

CHAPTER 4

VALENCY: THE INTERSECTION OF SYNTAX AND SEMANTICS

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As the analysis of ancient texts progresses past lexical and morphological levels to syntax, the syntactic structures highlight the inadequacy of earlier lexicographic studies. In particular, the lexical determination of verbal arguments and semantic contrasts associated with variations in verb argument structure have been insufficiently treated by the standard lexica. Valency theory provides a framework for analyzing these variations in a way that advances both syntactic and lexical analysis of these ancient texts. In this paper I present a theory of valency that has been developed out of the Accordance syntax project and discuss its contribution to our knowledge of Biblical Hebrew syntax and lexicography.

1. INTRODUCTION

Along with the familiar triad of tense, aspect, and mood, *valency* is a defining property of verbs.¹ Although in Hebrew all these properties involve interaction among verbal lexemes, inflection, and syntax, valency is particularly associated with the system of *binyanim* in contrast to the association of tense, aspect, and mood foremost with the verbal conjugations. Traditionally, valency has been treated under the rubric of either voice or transitivity. However, a valency approach to Biblical Hebrew has two distinct advantages over these traditional categories: firstly, valency analysis is not hampered by the traditional categories of classical grammar; secondly, valency focuses on the nexus between verbs (that is, lexeme and *binyanim*) and argument structure (syntax). Because of this particular focus, valency studies can

¹ Though valency is not restricted to verbs (e.g., Herbst et al., *A Valency Dictionary*, treat valency patterns of English verbs, nouns, and adjectives), my study of valency in Biblical Hebrew has been restricted to verbal valency.

potentially contribute to Biblical Hebrew lexicography and our understanding of the *binyanim*, as well as to the decipherment of Biblical Hebrew syntax.

In this paper I introduce the concept of valency and contrast it with voice and transitivity (section 2). After this introduction, I briefly summarize approaches to valency in Hebrew grammars (section 3), explore some of the issues involved in analyzing valency patterns in Biblical Hebrew, including addressing some objections to such a study (section 4), and finally, I illustrate with specific examples how my approach to valency advances our understanding of the Biblical Hebrew lexicon and syntax (section 5).

2. UNDERSTANDING VALENCY

The term valency derives from the field of chemistry. In linguistic usage the term refers to the number of syntactic elements a verb requires or permits combining with; in short, valency refers to a verb's syntactic "combining capacity." Although theoretically limitless, the typical range of verbal valency is zero to three constituents. These four patterns—avalent, monovalent, bivalent, and trivalent—are illustrated in (1) with examples in both English and Biblical Hebrew. The constituents that define each verb's valency pattern are underlined and marked by a subscript in each example.

- (1) a. Avalent:

תִּשְׁלֵג בְּצִלְמוֹן

(*It*) was snowing on *Zalmon*. (Ps 68:15)

- b. Monovalent:

לִבִּי שִׂמַח לְבִי

Therefore ₁*my heart* rejoices. (Ps 16:9)

- c. Bivalent:

יְהוָה תִּפְלֹתַי יִקַּח

₁*Yhwh* will accept ₂*my prayer*. (Ps 6:10)

- d. Trivalent:

וַתִּשְׂקוּ אֶת־הַנְּזִירִים יַיִן

₁*You* gave ₂*wine* ₃*to the Nazarites*.

(or, ₁*You* made ₂*the Nazarites* drink ₃*wine*.) (Amos 2:12)

These examples are self-explanatory. However, let me note that the avalent pattern illustrated in (1a) is relatively rare, because a well-formed clause typically requires both a subject and a predicate. What defines the examples in (1a) as avalent is that even where they employ a "dummy" subject pronoun, as in the English example and gloss, that pronoun fulfils no thematic role.² Therefore, the null-subject strategy

² "Thematic role" refers to the semantic role an argument performs, such as agent, patient, instrument, cause, locative, source, etc. (see Crystal, *Dictionary of Linguistics and Phonetics*, 483). This understanding of the "dummy pronoun" importantly distinguishes true

in Biblical Hebrew should not be interpreted as a valency-reducing feature of the language;³ in all cases except the rare aivalent pattern illustrated in (1a), clauses that lack an overt subject in Biblical Hebrew are best analyzed as having a null-subject constituent that serves the appropriate thematic role in the clause.

Transitivity is the analysis of the relationship of a verb to its dependent constituents, and as such clearly intersects valency. However, transitivity is a more narrow concept than valency in two crucial ways. First, transitivity analyzes only "internal arguments"; that is, the verb-phrase-internal constituents, in contrast to valency's scope of analysis that includes both internal and external arguments (that is, the subject).⁴ Second, transitivity treats only the verb-dependent constituents that are found in traditional grammar, that is, direct and indirect objects; it does not take into account other constituents governed by the verb that might be included in a valency analysis. As such, the transitivity approach of traditional grammar leads to awkward discussions about so-called accusative noun phrases that function as something other than direct object and other "objects" of the verb as mediated by prepositions.⁵ Given transitivity's exclusion of the subject and some prepositional constituents in its analysis, it only partially correlates with valency, as illustrated in (2).

- (2)
- a. Aivalent verbs are intransitive.
 - b. Monovalent verbs are intransitive, but intransitive verbs may have any valency.
 - c. Bivalent verbs may be intransitive or transitive.
 - d. Transitive verbs are at least bivalent; they cannot be monovalent.
 - e. Trivalent verbs are often ditransitive, but they may be transitive or, rarely, intransitive.
 - f. Ditransitive verbs are always trivalent; they cannot be monovalent or bivalent.

More importantly, a valency analysis better clarifies the relatedness between argument structures such as those in (3) than the traditional grammar analysis in terms of transitivity allows: valency theory identifies both the noun phrase in (3a) and the prepositional phrase in (3b) as *complements* of the verb זָרַח in each example.

subjectless constructions from those with "indefinite" subject referents, such as the impersonal constructions in Biblical Hebrew (cf. Waltke and O'Connor, *Biblical Hebrew Syntax*, §4.4.2 and §22.7a).

³ Cf. Andersen and Forbes, *Grammar Visualized*, 167.

⁴ See Crystal, *Dictionary of Linguistics and Phonetics*, 34.

⁵ E.g., Waltke and O'Connor, *Biblical Hebrew Syntax*, §10–11.

- (3) a. Bivalent אָחַז with noun phrase complement:

וַיִּאָחַזוּהוּ פְּלִשְׁתִּים

¹*The Philistines* seized *him*. (Judg 16:21)

- b. Bivalent אָחַז with בְּ prepositional phrase complement:

וַיִּאָחַז בְּפִילִגְשִׁי

(₁) seized *my concubine*. (Judg 20:6)

Voice analyzes the relationship between the syntactic subject and object and the thematic roles of agent and patient as determined by the verb. For example, the transitive verb with active voice in (4a) takes a subject as agent and the object as patient, whereas the corresponding passive verb in (4b) expresses the same underlying sense while switching the patient role to subject and encoding the agent role with a prepositional phrase.

- (4) a. *The* Subject & Agent *opera singer* sang Object & Patient *an aria*.

- b. Subject & Patient *An aria* was sung Agent *by the opera singer*.

Voice is therefore, like transitivity, both a more narrow concept than valency and derives from traditional grammar, in which the Latinate orientation focuses on morphological distinctions of voice. In Biblical Hebrew voice distinctions are expressed in large part by *binyanim*, and in her study, Maya Arad has observed several correlations among transitivity, voice distinctions, and the *binyanim*: according to Arad, both Niphal and Hitpael verbs are intransitive, and the Niphal may also frequently be passive; the Pual and Hophal *binyanim* are limited to verb-derived verbs, as opposed to root-derived verbs, in that they always encode the passive counterpart of the Piel and Hiphil verb of the same root, respectively.⁶ However, because valency is broader than either transitivity or voice, these correlations do not help us escape having to determine the valency patterns of these passive and intransitive verbs, despite the fact that they will tend to have lower valency than verbs in the Qal, Piel, and Hiphil *binyanim*.

3. APPROACHES TO VALENCY

Valency gets only the slightest mention in recent Hebrew grammars, whose approach generally still betrays a traditional-grammar orientation to valency phenomena. For example, Waltke and O'Connor note that “[g]rammarians sometimes distinguish between adjuncts and complements, the former signifying an optional constituent of a sentence, the latter an obligatory constituent.”⁷ However, they proceed to translate these notions into the traditional-grammar categories of “direct-object accusative” and “adverbial accusative.” Van der Merwe, Naudé, and Kroeze escape the traditional-grammar approach somewhat more successfully than

⁶ Arad, *Roots and Patterns*, 184–85.

⁷ Waltke and O'Connor, *Biblical Hebrew Syntax*, §10.2a.

Waltke and O'Connor and embrace the terminology of complement and adjunct in a more thorough-going approach. In addition, they revise the inherited and simplistic understanding of these categories embraced in Waltke and O'Connor by focusing on the semantic factors rather than the syntactic ones. They define complements as constituents that "cannot be omitted without changing the meaning of the clause or without making the clause ungrammatical," whereas adjuncts "add information to the core of the clause and may be omitted without changing the basic meaning of the clause." Further, they state in an accompanying footnote that "[t]he complement of a verb may be omitted, but then only when it can be inferred from the context of the sentence."⁸ Unfortunately, measuring meaning change and grammaticality on a closed corpus for an ancient language is no simple task.

More recently, Andersen and Forbes in an "aside" on valency in their *Biblical Hebrew Grammar Visualized* reject a valency approach as problematic on three fronts.⁹ First, adopting Crystal's standard definition of valency as analyzing the number of valents with which a verb combines to create a well-formed sentence,¹⁰ Andersen and Forbes object that the notion of well-formedness is too vague to be analytically useful for Biblical Hebrew. To illustrate, they provide a statistical analysis of the five verbs that most frequently occur with subjects and those that most frequently appear with a direct object to illustrate how inconsistently the valency pattern of these verbs are. Second, they draw attention to the inherent danger of analyzing English translations of the Hebrew data rather than the Hebrew valency patterns themselves insofar as the semantics and accompanying valency patterns do not match between languages. Third, they note that valency analysis has limited applicability because of the dearth of data; specifically the high incidence of low-frequency verb forms does not allow us to draw valid generalizations from the data.

However, the latter two objections are no serious grounds for abandoning a valency analysis of Biblical Hebrew inasmuch as they apply equally to any linguistic study of Biblical Hebrew. For instance, I have drawn attention to precisely the danger of translation confusion with the target language in my study of tense, aspect, and modality in Biblical Hebrew.¹¹ And given the closed and uneven data set that constitutes Biblical Hebrew, any linguistic generalizations about the language must be seen as tentative to one degree or another. By contrast, their objection regarding well-formedness is more serious, especially given the lack of native speakers of Biblical Hebrew: methodologically we must assume that all of the Biblical Hebrew data is well-formed until a case is made to the contrary. However, even in valency studies of spoken languages, well-formedness fails as the central criterion for distinguishing complements and adjuncts, and some studies retreat to

⁸ Van der Merwe, Naudé, and Kroeze, *Hebrew Reference Grammar*, §33.

⁹ Andersen and Forbes, *Grammar Visualized*, 165–68. Cf. also chapter 6 in the present volume, A. Dean Forbes, "The Proper Role of Valency in Biblical Hebrew Studies."

¹⁰ Crystal, *Dictionary of Linguistics and Phonetics*, 508.

¹¹ Cook, *Time and the Biblical Hebrew Verb*, 56.

the use of statistics in making such judgements.¹² I submit that by reassessing the complement–adjunct distinction as I propose below, this difficulty which Andersen and Forbes point out can be obviated to the degree that it is no longer a serious hindrance to a fruitful valency analysis of Biblical Hebrew.

4. ISSUES IN VALENCY ANALYSIS

This brief survey suggests two cautions in developing an analytically useful valency approach to Biblical Hebrew: first, we must develop a more sophisticated understanding of complements and adjuncts than the simplistic identification of these two arguments as obligatory and optional, respectively; on the other hand, we need more rigorous guidelines than a simple vague notion of “well-formedness,” as Andersen and Forbes point out. What is needed is an approach that recognizes the instinctually correct idea that complements are more integral to the predication than adjuncts and analyzes this distinction in a nuanced way that involves both syntactic and semantic factors, given that valency involves the intersection of these two domains. In this way valency study can contribute to our understanding of Biblical Hebrew syntax and lexical semantics, and contribute to the philological task of deciphering the Hebrew texts of the Bible.

Consider the English examples in (5): despite the variation of valency and transitivity of the verb *give*, all three expressions are equally “well-formed,” grammatically speaking.

- (5) a. *I give and I give, but do I ever receive any thanks?* (Monovalent/intransitive)
 b. *When I heard of her passing, I gave flowers in her memory.* (Bivalent/transitive)
 c. *I gave flowers to my wife on Valentine's day.* (Trivalent/ditransitive)

The simplistic and binary distinction between complement and adjunct is insufficient for analyzing these various argument structures. The two “graded” divisions in (6) have been suggested as alternatives to the traditional binary distinction of complements and adjuncts.

- (6) a. Primary complements — Secondary complements — Adjuncts¹³
 b. (Obligatory) complements — Optional complements — Contextually optional complements — Adjuncts.¹⁴

The intermediate category of secondary complements in (6a) is based on the contrastive results of linguistic tests applied to benefactive, instrumental, and some types of locative prepositional phrases: while “do-so” and “pseudo-cleft” tests identify these constituents as complements, the preposition-stranding test identifies

¹² E.g., Villavicencio, (“Learning to Distinguish PP Arguments From Adjuncts,”) sets a threshold of 80% occurrence for identifying a type of constituent as a complement rather than an adjunct.

¹³ DeArmond and Hedberg, “Complements and Adjuncts;” idem., “More Issues.”

¹⁴ Herbst, “English Valency Structures.”

them as adjuncts.¹⁵ Unfortunately, the application of linguistic tests of these sorts to Biblical Hebrew is difficult given the absence of native speakers and a closed corpus of data.

Herbst's three-way complement distinction in (6b) is a more promising basis for valency analysis of Biblical Hebrew verbs, not only because it does not rely on linguistic tests, but because the nature of these distinctions is more obvious and measurable from the data. Let me explain Herbst's graded categories as they apply to Biblical Hebrew, based on the ongoing use of this model in the development of the Accordance Bible software syntax module.¹⁶ Because my concern is with distinguishing complements and adjuncts, and due to the infrequency of aivalent or subjectless constructions, I will simply ignore the subject-role complements in my analyses.

4.1 Syntactically Obligatory Complements

First, a verb may have syntactically obligatory complements; that is, the absence of these constituents makes the expression ungrammatical. However, "obligatory" is in parenthesis in reference to this category in (6b), because different complement patterns may be associated with a single verb. Often a distinction in meaning can be discerned among the different patterns, such as illustrated in (7–8) below.

(7) Qal סמך

- a. Bivalent with NP complement: "support someone/something"

הִקְיָצוּתִי בִּי יְהוָה יִסְמְכֵנִי

I awake, because Yhwh supports me. (Ps 3:6)

¹⁵ The do-so and pseudo-cleft tests both separate out VP-internal arguments from the verb itself, thus helping distinguish between complements and adjuncts (i.e., complements presumably must move with the verb itself whereas adjuncts can be separated from them). For example, compare these two sets of transformations: *Colin gave a book to the teacher and so did Jared* versus **Colin gave a book to the teacher and so did Jared to the student* (the do-so test); *What Colin did was give a book to the teacher* versus **What Colin did to the teacher was give a book*. In each case the latter construction is ungrammatical because the complement (*to the teacher/teacher*) has been separated from the verb itself (*give*).

¹⁶ The Accordance syntax project was begun in 2008 through a collaboration between Robert D. Holmstedt of the University of Toronto and Martin G. Abegg Jr. of Trinity Western University, working in conjunction with Roy Brown of Accordance. The database that is being developed by the project is distinguished by four specific features: first, its scope includes biblical and extra-biblical texts from the first-millennium BCE, including the Hebrew Bible, epigraphic texts, and the Qumran manuscripts; second, it is native to the Accordance Bible software rather than being a stand-alone database; third, it is narrowly focused on clause syntax, building on existing morphological databases (which also facilitates our task) and eschewing treatment of semantic or discourse-pragmatic features of the Hebrew texts; fourth, it has a generative syntactic theoretical orientation.

- b. Trivalent with NP and על-PP complements: “lay something on someone”

וְסָמַךְ יָדוֹ עַל רֹאשׁ הָעֹלָה

(*He*) should lay *this hand upon the head of the burnt offering*. (Lev 1:4)

Examples (7a–b) illustrate two distinct meanings for the Qal סָמַךְ, which are associated with the two distinct valency patterns: a bivalent one and a trivalent one. The trivalent pattern appears to be a technical meaning, appearing only in sacrificial contexts with the exception of one occurrence in Amos 5:19.¹⁷

A different sort of semantics-based variation is illustrated by the examples in (8): a trivalent pattern with a noun phrase and prepositional complements is associated with the meaning to “give” (or “place”), as illustrated by (8a), whereas a trivalent pattern with a noun phrase and complementary infinitive is associated with the meaning “allow”, as illustrated by (8b).¹⁸

(8) Qal נתן

- a. Trivalent with NP and PP complements: “give something to someone”

הָאֵל הַנוֹתֵן נִקְמוֹת לִי

The God ¹who gives vengeance ³to me. (Ps 18:48)

- b. Trivalent with NP and Inf. complements: “allow someone something”

לֹא־יִתְּנֵנִי הַשֵּׁב רוּחִי

(*He*) will not allow *me ³to catch my breath*. (Job 9:18)

Finally, variation among obligatory valency patterns might admit other explanations. For example, the monovalent intransitive pattern for the Hiphil נָגַע “to arrive,” illustrated in (9), occurs once only in Ezekiel, Songs, and Qoheleth, and six times in Esther.¹⁹ This sort of clustering of a pattern within a particular corpus (i.e., Esther) or in books that are philologically “late” (i.e., Esther and Qoheleth) may indicate that the pattern is associated with a particular dialect or diachronic period of the language.

(9) Hiphil נגע

הַנִּצְּנִים נִרְאוּ בְּאֶרֶץ עַת הַזְּמִיר הַגִּיעַ

The blossoms have appeared in the land, the time of pruning has arrived. (Song 2:12)

¹⁷ Exod 29:10, 15, 19; Lev 1:4, 3:2, 3:8, 3:13, 4:4, 4:15, 4:24, 4:29, 4:33; 8:14, 8:18, 8:22; 16:21; 24:14; Num 8:10, 8:12; 27:18, 27:23; Deut 34:9; Amos 5:19; 2 Chr 29:23.

¹⁸ Whether one should refer to these as, e.g., נתן (I) and נתן (II) is a matter we need not enter into here.

¹⁹ Ezek 7:12; Song 2:12; Eccl 12:1; Esth 2:12, 2:15; 4:3; 6:14; 8:17; 9:1.

4.2 Optional Complements

A complement is “optional,” according to Herbst,²⁰ if it is implied by the structure of the predicate itself. Consider the English examples in (10): the former examples in each pair imply a “generalized” complement based on the semantics of the verb itself—one normally reads something with words; one normally cooks food. If the meaning departs from these general senses, a complement is required to cancel the implied complement, as in the second pair in each example.

- (10) a. ${}_1$ *She* is reading. (Implied complement: something with words)
cf. ${}_1$ *She* could *always* read ${}_2$ *this face*.
- b. ${}_1$ *He* is cooking. (Implied complement: food)
Compare: ${}_1$ *He* is cooking up ${}_2$ *trouble*.

A Biblical Hebrew example that falls into this category is the Qal שיר “to sing”: in its monovalent pattern in (11a), the verb implies a generalized complement of “song” or the like. However, the verb may also exhibit a bivalent pattern, as in (11b), in which what is sung or sung about is specified by a noun phrase complement. An important piece of evidence supporting the claim of an implied complement is the occasional presence of a cognate complement with such verbs in the bivalent pattern, as in example (11c), in which שירה “song” is the cognate complement of Qal שיר. In these cases the cognate complement reinforces the generalized complement implied by the verb itself.²¹

(11) Qal שיר

- a. Monovalent with implied complement
אָשִׁירָה וְאֶזְמְרָה לַיהוָה
(${}_1$) will sing and make melody to Yhwh. (Ps 27:6)
- b. Bivalent with overt complement: for examples “sing something”
וְאֲנִי אֲשִׁיר עֲזָרָה
But ${}_1$ I will sing of ${}_2$ your strength. (Ps 59:17)
- c. Bivalent with cognate complement
אֲזַיְרָה מִשְׁנֵה וּבְנֵי יִשְׂרָאֵל אֶת־הַשִּׁירָה הַזֹּאת לַיהוָה
Then ${}_1$ Moses and the children of Israel sang ${}_2$ this song to Yhwh. (Exod 15:1)

4.3 Contextually Optional Complements

“Contextually optional” complements refer to constituents that are recoverable or identifiable from the discourse context, in contrast to being implied by the verbal semantics alone, as in the previous case. One indication of this category of valency

²⁰ Herbst, “English Valency Structures.”

²¹ Similarly Hiphil רוע “shout, raise a shout” with cognate complement in Josh 6:5, and Hiphil שקה which can have only a complement of the person who is given a drink (bivalent) or specify in addition what is given as a drink (trivalent) (e.g., cf. Gen 24:14 and 24:43).

variation is the infrequency with which a complement might be absent. For example, only three of fifty-nine occurrences of the Hiphil שקה “to give a drink” lack a complement referring to the recipient of a drink. In each of these instances a good case can be made that the complement is elliptical—that is, null but identifiable from the context. The null constituent and its antecedent are in parentheses in the examples in (12). Note also that what is offered to drink is unspecified, being an optional complement, as in the case of Qal שיר, just discussed.

(12) a. Deut 11:10

אָשַׁר תִּזְרַע אֶת־זְרְעֶךָ וְהִשְׁקִיתָ בְּרִגְלֶךָ

... where (you) sowed your seed and watered (*it* = your seed) with your foot

b. Ps 78:15

יִבְקַע צְרִים בַּמִּדְבָּר וַיִּשְׁקֵם בְּתַהֲמוֹת רֶבֶה

(He) split rocks in the wilderness and gave (*them* = them vs. 14) drink as the great depths.

c. Esth 1:7

וְהִשְׁקוֹת בְּכֵלֵי זָהָב וְכֵלִים

... giving (*them* = all the people vs. 5) drinks in gold vessels

Determining contextually optional complements is complicated by the previous category of optional complements, because a verb might exhibit both types of valency variation with the result that in the case of a contextually optional example the text is not syntactically “fragmentary” as we expect for elliptical structures. Consider the examples of the Qal אכל “to eat” in (13): as with English “eat,” Qal אכל may imply a generalized complement of food as in (13a);²² but in Gen 3:6, cited in (13b), the verb has a contextually optional (that is, elliptical) complement whose antecedent is מִפְּרִיֹו.

(13) a. Ruth 3:7

וַיֹּאכַל בָּעוֹ וַיִּשְׁתָּ וַיֵּיטֵב לְבוֹ

Boaz ate and drank and his heart became merry.

b. Gen 3:6

וַתִּקַּח מִפְּרִיֹו וַתֹּאכַל

She took some of the fruit and she ate (*it* = some of the fruit).

This type variation among an optional and contextually optional complement may appear in a single passage, as in (14).

²² Also Prov 23:7 אָכַל וּשְׁתָּ Eat and drink!

(14) 1 Kgs 19:5-8

וַיִּשָׁב וַיֵּשֶׁן תַּחַת רְתֹם אֶחָד וְהִנֵּה־זֶה מִלֶּאֱדָן נֹגַע בּוֹ וַיֹּאמֶר לוֹ קוּם אֲכֹל: 6 וַיֵּבֶט
וְהִנֵּה מִרְאֲשֵׁתָיו עֵגֶת רְצָפִים וְצַפְחַת מַיִם וַיֹּאכַל וַיִּשְׁתֶּה וַיִּשָׁב וַיִּשָׁב: 7 וַיֵּשֶׁב מִלֶּאֱדָן
יְהוָה שִׁנִּית וַיִּגְעֵבוּ וַיֹּאמֶר קוּם אֲכַל כִּי רַב מַמְדַּךְ הַדֶּרֶךְ: 8 וַיִּקַּם וַיֹּאכַל וַיִּשְׁתֶּה וַיֵּלֶךְ
בְּכַח הָאֲכִילָה הַהִיא אַרְבָּעִים יוֹם וְאַרְבָּעִים לַיְלָה עַד הַר הָאֱלֹהִים חֲרֵב:

He lay down and fell asleep under a broom bush. Suddenly an angel touched him and said to him, "Arise and eat." 6 He looked about; and there, beside his head, was a cake baked on hot stones and a jar of water! He ate (it = the cake) and drank (it = the water), and lay down again. 7 The angel of the LORD came a second time and touched him and said, "Arise and eat, or the journey will be too much for you." 8 He arose and ate (it = the cake) and drank (it = the water); and with the strength from that meal he walked forty days and forty nights as far as the mountain of God at Horeb. (NJPS)

In verse 5 the angel awakes Elijah and tells him *קוּם אֲכֹל*. Here the imperative *אֲכֹל* appears to be monovalent, with an optional complement implied by the predicate itself: *Eat (something)*. In the following verse (vs. 6), however, Elijah looks near his head and finds a stone-baked cake (*עֵגֶת רְצָפִים*) and a jar of water (*וְצַפְחַת מַיִם*), and the text reports *וַיֹּאכַל וַיִּשְׁתֶּה*. Both these verbs should be treated as bivalent with contextually optional (i.e., elliptical) complements. Thus, we can intelligibly render them: *He ate it and drank it*. This command-narrative pattern is repeated in the following two verses (vss. 7-8), where the angel tells Elijah to eat and drink again. Although the bread and water are now known entities in the discourse, the expression in verse 7 is parallel with that of verse 5, suggesting that as in the previous case the repeated command here is likewise monovalent with a generalized optional complement. The fact that the angel does not specifically tell him to eat *and* to drink lends some weight to this monovalent interpretation. Similarly, for the repeated report in verse 8 that Elijah *וַיֹּאכַל וַיִּשְׁתֶּה* ate and drank we should understand the two verbs as bivalent, their null complements referring to the cake and water that the reader will infer the angel resupplied or were left over from Elijah's previous meal.

5. SOME ILLUSTRATIONS

Having explained valency and advocated a specific approach to valency analysis in Biblical Hebrew, it remains to illustrate the value of carrying out such an analysis. The contribution of valency analysis to our understanding of Biblical Hebrew goes in two directions. In the one direction, valency studies can contribute to lexicography by providing a syntactic basis for distinguishing different nuances of meaning as they are demonstrated to align with specific valency patterns. In the other direction, valency analysis can inform philology by providing data to arbitrate between alternative analyses of some clauses in the text. Let me illustrate each of these with an example.

First, analyzing lexical meaning in terms of valency patterns may undergird distinctions among homonymy in the lexicon in ways that simple semantic analysis cannot. For example, HALOT lists together under the single root *עלל* (I) the Poel meanings "treat severely" and "glean," which are illustrated by the examples in (15).

(15) Poal עלל (I)

- a. treat severely

עֵינַי עוֹלְלָה לְנַפְשִׁי

My eye treats *me* severely. (That is, “afflicts me”) (Lam 3:51)²³

- b. glean

וְכַרְמְךָ לֹא תַעֲוִלֵל

And your vineyard (*you*) do not glean (*completely*). (Lev 19:10)

While one might be able to do some acrobatics to see how these are etymologically semantically related, HALOT’s entry is only marginally helpful in pointing out that these meanings are distinguished by valency pattern: “treat severely” has a ל prepositional phrase complement whereas the meaning “to glean” has a noun phrase complement. The former occurs only in Lamentations, where the passive Poal also occurs with the sense of “be treated severely.” Based on this semantic alignment with the different valency patterns, it may be best to see these as two separate verbs, as indeed BDB treats them: though it ultimately relates the verbs to the same root as HALOT, BDB identifies the meaning “glean” as a denominative form from the feminine noun עֲלִלוֹת “a gleaning.”

An example in which attention to valency patterns aids philological analysis of the text is provided by the passage in (16).

(16) Qal דרך

גַּת דֶּרֶךְ אֲדוּנִי לְבַת־יְהוּדָה

NRSV: *The Lord has trodden as in a wine press the virgin daughter Judah.*NJPS: *As in a press the Lord has trodden Fair Maiden Judah.**The Lord has trodden the wine press for the virgin daughter Judah.* (Lam 1:15c)

Both the NRSV and NJPS treat לְבַת־יְהוּדָה as the complement of the verb דרך, and גַּת as some sort of adverbial accusative. But דרך does not elsewhere take as its complement a ל prepositional phrase, though it does appear five times with על and ten times with ב prepositional complements both with a locative idea “upon” or “on.” The majority of the time, however, it takes a noun phrase complement. Based on this valency pattern, it is best to identify גַּת as the complement and the prepositional phrase לְבַת־יְהוּדָה as an adjunct, as indicated by the third translation option in (16). And indeed, this is how Keil takes the text, explaining: “These [i.e., the young men mentioned in 1:15b] celebrate a feast like that of the vintage, at which Jahveh treads the wine-press for the daughter of Judah, because her young men are cut off like clusters of grapes (Jer. vi. 9), and thrown into the wine-press (Joel iv. 13).”²⁴

²³ See Lam 1:12 (Poal), 22; 2:20.

²⁴ Keil and Delitzsch, *Commentary on the Old Testament*.

6. SUMMARY AND CONCLUSION

The study of verbal valency in Biblical Hebrew is in its infancy. It is crucially focused on the intersection of syntax and semantics, with the result that it can inform our understanding of both syntax and lexical semantics of Biblical Hebrew. The approach I have proposed and illustrated above, and which is being continually refined in the course of the development of the Accordance Bible software syntax module, is one that successfully overcomes possible objections to valency analysis of Hebrew and provides a usable approach to the analysis of Biblical Hebrew argument structure.

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