Getting Started With Syntax

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Introduction

The Accordance Syntax feature allows both viewing and searching of certain original language texts that have both morphological tagging along with an extra Syntax module. Currently Syntax is supported in the Hebrew Bible (HMT-W4) and the Greek New Testament (GNT28-T) modules. Syntax support for other text modules may be added in the future.

Even though the syntactical structure of Greek and Hebrew are different, the same concepts are used to describe the syntax for both languages.

Installation

The Syntax module is an add-on module that is purchased separately from other text modules. All Accordance text modules with morphological tagging can be used by themselves, but the Syntax module requires the respective Accordance text module with morphological tagging.

Installation is usually performed automatically with Easy Install after purchase of both the Accordance text module and the Syntax module for that text.

Syntax Terminology

The Accordance Syntax feature uses standard concepts developed by Prof. Robert Holmstedt in the University of Toronto. The syntactical tagging was developed with the goal of keeping the Syntax concepts and analysis as "theory-neutral" as possible. However some of the Syntax terminology may not be familiar to a first-time user. For example, certain familiar grammatical terms such as "object" are not used in this Syntax terminology.

The following is a list of the Syntax terminology currently used in Accordance followed by a short definition. Other types of Syntax tagging may be added to Accordance in the future with additional terminology.

Clause — A unit of grammatical organization, consisting of a subject and predicate, although either the subject or predicate may be implied and not explicit.

Independent Clause (Sentence) — A set of words that is complete in itself, conveying a statement, question, exclamation, or command, and consisting of a main clause and sometimes one or more dependent clauses. This independent clause may be part of a larger group of independent clauses within a entire sentence.

Parenthesis — A parenthesis is a special clause category that interrupts the flow of an "argument," whether the argument is at its core chronological (i.e., a narrative) or logical (i.e., an exposition, as in, e.g., many psalms).

Phrase — A small group of words standing together as a conceptual unit, typically forming a component of a clause, and lacking its own predication.

Subject — The "doer" (agent) or "experiencer" (patient) of the predicate.

Predicate — The verb and any modifiers.

Complement — The phrase(s) that are required by either a verb or a preposition in order to "complete" the semantics of each.

Adjunct — The phrase(s) that are not required, but add additional information about a verb or noun.

Specifier — The definite article.

Appositive — A clause, phrase, or word that elaborates on a preceding clause, phrase, or word of the same type.

Vocative — A word or phrase of direct address that stands apart from the subject and predicate of the clause.

Exclamation — A word or phrase that interrupts the normal syntax to orient the attention of the addressee (the reader or a character in the narrative).

Casus pendens (dislocation) — A noun or pronoun placed outside a following clause and resumed within the clause by a resumptive pronoun.

Null — Used to mark an implied word such as a subject or verb.

Antecedent — A word to which another word (such as a following relative pronoun) refers.

Begin speech — Used to indicate the beginning of direct speech.

**Unknown** — used mainly in fragmented text with no clear syntax.

Special Syntax Features

In addition to the standard syntax terminology described above, the Accordance Syntax has the following special features:

1. **Speech** — If an independent clause or sentence is in the context of speech (or writing any quotation), it is tagged as speech to allow searching for speech. To preserve the syntactical structure of the speech, most speeches begin as independent clauses or sentences introduced by a special "Begin Speech" tag in the preceding syntax. There will be occasional situations in which the speech is discontiguous and mixed in with non-speech syntax.

2. **Nulls** — To preserve the regular syntax structure of a text, null identifiers may be added to show where an understood subject, predicate, or complement would be placed within the clause.

3. **Antecedents** — To assist in showing syntactical relationships, antecedent identifier labels are sometimes added to show relationships between a word and its antecedent. A null identifier may also be combined with an antecedent identifier.

Viewing Syntax

Instant Details Box

There are two ways to view the syntax of a word in Accordance. The first way is to place the cursor over the word to view its syntax structure in the Instant Details box. This gives a quick view of the morphology and syntax of the word, but does not show the syntactical relationship of the word to other words in the same clause. Here is an example shown below for a Subject:
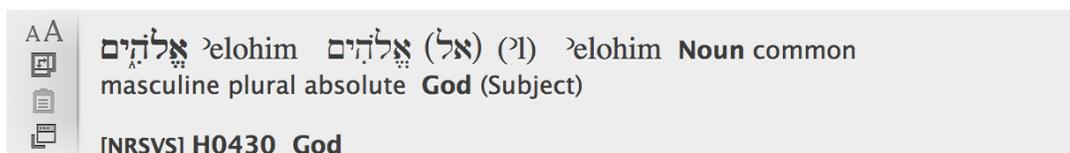

Syntax Tree Pane

A much better way to view the syntax is to open a Syntax pane so that the syntax can be viewed in parallel with the text. The Syntax pane is opened by clicking on an item in the "Syntax" submenu under the "Add Parallel" pull-down menu as shown below. If there are no syntax modules installed, this submenu will not have any items.
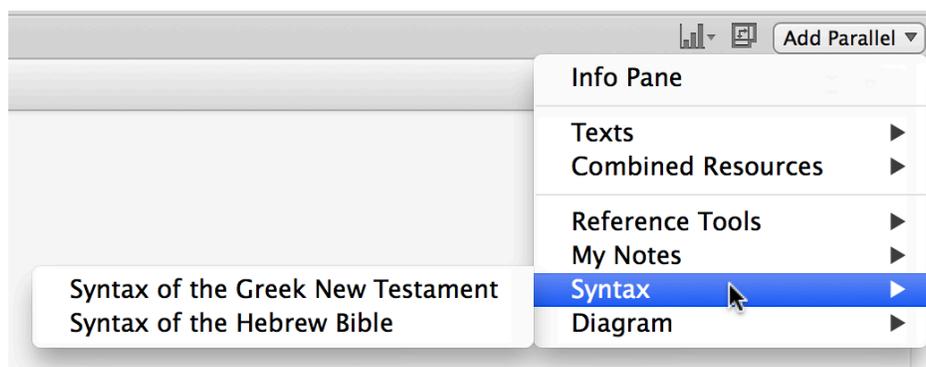
The Syntax pane will show the syntactical relationship between words of a parallel text in the form of a tree. The tree will be color coded according to the syntax of the tree "branch." The actual words of the text appear at the ends of the tree, as shown below.
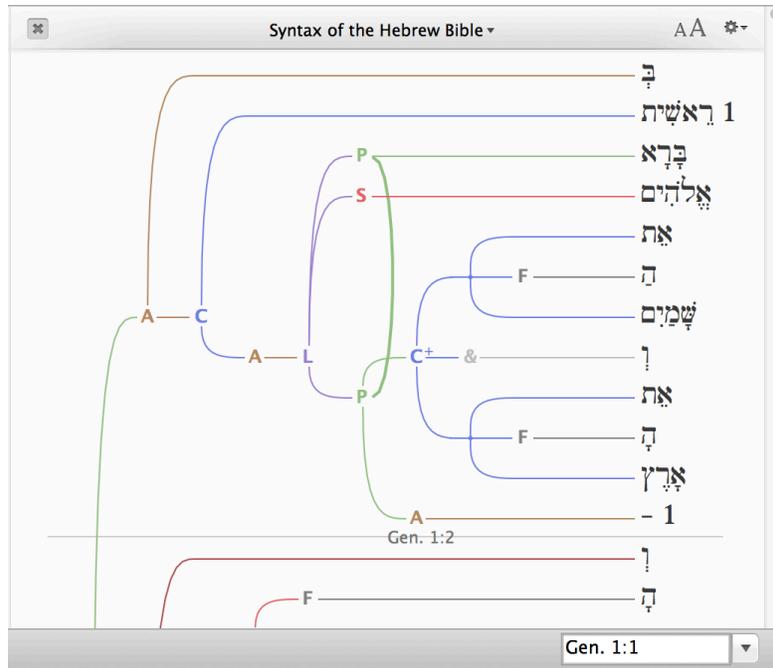
The tree can be made larger or smaller with the "A" buttons on the top bar. The tree can be viewed either vertically as shown above, or horizontally by clicking on the Move Down item in the "Gear" menu. The Syntax module being viewed can be changed with the pull-down menu in the center top of the pane, if more than one syntax data base is being used.

If the Syntax pane is selected (by clicking anywhere on the pane), the scroll bar will control the scrolling of the pane, with other parallel texts following to keep the verses approximately aligned.

Moving the cursor over the words in the tree will highlight corresponding words of the text in the parallel pane.

Conversely, moving the cursor over words in the parallel text will highlight the corresponding words in the Syntax tree.

Moving the cursor over the letters in the Syntax tree will show the definition of the letters in the Instant Details pane and highlight all of the words in the parallel text that are "enclosed" by the syntactical term, as shown below for a Complement:
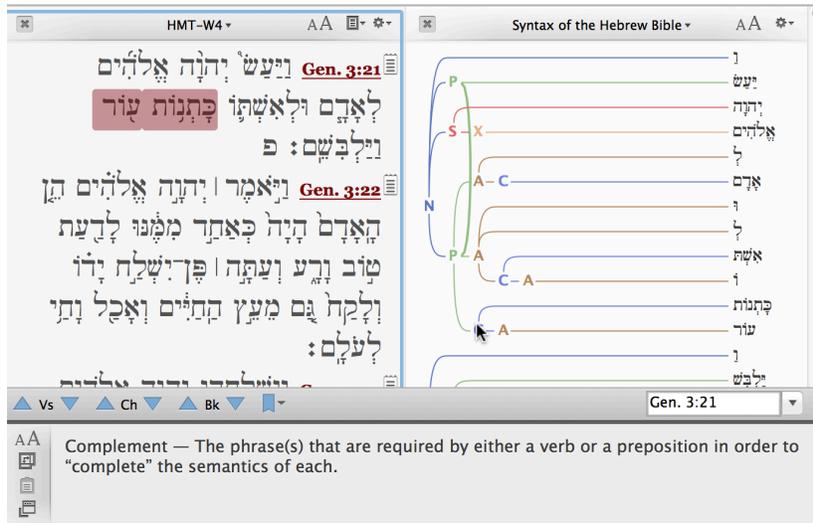
Syntax Abbreviations

The following abbreviations are used for each syntax term on the tree:

N Independent clause or sentence. (If there is a superscripted letter with the N, this indicates a level of speech for the clause or sentence.)

L	Dependent clause	T	Parenthesis
S	Subject	P	Predicate
C	Complement	A	Adjunct
F	Specifier	X	Appositive
V	Vocative	E	Exclamation or interjection
D	Casus pendens (left dislocation)	–	Null
1-9	Antecedent identifier	01-09	Null antecedent identifier
:	Begin speech in the following independent clause		
U	Unknown		

Simple Syntax Searching

Simple syntax structures can be found by entering the syntax term directly in the Search tab Entry box for a specific text. This may be done with or without combining other search elements such as morphological terms. In general the syntax terms can be combined in a search argument the same way as morphological terms, using the standard Accordance commands.

The syntax terms are usually entered automatically by using the appropriate item in the submenu of the *Enter Tag* item in the *Search* or *right-click* menu as shown. All of the basic syntax tags are listed below the morphological tags in the menu list.

For example, finding a subject within 3 words of a verb would be entered as:

[SUBJECT] <WITHIN 3 Words> [VERB]

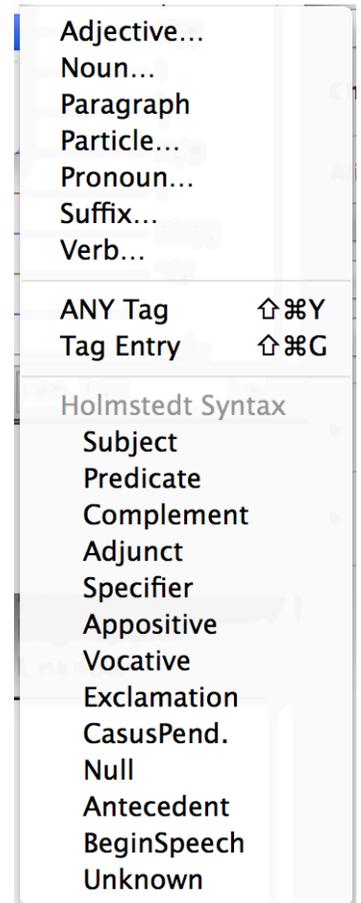To find where the word אֱלֹהִים is used as a subject in the HMT-W4 module, the entry would be:

אֱלֹהִים@[SUBJECT]

To find in Greek any genitive that is a Subject of a Predicate, the entry would be:

[ANY genitive]@[SUBJECT]

To find in Greek any accusative that is a Subject, the entry would be:

[ANY accusative]@[SUBJECT]

Construct Tab Syntax Searching

Construct Palette

More complex syntax searching can be performed by use of the Accordance Construct tab. The Greek or Hebrew Construct tabs are opened from the *New Construct* submenu in the *File* menu, or with the respective Command keys. If the Syntax module is installed, the Construct tab palette will show all of the syntax items below the morphological items, as shown to the right. As with many of the morphological items, the syntax items are dragged into the desired columns to form a search expression.

Most of the syntax items work the same way as the morphological items in the Construct tab, and can be easily mixed together with the morphological items. For example to find the same search as in the example above (the word אֱלֹהִים used as a subject in the HMT-W4 module), the respective items would be dragged into the right-most column as shown below.
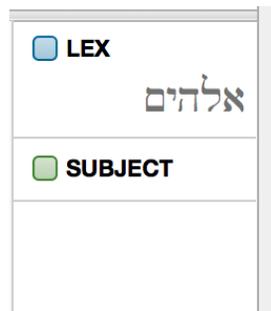
The most basic syntax terms, namely Subject, Predicate, Complement, and Adjunct can be expressed as either a simple word, a type of Phrase, or a type of Clause. To avoid confusion between the various ways to express Syntax with these basic terms, the following dialog will appear after dragging a simple Subject, Predicate, Complement, or Adjunct.
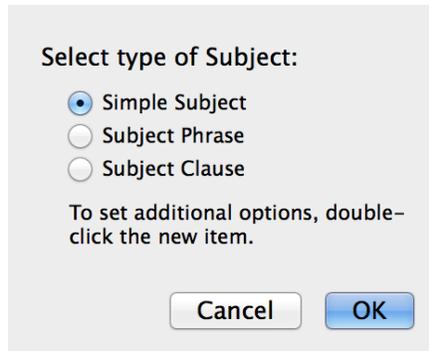
Select type of Subject:

- ● Simple Subject
- ○ Subject Phrase
- ○ Subject Clause

**To set additional options, double-click the new item.**

Cancel   OK

This dialog is intended to help the first-time user distinguish between the various uses of a specific Syntax term. If a simple word is selected after it is dragged into a column, then when it is double-clicked, a different dialog will appear, as shown below. This dialog box will allow the user to select a single or compound form of the term, such as a compound Subject, as shown below. For most searches, the dialog can remain as *Any*.

Select form:

- ● Any
- ○ Single
- ○ Compound

Cancel   OK
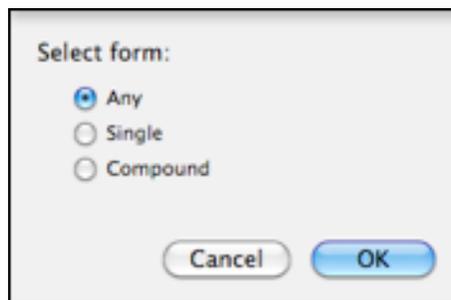
Clauses and Phrases

The Clause and Phrase Syntax items can enclose groups of other terms and can enclose other Clause or Phrase items to allow nested searching to any level, as shown to the right.

It is useful to think of the Clause or Phrase item as a "Construct within a Construct." That is, each Clause or Phrase contains its own columns with space above the columns for connecting items, all of which belong only within the enclosing Clause or Phrase being searched.

☐ ANY CLAUSE   Depth = 2

☐ PHRASE   Depth = 2
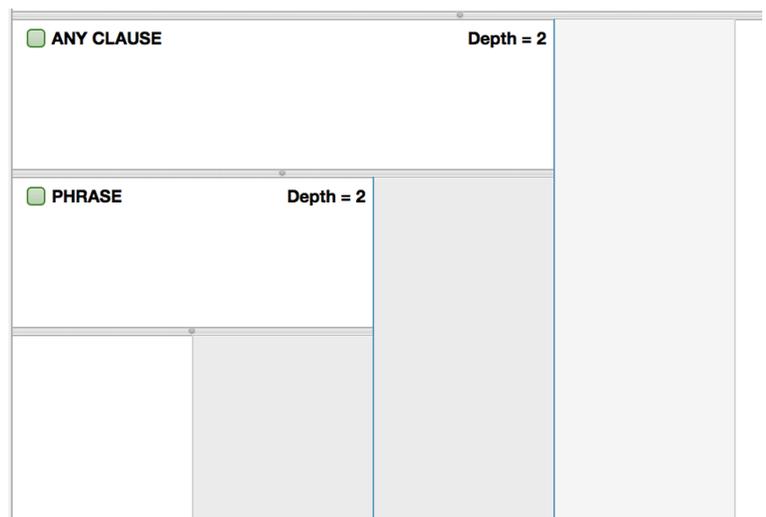
After dragging a Clause or Phrase item into a column, two new columns within the Clause or Phrase replace the original column. The number of columns within a Clause or Phrase can be adjusted by dragging the vertical blue dividing line. As with the main Construct, connecting items can be placed above the columns within a Clause or Phrase.

The Search tab pop-up menu labeled "Scope" must be set to Chapter or Book when a Clause or Phrase item is used, since clauses and phrases may cross verse boundaries. This is now automatically set when performing the search.

Clause Searching

After dragging a Clause item, the dialog box shown to the right will appear. The following options are available to specify details of the Clause:

1. **Type of clause** — Any Clause can be specified, or just an independent, dependent, or Parenthesis Clause can be specified. The Parenthesis Clause is defined above in Syntax Terminology.

2. **Type of dependent clause** — If a dependent Clause is selected, the type of dependent Clause can also be selected, whether Complement, Adjunct, Subject, Appositive, or Casus Pendens, as defined above in the Syntax Terminology. These items are also undimmed when an independent Clause is selected to allow searching for cases of an independent Clause embedded in another Clause.

3. **Clause speech** — When an independent or parenthesis clause is selected, the type of speech associated with that clause can be found. Clauses with "No speech" or "Speech only" can be specified.

Select:
- ● Any clause (or sentence)
- ○ Independent clause (sentence) only
- ○ Dependent clause only
- ○ Parenthesis clause only

Select type of dependent clause:
- ● Any
- ○ Complement
- ○ Adjunct
- ○ Subject
- ○ Appositive
- ○ Casus pendens

Select clause speech:
- ● Ignore
- ○ No speech
- ○ Speech only

Maximum search depth: 2 ⬍

Cancel   OK

4. **Maximum search depth** — Normally there are no restrictions on the type of items that can be put under a Clause. However for most syntax searching, it is important that the items in a Clause be closely associated by hierarchical level with the Clause to prevent false hits. This control allows the user to adjust the degree of association between the Clause and the terms inside the Clause. The number in the pull-down menu indicates the number of *extra* hierarchical terms between the Clause and the terms inside the Clause. That is, setting the depth to zero (0) means that the item must appear immediately below the Clause with no intervening terms in the hierarchy. A default depth of 2 is used when the Clause is first added from the palette.

When searching within a Clause the following should be kept in mind:

1. Search results for all items in a Clause will be found only within the same Clause.

2. If no terms are added inside the Clause Construct item, the search will still be performed, and all words of the Clause will be found, as indicated by a thin solid line drawn through each word. If the same word is included in nested Clauses, then more than one line will be drawn though each word, depending on the degree of nesting. (See an example of this below for Phrase Searching.)

3. Connecting items, such as AGREE or WITHIN, can be added between the columns inside the Clause. If a WITHIN item connects to an item within the Clause that is another Clause or Phrase, the results are understood as the proximity from the last word of one item to the first word of the following item.

Phrase Searching
After dragging a Phrase item, the dialog box shown to the right will appear. The following options are available to specify details of the Phrase:

1. **Type of phrase** — The type of Phrase can be selected, whether Subject, Predicate, Complement, or Adjunct, as defined above in the Syntax Terminology.

Select type of phrase:

- ● All types below
- ○ Subject
- ○ Predicate
- ○ Complement
- ○ Adjunct

Maximum search depth: 2 ▲▼

Cancel   OK

2. **Maximum search depth** — Normally there are no restrictions on the type of items that can be put under a Phrase. However for most syntax searching, it is important that the items in a Phrase be closely associated by hierarchical level with the Phrase to prevent false hits. This control allows the user to adjust the degree of association between the Phrase and the terms inside the Phrase. The number in the pull-down menu indicates the number of *extra* hierarchical terms between the Phrase and the terms inside the Phrase. That is, setting the depth to zero (0) means that the item must appear immediately below the Phrase with no intervening terms in the hierarchy. A default depth of 2 is used when the Phrase is first added from the palette.

When searching within a phrase the following should be kept in mind:

1. Search results for all items in a Phrase will be found only for words within the same Phrase.

2. If no terms are added inside the Phrase Construct item, the search will still be performed, and all words of the Phrase will be found, as indicated by a thin solid line drawn through each word. If the same word is included in nested Phrases, then more than one line will be drawn though each word, depending on the degree of nesting, as shown in the example below.

3. Connecting items, such as AGREE or WITHIN, can be added between the columns inside a Phrase. If a WITHIN item connects to an item within the Phrase that is another Clause or Phrase, the results are understood as the proximity from the last word of one item to the first word of the following item.

Null Searching

If the Null item is dragged to a column, then only Null forms will be found in that column. The Null item can be combined with other simple Syntax items, such as Subject or Predicate to find Null (understood) Subjects or Predicates respectively. The results of a Null search will be indicated by a "flag" icon in the position where the Null appears between two words. If a Null item is used in combination with other simple Syntax items, the Null item should be the top item.

Compound forms

Compound Syntax forms add an extra level of hierarchy to the normal Syntax structure, since the Compound Syntax term encloses all of its simple terms together. In order to facilitate searching of Compound terms, the extra hierarchy level of a Compound term is ignored, so that the search results will be consistent in hierarchy between simple terms and Compound terms.

The special treatment of Compound Syntax terms is also shown in the Syntax pane. The example below for Genesis 1:1 illustrates a Compound Complement:
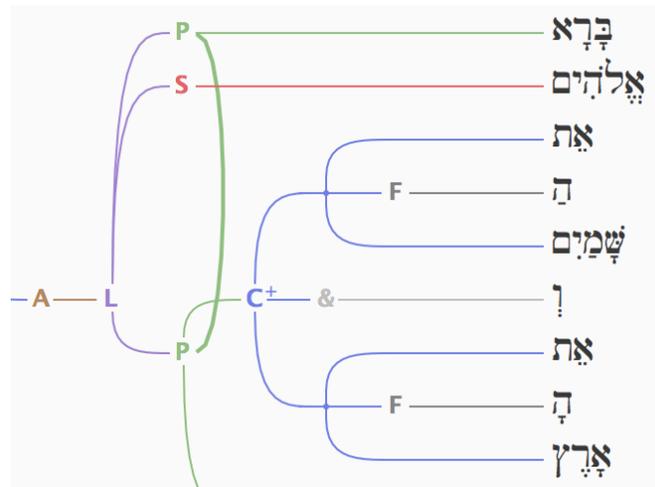
There are three special things in the Syntax Tree structure that indicate the Compound Complement form in this example:

1. A superscript "+" sign is added to the Complement term "C" to indicate that this is a Compound Complement.

2. The Complement terms enclosed by the Compound Complement do *not* have a "C', but are simply joined together to the right of the Compound Complement to indicate that this extra level of hierarchy is ignored during searching.

3. The connecting words (such as *vav* in this example) are strictly speaking not part of the Compound Complement, but simply serve to connect the individual terms together. To illustrate more clearly the connecting words, a light gray ampersand (&) character is included between the Compound Complement, with a light gray line following the ampersand.

Speech

As described above, speech can be found by specifying a Clause with speech. Since the contents of a speech may be very long in a Biblical text, the speech clause structure will stand alone as a series of independent clauses that are tagged to be speech. The Begin Speech tag described in Syntax Terminology marks the beginning of a speech, if the speech is embedded within another clause.

Antecedent

The antecedent itself can be searched, but searching for the word that the antecedent refers to is currently not supported.

Objects

Syntax searching does not include what has traditionally been defined as the "object" of a verb. The Complement tag is roughly equivalent to a direct object, but there may be exceptions. The Adjunct tag with a preposition is roughly equivalent to an indirect object, but there may also be exceptions here.

Syntax Search Examples

A few simple examples below will illustrate how to do Syntactical searching, both in Hebrew and Greek.

Infinitive Absolute as Predicate in Genesis
The simplest form of the search will start just with the Verb as Infinitive Absolute, which can be found without a Syntax term, as shown below. The Search tab is set to have a search range of Genesis.

The result is 53 hits in the book of Genesis, with most of the hits not being used as a Predicate.

Now the Predicate tag will be dragged into the same column as the verb to force the result to be both a predicate and a verb as infinitive absolute, as shown below:

The result is now only four verses (Gen. 17:10, 21:16, 30:32, and 41:43), which is a much more useful result.

אֱלֹהִים With a Plural Verb in Genesis

Usually אֱלֹהִים is used with a singular verb, so finding אֱלֹהִים with a plural verb in the same clause is a relatively rare syntax structure. This search will show step by step how to arrive at the final result, so as to illustrate the various options available in Syntax searching.

The simplest form of this search will start with the word אֱלֹהִים followed by plural verb in the book of Genesis. The Construct tab is set to search both directions, and the Search tab is set to have a search range of Genesis, with the search field set to Chapter, since clauses can cross verse boundaries.
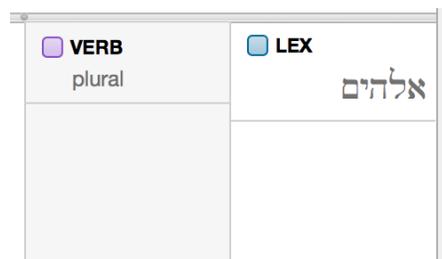
The result is over 3,500 hits just in the book of Genesis, which are way too many false hits, but this illustrates one of the limitations of doing a morphological search with no Syntax database.

The obvious solution is to put these two terms inside of the Clause object as shown below:
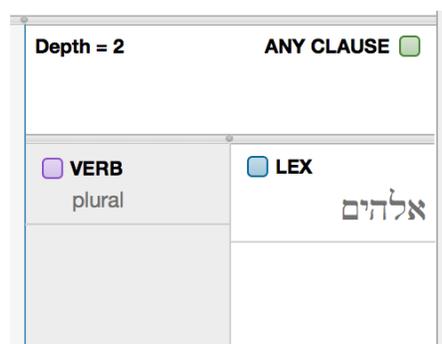
The number of hits has considerably been reduced, but there are still a few false hits, such as Genesis 3:5 and 6:4. In these verses the word אֱלֹהִים is not the Subject, even though there is a plural verb.

Now the word אֱלֹהִים will be specified to be only the Subject as shown below, by putting the Subject in the same column as אֱלֹהִים as shown below:
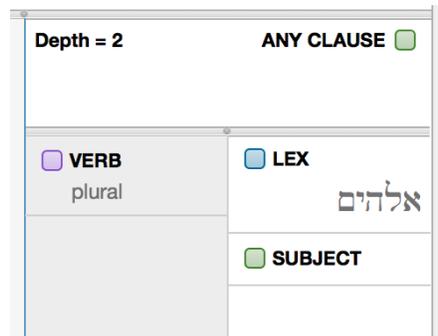

The result is three verses (Gen. 20:13, 31:53, 35:7) which show אֱלֹהִים as subject with a plural verb, when the Construct tab is set to search in both directions. This search could be further refined to constrain the VERB to be a Predicate, since sometimes the participle form of a verb is not the Predicate of a sentence.

A direct object without אֵת in Genesis

This search is more complex, so only the final Construct is shown to the right. This search is reasonably accurate, but may not account for every possible case. The Construct tab is set to search only in one direction for clarity. Here is the explanation of this particular search:

1. All terms should be within a Predicate Phrase.

2. The first term is a Verb, that should also be the Predicate within the Predicate Phrase.

3. The second term is the Hebrew article ה, which usually requires אֵת.

4. The third term is a Noun, which should be a complement.
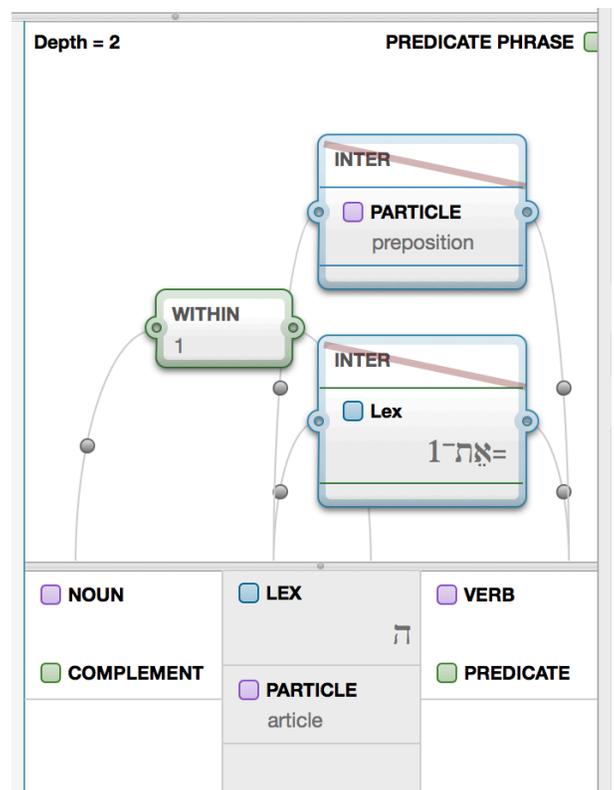
5. The WITHIN 1 forces the ה to be just before the Noun.

6. The INTER with את is negated with the slash (NOT) to specify no את between the Noun and Verb.

7. The INTER with Particle Preposition is negated with the slash (NOT) to specify no Preposition between the Noun and Verb to eliminate "indirect objects."

The result is several verses in Genesis starting with Genesis 9:2, which indeed gives a verb with a direct object without את.

Greek Accusative as a Subject With an Infinitive

As with the Hebrew searches above, this Greek search will show step by step how to obtain examples of an accusative Subject with an infinitive form. This structure is useful since most accusatives are used as complements in Greek.

The search will focus on the book of Matthew, searching in both directions in the Construct tab. Initially two columns are used to express the search. The first column contains both an accusative form that must also be a Subject, and the second column contains any infinitive verb as shown below:

In the book of Matthew there are 68 hits found, if the field is set to Verse. However some of these hits, such as in Matthew 3:7, are cases in which the verb and the accusative are not related to each other, since they are in different clauses.

As with the Hebrew examples above, the obvious solution is to put these two terms inside of the Dependent Clause object as shown below. The search scope will be automatically set from Verse to Chapter, since Clauses can cross verse boundaries.

This structure eliminates most of the false hits, so that 73 words are found. (The reason why the number is somewhat high is because inside a clause each word is counted as a hit, but without a clause the entire expression is counted as a hit.)

To focus the search even further, we can specify that the dependent clause can only be used as a subject as shown below:

Now there are only 14 words that are found for this case in Matthew, which gives a good summary of the different ways that an accusative is used as the subject in a Clause that also is a Subject.

There are many more examples of Greek syntax searching on the Accordance web site forums at <http://www.accordancebible.com/forums/index.php?showforum=40>.