On Memorization

Like it or not, much of your work at the seminary (and throughout life, actually) involves memorization. The currently accepted model of memory divides a person's memory into short-term memory and long-term memory. In this model, *memorization* is the process of moving data from short-term memory to long-term memory. The difference between the two "memories" is similar to the difference between the random-access memory in your computer and the hard drive (or solid-state drive) that you use to store files.[1] The theological paper that you may be writing on the computer resides in RAM while you are typing the paper, but if you don't "save" the paper to the hard drive before turning off the computer, it will evaporate. The RAM is short-term memory; the hard drive is long-term memory.

No one method of memorization is superior to another. Some methods of memorization work well for some people, while the same methods are entirely useless to others. In addition, no one is obligated to use only one method of memorization for all tasks. A method that works well for an individual in some cases may be replaced by a different method in other cases. It is thus helpful to have some idea of the range of methods available, and to pick and choose from those methods the one that works best for a particular student for the particular item that is being memorized.

First, let's look at the old standard, rote memorization. It has its place—I find it hard to think that Bible verses, for example, can be learned easily in other ways. However, there are plenty of ways to *improve* rote memorization. Simply using all four aspects of a language (reading, writing, hearing, speaking) will speed up memorization, even rote memorization. Don't just *look* at a Bible verse or word and "think" it; say it out loud. Saying the word or verse out loud helps to impress it on your memory, that is, move it from short-term to long-term memory.

> Charles Berlitz says that saying a word or phrase aloud ten to twenty times is more effective a learning technique than merely reading the same item fifty to one hundred times. Likewise, seeing a word or phrase in your grammar book fifty times does not secure it in your memory as effectively as seeing it two or three times and then coming across the same word or phrase by surprise in a newspaper or magazine or hearing it on a cassette or in a radio broadcast or a movie or in conversation with a native speaker.[2]

Strengthen the process of memorizing by adding other senses: write the word out; listen to it. This latter point is especially important when trying to learn biblical verses in Hebrew.

One currently accepted (and proven) practice for rote memorization is spaced repetition. This method is as old as flashcards. If you have used flashcards, you have

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[1] This comparison is not meant to be an exact description of memory. The picture of memory here is simply meant to give you a practical way of thinking about memory—a view that helps you understand and apply the practical hints included in this section.

[2] Barry Farber, *How to Learn Any Language: Quickly, Easily, and On Your Own!* (Barnes & Noble Books, 1991), 61.

probably practiced spaced repetition without realizing it. If you ever put a card for a vocabulary word you know well at the back of the pack, while you kept a card for a word that you have trouble remembering near the front of the pack, you were practicing spaced repetition. Modern spaced repetition software (SRS) automates this whole process. Such software brings words that you identify as difficult to remember more often into view, while "easy" words are reviewed far less often.

Anki[3] is perhaps the best-known example of SRS, although there are many others. Most of the websites mentioned above for working with Hebrew vocabulary implement their own version of spaced repetition. While websites may or may not give you the opportunity to change vocabulary cards, independent applications give you that ability. You can also employ additional senses to strengthen your memory work with a computer application: use images instead of words on the (virtual) back of the (virtual) cards. Pasting images into a stack of cards is very easy on the computer. Add your own sound file with a recording of the word, and you have about as many senses as possible in operation.

Rote memory is not the only technique for memorization, nor is it generally considered the most effective or efficient. There are a variety of mnemonic devices that one can use for memorization. "A mnemonic device is a memory technique that helps one encode and later recall information."[4] When it comes to ways to memorize rules or lists, *all* of us have used memory techniques in the past that were not simply rote memorization. Most of us learned the English spelling rule "*i* before *e* except after *c* or when sounding like *a* as in *neighbor* and *weigh*." The order of the colors in a rainbow were recalled with the name "Roy G. Biv." Few students of earth science would have been able to memorize the essential nutrients for plant growth in order by atomic symbol (C H O P K N S Ca Fe Mg B Mn Cu Zn Mo Cl) without the phrase "C. HOPKiNS CaFe, Managed By Mine CuZins, Mo and Claude." There are some slight variations to the end of the phrase, depending on what research has added to the list of essential nutrients.

Hebrew lends itself quite easily to mnemonic devices. Any sequence of letters can become a word or two simply by adding vowels. You are probably quite familiar with the acronym "בג״ד כפ״ת"—a mnemonic device—for the letters that can take a *dagesh forte*. The sequence of the ten plagues is דָּם, צְפַרְדֵּעַ, כִּנִּים, עָרוֹב, דֶּבֶר, שְׁחִין, בָּרָד, אַרְבֶּה, חֹשֶׁךְ, מַכַּת בְּכוֹרוֹת. Rabbi Yehudah took the beginning letters of the ten plagues and produced the acronym דְּצַ״ךְ עַדַ״שׁ בְּאַחַ״ב.[5]

You could rightly argue that these rules had to be memorized by rote memoriza-

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[3] Available for download at https://apps.ankiweb.net/. Versions for all platforms except for Apple's iOS are free. The AnkiMobile version for Apple devices is available from the Apple App Store.

[4] Adam J. Howell, Benjamin L. Merkle, and Robert L. Plummer, *Hebrew for Life: Strategies for Learning, Retaining, and Reviving Biblical Hebrew* (Baker Academic, 2020), 71.

[5] The Passover Haggadah recites the story thus: אֵלּוּ עֶשֶׂר מַכּוֹת שֶׁהֵבִיא הַקָּדוֹשׁ בָּרוּךְ הוּא עַל הַמִּצְרִים בְּמִצְרַיִם, וְאֵלּוּ הֵן: דָּם, צְפַרְדֵּעַ, כִּנִּים, עָרוֹב, דֶּבֶר, שְׁחִין, בָּרָד, אַרְבֶּה, חֹשֶׁךְ, מַכַּת בְּכוֹרוֹת. רַבִּי יְהוּדָה הָיָה נוֹתֵן בָּהֶם סִמָּנִים: דְּצַ״ךְ עַדַ״שׁ בְּאַחַ״ב.

tion. The rules, however, were "memorable"—they move quite easily from short-term to long-term memory. Rules are memorable when they use rhythm and rhyme (the "*i* before *e*" rule)—the rhythm and rhyme aid long-term memory. Short phrases (Roy G. Biv) are much easier to memorize than a list of seven colors. And a somewhat nonsense phrase about a café is *much* easier to memorize than a sequence of atomic symbols; plus, the ungrammatical (at least, in modern English) *mine* in the phrase actually helps memory. Once you hear the words "mine cousins," they stick in memory because of their oddity. It's almost impossible *not* to memorize the phrase.[6]

The authors of *Hebrew for Life* mention these seven mnemonic devices:[7]

Use your imagination and association
Use substitute words
Use acronyms
Use silly stories
Use English cognate terms
Use the method of *loci* (memory palace)
Use an alternative method of *loci*

There is nothing mysterious about any of these; you can certainly read about them in *Hebrew for Life*, but you are are not limited to that book. Except for the use of an alternative method of *loci* (which is particular to Hebrew), you can find discussions of these mnemonic devises in many places. We've already mentioned the use of acronyms above. For additional information on some of these memory devices, you could perhaps start with the Wikipedia article on "Mnemonic," which even includes a few examples of mnemonics for foreign languages (including some for Hebrew). For some primary sources on mnemonics, you could read any of the books by Harry Lorayne (several are available in the Internet Archive).

You have no doubt encountered some mnemonics in your study of Hebrew. For example, a *ḥireq* preformative vowel, a *dagesh forte* in the first root letter, and a *qamets* under the first root letter identifies a verb form as a *niph'al* imperfect. This is the "diagnostic" (using Van Pelt's terminology) or the "mantra" (using Dr. Tietz's terminology, which includes seeing the three elements as a visual triangle) or the "indicator" or the "mnemonic" for this verb form—a rule of thumb that helps you identify a verb in the text. Another example of a similar mnemonic: the *qal* active participle (masculine singular) has a *ḥolem* (or a *ḥolem vav*) followed by a *tsere*.

Note, however, that these mnemonics depend on having a written text in front of you. Can we develop parallel mnemonic for the *sound* of a word? Yes, we can. For the imperfect *niph'al*, we first note that doubled consonants are not pronounced differ-

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[6.] When you add music to the mix, you get another powerful help in memorizing. Those of you old enough to remember when advertisers used catchy jingles (rhythm, rhyme, *and* music) in their advertisements can readily recall those jingles even decades after hearing them, because they *stick* in memory almost effortlessly.

[7.] Howell et al., "Develop a Next-Level Memory," chapter 4 in *Hebrew for Life*, 67–87.

ently from single consonants in Israeli Hebrew. So, you can't "hear" the *dagesh* in the first root letter. You would only hear a change in pronunciation for the three בג״ד כפ״ת letters that change pronunciation when they have a *dagesh*. That leaves only the sounds of the vowels: an /i/ vowel followed by an /a/. It turns out that that is sufficient to identify a verb as an imperfect *niph'al*: the first two vowels are /i/-/a/. We've simplified the rule by eliminating one element—and it can be applied to *either* written or spoken Hebrew. Once we've gotten this rule of thumb, we can generalize it a bit more. The general rule of thumb does not include the vowel under a first-person singular preformative, as well as the vowel under the preformative in a I-Gutteral and I-א verb (an /e/). A slight change lets us include also this situation: An i-class vowel (/i/ or /e/) followed by an /a/ identifies a *niph'al* imperfect.

Similarly, it turns out that we can simplify slightly the rule for the *qal* participle. The vowel sound of both the *ḥolem* and the *ḥolem vav* is [o]. And the sound of the *tsere* is, of course, [e]. So, if you listen for the sound, and you hear an /o/ followed by an /e/, you have a masculine singular *qal* participle.

If you are interested in studying methods of memorizing words, you might try this book available in Kroemer Library: Blair W. Kasfeldt, *Biblical Hebrew, Vocabulary Made Easy! Master 500 Hebrew Words in 28 Days!* 3rd expanded and rev. ed. ([Fort Wayne, IN?]: [B. Kasfeldt?], 2013). Keep in mind that mnemonic devices work best if you make up your own memory aids. This book may help you to do this by giving you an idea of how to create memorable "hooks" for Hebrew vocabulary. And, if you want to see examples of visual mnemonics, you can check out Cartoon Hebrew (http://www.cartoonhebrew.com). The site uses cartoon images as visual mnemonics to help you remember the Hebrew letters. (An internet search for "learn Hebrew alphabet" will provide many additional examples.)

Another good source for learning about mnemonics for foreign-language vocabulary is the chapter "Harry Lorayne's Magic Memory Aid" in Barry Farber's book *How to Learn Any Language*.[8] Farber provides in that chapter a number of examples in many languages (one example in Hebrew) of Harry Lorayne's method of associating the word with a colorful visual image (this is the same as *Hebrew for Life*'s "use silly stories" and Kasfeldt's mnemonics in *Biblical Hebrew, Vocabulary Made Easy!*). Lest one thinks that the entire "scenario" of the association will always encumber recalling words from memory, Farber adds this note: "One beauty of the system is, the association that helps you capture the word falls away and disintegrates. Once you've learned the words, the 'crutch' obligingly disappears."[9] The purpose of the association is to move the word as quickly and as easily as possible into long-term memory. Once a word is solidly in long-term memory, the mind no longer needs the association—although it is always there if the word slips out of long-term memory, and you have to recall it again.

[8.] Farber, "Harry Lorayne's Magic Memory Aid," in *How to Learn Any Language*, 81–96.

[9.] Farber, *How to Learn Any Language*, 85.