order to achieve S-V word order. The question arises as to which overt NP movement is applicable in the present instance.

This requires further more discerning consideration of Spec-AgrS in the functional domain. In view of the fact that N-features are weak

---

12   The V-features of AgrS for the Participle are weak in BA, which renders mandatory a covert V movement to AgrS. This movement takes place after spell-out as dictated by the principle of procrastination. The NP *kôl-`amemajjâ´* likewise moves covertly to Spec-AgrS to license its features. This covert NP movement is rendered necessary by the weak N-features revealed by T and AgrS. The covert processing on the LF level is reflected in the following structure (i):

(i)

$$
\begin{array}{l}
\text{AgrSP}_2 \\
\nearrow \quad \searrow \\
\textit{kôl-`amemajjâ´}_j \quad \text{AgrSP}_1 \\
\qquad \nearrow \quad \searrow \\
\qquad \textit{nâpᵉlijn}_i \quad \text{TP}_1 \\
\qquad\qquad \nearrow \quad \searrow \\
\qquad\qquad t_i \quad \text{VP}_2 \\
\qquad\qquad\quad \nearrow \quad \searrow \\
\qquad\qquad\quad t_j \quad \text{VP}_1 \\
\qquad\qquad\qquad\qquad \downarrow \\
\qquad\qquad\qquad\quad t_i
\end{array}
$$
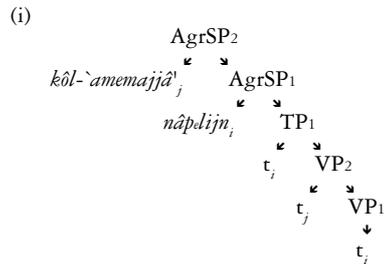
in PF and N has to move covertly after spell-out for the licensing of weak N-features in Spec-AgrS, it stands to reason that besides Spec-AgrS, there is a Spec position for the licensing of strong N-features.

Additional evidence may be adduced to substantiate the claim for a second Spec position. Borer (1995: 529) is of the opinion that if S reveals a weak feature in the highest Spec position, it is distinctly possible that this highest Spec occupies an A' position allowing room for topics and scrambled elements. Koopman & Sportiche (1991: 221) hold the view that NP (subject) movement to Spec-IP (which is a topical position) occurs in V-S-O languages, resulting in S-V-O word order. This NP movement is a direct result of the necessity to move S to a topic position from a base-generated position in Spec-VP. This highest Spec position in the functional domain is a non-case position.

In BA a pronominal pronoun features as a subject in a pre-verbal position only in the Imperfect and Perfect classes of conjugation.[13] Compare for example (49)-(50):

Imperfect

(49) הוּא יְשֵׁיזְבִנָּךְ (Dan 6:17)

hû´ - ješejzebinnâk

he - he will deliver you

"He will deliver you".

Perfect

(50) אֲנָה בֱּנַיְתֵהּ (Dan 4:27)

'anâh - beenajetah

I - I have built him

"I have built him".

This subject pronoun can only be marked as a subject topic (Naudé 1993: 17-8, 22-3). Where the external argument is used on its own as a subject, it remains *in situ* (Spec-VP). Where the external argument is used as a subject-topic, it is transferred to the Spec-IP, which is presumed to be a topic position. A subject topic accordingly occupies a pre-verbal position, and a subject remaining *in situ* a post-

---

13   By contrast, a pronominal pronoun as a subject in the Participle class of conjugation may occupy a pre- or post-verbal position.

verbal position. One may infer from this that topics have strong N-features which have to be licensed.

In MP the abovementioned topic position is not to be confused with a Spec-AgrSP which constitutes the "landing strip" for S in covert syntax. It is quite probable that Spec-AgrSP can never occupy a topic position in BA, in view of the following considerations:

- S transfers to Spec-AgrS to license weak N-features. The Spec-AgrS position is therefore occupied by S.
- The derivation of possible object-topics in BA becomes complicated in that the Spec-AgrS has already been marked for the subject.
- The LF interpretation will eventually assume a different guide. Apart from the subject position Spec-AgrSP, an additional topic position, that of Spec-Top, is thus suggested.[14]

A further question arises for consideration: Why is the (subject) topic not transferred to the traditional topic position in CP? The following answer is suggested:

In BA, embedded sentences with complements[15] are also prone to topicalisation. Take for example (51):

(51) דִּי־כְתָבָה יִקְרוֹן (Dan 5:15)

dij - ketâbâh - jigrown

that - the writing - they can read

complement + topic + rest of the sentence (V)

"...that they can read this writing...".

If Spec-CP were accepted as a topic position, an erroneous word order would be inferred for BA as in (52):

---

14 In their analyses of interrogative sentences and topicalisation Zwart (1993) and Hoekstra & Zwart (1994) maintain from a Minimalist approach that CP may be divided into two distinct categories, *viz* WhP and TopP. According to this analysis AgrSP constitutes the complement of Top (the heading of TopP). Spec-TopP provides the "landing strip" of topicalised phrases. Like all functional categories within MP, TopP can only be projected when it is required for feature-licensing.

15 Naudé (1996) proposes a derivation in MP for complements in BA.

(52)

                          CP2
                        ↙   ↘
        (topic) Spec   CP1
                           ↙   ↘
                        Comp   rest of the sentence
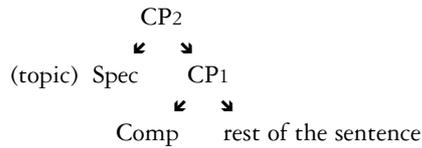
In order to justify the word order (51) it is proposed that a sepa-
rate topic position for BA be projected (53):

(53)

                        WhP2
                      ↙   ↘
              Spec   WhP1
                        ↙   ↘
                    comp   TopP2
                              ↙   ↘
                          topic   TopP1
                                    ↙   ↘
                                Top   rest of the sentence
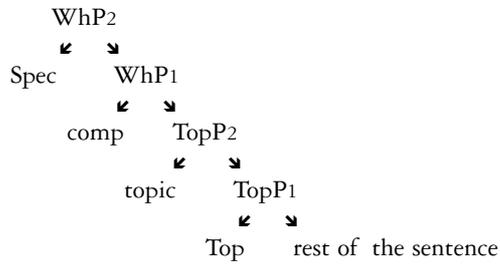
An extension of this diagram takes place which can be set out as
follows (54):

(54)

            TopP2
          ↙   ↘
      Topic   TopP1
              ↙   ↘
          Top   AgrSP2
                 ↙   ↘
             Spec   AgrSP1
                       ↙   ↘
                   AgrS   TP1
                           ↙   ↘
                       T   VP
                              ↙   ↘
              (subject) NP   V
                                ↙   ↘
                       (verb) V   NP (object)
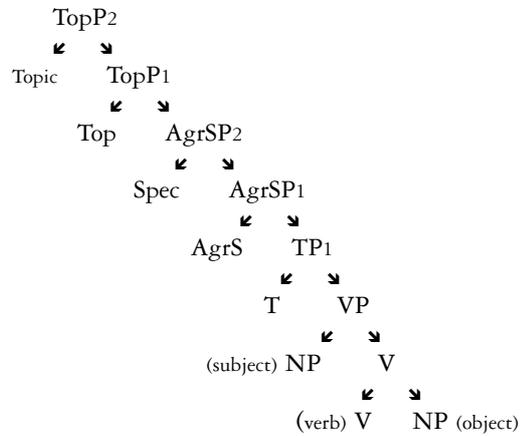
In instances where the grammatical relations V and S appear in
combination with an intransitive verb, inference (B) applies: in BA

S-V word order is a marked word order with the subject occupying a topic position.[16]

The following data in various types of sentence support S-V word order (55)-(65):

Verb intransitve

V as Perfect active in various types of sentence

Simple sentences

(55) דִּינָא יְתִב (Dan 7:10)

dijnâ´ - jetib

the court - he sat

"The court sat in judgment".

Complex sentences

(56) וְזִמְנָא מְטָה (Dan 7:22)

wezimnâ´ - methâh

and the time - he came

"...and the time came...".

(57) אֱדַיִן שֵׁשְׁבַּצַּר דֵּךְ אֲתָא (Ezra 5:16)

´eedajin - šešbatstsar - dek - ´atâ´

then - Sheshbazzar - this - he came

"Then this Sheshbazzar came".

(58) עַד דִּי שַׂעְרֵהּ כְּנִשְׁרִין רְבָה (Dan 4:30)

`ad - dij - sha`reh - kenišrijn - rebâh

till - hair his - as eagles - he grew long

"...till his hair grew as long as eagles' feathers...".

V as Imperfect active in various types of sentence

Simple sentences

(59) שְׁלָמְכוֹן יִשְׂגֵּא (Dan 3:31)

šelâmekown - jishge´

peace your - he is great

"May your peace be great".

---

16   Cf also Naudé (1993: 17-8) for an exposition of topicalisation of a subject in BA.

Complex sentences

(60) וְאַפְּתֹם מַלְכִים תְּהַנְזִק (Ezra 4:13)

we´appetom - malkijm - tehanziq

and revenues - king - it will suffer

"...and the royal revenues will suffer...".

(61) עַד־טַעְמָא לְדָרְיָוֶשׁ יְהָךְ (Ezra 5:5)

`ad - tha`mâ´ - ledârejâwêš - jehâk

till - the report - to Darius - he should reach

"...till the report should reach Darius...".

(62) עַד דִּי עִדָּנָא יִשְׁתַּנֵּא (Dan 2:9)

`ad - dij - `iddânâ´ - jištanne´

till - the time - he change

"...till the times change...".

(63) בֵּאדַיִן מַלְכָּא בִּשְׁפַּרְפָּרָא יְקוּם בְּנָגְהָא (Dan 6:20)

be´dajin - malkâ´ - bišparpârâ´ - jeqûm - benâghâ´

then - the king - in the morning - he arose - in the light

"...then, at break of day, the king arose...".

V as Participle active in various types of sentence

Simple sentences

(64) וְשָׂבֵי יְהוּדָיֵא בָּנַיִן (Ezra 6:14)

weshâbej - jehûdâje´ - bânajin

and elders - of Jews - they built

"And the elders of the Jews built".

Complex sentences

(65) וְזִיוֹהִי שָׁנַיִן עֲלוֹהִי (Dan 5:9)

wezijowhij - šânajin - `alowhij

and colour his - changed - on him

"...and the king's colour changed...".

The syntactic derivation of sentence (55), representing (55)-(63), likewise starts with a selection of substantive heads. The V *jetib* requires a single argument to receive the role of Agent, *viz dijnâ´*. The

respective operations of projection and merging remain active until structure (66) has been formed:

(66)

$$
\begin{array}{c}
\text{VP2} \\
\swarrow \quad \searrow \\
\textit{dijnâ´} \qquad \text{VP1} \\
\downarrow \\
\textit{jetib}
\end{array}
$$
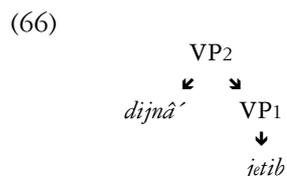
The morphological features of *dijnâ´* and *jetib* are licensed on the two functional heads T and AgrS in a single structure (67). A feature [+ topic] is added to *dijnâ´* and therefore a functional heading Top is selected.[17]

(67)

$$
\begin{array}{c}
\text{TopP2} \\
\swarrow \quad \searrow \\
\textit{dijnâ´}_{j} \qquad \text{TopP1} \\
\swarrow \quad \searrow \\
\text{Top} \qquad \text{AgrSP2} \\
\swarrow \quad \searrow \\
t_{j} \qquad \text{AgrSP1} \\
\swarrow \quad \searrow \\
\textit{jetib}_{i} \qquad \text{TP1} \\
\swarrow \quad \searrow \\
t_{i} \qquad \text{VP2} \\
\swarrow \quad \searrow \\
t_{j} \qquad \text{VP1} \\
\downarrow \\
t_{i}
\end{array}
$$
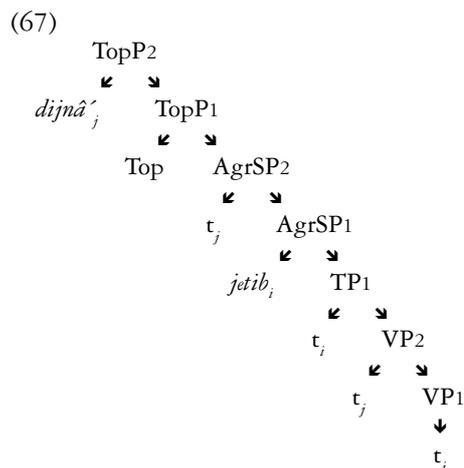
The V *jetib* is in the Perfect conjugation class and has strong V-features at T and AgrS which have to be licensed before spell-out. It moves to T and then to AgrS before spell-out in order to license these features. Overt NP movement takes place in like manner but to the to-

---

17 Zwart (1993: 281-4) makes a momentous suggestion (i) (which for the present is also acceptable in BA) as far as the functional principal category Top in Dutch is concerned:

(i) the functional head Top has [+ topic]-features, but inherently lacks all V-features.

This suggestion implies that V cannot move to Top in order to license or eliminate strong/weak V-features.

pic position in Spec-TopP. Even though the N-features of AgrS are weak, *dijnâ´* moves overtly prior to spell-out to Spec-AgrS underway to Spec-TopP. This feature ensures the shortest route, which is a basic principle of MP. Had this not been the case *dijnâ´* would have had to revert from Spec-Top to Spec-AgrS after spell-out in order to license the weak features. In both cases movement takes place because it is inevitable.

The result of the overt movement in structure (67) is to reveal the S-V word order as superficial.

Again, the syntactic derivation of sentence (64), representing (64)-(65), starts with a selection of substantive heads. In the case of the Participle conjugation class, V *bânajin* requires a single argument to receive the role of Agent, *viz weshâbej-jehûdâje´*. The respective operations of projection and merging remain active until structure (68) has been formed:

(68)

$$
\begin{array}{ccc}
 & \text{VP2} & \\
 & \swarrow \quad \searrow & \\
\textit{weshâbej-jehûdâje´} & & \text{VP1} \\
 & & \downarrow \\
 & & \textit{bânajin}
\end{array}
$$
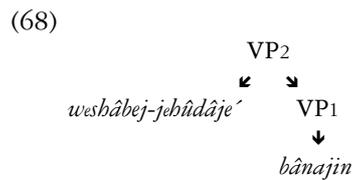
The morphological features of *weshâbej-jehûdâje´* and *bânajin* are licensed on the two functional heads T and AgrS (69). A feature [+ topic] is also added to *weshâbej-jehûdâje´*. Consequently a functional heading Top is also selected.

(69)
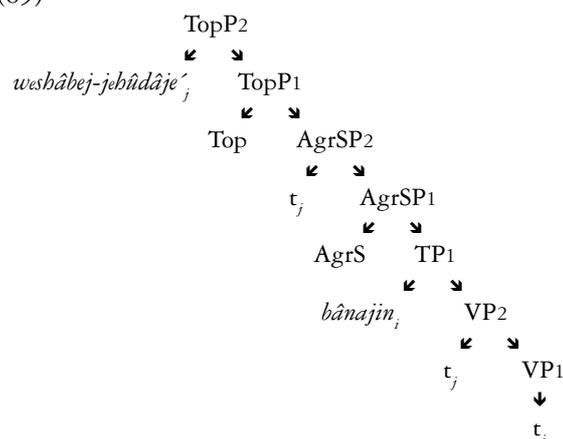
$$
\begin{array}{c}
\text{TopP}_2 \\
\swarrow \quad \searrow \\
\textit{weshâbej-jehûdâje}'_j \quad \text{TopP}_1 \\
\swarrow \quad \searrow \\
\text{Top} \quad \text{AgrSP}_2 \\
\swarrow \quad \searrow \\
t_j \quad \text{AgrSP}_1 \\
\swarrow \quad \searrow \\
\text{AgrS} \quad \text{TP}_1 \\
\swarrow \quad \searrow \\
\textit{bânajin}_i \quad \text{VP}_2 \\
\swarrow \quad \searrow \\
t_j \quad \text{VP}_1 \\
\downarrow \\
t_i
\end{array}
$$

As far as the participle is concerned, the V-features of T are strong, but those of AgrS are weak. The result is that V *bânajin* moves overtly to T so as to license its strong V-features. Likewise, overt NP movement takes place, but to the topic position in Spec-TopP. In both cases movement takes place because it is necessary.

3.9 Conclusions

- The strong/weak distinctions in the N- and V-features of the categories T and AgrS in BA are as follows:

(70) Perfect/Imperfect

T	-	N-features	=	weak
T	-	V-features	=	strong
AgrS	-	N-features	=	weak
AgrS	-	V-features	=	strong

(71) Participle

T	-	N-features	=	weak
T	-	V-features	=	strong
AgrS	-	N-features	=	weak
AgrS	-	V-features	=	weak

- In all instances where relations V and S occur in combination with an intransitive verb, the inference (A) is: in BA, V-S is the unmarked word order.

The verb in the Perfect and Imperfect classes of conjugation has strong V-features on T and AgrS, causing V to move overtly to T and then to AgrS prior to spell-out in order to license its features. The V-features on AgrS are weak and S remains *in situ*.

As far as the Participle is concerned, the V-features of T are strong, but the V-features of AgrS are weak, resulting in overt V movement to T in order to license its features. No overt NP movement takes place and S remains *in situ*.

- In cases where the grammatical relationships V and S occur in combination with an intransitive verb, the inference (B) is: in BA S-V is a marked word order with the subject occupying a topic position.

The verb in the Perfect and Imperfect classes of conjugation has strong V-features on T and AgrS, causing overt V movement to T and then to AgrS prior to spell-out in order to license its features. Overt NP movement does take place, but then to the topic position in Spec-TopP in order to license and eliminate strong topic features prior to spell-out.

As far as the Participle is concerned, the V-features of category T are strong, but those of AgrS are weak, resulting in overt V movement to T in order to license its features. A feature [+ topic] is added to the subject. Overt NP movement to the topic position in Spec-TopP takes place in order to license or eliminate strong topic features prior to spell-out.

- In addition to Spec-AgrS, a Spec position is suggested to which an NP with [+ topic] features may be transferred prior to spell-out. This is the reason for selecting a functional heading Top (72):

(72)

$$\begin{array}{c} \text{TopP2} \\ \swarrow \quad \searrow \\ \text{Spec} \quad \text{TopP1} \\ \downarrow \\ \text{Top} \end{array}$$
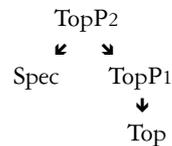
- As far as BA is concerned, it has been pointed out that embedded sentences with complementary data may also undergo topicalisation rendering a topic position for Spec-CP unlikely. A separation of CP into WhP and TopP is offered as an explanation of the BA word order featuring both a complement and a topic (73):

(73)

```
        WhP2
       ↙    ↘
   Spec      WhP1
            ↙    ↘
        comp      TopP2
                 ↙    ↘
             topic      TopP1
                       ↙    ↘
                   Top      rest of the sentence
```
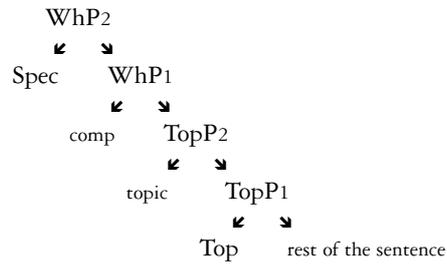
Thus, the V-S and S-V word orders in BA have been adequately explained, within the parameters of the principles of economy proposed by Chomsky (1992).