# A Reference Guide to the Westminster Hebrew Morphology Database

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Note: In December 2006, *The Westminster Hebrew Institute* was formally renamed *The J. Alan Groves Center for Advanced Biblical Research* in honor of its founder, who died shortly thereafter of cancer.

In mid-2009 the Groves Center became a separate non-profit organization and is no longer part of Westminster Theological Seminary, though the Groves Center continues to be located on the campus of Westminster Theological Seminary.

This document replaces all previous documentation, beginning with Release 4.0.
See the Release Notes file(s) for specific changes not covered in this document.
Together, these documents contain a complete description of Release 4.16.

**General Introduction**

The Westminster Hebrew Morphology Database ("MORPH") is, prior to version 5.0, a simple ASCII file, containing roughly a half-million records (approximately 13 million bytes), each record representing a morpheme of the Hebrew Bible.

The Groves Center is the owner, maintainer, and distributor of MORPH. MORPH's executive editor is Prof. Kirk Lowery (President of and Senior Research Fellow at the Groves Center). MORPH's editor is Stephen K. Salisbury (Research Fellow at the Groves Center).

Some of the characteristics of this database are:

- The first dozen or so lines of the file are a header comment that identifies the file version, the owner of the file, copyright information, contact names and e-mail addresses, and the date and time of and internal version number of the files used to create the release. (This header comment was new in version 4.8. Otherwise the file format is generally the same as in previous versions.)

- MORPH generally follows *The Hebrew and Aramaic Lexicon of the Old Testament* (HALOT), Ludwig Koehler, Walter Baumgartner and Johann Jakob Stamm, eds., translated by M. E. J. Richardson, (1st English edition, E. J. Brill, 1994-2000), in matters of lemmas and parsing where such matters are either unambiguous or arbitrary. However, where we feel HALOT is in error (either substantive or typographic) or is inconsistent we have not hesitated to deviate. MORPH does not use or follow Strong's lemma numbering. (HALOT is the English translation of the original German reference work *Hebräisches und aramäisches Lexicon zum Alten Testament* (HALAT), Ludwig Koehler, Walter Baumgartner and Johann Jakob Stamm, eds. (3rd Edition, E. J. Brill, 1967-96).
- MORPH *generally* follows the dictum "**parse what is *written* not what is *meant***." This means we try to parse a morpheme based upon its external *form* apart from any consultation with the wider context in which the morpheme stands. Ambiguity frustrates this goal and sometimes forces us to parse contextually, e.g., in the case of the state of segolate nouns. *Ketiv* words can be particularly difficult to parse since they do not have explicit pointing and often appear (or at least often appeared to the Masoretic scribes) to be minor spelling mistakes. Another example is the numerals three through nine, the masculine forms of which appear feminine and vice versa in both Hebrew and Aramaic. (We have chosen to parse them according to use, not form.)
- Sometimes the parsing of a morpheme depends upon text-critical or philological (comparative Semitic, etc.) criteria. In most of these cases, MORPH parses according to the Masoretic textual tradition. MORPH attempts to vocalize and parse *Ketiv* as well as parsing the *Qere*. In all matters of textual reading, the Leningrad Codex is our final arbiter – MORPH is the morphology of the language attested in that manuscript.
- MORPH does not follow exclusively any one authority for grammar and parsing. All the standard grammars – ancient and modern – are consulted: GKC, Joüon/Muraoka, van der Merwe, Bauer-Leander, Bergsträsser and Waltke-O'Connor – to mention just the most commonly used sources. For Aramaic, Bauer-Leander, Segert's *Altaramäische Grammatik*, and Rosenthal's *A Grammar of Biblical Aramaic* are the most frequently consulted.
- Unlike in the early 1990s when the morphology was broken up into multiple files, we distribute the database as one file. This is how we handle the data in-house and our feeling is that any attempt to split it into smaller files introduces unnecessary risk of inadvertent data loss or corruption.
- As a further effort to maintain not only data integrity but also to keep versions of the database separate, beginning with version 3.5 we have distributed our releases with an MD5 check-sum number which uniquely identifies this release from all others. Even if one bit is changed, the check-sum will change and not match the check-sum of the canonical release.

This database was first conceived and built during the 1980s. As it has matured, we have found it necessary to add to and change the data record structure. At that time a flat ASCII file was the only acceptable "lowest common denominator" for maintenance and distribution. However, we have continuously wrestled with the problem of auditing and maintaining change deltas, especially as time and personnel have come and gone. In that time the world has seen the introduction of the Internet and the World Wide Web. In addition, our long-range plans for the database's expansion call for significantly more complex data structures.

To resolve these issues, the Groves Center is taking the following action:

- The 4.x series of releases will continue to be in the legacy format. After 5.0, we will provide a "legacy" version, but it will not have the additional information added to the database.

- With MORPH (5.0) the distributed database format will change to an XML encoding, including a DTD/Schema, XSLT transformations to generate HTML, and a basic XSL stylesheet.
- The distributed file will be available in both Michigan-Claremont encoded (transliterated) Hebrew/Aramaic and UTF-8 encoding of Hebrew/Aramaic (allowing proper display of Hebrew/Aramaic text in any UTF-8 compliant application: Internet browser, word processor, etc.)
- Monitor and comply with the final recommendations of the newly formed Open Scriptural Information Standard (OSIS) <http://www.bibletechnologies.org>, which we support.

The advantages of these actions for the developer will be:

- The addition of new possibilities for display formats in applications, including the creation of browser-based applications taking advantage of XML flexibility.
- Vastly increased interoperability between applications that support the above-mentioned standards and technologies, as well as ease of data format transformation by not only the Groves Center, but also by the user.
- Seamless integration with recent versions of the Microsoft Windows® operating system, which use Unicode® character set as their native character encoding.
- The elimination of font issues.
- The addition of significant new features, such as user annotation of data that can then be searched.

These changes will free the Groves Center of the shackles of its obsolescent data model and allow us to greatly expand the type and complexity of information provided. For example, we plan on systematically recording the reasons or authority for the parsing or textual reading we make. Such annotations and alternate parsing could be easily incorporated into the distributed database for greatly enhanced value and usability.

Long-range plans are, by their very nature, subject to change. Nevertheless, we want to give the developer community a "heads up" about our intentions and the direction we want to go. We are acutely aware of the need for timely notification of major changes such as this. As soon as decisions are made for each action and the details have been worked out, we will inform the community about those changes.

## MORPH Record Format

There are two basic kind of records in MORPH: a verse separation record and a morpheme record. The verse separation record begins with an angle bracket or "greater-than" sign (">") followed by the standard chapter and verse enumeration, following the Leningrad Codex versification. This record has no other purpose than to visually set off verses for human readers.

A morpheme record is composed of three fields separated by spaces, so that the following record

```
gn1:1,3.1 ):ELOHI92YM ):ELOHIYM@ncmpa
```

is understood to be:

| Record ID | Hebrew Text | Lemma and Parsing |
|---|---|---|
| gn1:1,3.1 | ):ELOHI92YM | ):ELOHIYM@ncmpa |

## MORPH Record Format – Record ID

The **Record ID** is field composed thus:

| Book | Chapter | Separator | Verse | Separator | Position in Verse | Separator | Position in Word |
|---|---|---|---|---|---|---|---|
| **gn** | **1** | **:** | **1** | **,** | **3** | **.** | **1** |

That is, the Record ID field consists of a book name of two characters followed without a separator by the chapter number, a colon, the verse number, a comma, the word number (that is, the word's position in the verse), a period and finally the morpheme number (that is, the morpheme's position within the word).

The order of books in the database follows the order of the Leningrad Codex, which varies from the traditional Rabbinic canon by positioning Chronicles after the Prophets. Chapter and verse numbers vary from one to three digits. Word numbers range from one to two digits, but morpheme numbers are always one digit. Note that the book order is not English (Vulgate), nor Rabbinic (*Miqraot Gedolot*), but the order of the Leningrad Codex. The difference between the Rabbinic order and the Leningrad Codex is slight: a shift of Chronicles from the end of the Hebrew Bible to right before Psalms. The possible values for a book name are:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| gn | Genesis | 2k | 2 Kings | na | Nahum | pr | Proverbs |
| ex | Exodus | is | Isaiah | hb | Habakkuk | ru | Ruth |
| lv | Leviticus | je | Jeremiah | zp | Zephaniah | ca | Canticles |
| nu | Numbers | ek | Ezekiel | hg | Haggai | ec | Ecclesiastes |
| dt | Deuteronomy | ho | Hosea | zc | Zechariah | lm | Lamentations |
| js | Joshua | jl | Joel | ma | Malachi | es | Esther |
| ju | Judges | am | Amos | 1c | 1 Chronicles | da | Daniel |
| 1s | 1 Samuel | ob | Obadiah | 2c | 2 Chronicles | er | Ezra |
| 2s | 2 Samuel | jn | Jonah | ps | Psalms | ne | Nehemiah |
| 1k | 1 Kings | mi | Micah | jb | Job | | |

There is an optional note field attached to the end of a **Record ID**, marked by zero or more “bracket notes” A “bracket note” consists of a square bracket "]" plus a digit or letter. The case of a letter in a bracket note is important. Sometimes the upper case and lower case versions of a bracket note have completely unrelated meanings (for example, the bracket notes “]q” and “]Q”). On the other hand, sometimes the upper case and lower case versions of a bracket note have related but different meanings. (For example, the bracket note “]c” refers to an accent difference between our text and *BHS*, abut the bracket note “]C” refers to an accent difference against *BHQ*.)

NOTE: Morph 4.12 was the first release to include more than one bracket note on some words. In Morph 4.16, we have eight words (a total of fifteen morphemes) with three bracket notes and even one word (ru3:14,3) (a single morpheme) with four bracket notes.

The following chart lists the meanings of these bracket notes:

| | | |
|---|---|---|
| ]1 | BHS has been faithful to 𝕃 (the Leningrad Codex) where there might be a question of the validity of the form and we keep the same form as BHS. (This is similar to the note "]U", but the latter refers to cases where we keep the same form as both BHS and BHQ.) | **gn32:24,8.1]1 L/OW00 L:@PpX3ms**<br>(missing Silluq) |
| ]2 | Morph versions 4.4 and earlier inserted a *Sof Pasuq* at the end of the text of this verse because it would be expected, but those *Sof Pasuqs* were removed for version 4.6 through 4.14 because those *Sof Pasuqs* were not actually present in 𝕃. (The "]2" bracket notes were kept through Morph 4.14 for historical purposes, but have all been replaced in Morph 4.16 and later by "]1" (or, if appropriate, by "]U").) | (Only used in Morph 4.14 and earlier) |
| ]3 | We read or understand 𝕃 differently from BHS. Often this note indicates a typographical error in BHS. ("]3" has been completely replaced in Morph 4.16 and later by the more specific bracket notes "]c", "]k", "]p", and "]v".) | (Only used in Morph 4.14 and earlier) |
| ]4 | *Puncta Extraordinaria* — a 52 is used to mark such marks in the text when they are above the line and 53 when they are below the line. | **gn16:5,19.1]4 W. W:@Pc**<br>**gn16:5,19.2]4 B"YNE75Y52/KF00 B.AYIN@PpX2ms** |
| ]5 | Large letter(s) | **lv11:42,4.1]5 G.FXO61WN G.FXOWN@ncmsa** |
| ]6 | Small letter(s) | **pr16:28,5.1]6 11W: W:@Pc**<br>**pr16:28,5.2]6 NIR:G.F81N RGN@vnPmsa** |
| ]7 | Suspended letter(s) | **ju18:30,11.1]7 M:NA$.E61H M:NA$.EH@np** |
| ]8 | Inverted *Nun* (**N** in the text) | **nu10:34,8.1]8 N N@x** |
| ]9 | BHS has abandoned 𝕃 and we concur. All of these occurrences are *Ketiv/Qere* problems. This bracket note is obsolete as of Morph 4.16. We have changed the text at all of those places to follow 𝕃 and thus disagree with BHS. | (Only used in Morph 4.14 and earlier) |

| | | |
|---|---|---|
| ]C | We read an accent in 𝕃 differently from BHQ. (This is similar to the note "]c", but the latter refers to accent differences against BHS.) | **dt28:25,1.1]C YIT.EN/:KF63 NTN@vqi3msX2ms** |
| ]F | Marks a word with an anomalous consonant that is word-medial but has a word-final form. | **is9:6,1.1]F *L: L:@Pp**<br>**is9:6,1.2]F *MAR:B."H MAR:B.EH@ncmsc** |
| ]K | We read a consonant in 𝕃 differently from BHQ. (This is similar to the note "]k", but the latter refers to consonant differences against BHS.) | **er10:44,3.1]K]k *NF&:)/IY N&)@vqcX1cs**<br>(This is the only occurrence of "]K" in Morph 4.16.) |
| ]M | Marks a word with an anomalous consonant that is word-final but has a word-medial form. | **jb38:1,5.1]M *MIN MIN@Pp** |
| ]P | We read a punctuation character (*Maqqef*, *Mappiq*, *Dagesh*, space or *Sof Passuq*) in 𝕃 differently from BHQ. (This is similar to the note "]p", but the latter refers to punctuation differences against BHS.) | **lm3:14,2.1]P &.:XOQ03 &:XOWQ@ncmsa** |
| ]Q | Marks a place where we agree with BHQ against BHS in reading 𝕃. This note will always be accompanied by another bracket note to specify the type of disagreement with BHS. | **ru2:11,17.1]Q]p ).FBI74Y/K: )FB@ncmscX2fs** |
| ]U | BHS and BHQ have both been faithful to 𝕃 (the Leningrad Codex) where there might be a question of the validity of the form and we keep the same form as both BHS and BHQ. This is similar to the note "]1", but the latter refers to cases where we keep the same form as just BHS. ("]U" only applies when the relevant fascicle of BHQ has been published and BHQ has the same reading as BHS.) | **dt23:18,10.1]U YI&:RF)"L00 YI&:RF)"L@np**<br>(missing Silluq) |
| ]V | We read a vowel in 𝕃 differently from BHQ. (This is similar to the note "]v", but the latter refers to vowel differences againt BHS.) | **es1:14,2.1]V )"LF81Y/W )EL@PpX3ms** |

| | | |
|---|---|---|
| ]a | Adaptations to a *Qere* that 𝕃 and BHS, by their design, do not indicate. Usually this indicates the addition of a *Maqqef* to our Qere text that is not present in the margin of 𝕃, or to the addition of a *Dagesh or Mappiq* to our Qere text that is not present in the *Ketiv* consonants in the main text of 𝕃. | **ex4:2,5.1]a **MAH- MFH@pii**<br><br>(The *Maqqef* in the Qere is not present in the margin of 𝕃.)<br><br>**je50:29,14.1]a **L/FH.03 L:@PpX3fs**<br><br>(The *Mappiq* in the Qere is not present in the *Ketiv* text of 𝕃.)<br><br>**lm4:16,12.1]a **W. W:@Pc**<br>**lm4:16,12.2]a **Z:Q"NI73YM ZFQ"N@ampa**<br><br>(The *Dagesh* in the *Waw* is not present in the *Ketiv* text of 𝕃.) |
| ]c | We read one or more accents in 𝕃 differently from BHS. (This is similar to the note "]C", but the latter refers to accent differences against BHQ.) | **gn22:2,5.1]c B.IN/:KF63 B."N_1@ncmscX2ms** |
| ]k | We read a consonant in 𝕃 differently from BHS. (This is similar to the note "]K", but the latter refers to consonant differences against BHQ.) | **gn14:2,17.1]k **C:BOWYI80YM C:BO)YIM@np** |
| ]m | Miscellaneous notes to the text and occasions where more than one bracket category applies. All of these notes have been re-examined for Morph 4.16 and either removed or replaced with a more appropriate bracket note. | (Only used in Morph 4.14 and earlier) |
| ]n | An anomalous form in the text of 𝕃. (This bracket note was new to Morph 4.14 and is not yet widely used, occurring on about two dozen words in Morph 4.16.) | **lv25:20,4.1]c]n N.O)KA7073L )KL@vqi1cp**<br><br>(In this case, the double accent is anomalous.) |
| ]p | We read a punctuation character (*Maqqef*, *Mappiq*, *Dagesh*, space or *Sof Passuq*) in 𝕃 differently from BHS. (This is similar to the note "]P", but the latter refers to a punctuation difference against BHQ.) | **gn2:10,1.1]p W: W:@Pc**<br>**gn2:10,1.2]p NFHFR.03 NFHFR@ncmsa** |
| ]q | We have abandoned or added a *Ketiv/Qere* relative to BHS. In doing this we agree with 𝕃 against BHS. | **gn9:21,7.1]q )FH:FL/O75H00 )OHEL_1@ncmscX3ms**<br>(Here we do *not* have a Qere reading where BHS has one.)<br><br>**ps21:2,8.1]q **Y.F71GEL GYL@vqi3ms**<br>(Here we have a Qere reading where BHS does *not* have one.) |

| | | |
|---|---|---|
| ]t | We read one or more consonants, vowels or punctuation (*Maqqef*, *Dagesh*, *Mappiq*, or *Sof Passuq*) in 𝕃 differently from BHS. (This bracket note was used only in Morph 4.12.) | (This bracket note was used only in Morph 4.12 and was replaced in Morph 4.14 and later by the more specific bracket notes "]c", "]k", "]p", and "]v".) |
| ]v | We read a vowel in 𝕃 differently from BHS. (This is similar to the note "]V", but the latter refers to vowel differences against BHQ.) | **gn31:42,17.1]v Y:GI94Y(A Y:GIY(A@ncmsc** |
| ]y | *Yathir* readings in 𝕃 which we have designated as *Qeres.* In Morph 4.14 and earlier, a few Yathir readings in 𝕃 were not marked as such because they were not treated as *Qeres* in either BHS or in the Dotan ADI edition of 1973, but as of 4.16 we rely only on whether or not something is a *Yathir* reading in 𝕃.) | **1s28:8,17.1]y **QF95S:FMIY- QSM@vqvfs** |

Some of the now removed "]3" bracket notes referred to differences between Morph and early (1980s) printings of BHS, differences that have been corrected in the more recent printings of BHS (particularly 1997). The new bracket notes "]c", "]k", "]p" and "]v" always refer to the 1997 edition of BHQ. References to BHQ refer to the five fascicles released as of early 2011.

Note that as of release 4.12, multiple bracket notes can occur. For example:

**gn1:12,9.1]c]p (O75&EH- (&H_1@vqPmsa**

In this case, there is a "]c" bracket note on this verse because BHS has a *Mereka* (<71>) where we read a left *Meteg* (<75>) in the Leningrad Codex. We also see a *Maqqef* after that word that is lacking in BHS, thus the "]p" bracket note to indicate a punctuation difference.

There are about a hundred words marked with "]Q" in this release to indicate that we agree with BHQ against BHS about the text. (A further bracket note will specify whether the difference with BHS is about an accent, a consonant, a vowel or punctuation.)

An example of this bracket note would be:

**ca2:14,7.1]Q]p )ET.- )"T_1@Po**

For this occurrence, BHS lacks the *Dagesh* that is clearly present in the *Taw* in the Leningrad Codex (and which is present in BHQ and our morphology), thus the "]Q" to indicate that we agree with BHQ and the "]p" to indicate that we disagree with BHS as to the punctuation on this word.

As of the 4.14 release, we also have as many as four bracket notes on one word, such as the following:

**ru3:14,3.1]Q]k]n]v **MAR:G.:LOWTFY/OW03 MAR:G.:LOWT@ncfpcX3ms**

In this case, we agree with BHQ about both the consonant *Waw* (the first occurrence, which BHS lacks) and the vowel *Holem* on the final syllable in this word (which BHS also lacks), thus the three bracket

notes “]Q”, “]k” and “]v”, plus we have marked this unusual form with the new bracket note “]n” to flag this word as anomalous (the *Holem* is unexpected with a *Qamets-Yod-Waw* pronomial suffix).

Another special case is the word:

```
er9:9,4.1]C]C]c W. W:@Pc
er9:9,4.2]C]C]c B: B.:@Pp
er9:9,4.3]C]C]c (AB:DU80T/"NW. (AB:DW.T@ncfscX1cp
```

In this case, there are two “]C” bracket notes because we have two accent differences against BHQ and one accent difference against BHS 1997. The common difference that we have against both BHS and BHQ is that the *Zaqqef Parvum* is above the Taw in BHS 1997 and BHQ, instead of above the *Dalet* as in the Leningrad Codex and our text. The additional accent difference against BHQ is that it has an *Azla* above the *Ayin* that is not found in the Leningrad Codex (or in BHS 1997, for that matter).

There also used to be a number of bracket notes on two or more words separated by a *Maqqef* when the bracket note refers to only one of the words. (In Morph 4.0 and earlier, morphemes separated by *Maqqefs* were considered the same word and thus all had to have any bracket note applying to only some of the morphemes.) As of this release (4.16), we have removed all such unnecessary bracket notes from the words to which they should not apply according to our current word numbering scheme, which treats *Maqqef* as a word separator.

## MORPH Record Format – Hebrew Text

The Hebrew Text field is the morpheme itself, as found in the biblical text. Generally a "word" is given its own record. However, if there is prefixed to another morpheme the conjunction -וְ or one of the prefixed prepositions -בְּ, -כְּ, -לְ, or -מִן, the relative particle -שֶׁ, the definite article -הַ or -אָ, etc., the prefixed conjunction or preposition is broken off from the other morpheme(s) in the “word” and given its own record line.

The transliteration scheme used is known as the Michigan-Claremont encoding scheme, which originated in the work of a number of scholars at various universities in the mid-1980s. Transliteration was originally chosen for this text because at the time when this work was begun, it was not possible to display and manipulate both the Hebrew and Latin alphabet in a consistent way across computer systems. Even today, despite the widespread use of Unicode® font technology, there are still problems on many computer systems with displaying Hebrew accents, especially multiple accents on the same word. The following table lists the transliteration system used in MORPH:

| Consonants | | | Vowels | | |
|---|---|---|---|---|---|
| Hebrew | | Encoding | Hebrew | | Encoding |
| Alef | א | ) | Patah | בַ | A |
| Bet | ב | B | Qamets | בָ | F |
| Gimel | ג | G | Segol | בֶ | E |
| Dalet | ד | D | Tsere | בֵ | " |
| Heh | ה | H | Hireq | בִ | I |
| Waw | ו | W | Holem | בֹ | O |
| Zayin | ז | Z | Qamets-Hatuf | בָ | F |
| Het | ח | X | Qibbuts | בֻ | U |
| Tet | ט | + | Shureq | וּ | W. |
| Yod | י | Y | Shewa | בְ | : |
| Kaf | כ ך | K | Hatef Patah | בֲ | :A |
| Lamed | ל | L | Hatef Segol | בֱ | :E |
| Mem | מ ם | M | Hatef Qamets | בֳ | :F |
| Nun | נ ן | N | Miscellaneous | | |
| Samekh | ס | S | Dotless Sin/Shin | | # |
| Ayin | ע | ( | Ketiv | | * |
| Peh | פ ף | P | Qere | | ** |
| Tsade | צ ץ | C | Dagesh / Mappiq | | . |
| Qof | ק | Q | Maqqef | | - |
| Resh | ר | R | Raphe | | , |
| Sin | שׂ | & | Accent (two-digit codes) | | 03 75 etc. |
| Shin | שׁ | $ | Compound Joint (a space in BHS) | | ~ |
| Taw | ת | T | Prefix/Suffix Separator | | / |

A Hebrew word is constructed by beginning with a (required) consonant, followed by an optional *Dagesh* (if any), followed by a (required) vowel, followed by an optional accent marker, followed by an optional vowel letter (*mater lectionis*), followed by an optional consonant (in the case of a closed syllable).

No distinction is made in our transliteration scheme between medial and final consonants, between *Qamets* and *Qamets-Hatuf*, between vocal and silent *Shewa*, or between *Dagesh forte* and *Dagesh lene*.

## MORPH Record Format – Lemma and Parsing

The **Parsing** portion of the record is separated into two parts: the lemma and the morphology. The separator is an at sign ("@") for Hebrew lemmas and a percent sign ("%") for Aramaic lemmas. The **Lemma** field is very similar to the **Hebrew Text** field. If HALOT shows more than one homonym for a lemma, a "**_1**" is added to the end of the first lemma dealt with in HALOT, "**_2**" to the second lemma and so forth. If there are no homonyms for a lemma, no homonym number is added, since it is a unique lemma. Some examples:

| | |
|---|---|
| 2nd and 5th homonyms of Hebrew lemmas according to HALOT | **ex20:4,9.2 M.A8380(AL MA(AL_2@Pd**<br>**ex20:5,10.1 )"74L )"L_5@ncmsa** |
| Unique Hebrew lemma | **ex20:4,11.3 )F6373REC )EREC@ncfsa** |
| Unique Aramaic lemma | **er4:12,7.1 S:LI33QW.03 SLQ%vNp3mp** |
| 2nd homonym of an Aramaic lemma according to HALOT | **er5:1,6.1 BAR- B.AR_2%ncmsc** |

The **Morphology** field follows after the lemma separator.

There are six categories of records: (1) paragraphing, (2) particle, (3) pronoun, (4) noun, (5) adjective or numeral and (6) verb. A seventh category, suffixes, cannot stand alone, but appear attached to the end of prepositions, nouns or verbs. Here are some interpreted examples of each category:

1. Paragraphing

   **gn1:5,14.1 P P@x**

   The "lemma" here is artificial for this special particle. "x" stands for paragraphing.

2. Particle

   When the article appears by itself with an accent. note the noun which it modifies shares the same word number, in this case "6". The article is word-part "1" and the noun is word-part "2". The lemmas is **<HA>**, it is a Hebrew lemma ("@"), and the parsing is "Particle-Article".

   **gn49:14,6.1 HA75 HA@Pa**
   **gn49:14,6.2 M.I$:P.:TF75YIM00 MI$:P.:TAYIM@ncmda**

   The noun is the second part of word 6 in verse 16 of Genesis 49. Its Hebrew lemma is **<MI$:P.:TAYIM>** and its parsing is "Noun-Common-Masculine-Dual-Absolute".

   A definite article with inseparable preposition prior to Release 4.0 was tagged with "**+Pa**" at the end of the analysis for the preposition. Beginning with Release 4.0, when the <**H**> is not present, this occurrence of the article receives a line to itself with a text field of just an underscore ("_") to represent the empty string.

```
gn49:11,2.1 LA L:@Pp
gn49:11,2.2 _ HA@Pa
gn49:11,2.3 G.E33PEN03 G.EPEN@nbcsa
```

The text is the 2nd word of the 11th verse of the 49th chapter of Genesis. Part 1 has **<LA>** as the Hebrew text, **<L:>** for the Hebrew lemma, and is a "Particle-Preposition". Part 2 has been given the "dummy" Hebrew text of underscore, <_>, parsed as "Particle-Article" which represents the assimilated **<H>**.

The 3rd part of the 2nd word of Genesis 49:11 is, in the Hebrew text, **<G.E33PEN03>**. Note that the word has two accents, one for each syllable. The word comes from the Hebrew lemma **<G.EPEN>**. Its parsing is "Noun-Common-Both-Singular-Absolute", that is, it is treated by adjectives and verb inflections with both masculine and feminine genders.

```
2s2:5,8.1 ):AL"Y/HE81M )EL@PpX3mp
```

In 2 Sam 2:5, the 8th word is **<):AL"Y/HE81M>** which has a morphological slash dividing the word from its suffix. The Hebrew lemma is **<)EL>** and its parsing is "Particle-Preposition". The parsing of the suffix is signaled by the "X" and is understood to be "3rd Person-Masculine-Plural".

3. Pronoun

```
2s2:5,10.1 )AT.EM03 )AT.EM@pi2mp
```

In 2 Sam 2:5, we find the 10th word of the verse to be **<)AT.EM03>**, the accent on the second syllable. It is a Hebrew lemma, **<)AT.EM>**, and its parsing is "Pronoun-Independent-2nd Person-Masculine-Plural".

4. Noun

```
2s2:5,6.1 YFB"74Y$~G.IL:(F92D YFB"Y$~G.IL:(FD@np
```

We have already seen examples of common nouns above. In 2 Sam 2:5 the 6th word is a compound proper noun. The text is **<YFB"74$~G.IL:(F92D>**, with the two parts of the compound name divided by the tilde (~) and are not joined by a Maqqef. The Hebrew lemma is **<YFB"Y$~G.IL:(FD>** and its parsing is "Noun-Proper".

```
2s2:5,17.1 ):ADO75N"Y/KEM03 )FDOWN@ncmpcX2mp
```

In the 1st part of the 17th word of 2 Sam 2:5 we find the Hebrew text **<):ADO75N"Y/KEM03>**. The morphological slash tells us that there is a suffix. The noun's Hebrew lemma is **<)FDOWN>** and the parsing is "Noun-Common-Masculine-Plural-Construct". And the suffix parsing after the dividing "X" is "2nd Person-Masculine-Plural".

5. Adjective/Numeral

   **2s2:17,3.1 QF$F71H QF$EH@afsa**

   In 2 Sam 2:17, the 3rd word is **<QF$F71H>** with the accent on the final syllable. The Hebrew lemma is **<QF$EH>** and we discover that it is an "Adjective-Feminine-Singular-Absolute".

   **2s2:11,14.2 $I$.F71H $"$_1@ucmsa**

   In this second example, the 2nd part of the 14th word (the 1st part of the 14th word is a Waw conjunction) is the word **<$I$.F71H>** with the 1st listed (in HALOT) homograph Hebrew lemma **<$"$>**. Its parsing is "Cardinal Number-Masculine-Singular-Absolute".

6. Verb

   **2s2:6,2.1 YA75(A&- (&H_1@vqi3msXa{1}Jt**

   In 2 Sam 2:6, the 2nd word is **<YA75(A&->** from the 1st listed Hebrew homographic lemma (according to HALOT) **<(&H>**. Its parsing is "Verb-Qal Stem-Imperfect-3rd Person-Masculine-Singular-Apocopated-Jussive in Form and Meaning".

   **is35:4,15.2 YO$A(/:AKE75M00 Y$(@vhi3msXaX2mp{1}Jt**

   In the 2nd part of the 15th word in Isaiah 35:4 we find the word **<YO$A(/:AKE75M00>**, from the unique Hebrew lemma **<Y$(>**. It is a "Verb-Hifil Stem-Imperfect-3rd Person-Masculine-Singular-Apocopated-2nd Person Masculine Plural Pronominal Suffix-Jussive in Meaning and Form".

   The two-page table at the end of this document summarizes all the possible values for each field.

## The Ketiv-Qere

This Masoretic feature presents more challenges to the data structure than any other single factor. First of all, we must list the *Ketiv* and *Qere* as separate words (unlike BHS which uses one 'nonsense' graphical word to indicate both). Thus word counts in verses with *Ketiv / Qere* will be skewed by the number of *Ketiv / Qere* in a verse.

Secondly, there are simply a number of anomalous situations created by trying to account for this feature within our normal encoding. A list of the kinds of situations follows.

1. Simple *Ketiv-Qere*

   **gn8:17,14.1 *HOWC") YC)@vhvms**
   **gn8:17,15.1 **HAY:C"74) YC)@vhvms**

2. *Ketiv* in two parts, *Qere* in one

```
2s10:9,13.1 *B.: B.:@Pp
2s10:9,13.2 *YI&:RF)"L YI&:RF)"L@np
2s10:9,14.1 **YI&:RF)"80L YI&:RF)"L@np
```

3. *Ketiv* in one part, *Qere* in two

```
2s12:22,11.1 *Y:XFN./ANIY XNN@vqi3msX1cs{1}Jm
2s12:22,12.1 **W: W:@Pc
2s12:22,12.2 **XAN./A71NIY XNN@vqp3msX1cs{2}
```

4. *Ketiv* following *Maqqef* (note word and part numbering)

```
2s3:25,12.1 W: W:@Pc
2s3:25,12.2 )ET- )"T@Pp
2s3:25,13.1 *M:BOW)/EKF MFBOW)@ncmscX2ms
2s3:25,14.1 **MO74WBF)/E80KF MFWBOW)@ncmpcX2ms
2s3:25,15.1 W: W:@Pc
2s3:25,15.2 LF L:@Pp
2s3:25,15.3 DA85(AT YD(@vqc
```

5. *Ketiv* and *Qere* with *Maqqef* (note word and part numbering)

```
2s14:7,26.1 L: L:@Pp
2s14:7,26.2 BIL:T.I94Y B.IL:T.IY@Pp
2s14:7,27.1 *&W.M- &YM@vqc
2s14:7,28.1 **&IYM- &YM@vqc
2s14:7,29.1 L: L:@Pp
2s14:7,29.2 )IY$/I91Y )IY$@ncmscX1cs
```

6. *Ketiv* and *Qere* internal to compound name

   (js18:24 and 2k14:7 have the only such other occurrences.)

```
2k23:10,5.1 B.: B.:@Pp
2k23:10,5.2 G"74Y~*B:N"Y-HIN.O92M G."Y)~BEN-HIN.OM@np
2k23:10,6.1 G"74Y~**BEN-HIN.O92M G."Y)~BEN-HIN.OM@np
```

7. *Qere* without *Ketiv* (*Qere wela Ketiv* - “qwlk”)

```
2s8:3,12.1 B.I75 B.:@Pp
2s8:3,12.2 N:HAR- NFHFR@ncmsc
2s8:3,13.1 *kk kk@qwlk
2s8:3,14.1]a **P.:RF75T00 P.:RFT@np
```

8. *Ketiv* without *Qere* (*Ketiv wela Qere* - “kwlq”)

```
ek48:16,12.1 *X:AM"$ XFM"$@ucfsc
ek48:16,13.1 **qq qq@kwlq
```

## Coding Practices

1. Slash ('/') to indicate beginning of suffix in textual entry

   All suffixes are attached to the end of the analysis of the form to which they are attached rather than having a line to themselves. A slash in the text indicates the beginning of the suffix (these slashes are occasionally omitted or misplaced).

```
2s2:5,8.1 ):AL"Y/HE81M )EL@PpX3mp
```

2. Directional suffix on first word of a compound name

   (Potential confusion because directional -he (or he-locale) is suffixed to the first in the compound and not the second—'/' indicates suffix position and Xd marks the analysis for the directional)

```
gn28:2,3.1 P.AD.E74N/F75H~):ARF80M P.AD.AN~):ARFM@npXd
```

3. Two suffixes on a single word (verbs only)

   Twice in the Psalms and several times in Proverbs, there is both a paragogic Nun and an object suffix which means an analysis will indicate two suffixes.

```
ps63:4,6.1 Y:$AB.:X75W./N/:KF00 $BX_1@vpi3mpXnX2ms
```

4. Article as part of proper names ('//')

   In early versions of Morph, a double slash was used to indicate a definite article as part of a proper name, but this practice was discontinued in Morph 4.4.

5. Run-on words (textual corruption in manuscript)

   Run-on words, a textual critical issue, must be analyzed separately. In such cases there is no space or *Maqqef* in the text as would be expected, so they must be treated as a single orthographic entity. However, we analyze the constituent morphemes separately on two (or more) lines, treating them as one word with two (or more) parts. For example:

   ```
   ps106:1,1.1 HA75L:LW. HLL_2@vpvmp
   ps106:1,1.2 YF63H.05 YFH.@np
   ```

   (There are other examples of run-on words in is9:5 (word 18) and ec4:10 (word 8) and also in *Ketiv* text in 2k6:25 (word 16), er4:9 (word 17), and 1c9:4 (word 9).)

6. Space or *Maqqef* ('-') means a new word except…

   A text entry or lemma may not have anything following a *Maqqef*, except for the case of compound names or nouns.

   However, there is also an anomalous word in ps102:4 that contains a *Maqqef* where the *Maqqef* is not viewed as a separator between words:

   ```
   ps102:4,6.1 K.: K.:@Pp
   ps102:4,6.2 MOW-Q"71D MOWQ"D@ncfsa
   ```

   (This anomalous morpheme division was new for version 4.8. In prior versions, that word was split into two morphemes according to the placement of the *Maqqef*.)

7. Concerning Aramaic

   Aramaic sections are indicated with a "%" between lemma and analysis instead of a "@".

   Aramaic sections are found as follows:

   Genesis 31:47 (4th word)
   Jeremiah 10:11
   Daniel 2:4 (5th word) – 7:28
   Ezra 4:8 – 6:18 and 7:12 – 26

8. *Raphe*

   Biblia Hebraica Stuttgartensia's editorial policy was to omit *Raphe* consistently, "…otherwise there would have been almost insuperable technical difficulties."[1] Nevertheless, *Raphe* does occur in BHS twelve times. We have replicated these cases in Morph, where *Raphe* is represented in the encoded Hebrew text as a comma ("`,`"):

1 Karl Elliger and Wilhelm Rudolph, "Foreword" in *Biblia Hebraica Stuttgartensia*, p. xii.

```
ex20:13,2.1 T.,IR:CF7375X00 RCX@vqi2ms
ex20:14,2.1 T.,IN:)F9275P00 N)P@vqi2ms
ex20:15,2.1 T.,IG:NO8075B00 GNB@vqi2ms
dt5:13,5.1 K.,FL- K.OL@ncmsc
dt5:17,2.1 T.,IR:CF75X00 RCX@vqi2ms
dt5:18,2.1 T.,IN:)F7592P00 N)P@vqi2ms
dt5:19,2.1 T.,IG:NO7580B00 GNB@vqi2ms
2s11:1,6.2]1 M.AL:),KI81YM MELEK:_1@ncmpa
is22:10,5.2 T.IT,:CW.03 NTC@vqw2mp
je20:17,9.2 RAX:MF73H, REXEM@ncmsc
zc5:11,4.1 L/F71H, L:@PpX3fs
ps119:99,7.1 L,/I75Y00 L:@PpX1cs
```

These occurrences are almost all textual issues, most of them occurring in the Decalogues of Exodus and Deuteronomy where there is the well-known double punctuation. As a courtesy to users, MORPH has the same *Raphes* as BHS. The Leningrad Codex uses *Raphe* extensively, and adding those to the Hebrew text of MORPH is planned for a future release.

9. "Context-bound" constructs

Each nominal has been coded as to its "state," either "absolute" or "construct." In the past, MORPH had only marked "context-free" constructs, that is, those nominals[1] whose form changes between absolute and construct states. Since the Morph 4.12 release, all nouns, numerals, adjectives and verbal participles have been parsed as to state.

10. Gender issues

Extensive gender consistency checks have been made. The results show that Hebrew is inconsistent in marking morphologic, grammatical and pragmatic gender. In a future release, we plan on offering these distinctions.[2] Lemmas that are not consistently used for one gender are usually parsed "b" for "both."

11. Preposition + article + nominal[3]

In theory, MORPH divides Hebrew words into their relevant morphemes, one record per morpheme. In practice there are inconsistencies. One of those is the case when a definite article is assimilated if it occurs between a preposition and a nominal. It is only a phonemic change. The definite article is still there and is known by the *Patah* or *Qamets* of the preposition and the doubling of the first consonant of the nominal. From a data modeling point of view, the definite article deserves its own record. Otherwise, when a user is querying definite articles, one must remember about this special case. We cannot assume that level of

1 A "nominal" is linguistic jargon for what philology would call a "substantive." For Hebrew or Aramaic, a nominal is a common noun, an adjective, a numeral (cardinal or ordinal) or a verbal participle used as a noun.

2 cf. Van der Merwe, et al., *A Hebrew Reference Grammar*, §24.2.

3 A "nominal" is linguistic jargon for what philology would call a "substantive." For Hebrew or Aramaic, a nominal is a common noun, an adjective, a numeral (cardinal or ordinal) or a verbal participle used as a noun.

knowledge on the part of the user. For example,

```
gn1:5,3.1 LF L@Pp
gn1:5,3.2 _ HA@Pa
gn1:5,3.3 )OWR03 )OWR@ncbsa
```

12. Verbal lemma spelling

Since HALOT is our standard for lemmas (and parts of speech), we spell verbal lemmas as HALOT does. A verbal lemma consists of the three (or occasionally four) root consonants, omitting vowels, *Dageshes* or *Shewa* in final *Kaf*. For non-verbal lemmas, also in accordance with the practice of HALOT, *Dageshes*, silent *Shewa* in final *Kaf* and full vocalization are included in the spelling.

13. Aramaic Gentilic

Following an analysis of the morphology of *gentilic* forms in biblical Aramaic, we have extended the parsing of *gentilics* to include number and determined (the Aramaic definite article). Parsings are made up of three parts:

**%ng** – Aramaic noun, gentilic
**s** or **p** – singular or plural
**d** or (null) – determined or undetermined

Thus the combined parsing is one of the following:

```
%ngs
%ngsd
%ngp
%ngpd
```

The *gentilic* is simply another noun class, parallel to common and proper nouns. The codes used for these features are the same as for the common nouns, but is a more restricted set in that state (absolute and construct) is not parsed.

14. Exclamation Points

In Morph 4.12 we introduced a new indication of an unexpected element in a parsing, an exclamation point ("!") following the character representing the unexpected part of the parsing.

A "pausal" form of a second person *masculine* singular pronomial suffix may resemble the normal form of the second person *feminine* singular pronomial suffix of the same person and number. (A "pausal" form is a form with a major accent such as Athnach <92>.) For example:

```
gn3:18,4.1 L/F92K: L:@PpX2m!s
```

This suffix is clearly masculine in context, but because of the Athnach accent (<92>), the vowels on this second person *masculine* singular pronomial suffix have changed from the expected form (<L/:KF>) to what would normally be a second person feminine singular form (<L/FK:>).

Sometimes the expected gender of a noun is contradicted by the gender of an adjective that modifies the noun or by the gender of a verb of which the noun is the subject. For example:

**ru11:31,1.2 R61W.XA RW.XA@ncm!sa**

The noun <RW.XA> is normally *feminine* but here it is the subject of a verb (the following word) that is third person *masculine* singular in form, so we have marked the gender of this occurrence of this noun as unexpected by following the "m" with an exclamation point ("!").

Another use of the exclamation point ("!") is to mark an unexpected parsing of a verb. For example:

**mi4:13,15.2 HAX:ARAM:T.I70Y XRM_1@vhp2!fs{2}**

The ending on this verb is normally that of a *first* person common singular, but this unusual form is interpreted in context as an archaic form of the *second* person feminine singular.

The exclamation point ("!") can also mark a noun that is in an unexpected state. For example:

**gn3:22,7.2 )AXA74D )EXFD@ucmsa!**

This form of the masculine singular numeral must be *absolute* in context (because it is followed by a prepositional form) even though it has the vowels of the *construct* form. The exclamation point marks the unexpected state of this word.

## Some Anomalies in the Leningrad Codex

There are some anomalies in the Leningrad Codex that we cannot accurately represent in our text. Sometimes an accent is placed usually, or a vowel is shifted from its expected position. The Leningrad Codex also has a number of unusual ways of representing Qere consonants in the margin.

For example, there is an accent (a Mereka = <**71**>) that is on the right side of its vowel (instead of on the expected left side) in the word <**T."71)FLA81M:NFH**> in ps31:19 . BHS reproduces this unusual form, but we have no accent code for this irregularly misplaced accent. This word was marked with a "**]3**" bracket note from Morph 1.0 through 4.14, but in Morph 4.16 we dropped the "**]3**" bracket note since this is really a minor typesetting issue and not a meaningful difference between our text and BHS.

Another anomaly is the Qere consonants of the word <**H:AMOWN/O92W> in ek32:31. The Qere is noted in the margin of the Leningrad Codex with <QR NW> (with a dot over the <R>) instead of the expected <Q HMWNW> (with a dot over the <Q>). BHS treats this as a regular Ketiv-Qere, and so do we. In Morph 1.0 through 4.14, this word had a "]m" bracket note to mark a "miscellaneous" note to the text, but we have removed this bracket note since it provided no real value.

A similar Qere anomaly is the word <**)AR:T.AX:$A73&:T.:> in er4:7. Instead of the expected marginal reading of <Q )RTX##T> (with a dot over the <Q>) we find only <Q #T> (with a dot over the <Q>) in the margin of the Leningrad Codex. In Morph 1.0 - 4.14, the Qere word was marked with the bracket note "]y", which is not right since this definitely not a *Yathir* reading but rather a slightly non-standard Qere notation.

**A Brief History of Releases of MORPH since 3.5:**

Morph 4.0 had implicit definite articles listed on their own lines as separate morphemes.

Morph 4.2 had the books of the Hebrew Bible in the order of the Leningrad Codex (instead of in English Bible order as in Morph 4.0 and earlier). In it the old circumflex accents ("^") of 4.0 and earlier were replaced with two-digit accents and about a dozen occurrences of *Raphe* (",") were added. Starting with Morph 4.2, *Maqqef* has been treated as a word separator (whereas before two or more sets of morphemes joined by one or more *Maqqefs* were numbered as a single "word".)

Morph 4.4 introduced the parsing of numerals as @uc for cardinal numbers (1, 2, 3, etc.) and @uo for ordinal numbers (1st, 2nd, 3rd, etc.) instead of the previous practice of encoding both as "@a" for adjective. The code "Xe" was added to several parsings in 4.4 to mark the presence of the so-called "energic *Nun.*" Prior to Morph 4.4 the definite article in proper names was marked off with a double forward slash ("//"), but starting with that release (4.4) there was no special handling of the definite article in proper names. The files "wlc44_ps.txt", "uniqLemmas44.txt" and "uniqParsings44.txt" were added to the Morph 4.4 release.

Morph 4.6 saw the removal of hypothetical *Keti*v pointing from "wlc46_ps.txt." In 4.6 the meaning of bracket note "]2" was modified and the *Sof Pasuqs* that earlier had been added to words marked with "]2" were removed because those *Sof Pasuqs* are not present in the Leningrad Codex.

Morph 4.8 saw the addition of a dozen or so line header comment to both "morph48.wts" and "wlc48_ps.txt". The bracket note "]c" was introduced in this release.

Morph 4.10 had many lemma, parsing, and textual changes.

Morph 4.12 was the first release that had an explict state (absolute or construct) for all "nominal" forms (nouns, adjectives, numerals, and verbal participles). It also saw the introduction of the new bracket notes "]F", "]M", "]Q", and "]t" and the first occurrence of double bracket notes and the first occurrence of a repeated bracket note. The exclamation point was first added to mark unexpected parsings in 4.12.

Morph 4.14 saw the replacement of the bracket note “]t” by the new and more specific bracket notes “]k”, “]p”, and “]v”, as well as the new bracket note “]n” and the BHQ-specific bracket notes “]C”, “]P”, and “]V”. This release also saw the first occurrence of a repeated bracket note and of triple and quadruple bracket notes. For Morph 4.14 we reviewed our text against the Leningrad Codex for all textual errors cited by the first three fascicles of BHQ.

Morph 4.16 had new bracket notes “]K” and “]U”. All remaining “]3” bracket notes were replaced by the more specific bracket notes “]c”, “]k”, “]p”, and “]v”. The bracket notes “]2”, “]9”, and “]m” were all dropped or replaced by something more specific. All redundant bracket notes on the other side of a *Maqqef* were removed. For Morph 4.16 we reviewed our text against the Leningrad Codex for all textual errors cited by the fourth and fifth fascicles of BHQ.

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# Westminster Hebrew Morphology 4.16 – Parsing Code Table (Part 1/2)

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| nc | noun – common | m | masculine | s | singular | a | absolute | | | | | | | | |
| np | noun – proper | f | feminine | d | dual | c | cons5truct | | | | | | | | |
| ng | noun – gentilic[1] | b | both | p | plural | d | determined[2] | X | suffix | h | paragogic he | | | | |
| a | adjective | | | | | | | | | n | paragogic nun | | | | |
| uo | number – ordinal | | | | | | | | | d | directional he | | | | |
| ua | number – cardinal | | | | | | | | | | | | | | |
| v.P | verb – Participle | | | | | | | X | suffix | 1 | 1st person | m | masculine | s | singular |
| v.s | verb - passive participle | | | | | | | | | 2 | 2nd person | f | feminine | p | plural |
| | See the next page for the possible verbal stem values in participles (“v.P” and “v.s”). | | | | | | | | | 3 | 3rd person | c | common | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| p | pronoun | i | independent | i | interrogative | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| p | pronoun | i | independent | 1 | 1st person | m | masculine | s | singular | | | | | | |
| | | | | 2 | 2nd person | f | feminine | p | plural | | | | | | |
| | | | | 3 | 3rd person | c | common | | | | | | | | |
| | | | | | | | | | | | | | | | |
| P | Particle | a | definite article | | | | | | | | | | | | |
| | | c | conjunction | | | | | | | | | | | | |
| | | d | adverb | | | | | | | | | | | | |
| | | g | interrogative | | | | | | | | | | | | |
| | | i | interjection | | | | | | | | | | | | |
| | | n | negative | | | | | | | | | | | | |
| | | o | object-marker[3] | | | | | | | | | | | | |
| | | p | preposition[3] | | | | | | | | | | | | |
| | | r | relative | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| x | paragraph[4] | | | | | | | | | | | | | | |

1 Aramaic only

2 Aramaic only

3 The object marker and many prepositions can take a pronomial suffix of the form X1cs, X2mp, X3fs, etc.

4 Used only for **P@x**, **S@x** and **N@x**

# Westminster Hebrew Morphology 4.16 – Parsing Code Table (Part 2/2)

| | | | **Hebrew** | **OR** | **Aramaic** | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| v | verb | q | qal | A | afel | p | perfect | 1 | 1st person | m | masculine | s | singular | | | | |
| | | p | piel | B | hafel | i | imperfect | 2 | 2nd person | f | feminine | p | plural | | | | |
| | | P | pual | H | hishtafel | w | *wayyitqol*[1] form | 3 | 3rd person | c | common | | | | | | |
| | | n | nifal | S | hitpaal | v | imperative[2] | | | | | | | | | | |
| | | h | hifil | F | hitpeel | c | infinitive construct[3] | | | X | suffiX | 1 | 1st person | m | masculine | s | singular |
| | | H | hofal | G | hitpolel | a | infinitive absolute[3] | | | | | 2 | 2nd person | f | feminine | p | plural |
| | | Q | qal passive | I | ishtafel | P | participle[4] | | | | | 3 | 3rd person | c | common | | |
| | | t | hitpael | L | itpeel[5] | s | passive participle[4] | | | | | | | | | | |
| | | a | palel | P | polel | | | | | X | suffiX | a | apocopated | | | | |
| | | b | pealal | R | shafel | | | | | | | e | energic nun | | | | |
| | | c | pilel | N | peal | | | | | | | h | paragogic he | | | | |
| | | d | pilpel | M | pael | | | | | | | n | paragogic nun | | | | |
| | | e | polel | O | peil | | | | | | | | | | | | |
| | | k | poel | D | hofal | | | | Optional tag on *imperfect* verbs: | | | | | | | | |
| | | m | tifil[6] | Q | safal | | | | {1}Jt | jussive in both form & meaning | | | | | | | |
| | | f | polal | K | itpaal | | | | {1}Jf | jussive in form only | | | | | | | |
| | | g | polpal | V | itpoel[7] | | | | {1}Jm | jussive in meaning only | | | | | | | |
| | | i | pulal | | | | | | {1}Ct | cohortative in both form & meaning | | | | | | | |
| | | l | poal | | | | | | {1}Cf | cohortative in form only | | | | | | | |
| | | u | hotpaal | | | | | | {1}Cm | cohortative in meaning only | | | | | | | |
| | | v | hitpolel | | | | | | | | | | | | | | |
| | | y | hitpoel | | | | | | Optional tag on *perfect* verbs: | | | | | | | | |
| | | w | hitpalpel | | | | | | {2} | consecutive perfect | | | | | | | |
| | | s | hishtafel | | | | | | | | | | | | | | |
| | | x | nitpael | | | | | | | | | | | | | | |

1 Also known as *waw-consecutive*

2 Imperatives take a gender (m or f) and a number (s or p) but no person (1, 2 or 3).

3 In Aramaic, *all* infinitives are analyzed as infinitive construct. Infinitives take no further parsing code.

4 See the previous page for the codes that follow verbal participles and verbal passive participles.

5 Used only four times (in Daniel 2:45; 7:8 (twice), and 7:15)

6 Used only three times (in Hosea 11:3 and in Jeremiah 12:5 and 22:15)

7 Used only once (in Daniel 4:16)