Hebrew Language Resources

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Abstract
Publications on the Hebrew language are extensive.1 This essay provides an overview of significant touchstones in the study of Hebrew. Special attention is paid to comparative Semitic linguistics—specifically, the languages most closely related to Hebrew. Surveying Hebrew resources provides a valuable aid to the reference librarian who is helping patrons find quality resources in the study of Hebrew, as well as the acquisitions librarian who needs to select content in the Semitic language section of his or her collection. This guide provides a solid base collection for any library serving students engaged in the academic study of Biblical/Classical Hebrew. These sources are important references for students as they reach advanced levels of study.

From a linguistic standpoint, one of the biggest problems in studying biblical Hebrew is the small size of the corpus. For the intermediate and advanced student of Hebrew to overcome this challenge, she must start looking at the comparative grammar of the other Semitic languages. The purpose of this essay is to provide the bibliographic context for the study of Hebrew grammar with special regard for its closest linguistic relatives. In order to accomplish this goal, I first outline works important for the larger question of Hebrew’s place in the Semitic language family. Next, I deal with the languages most closely related to Biblical Hebrew.2 In this section, special attention is paid to strong introductory grammars, reference works, and lexical tools. In the next section, I turn to Hebrew itself. In that section, tools for Hebrew are broken down into reference grammars, morphology, verbal semantics, dictionaries, concordances, and software tools. The last section contains some works that introduce the student to later stages of Hebrew. It is the hope that this essay will help librarians and students of Hebrew find the right sources to use the language effectively.

Comparative Semitics and Hebrew
Neither linguistics nor comparative Semitics have systematically been applied to the study of Biblical Hebrew in a single reference work. The best grammar working with Hebrew in its comparative Semitic setting is Bauer and Leander’s Historische Grammatik der hebräischen Sprache.3 The translation from Hebrew of Blau’s Phonology and Morphology of Biblical Hebrew, unfortunately, was not revised as thoroughly as it should have been. The book is disorganized, and the bibliography has been inconsistently updated, leaving the work on a whole unreliable and dated.4 Na’ama Pat-El and David Steinberg have written helpful reviews of this work that extend its value. Pat-El emphasizes some important recent work that has not been incorporated, while Steinberg provides a

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1 I would like to thank Andrew Burlingame, Aaron Christianson, and Nathan S. French for reading drafts of this work, suggesting resources, and correcting errors.
2 The important languages of Akkadian, Arabic, and Ge’ez are not treated here, but more thorough bibliographies for these languages are found in the works of Stefan Weninger, et al., ed., The Semitic Languages: An International Handbook, Handbücher Zur Sprach- Und Kommunikationswissenschaft 36 (Berlin: De Gruyter Mouton, 2011); Roger D. Woodard, ed., The Cambridge Encyclopedia of the World’s Ancient Languages (Cambridge; New York: Cambridge University Press, 2004); Robert Hetzron, ed., The Semitic Languages, Routledge Language Family Descriptions (New York: Routledge, 1998); as well as the comparative Semitic section below.
thorough list of corrections.⁵ Murtonen’s *Hebrew in Its West Semitic Setting* has the most exhaustive comparative Semitic lexicon of Biblical Hebrew roots, as well as a thorough discussion of non-Masoretic Hebrew dialects.⁶

There has been much work on comparative Semitics since the publication of Brockelmann’s *Grundriss der vergleichenden Grammatik*. Nevertheless, Brockelmann’s still remains the most comprehensive and systematic look at comparative Semitics.⁷ A modern and thorough introduction to each of the Semitic languages is presented in Weninger’s edited collection, which includes a host of essays surveying the grammar of ancient and modern Semitic languages. It also provides introductory essays to the different Semitic language groups, as well as different periods for some of the more broadly attested languages.⁸ Similarly, the collections of essays edited by Woodard and Hetzron, respectively, provide short grammatical sketches of Semitic languages.⁹ The essays in these collections are of varying quality. All provide adequate surveys of the essential grammatical features, but some provide surprising depth, given their brevity. Particularly noteworthy is Pardee’s essay on Ugaritic. Two more theoretical works on comparative Semitics are Lipiński’s and Moscati’s books, respectively.¹⁰ A work that combines the theoretical nature of Lipiński’s and Moscati’s is Bergsträsser’s *Introduction*.¹¹ The additions of Peter Daniels make this book an excellent resource for students of comparative Semitics.

**RESOURCES FOR THE LANGUAGES MOST CLOSELY RELATED TO HEBREW**

**Ugaritic**

Ugaritic was discovered and deciphered in the 1930s, and comparative consideration of this language has revolutionized the study of Biblical Hebrew and scholars’ understanding of the cultural context of the Bible’s creation. Ugarit was a city in modern Northern Syria, close to Turkey. The texts discovered there attest to a language that is closely related to Biblical Hebrew, and the study of this language has provided a wealth of insight into Hebrew grammar and its lexicon. The greatest problem with Bauer and Leander’s *Historische Grammatik* work is that it was written before the deciphering of Ugaritic. It speaks to their mastery of the field, that even after the deciphering of Ugaritic, the work continues to have value. The most essential reference work for Ugaritic is Josef Tropper’s *Ugaritische Grammatik*.¹² The second edition is a complete re-writing of the grammar in light of new texts, as well as a response and reflection on Pardee’s 400-page review of Tropper’s first edition.¹³ Pardee’s review is nearly a reference grammar in its own right. Because it is a paragraph-by-paragraph response to Tropper’s first edition, however, it is not a reference tool that can stand on its own.¹⁴

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⁸ Weninger et al., *The Semitic Languages*.
Both Huehnergard’s *Introduction* and Bordreuil and Pardee’s *Manual* offer excellent introductions to the Ugaritic language. The strength of Huehnergard’s text is his mastery of comparative linguistics, which is very important for a language as poorly preserved as Ugaritic. Bordreuil and Pardee’s contribution is a presentation of the language with cuneiform script used at Ugarit (which is absent in Huehnergard’s book). Pardee and Bordreuil are masters of Northwest Semitic philology, and this manual is a necessary tool for all students of the language.

The standard Ugaritic lexicon is Del Olmo Lete’s dictionary, a thorough treatment of the language. It provides detailed linguistic comparison, as well as references to the few Ugaritic words that appear in Mesopotamian cuneiform. Though it is expensive, no other works are as helpful. Older resources cannot be recommended because the state of knowledge of Ugaritic has changed so quickly in the last thirty years. The grammars and handbooks of Cyrus Gordon, Daniel Sivan, and Stanislav Segret should be used primarily for studying the history of scholarship and not as authoritative reference works. Unfortunately, Schniedewind and Hunt is not reliable for students because of its frequent mistakes and out-of-date bibliography.

Aramaic

Aramaic is second in importance only to Hebrew for studying the Old Testament. Much of Daniel and parts of Ezra are written in Aramaic, but Aramaic is important in other respects. Aramaic was a dominant language for commerce in the ancient Near East as well as the *lingua franca* of the Persian and Neo-Assyrian Empires. Moreover, it was the language used by the author of Genesis when Laban names the place where he made a covenant with Jacob (Gen. 31:47). In addition, some of the earliest translations and scholarly treatments of the Bible are in Aramaic (and Syriac). Aramaic has a long, complicated history that touches many disciplines, yet is rarely considered to be its own discipline. Gzella’s *Cultural History* does a great job of providing a summary of Aramaic in its different stages and parts.

The best reference grammar for Biblical Aramaic is still Bauer and Leander’s *Grammatik des Biblisch-Aramäischen*. It is thorough, well organized, and historically oriented. Two reliable pedagogical grammars are the works of Rosenthal and Johns. Both grammars focus on Biblical Aramaic and assume a prior knowledge of Biblical Hebrew. Other more recent teaching grammars include those by Muraoka and Qimron.

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17 A full study of these syllabic spellings for Ugaritic can be found in John Huehnergard, *Ugaritic Vocabulary in Syllabic Transcription, Revised*, Harvard Semitic Studies 32 (Winona Lake, IN: Eisenbrauns, 2008). The revised edition has a thoroughly updated appendix where Huehnergard has updated the research as well as corrected earlier mistakes in the work.
Many of the different periods and corpora of Aramaic have their own grammars. One of the most important is the work of Muraoka and Porten, which focuses on the Aramaic papyri discovered in Egypt.\(^{23}\) For students of Biblical Aramaic, the most important of these locations is Elephantine. This Jewish settlement had a temple and exchanged important letters with the priests in Jerusalem—letters that offer a unique window into the Jewish diaspora of the Persian period. Muraoka and Porten have supplied a thorough grammar of the Elephantine texts.\(^{24}\)

The most exhaustive dictionary for Aramaic in all of its different periods is the online resource from Hebrew Union College: The Comprehensive Aramaic Lexicon.\(^{25}\) A treasure trove of Aramaic material, this resource includes both texts and concordance searches for various corpora. Although the website is dated and the navigation less than straightforward, the information is reliable.

There are other dictionaries that are specifically oriented to Biblical Aramaic, but because the widely available BDB and HALOT cover this material well enough, it is not necessary to acquire a specifically Biblical Aramaic lexicon.\(^{26}\) Jastrow’s Dictionary is a unique resource for studying early Jewish Aramaic texts in that it is a dictionary of both the Aramaic and Hebrew portions of early Rabbinic material.\(^{27}\) Unlike BDB and HALOT, there is only one alphabetic ordering of the texts, so both Hebrew and Aramaic words will be found next to each other. This resource is valuable but should be supplemented by the more recent works of Sokoloff, who has made massive contributions to Aramaic lexicography.\(^{28}\) His dictionaries provide a comprehensive glossary for different corpora of Aramaic texts; they are invaluable resources for lexical studies in Aramaic.

**Syriac**

Though Syriac was a dialect of Aramaic, because of its cultural importance for Christians in the Middle East, and the abundant material written in Syriac, I treat it separately from Aramaic. Syriac is an important language for the study of the Hebrew Bible for two reasons: 1) it provides an important early edition of the text of the Hebrew Bible—as well as the New Testament; and 2) it is the best attested Northwest Semitic language that includes some vowel markers, which makes it a language helpful for restoring the vowels in non-Masoretic Hebrew and Ugaritic texts. A flurry of activity in the 19\(^{th}\) century pushed Syriac studies forward, though scholarship has not continued as rigorously in the 20\(^{th}\) and 21\(^{st}\) centuries. Thus, many of the standard reference works on Syriac were published over one hundred years ago.

Robinson’s Paradigms was originally published in 1915. This grammar has been revised by Coakley, and the 6\(^{th}\) edition is now available.\(^{29}\) With the 5\(^{th}\) and 6\(^{th}\) editions, this is still one of the standard pedagogical grammars for Syriac. One caution is worth considering: this work assumes some knowledge of Semitic languages. Muraoka has two pedagogical grammars that have slightly different foci.\(^{30}\) Both are also solid resources for Syriac grammar.

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\(^{24}\) For other periods and corpora of the Aramaic language see Gzella and the bibliographies in Weninger et al., *The Semitic Languages*; Woodard, *The Cambridge Encyclopedia of the World’s Ancient Languages*; Hetzron, *The Semitic Languages*.

\(^{25}\) [http://cal1.cn.huc.edu/](http://cal1.cn.huc.edu/)

\(^{26}\) For BDB and HALOT, see the section below on Hebrew Dictionaries.


The best Syriac dictionary is Payne Smith’s *Compendious Syriac Dictionary*. This book was originally published in 1903, but was reprinted by Eisenbrauns in 1998. An important reference supplement is Sokoloff’s translation and update of Brockelmann’s *Lexicon Syriacum*.

**Phoenician**

Phoenician and Punic, two of the closest languages to Biblical Hebrew, provide unique insight into the language and culture of the Canaanites. Phoenician is primarily known through inscriptions. Such languages are difficult to study for two reasons. First, inscriptions tend to be short and laconic, making it challenging to fill in gaps in understanding through the narrative logic of a text. Second, each new archaeological season uncovers new texts that can shed light on previous difficulties or overturn established theories. This makes the study of inscriptions fascinating, but also makes it difficult to keep up with the state of knowledge, particularly for those publishing reference works. Krahmalkov has attempted to provide reference materials that bring personal names as well as details of the Latin texts, which contain Phoenician texts. However, these works provide an idiosyncratic view of Phoenician and do not provide a bibliography in which alternative views are discussed. In addition, the citation of primary literature is incomplete. The most beneficial aspect of Krahmalkov’s works is that they are convenient, especially for Anglophones. The standard reference grammar is Friedrich’s *Phönizisch-Punische Grammatik*. Segert’s Phoenician grammar is also worth consulting. Additionally, the encyclopedic character of Lipiński’s *Dictionnaire* makes it a valuable resource to consult.

Though the dictionary of Krahmalkov is convenient, Hoftijzer’s is a more reliable reference tool. The latter not only covers the inscriptions of Phoenician and Punic, but also those of Aramaic, Hebrew and other Canaanite dialects.

**Canaanite in the Amarna Letters**

One of the earliest attestations of West Semitic is embedded in the Amarna Letters. These letters were written in Akkadian by the city rulers of Syria and Palestine during the Early New Kingdom period of Egypt. Even though they were not written in Canaanite, they display some marks of the authors’ first language. Distinguishing between what is a shared Akkadian pidgin and true West Semitic is difficult but necessary for those interested in the history and development of the Hebrew language.

33 There are distinctions between the different periods and eras of the Phoenician and Punic languages, but for simplicity’s sake I will refer to them both generically as Phoenician.
40 There are three aspects to the Canaan-Akkadian texts. Standard Akkadian and West Semitic are the two obvious aspects. But there is a shared innovation of Western Peripheral Akkadian that neither reflects the local languages of the West Semitic speakers, nor the Standard Akkadian they are trying to write. This third aspect, then, is an innovation that the scribes of Western Peripheral Akkadian all adopted. For lack of a better term, I have called this Akkadian pidgin.
The single most important work on the grammar of the Amarna Letters is Rainey’s *Canaanite in the Amarna Tablets*.\(^{41}\) It is thorough, covering most topics related to untangling and elucidating the Amarna Letters. Nonetheless, it sprawls over four volumes, many topics are covered multiple times, and they are not always treated consistently. This work alone is a major contribution to the study of the Amarna Letters, but Rainey has also had an edition of the Amarna Letters published posthumously.\(^{42}\) Rainey’s edition of the Amarna Letters is a careful and valuable work. It corrects many of the errors that are contained in Knudtzon’s edition, yet Knudtzon’s remains preferable.\(^{43}\) Ebeling has provided a complete index to Knudtzon’s edition of all of the words and forms and where they can be found in the Amarna Letters. The glossary found in Rainey’s edition should be a convenient reference tool, except that it is at the back of a book that is already too large, and this negates the one purpose it would serve. Also, some of the texts in Rainey’s edition are simply re-transcriptions of Knudtzon, as the texts have been lost after his collations. Tropper and Vita have produced a much more recent and systematic treatment of the Canaanite Letters from Amarna; it is a good companion volume to Rainey’s treatment.\(^{44}\)

**HEBREW LANGUAGE RESOURCES**

**Hebrew Reference Grammars**

Hebrew language study is in a better position currently than that of New Testament Greek from the perspective of the availability of recent reference works on grammar. One of the most thorough and up-to-date references for every aspect of the Hebrew language is Geoffrey Khan’s *Encyclopedia of Hebrew Language and Linguistics*.\(^{45}\) Each article in this work presents a different aspect of Hebrew grammar and linguistics with an up-to-date bibliography and linguistic sophistication, and it is edited by one of the foremost experts on Hebrew linguistics today. For reference grammars particularly, Muraoka translated and updated the footnotes of Joüon’s Hebrew grammar in the early 1990s. In 2009, Muraoka thoroughly revised the text and updated the bibliography to make it an excellent summary of the current state of research and a good guide to contemporary discussions of Hebrew grammar.\(^{46}\) Paragraph numbering largely remains the same across the different editions.

Joüon did not intend his grammar to be an exhaustive reference work, but rather a reference for intermediate students. Not every grammatical problem of the Hebrew Bible can be found in Joüon’s book, making it similar to the *Biblical Hebrew Reference Grammar*, also designed for intermediate students.\(^{47}\) Both grammars are very good at what they do. Muraoka provides a better bibliography, which is a bit more thorough. Van der Merwe provides easily comprehensible overviews of grammatical topics, which are arranged logically, rather than pedagogically. Another outstanding feature of Van der Merwe’s work is the incorporation of modern linguistics. Joüon and Muraoka are more thorough than Van der Merwe, while Joüon and Muraoka are more philologically oriented. Joüon and Muraoka also cover morphology of Hebrew better than Van der Merwe.


\(^{44}\) Josef Tropper and Juan-Pablo Vita, *Das Kanaano-Akkadische Der Amarnazeit* (Münster: Ugarit-Verlag, 2010).


In German, the works of Meyer and Richter are particularly noteworthy. Richter provides a solid exploration of morphology and syntax from a linguistic perspective.\textsuperscript{48} The examples in his grammar are illustrative rather than comprehensive, and the use of linguistic categories can be confusing to students less familiar with the terminology. Meyer’s \textit{Hebräische Grammatik} is a shorter reference grammar than GKC (see the next paragraph), but is also clearly organized and thorough.\textsuperscript{49} Meyer makes extensive use of Arabic and Ugaritic in his work even though the primary Ugaritic references he provides are to Cyrus Gordon’s book. Despite this shortcoming, this work is a valuable reference, especially for its clear exposition and organization.

The most thorough reference grammar of the Hebrew language is Gesenius, Kautzsch, and Cowley (GKC).\textsuperscript{50} The one place where GKC is beginning to show its age is in its discussion of syntax, especially the syntax of the Hebrew verbal system. Even in issues of syntax, however, GKC is a very reliable guide to the discussion of Hebrew grammar. The ongoing value of GKC is primarily found in its discussion of Hebrew morphology. GKC is available in many editions: the cheap Dover paperback reprints the uncorrected text of 1910; the later Oxford printings have a corrected index, but the most recent printings from Oxford have a lower quality of printing, paper, and glue than the Dover edition.

Putnam has compiled a scripture index of many different Hebrew grammars.\textsuperscript{51} It is better than many of the Bible software programs that will be mentioned below because he has included numerous German sources. On the other hand, the sources he chooses to include are not always intuitive. The biggest oversight is his omission of König’s magnum opus. And because Arnold and Choi’s syntax and Van der Merwe’s grammar were both published subsequently, Putnam’s work was not able build upon them.\textsuperscript{52}

**Hebrew Morphology**

Some of the best reference works on morphology have already been covered in the section above on comparative Semitics. One further book that deserves special mention is Fox’s \textit{Semitic Noun Patterns}.\textsuperscript{53} This dissertation was written at Harvard under John Huehnergard and provides an exhaustive look at Semitic nominal patterns. It is an extremely useful source for looking into Hebrew nominal patterns, as well as for reconstructing vowels in Ugaritic and other Northwest Semitic languages. Bauer and Leander’s \textit{Historische Grammatik} still provides one of the most detailed accounts of Hebrew noun patterns. In some respects, Sagarin’s \textit{Hebrew Noun Patterns} provides a certain utility, but is neither a replacement for Bauer and Leander nor for Fox.\textsuperscript{54}

Other aspects of Hebrew morphology can be found in journal articles and essay collections gleaned from the footnotes of Joüon and the bibliography of M. Smith.\textsuperscript{55}

\begin{itemize}
\item \textsuperscript{48} Wolfgang Richter, \textit{Grundlagen Einer Althebraischen Grammatik}, Arbeiten Zu Text Und Sprache Im Alten Testament 8, 10, 13 (St. Ottilien: EOS Verlag, 1973).
\item \textsuperscript{49} Rudolph Meyer, \textit{Hebräische Grammatik}, 3\textsuperscript{rd} (Berlin: De Gruyter, 1966).
\item \textsuperscript{51} Frederic C. Putnam, \textit{A Cumulative Index to the Grammar and Syntax of Biblical Hebrew} (Winona Lake, IN: Eisenbrauns, 1996).
\item \textsuperscript{52} The first edition of the later being Christo H. J. Van der Merwe, Jacobus A. Naudé, and Jan H. Kroeze, \textit{A Biblical Hebrew Reference Grammar}; Biblical Languages: Hebrew 3 (Sheffield: Sheffield Academic Press, 1999)
\item \textsuperscript{53} Joshua Fox, \textit{Semitic Noun Patterns} (Winona Lake, IN: Eisenbrauns, 2003).
\item \textsuperscript{55} Mark S. Smith, “A Bibliography of Ugaritic Grammar and Biblical Hebrew Grammar in the Twentieth Century,” 2004, \url{http://oi-archive.uchicago.edu/OI/DEPT/RA/bibs/BH-Ugaritic.html}
\end{itemize}
Hebrew Verbal Semantics

The study of Hebrew Syntax is producing a number of quality monographs. Waltke and O’Connor’s *Introduction to Biblical Hebrew Syntax* provided a much needed update to GKC and Joüon’s work on syntax, as well as an excellent bibliography.\(^{56}\) Arnold and Choi provides a convenient and reliable outline to students of Waltke and O’Connor’s basic approach to Hebrew syntax.\(^{57}\) Muraoka’s update to Joüon’s grammar also provides a current bibliography to many of the debates that are continuing to be hashed out regarding both Hebrew tense and the Hebrew stem system.\(^{58}\) Van der Merwe has done an excellent update that incorporates some leading syntactical studies that Muraoka didn’t incorporate as systematically.\(^{59}\)

The study of tense in the Hebrew verbal system has been hotly debated since the Middle Ages. McFall has chronicled this debate in his book-length survey.\(^{60}\) Providing a brief but excellent survey of medieval Hebrew grammarians’ understanding of the tenses, McFall’s book excels with the period between 1827 and the early 20th century. Unfortunately, comparative approaches to the issue are not treated well.\(^{61}\) Though McFall ends his survey in the 1950s, the debate continues unabated. Three excellent scholars have entered the fray: Cohen, Joosten, and Cook. Each has presented well-researched and convincingly-argued contemporary theories on the tense system.\(^{62}\) Cohen’s study concentrates on late Biblical Hebrew.\(^{63}\) Joosten focuses on the prose literature and argues for the temporal quality of the verbal system, but he is careful to distinguish it from a tense system.\(^{64}\) Cook argues for a system that is primarily aspectual, but also has a place for temporal reference.\(^{65}\)

Hebrew Lexicography

The study of Hebrew lexicography still stands in the shadow of Barr’s work of the 1960s, which heavily criticized the methodological foundations of the *Theological Dictionary of the New Testament (TDNT).*\(^{66}\) This critique precipitated a change in approach in the later volumes of *TDNT*, as well as the *Theological Dictionary of the Old Testament (TDOT)*. Barr’s linguistic approach, however, was already dated when he wrote his book, and several advances in linguistics should be applied to the practice of lexicography. A notable recent approach to linguistics that is gaining influence is systemic functional grammar, as practiced notably by Halliday.\(^{67}\) An excellent guide for students is Walton’s “Principles for Productive Word Studies”; it is a clear and practical introduction to doing word studies in Hebrew.\(^{68}\)

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\(^{59}\) Van der Merwe, Naudé, and Kroeze, *Biblical Hebrew Reference Grammar*.

\(^{60}\) Leslie McFall, *The Enigma of the Hebrew Verbal System: Solutions from Ewald to the Present Day* (Sheffield: Almond Press, 1982).

\(^{61}\) This weakness is filled somewhat by both Waltke, *An Introduction to Biblical Hebrew Syntax*, 343-377, and Cook (mentioned below).


\(^{63}\) Ohad Cohen, *The Verbal Tense System in Late Biblical Hebrew Prose* (Winona Lake, IN: Eisenbrauns, 2013).


Hebrew Dictionaries

The most recent dictionary of Biblical Hebrew in English is Clines’s *Dictionary of Classical Hebrew (DCH).* This enormous project applies a sophisticated linguistic methodology and a near-concordance-level comprehensive analysis of all the words of the Hebrew Bible. One significant weakness of this work is its hesitance to use comparative Semitic data. In the Hebrew Bible, there are many, many words that are only attested a few times. In these cases, the comparative approach is a necessary tool for understanding what some of these words might mean. *DCH* is not always consistent in its methodological commitment to synchronic linguistics.

Kohler and Baumgartner’s dictionary *Hebrew and Aramaic Lexicon of the Old Testament (HALOT)* provides an important update and translation of the 1970s German lexicon. This dictionary utilizes both the insights from the publication of the Dead Sea Scrolls, as well as more recent developments in comparative Semitics. The two-volume student edition is a bit more difficult to use than the five-volume edition, but the price difference is considerable. As good as *HALOT* is, however, Brown, Driver, and Briggs’s lexicon (BDB) is still a formidable resource. One of the biggest advantages of BDB is its treatment of particles and prepositions. The depth of insight and compact presentation is unmatched in any Biblical Hebrew resource. BDB is organized by root, which is both an advantage and a disadvantage. The advantage of organization by root is that all of the related lexemes are close together. The disadvantage is that occasionally the roots are divided incorrectly. For example, *hštḥwh* is classified as *šḥh* and not *ḥwy*, but these missed roots are few and should not be exaggerated. Also, organization by root presupposes knowledge of Hebrew morphology, which can be a challenge for students.

Three other dictionaries worth considering are Clines’s *Concise Dictionary, Kaddari’s Milon,* and the 18th edition of Gesenius’s dictionary. Clines’s concise dictionary lacks many of the advantages of *DCH,* and the weaknesses of the more comprehensive volumes are amplified. It is an affordable resource for students and easier to use than BDB, but not a replacement for it. Kaddari’s book is a good dictionary in modern Hebrew, providing glosses, ample examples, and some comparative Semitic discussion. The 18th edition of Gesenius is thoroughly revised: the etymological sections as well as the lexicographical discussions. The organization is strictly alphabetical and a good resource for Hebrew lexicography in German.

Hebrew Theological Dictionaries

Despite Barr’s critique, the production of theological dictionaries has continued. The Old Testament companion to the *Theological Dictionary of the New Testament* has taken Barr’s critique seriously and provides an encyclopedic approach to each word. Though it is a wellspring of information, students should be warned about the potential pitfalls of using dictionaries like this. The biggest strength of *TDOT* is the presentation of information, but one weakness is that there is not much synthesis in most of the articles. VanGemeren’s *NIDOTTE* provides a bit more synthesis than *TDOT,* but the articles are shorter. Both are solid works in the category of theological dictionary.

Hebrew Concordances

Although computer tools have revolutionized the study of Hebrew grammar and semantics, there is still a place for hard copies of concordances. Pride of place amongst concordances goes to Even-Shoshan’s *New Concordance*, published by Baker.\(^7^5\) Unfortunately, the Baker edition is now out of print, though the concordance is still available through Israeli publishers. The Baker edition has two advantages over the Israeli printings. First, the verse references have been translated into English references, while the Israeli printings use Hebrew book names as well as Hebrew letters for the chapter numbers. Second, John Sailhamer provided an excellent insert for the Baker edition that both describes how to use Even-Shoshan’s concordance and provides some principles for good word studies.\(^7^6\)

Another standard concordance for the study of Hebrew is Mandelkern’s concordance, which is also out of print.\(^7^7\) This concordance stands out by being both more thorough in its citations and organized by root like BDB, making it easier to find all the forms of a given root.

Both Even-Shoshan and Mandelkern provide a level of accuracy and syntactical information that has not yet been matched by computer programs and databases.

Databases and Tools for Biblical Hebrew

Increasingly scholars are using digital tools to aid their work with Hebrew, and the major Bible software products improve with each release. Logos and Accordance are frequently used tools with benefits for the student of biblical Hebrew, and the now-defunct Bibleworks continues to have value.\(^7^8\) Logos provides a research-library quantity of tools and secondary texts for Biblical studies. Many of their resources should only be used with caution, however, or not at all. For example, Logos provides a pricey Ugaritic library add-on. None of the texts in this library provide up-to-date resources for the study of Ugaritic. Many of them are by Dahood, whose work was considered to be on the fringe even as it was being produced and has not stood up under the pressure of subsequent research. Likewise, Gordon’s *Handbook for Ugaritic* was a great service when it was first written but has since been surpassed by the works of Pardee and Tropper.\(^7^9\) In addition, resources in other modern languages are thin or non-existent, while others are products of poor scholarship. In earlier releases, Logos lagged behind other programs in the ability to search Hebrew. The last few releases have shown great strides in improving primary language resources.

Accordance has emerged as a strong alternative to Bibleworks, which has in the past been the preferred tool of Biblical scholars, though Bibleworks is no longer being updated or supported. The most recent releases of Accordance have more resources than the last releases of BibleWorks, and historically Accordance has done a better job of curating its collection. It also excels at providing powerful search capabilities for the primary languages and sources. The biggest disadvantage of Accordance is its higher price. Logos and Accordance both run on both Windows and MacOS, though Accordance runs best on MacOS and Logos runs about the same on both Windows and MacOS, though it is slower than Accordance.

There are also several open source resources for the study of the Hebrew Bible, of which the most sophisticated is SHEBANQ.\(^8^0\) Built on a special database, Emdros, which uses MQL as its query language, SHEBANQ provides several significant advantages over XML, one being that SHEBANQ data can use

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\(^7^7\) Solomon Mandelkern, *Veteris Testamenti Concordantiae Hebraicae Atque Chaldaicae* ([s.l.]: Margolin, 1925).


\(^7^9\) See the above section on Ugaritic.

\(^8^0\) [https://shebanq.ancient-data.org/](https://shebanq.ancient-data.org/)
overlapping elements. MQL is a powerful language, but it does require some effort to learn. Yet, as easy as the major Bible programs have tried to make searching, it is still difficult to learn how to get the most out of a Bible program. Furthermore, any accommodations for ease of use will also make sacrifices for power and malleability. MQL will do much more than even the most convoluted search in other Bible programs. The SHEBANQ syntax analysis is also available as an Accordance module. Another open source tool, CATSS, has its Septuagint and lexical data available online, though in plain text Betacode format, which requires some knowledge of computer programming for use. There are other free tools for the Biblical languages online.

Those considering computer tools should consider licensing concerns. Porter accurately addresses the issues involved in computer tools for the New Testament in his first two chapters. For example, he points out that there are many errors in the text, and when it comes to much more involved analysis where there are many disagreements, it is not clear who decides what is an error and what is not. As Bible programs encode more and more interpretive decisions, this becomes a more significant problem. There is one strength of open source texts: there is (or can be) a clear procedure for discussing differences of opinions and opening tickets for errors in the metadata. Second, open source tools are only limited by the user. For the Bible programs, many questions that a user can ask cannot be answered because of the constraints of either the user interface or the nature of the database underlying the software. With open source texts, if the user can create the algorithms, she can run the query. This is what makes the difficult learning curve of MQL worth the effort: there is no limit to the tool if one learns how to use it! One final note about Bible Software is the consideration of ownership. When a user buys a physical book, it is hers until she loses it, sells it, or destroys it. When she buys commercial Bible software, however, it is hers to use only as long as she maintains the operating system that came out when she bought it, or continues to pay a few hundred dollars every few years to upgrade to the latest version. If any of these companies should ever close, as Bibleworks did recently, or should a company decide that older licenses will no longer be honored, legacy users could be at risk of losing everything. Materials that are protected under a digital rights management system are never owned by the user; they are only rented by the user. This becomes even more disheartening to realize when some modules are more expensive in digital form than they are in print. Computer tools are a great resource for analyzing Hebrew, but the total cost is much more than the initial sticker price.

RESOURCES FOR THE LATER STAGES OF HEBREW

Mishna

Mishnaic grammar contributes to the study of Biblical Hebrew both in its demonstration of the continuation of Hebrew as well as in displaying grammatical features that are important for elucidating some grammatical forms of the Dead Sea Scrolls and the Bar Kokhba letters. The dictionaries by Jastrow and Even-Shoshan are adequate for covering the unique vocabulary of the Mishna.

In terms of grammar, the biggest problem in studying the Mishna is the quality of the texts. Most of the printed editions of the Mishna have gone through a process of editing to try to make Mishnaic Hebrew read more like Biblical Hebrew. Therefore, individual manuscripts are primary tools for the study of Mishnaic

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81 Aaron Christianson has made a very valuable tool in the Python computer language that takes Betacode Greek and Hebrew and turns it into Unicode text. See https://github.com/ninjaaron/betacode.
82 See for example Crosswire (http://crosswire.org), Davar4 (http://www.davar3.net/faq.html), and StepBible hosted by Tyndale House Cambridge (https://www.stepbible.org/).
grammar. Fortunately, many of these texts have been digitized, and seminal studies have been published on others.

Many of the best studies on Mishnaic Hebrew today are published in Modern Hebrew. A few works in English that should be mentioned are Segal’s *Grammar* and Perez’s *Introduction*. Segal’s is older, but still serviceable. Perez covers more than the period of the Mishna. In Hebrew, Azar’s book has provided a detailed look at the syntax of the Mishna. Also, Yalon’s work gives a good presentation of the vocalization found in the various manuscripts of the Mishna.

Modern Hebrew

Israeli scholars are publishing a wealth of scholarship in all periods of Hebrew, and there are many good tools to aid in reading that scholarship. Glinert’s *Modern Hebrew* is a good practical grammar for beginning students of Modern Hebrew. The chapters are clear and well laid out, and the exercises are well planned. For reference questions, Coffin’s grammar is serviceable. For questions of Hebrew grammar beyond these two works, one will need to look at either textbooks for the 5th and 6th levels of Hebrew or special publications.

The best dictionary for Modern Hebrew is Even-Shoshan’s. It is a comprehensive dictionary with ample citations from all periods of Hebrew. For quick lookup of Hebrew words for English speaking students, Morfix is an excellent website.

CONCLUSION

Research into the Northwest Semitic languages continues to progress, though not always evenly. The understanding of Hebrew syntax is in a much better state than it was at the turn of the 20th century, when Kautzsch and Cowley published their update of Gesenius’s venerable grammar. The comparative work of that period, however, is still enduring through the works of Bauer and Leander, and even Brockelmann. Moreover, scholarly understanding of Ugaritic has improved in leaps and bounds, so much so that even works published twenty-five years ago must be used with great care.

The future of computational work on Hebrew and the surrounding languages is bright and exciting, especially if the dangers of closed and proprietary systems can be balanced with an openness to progressing scholarship. Not all of the recent research into Semitic grammar has replaced the work of previous generations, and even the most sophisticated algorithm should be developed in dialogue with the masters of the last century, whose work continues to endure.

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90 Even-Shoshan, *Milon Even Shoshan*.

91 [http://www.morfix.co.il/](http://www.morfix.co.il/).
BIBLIOGRAPHY


