Janet Dyk, Oliver Glanz, Reinoud Oosting

ANALYSING VALENCE PATTERNS IN BIBLICAL HEBREW: THEORETICAL QUESTIONS AND ANALYTIC FRAMEWORKS

ABSTRACT

When not recognizing the peculiarities of a syntactic construction, translators and exegetes tend to resort to the most common meaning of the verb present in the structure, adjusting the sense of the passage by making explicit information assumed to be implied in the text or by making other adjustments. Verbs, however, can have different meanings in divergent syntactic structures. The relatively few elements which determine the significance of a verb have been made explicit in a flow chart of "yes"– "no" questions for Hebrew verbs. A researcher's choices as to the relation of an element to the verb, assuming information present elsewhere in the context, and the presence of an idiomatic expression should be annotated.

1. INTRODUCTION

The research project in which we are currently involved – "Bridging the Gap between Data and Tradition" – is funded by the Netherlands Organisation for Scientific Research (NWO). In this four-year project which began in August 2010, we analyse the patterns of elements occurring around a verb in Classical Hebrew. Different combinations of elements occurring with the same verb can result in different meanings, which are not always or not sufficiently recognized in translations and interpretations of the texts. The formal language patterns yield a concrete basis for the interpretation or translation of a construction. In the end, the database is to be enriched with the results of this research.

2. THE WIVU DATABASE

Inspired by the work of James Barr, Eep Talstra saw the need of taking language data seriously when interpreting a biblical text. The emerging science of computing provided an instrument for collecting and analysing large amounts of language data. Talstra envisioned implementing the computer to search for constructions which would provide the basis for a clear choice in the interpretation of a particular text. But what does one search for in order to arrive at insights into the significance of a text? Separate words or phrases? Surface text or underlying paradigmatic information? Particular combinations within a construction? Any aspect to be searched for must be isolatable in order to be retrievable from the database. With the choice for a database of language data, the science of linguistics provided a key for isolating and encoding the smallest elements bearing significance. From the beginning, it was Talstra's intention to set up the database in such a way that it could be exploited for different research goals and accessible from divergent theoretical platforms.¹

Starting from the isolated morphemes, programs were constructed which recognize patterns of morphemes as words, patterns of words as phrases, patterns of phrases as clauses, patterns of clauses as sentences, and patterns of sentences as text hierarchy. Each level has its own system of organizing the information at that level; different characteristics of language play a role at the various levels (cf. Talstra & Sikkel 2000: 33-68). Each new research goal with which the database is approached gathers its data by raking through the material from a new perspective. More refined demands for consistency emerge in aspects or at levels which were not in focus previously. Emerging insights demand that the

1 The motivations for constructing a linguistic database were similar to the ones that stimulated the research projects of Wolfgang Richter in Munich (Richter 1971:1-39). The methodological approaches, however, were different. A remarkable difference can be seen in the fact that Richter's database is based on dependency grammar (Richter 1985:10-17) while the WIVU chose to limit the input of grammatical theory to a minimum (Van der Merwe 2002:16-17). From this followed that instead of a specific grammatical framework, the sequence of word units as they are found in the Hebrew text functioned as the point of departure for the syntactic analysis. This led automatically to a constituency approach in the development of the WIVU database (cf. Harmsen 1998:10-141). This methodological decision allowed the WIVU to postpone decisions about specific syntactic and semantic relations of government until the analysis of the appropriate level (the level at which the government relationship was valid) was completed, be that morpheme, word, phrase, clause or sentence level. Thus, while Richter's methodology enabled him to address matters of verbal valence and semantics at an early stage in his database development (cf. Richter 1985; 1986), the WIVU research group prepared its database by bottom-up approach to such an extent, that from 2003 on the database allows for an in-depth analysis of verbal valence based on the distribution of clause constituents (cf. Van der Merwe 2002:18-21). It will, therefore, be interesting to see how far the methodological approach of the WIVU leads to different insights in comparison with the results of the pioneering work of Richter. Such a comparison, however, will only be possible after the present WIVU research has been completed.

database be enriched with new categories in order to be able to exploit its potential for further research goals and in order to be able to interact with other approaches and theories.

3. VALENCE

In the majority of languages, a verb is necessary as the core of the most frequent type of sentence structure (Richter 1980:33). Not only do various types of verbs reveal their differences by means of the patterns in which they occur, for example, transitive verbs versus verbs of movement, but a single verb may occur in a variety of syntactic patterns which influence the particular meaning in a given instance. Lexica often provide a broad range of meanings for a single verb, but it is not always clear under which conditions a specific significance is to be preferred (Richter 1985:1-2). Exegetes and translators sometimes take the liberty of choosing rather freely from the available dictionary glosses without realizing that specific elements in the context could pose restrictions on the choice of rendering.

The French linguist Lucien Tesnière (1893-1954) introduced the term "valence" into linguistics (Tesnière 1969:238), borrowing it from chemistry where the term indicates the number of bonds formed by an atom of a given element. In chemistry, the number of bonds and the elements bonded with result in different compound elements, such as oxygen in H_2O and CO_2 . With regard to language, the term "valence" is used to refer to various types of relations, such as:

- Lexical valence "lexical items that communicate a negative or positive attitude" (Polanyi & Zaenen 2004:1), such as "ensure", with a positive ring to it, and "conspire", with negative connotations.
- Semantic valence the thematic relations within a sentence, that is, the role that a phrase has in the action or state presented by the verb, for example, the agent, who performs, and the patient, who undergoes the action of the verb. These thematic roles are sometimes also called "participant roles", "semantic roles" or "deep case relations".
- Syntactic valence the number and kind of arguments controlled by a verbal predicate, such as "complements" and "adjuncts".

Due to the nature and structure of the WIVU database, our research is concentrated on syntactic valence – the ability of a verb to occur in specific patterns of other sentence constituents (cf. Allerton 1982:1-2; 2006:301). How important a verb is within a sentence can be seen in the fact that the chosen verb determines the basic structure of the sentence

involved, not so much in the order of elements as in the number and nature of elements occurring in the sentence. The other sentence constituents indicate the participants which fill a role in the action of the verb, such as the direct object, but also indicate diverse aspects of the situation in which the action takes place, such as location, time, manner, and other accompanying circumstances (Allerton 1982:57-58).

4. THEORETICAL QUESTIONS

There are various types of syntactic valence characteristic of a certain verb:

- Impersonal or avalent a verb without arguments, such as "it rains". Although technically "it" is the grammatical subject of this verb, it is only a dummy subject, that is, a syntactic placeholder without a concrete referent. No other subject may replace it. In many languages, there would be no subject at all.
- Intransitive or monovalent a verb with one argument, such as, "he sleeps", with subject only.
- Transitive or divalent a verb with two arguments, such as "he kicks the ball", with a subject and a direct object.
- Ditransitive or trivalent a verb with three arguments, such as "he gives her a flower", with a subject, a direct object, and an indirect object.
- Tetravalent a verb with four arguments, such as "the fool bet him five quid on 'The Daily Arabian' to win", in which "the fool", "him", "five quid", and "The Daily Arabian" are all arguments of the English verb "bet" (subject, indirect object, direct object, and complement, respectively).

Since each verb requires a certain number and type of arguments to be grammatically correct, theoretically one must determine which valence a specific verb has. At the same time it is true that a verb can occur with different valence patterns. The theory provides the terms "valence reduction" or "valence expansion" to cover this. An example is the verb "eat", which by nature is said to be transitive or divalent, as in "he eats an apple". However this can be reduced to a monovalent construction, "he eats", without becoming ungrammatical.² On the other hand, avalent and monovalent verbs, such as "rain" and "sleep", which usually do not take a direct object, can occur with the direct object, such as in "it is raining cats and dogs" and "she sleeps the sleep of the innocent". This is then called "valence expansion".

We are thus saddled with a theoretical problem: on what basis can one determine that a verb is monovalent and has undergone expansion when it occurs with a direct object instead of calling the verb divalent or transitive? Or, that it is divalent or transitive by nature and undergoes "valence reduction" when it occurs without a direct object? In order to answer that question, it is important to register the number of elements accompanying a verb. The relative frequency of the various patterns in which a verb occurs can be an important indication of its syntactic valence. Furthermore, by comparing the syntactic patterns of one verb with those of other verbs we can compare which verbs occur in similar syntactic patterns.

The second question that requires attention is the distinction between obligatory elements, called "complements", and non-obligatory elements, called "adjuncts". It is not a simple matter to define the distinction between these two categories. Tests designed to distinguish the two on the basis of semantic, morphosyntactic, or functional criteria have proven to be less than water tight (Vater 1978:21-45). There seem to be "no formal or operational criteria for the distinction" and no types of constituents that are by nature a complement or an adjunct (Vater 1978:39). The same formal element can be obligatory with one verb and optional with another. For example, a phrase indicating location can be merely extra information, but with verbs of movement such phrases, telling where to or from where the movement takes place, consistently form a part of the pattern occurring with such verbs. Also, in running texts, elements which are commonly viewed as obligatory for a particular verb could be omitted because the information is present in the context. Furthermore, even when adverbials can be omitted without creating ungrammaticality, the meaning of the sentence may be altered by the presence or absence of this optional element: it is not the case that the sentence with the extra element entails

² One should, however, take into account that a verb together with a specific element does not necessarily mean the same as when that verb occurs without that element. For example, the verb "eat" does not mean the same in the two sentences "he eats an apple" and "he eats". The latter is about the act of eating in general, while the former is about eating something specific.

the sentence without it (Günther 1978:131). Compare the meaning of "go" in the sentences "I'm going to the city", meaning that I will move in the direction of the city, "I'm going to cook", meaning I am undertaking the activity of cooking, and "I'm going", meaning I am leaving at this minute, or, alternatively, that I – and not someone else – am the one who is departing.

As interesting as the question concerning the theoretical valence of a particular verb may be, before we can develop a theory as to the inherent valence of a verb in Classical Hebrew, we need to focus on the diverse syntactic combinations in which it occurs and the various meanings a verb can have in these contexts. Our primary focus is not to interact and account for the existing literature on the topic but to search for the system behind the distinctive valence patterns which we encounter within the biblical text.

5. DISTRIBUTIONAL APPROACH

Since there are no formal or operational criteria for distinguishing the various elaborators in the sentence, we apply the following steps:

- Collect all occurrences of a verb with the complete patterns of elements occurring in the data.
- Sort these by pattern.
- Analyse the differences between the various patterns, observing what relation the separate sentence constituents have to the verb.

Through this method, it becomes apparent that although a verb can have different meanings, most often the meaning is coupled to the specific pattern in which in occurs. The multiple meanings to be found in a dictionary entry turn out not to be available as translation or interpretation at all times and in all cases. In this, we see that syntax and semantics are intimately related, for the meaning of a structure is portrayed through, expressed in and carried by the formal pattern in which it occurs.³

In striving to enrich the database so that valence information is retrievable, we need to be aware of a number of questions: Which information is formal, "hard" data and how much is interpretation on the part of the researcher? Which data comes from the syntax and which from the lexicon? Is it possible to capture those elements which determine the differences between verbal valence patterns in a single series of

³ On the "projection principle", see Haegeman (1991:47, 59, 63).

decisions? When there are various elements governed by the verb, at which point is the significance of the pattern established? What is the hierarchy between the various elements which affect the meaning?

For our research goals, the tools need to be chosen which do justice to the methodological choices (data oriented, grammar systematic). Because it contains syntactic parsing as the product of recursive bottom-up analyses, the WIVU database as a central source was a logical choice. The stored syntactic analyses contain the most central clause constituent categories initially needed for valence research: predicate (Pred), subject (Subj), object (Objc), complement (Cmpl), adjunct (Adju).

The various patterns of a specific Hebrew verb are collected by a program called val2csv developed by one of our programmers. This program enables us to search through the WIVU database at clause level for verbal forms and their satellites. The results of this query are put in a csv-file containing all the patterns of a verb. That output file can be imported in Office programs like Calc and Excel for Windows or Open Office, so that an analyst can manipulate the data by sorting and filtering the various patterns.

While of the available databases the WIVU database is presently the best suited to our aims, this research in itself presents new challenges to the database in its structure and parsing, and on issues of the consistency and data accessibility. Definitions need to be refined, parsing labels expanded, a search object must be able to be accessed at all levels of the database hierarchy, and the parsing needs to be made consistent.

We chose to begin by tackling the verbs with more complex valence patterns, particularly those occurring with double objects, such as ברא ("create"), ברא ("give, place"), עשה ("do, make"), שים ("place, appoint"), and שים ("place, appoint"). The idea was that if we could account for the worst cases, the others would fall into place. We are not as yet far enough to be sure that our assumption will hold up, but the results are encouraging thus far. After valence has become clearer on the basis of the study of a limited number of complex verbs, the insights will in time be tested on other verbs. As illustration of our work, in this contribution we focus on the verb עשה ("do, make").

6. THE VERB עשה IN CLASSICAL HEBREW

The BDB lexicon assigns to the verb עשה a broad array of meanings: "do", "make", "bring upon", "make something into something",

"produce", "yield", "prepare", "offer", "attend to", "observe", "acquire", "appoint", "ordain", and others.

The frequent puzzle of a dictionary user presents itself: how does one know which shade of meaning one should choose in a particular instance? Are there restrictions offered to us within the language data for choosing a certain significance or is one free to follow the inspiration of the moment when translating? The latter position can function as a default value: if no clues are available, one must rely on special giftedness alone while translating. Before that point is reached, however, the data should be scrutinized for indications of which of the verb's various meanings should be chosen.

How exact are the limitations from the context on which meaning should be selected? Which elements in the context are of importance to this? Are there general principles which apply to a wide range of verbs? What can be formally registered in and retrieved from the database? For What can be interesting distinction appears to be in the various numbers of direct objects occurring in a construction.

6.1 Single Direct Object

Exod 20:4 לָא תְעֲשֶׂה־לְדְ פֵסָל "You shall not make yourself a carved image". (NJB)⁴

⁴ The offered translations are only a selection for illustration, being neither a complete summary of renderings in the various versions, nor a promotion of one translation over the others. The following abbreviations appear: ASV (American Standard Version); BBE (Bible in Basic English); CJB (Complete Jewish Bible); DBY (Darby Bible); ESV (English Standard Version); GWN (God's Word to the Nations); GNB (Groot Nieuws Bible); GNV (Geneva Bible); KJV (King James' Version); NAB (New American Bible); NAS (New

The carved images are concrete items, and we translate with "make". A less concrete item is involved in the following verse:

Exod 1:18 מִדְּהָרֵ שָׁשִׁיחֵן הַדְּבֶר הַאָה הַיָּרָ (GWN) What the midwives had done was not a concrete, physical object, and we translate using "do", but Hebrew uses a single verb. The same is true for objects such as הַסָר וָאָבָר הָאָר ("kindness and truth"; Gen 24:49), דָר ("evil"; Gen 31:29), רָסָר וָאָבָר זייָ ("good"; Ps 119:65) and הַסָּר וָאָבָר מָשָׁהָ ("judgment"; Ps 119:84). A translation adapts itself similarly to the direct object when שׁשׁ occurs with a feast as object or with a sacrifice. With a feast, such as "Sabbath" or "Passover", the verb is often rendered "observe", and with a sacrifice, "performed, offer". To use "make" together with "sacrifice" would result in a different significance in English than that which is intended in Hebrew. So even with the least ambiguous syntactic pattern for this verb, it is necessary to adjust the rendering due to the dictates of the target language.

6.2 Double-Object Constructions

Exod 32:4 וַיַשָׁהו עַגָל מַסֵּהָה 'And made it a molten calf' (TNK).

Ps 104:4 עָשָה מַלְאָבְיו רוּחֵוֹת מְשָׁרְתִיו אֵשׁ לוֹהֵט "You make your angels winds and your servants flames of fire" (GWN).

The relationship between the two objects is not always readily understood, as can be seen in the various renditions of the following verse:

Exod 31:16 וְשִׁמְרִוּ בְנֵי־יִשְׂרָאֵל אֶת־הַשַּׁבֶּת לַעֲשְׂוֹת אֶת־הַשַּׁבֶּת לְדֹרֹחֶם בְּרִית עוֹלֵם

American Standard); NBG (Vertaling Nederlands Bijbelgenootschap 1951); NET (New English Translation); NIB (New International Bible); NIRV (New International Reader's Version); NIV (New International Version); NJB (New Jerusalem Bible); NLT (New Living Translation); RSV (Revised Standard Version); SVV (Statenvertaling); TNIV (Today's New International Version); TNK (JPS Tanakh); WEB (The Webster Bible); W95 (Willibrordvertaling 1995); YLT (Young's Literal Translation). The translations work around the double-object construction in various ways. Some resort to making the second object ("everlasting covenant") into an adjunct of manner (how the Sabbath is to be observed) by adding "as" or "for", as in:

GWN "celebrating it for generations to come as a permanent reminder of my promise"

KJV "to observe the sabbath throughout their generations, *for* a perpetual covenant"⁵

Others add a separate clause to express the second object:

DBY "to observe the sabbath throughout their generations – *it is* an everlasting covenant"⁶

However, a more consistent reflection of the double-object construction would be:

"The children of Israel shall keep the Sabbath by making the Sabbath a perpetual covenant for their generations".

6.3 Expansion of the Double-Object Construction in Building Instructions

The double-object construction can expand to multiple objects, particularly in the building instructions in Exodus. In the description of the building of the tabernacle, the verb $\psi\psi$ occurs repeatedly with multiple objects. This is also found in other books, but nowhere as extensively as in Exodus.

In the building instructions in Exodus, when a single object occurs with a form in construct state governing another form, then the first (the governing noun) is always the object being made, and the second (the governed noun) is always the material out of which the object is made, as in:

Exod 25:31 אָשָׁיָת מְנֹרֵת זְהָב טְהוֹר 'And you shall make a lampstand of pure gold'' (NAS)

However, if the two elements are not in construct state binding, then not only can the elements vary in their word order, but also roles other than that of material are possible. In each case, we are dealing with

⁵ Cf. also CJB; NAB; RSV; TNIV; TNK; WEB.

⁶ Cf. also NIRV; NLT.

constructions in which the object involved is of one of the following types: verbal suffix, noun phrase with $\varkappa n$, and noun phrase without $\varkappa n$.

Exod 39:27 וַיַּשֲשָׁוּ אֶת־הַכְּתְנָת שֵׁשׁ מַעֲשֵׁה אֹרֵג לְאַהַרְן וּלְבָנֵיו (lit.) "And they made the coats fine linen the work of a colour weaver for Aaron and his sons".

Both the fact that all the phrases concerned end in the absolute state and the fact that the phrases can occur in varying word order in relation to one another favour the treatment of all the phrases consistently as part of the multiple-object construction rather than as subordinate to one another. Thus the data requires that we expand the double-object construction to encompass multiple-object constructions. As we shall see, in Exodus, this can extend to as many as four phrases. Thus, Hebrew employs a formal structure more extensively than is to be found in other languages, and this will require various adaptations in translation.⁷

6.3.1 With Two Elements

The following combinations have been found with two elements:

- Object-material (for example, gold, *shittim* wood, rams skins dyed red, silver, bronze, and others)⁸ and material-object.⁹
- Object–type of workmanship (for example, work of a skilled one, work of an embroiderer, work of a mixer [apothecary], work of a colour weaver, and others)¹⁰ and type of workmanship–object.¹¹
- Object–manner of execution (hollowed out boards, folded double, enclosed in ouches of gold, and others)¹² and manner of execution–object.¹³
- 6.3.2 With Three Elements

For a study that shows the effect of the more extensive verbal valance patterns emplyed by Biblical Hebrew on the translation into Syiac, see Dyk (2008:185-198).

⁸ Cf., e.g., Exod 25:18, 23, 28; 26:14, 15, 21, 26; 27:1; 30:5; 36:19, 20, 25, 26; 37:7, 10; 38:6; 1 Kgs 6:23, 33; 7:16, 27, 38; 10:16.

⁹ Cf., e.g., Exod 25:29, 39; 38:15; 29:2; 30:1; 37:24.

¹⁰ Cf., e.g., Exod 28:15, 39; 37:29; 39:3.

¹¹ Cf., e.g., Exod 25:18; 37:7, 17.

¹² Cf., e.g., Exod 26:1; 36:8; 39:6.

¹³ Cf., e.g., Exod 26:7; 27:8; 36:14; 38:7; 39:9.

With three elements, the following combinations have been found:

- Object-material-type of workmanship.¹⁴
- Object-material-form of object.¹⁵
- Object-type of workmanship-material.¹⁶
- Object–form of object–material.¹⁷
- Type of workmanship–object–form of the object (cherubs, chords).¹⁸
- Form of object-object-type of workmanship.¹⁹
- Form of object-material-object.²⁰

6.3.3 With Four Elements

On the basis of what is encountered in the other multi-object constructions, there appears to be one construction in which four elements occur with this verb. This single construction occurs twice in Exodus with exactly the same elements: material–form of object–type of workmanship–object (Exod 26:1; 36:8).

6.3.4 Hierarchy between Objects in Multiple-Object Constructions

In the constructions with more than one object, it can be important to establish which the object is that is being made. A hierarchy has surfaced between the objects, in which the type and the determinedness of the phrase are decisive:

- Suffix > את (object marker) phrase > noun phrase > prepositional phrase;
- When the objects have the same form, the definiteness of phrases is determinative: a definite phrase ranks higher than an indefinite one.
- When the phrases are the same in phrase type and definiteness, the order in which they occur is determinative: first comes first.

- 18 Cf., e.g., Exod 26:31; 36:35.
- 19 Cf., e.g., Exod 28:14
- 20 Cf., e.g., Exod 28:11.

¹⁴ Cf., e.g., Exod 28:6; 36:35; 30:25, 35; 36:37; 39:27, 29.

¹⁵ Cf., e.g., Exod 26:29; 36:34.

¹⁶ Cf., e.g., Exod 27:4; 28:22; 38:4; 39:8, 15, 22.

¹⁷ Cf., e.g., 1 Kgs 6:31.

These observations dovetail with those proposed for the ranking of subjects and predicates in nominal clauses (cf. Dyk & Talstra 1999:133-185). This reflects the fact that in a double-object construction, the verb can be said to govern a small clause (cf. Haegeman 1991:160-161). It is therefore not strange to have the same hierarchy observable between the objects of a verb as between the elements of a nominal clause.

6.4 Application to Other Building Instructions

The repeated consistency with which this construction is used in building instructions brings clarity regarding the same construction encountered elsewhere, as in the following, involving an object and the form of the object:

Gen 6:16 תַּחְתִיָם שְׁנַיֵּם וּשְׁלִשִׁים תַּעֲשֶׂה (lit.) "lower, second and third you shall make her"

Many translations add "with" ("make it with decks")²¹ or "in" ("make decks in it").²² Some omit the direct object "it" (the ark)²³ in order to make the rendering smoother. The GNB uses a different verb, but is able to capture the significance of the Hebrew construction:

GNB "De boot moet uit drie verdiepingen bestaan" ("the boot must be of three floors").

Literal translations which follow the Hebrew words closely can end up with rendering which would hardly win a prize for smooth and clear English:

YLT "lower, second, and third stories dost thou make it"

6.5 The Second Object introduced by \supset or \checkmark

The second object in the double-object construction can be introduced by the prepositions \supset or \checkmark . However, since the preposition \supset can also introduce the manner of action and \checkmark can introduce a location or the one affected by the action, the first object and the prepositional phrase must together form a small clause in order to qualify as a double-object construction. The same condition holds between two non-prepositional

²¹ Cf., BBE; DBY; ESV; GNV; KJV; NAB; NAS; NBG; NJB; RSV; SVV; TNK; WEB.

²² Cf., NLT.

²³ Cf., NIB; NIRV; NIV; TNIV; W95.

phrases. This means that the prepositional phrase does not express manner of action, location of action or the one affected by the action. Examples:

Exod 32:10 אוֹתְדָ לְגוֹי גָּדְוֹל "I will make you into a great nation" (NIB).

Eccl 6:12 יְיַשָׁשָׁם כַּאֵל "and he maketh them [days of life] as a shadow" (YLT).

This pattern also appears in a text which is often translated in another manner:

Gen 34:31 הַכָזוֹנָה יַעֲשֵׂה אֵת־אֲחוֹתֵנוּ

Most translations render with the meaning the verb ψ has when it occurs with a single object, that is, "do", and let "as a whore" refer to the manner of action:²⁴

BBE "Were we to let him make use of our sister as a loose woman?"

NIB "Should he have treated our sister like a prostitute?"

The construction, however, meets the requirement for the double-object construction: "our sister" and "as a whore" together form the nominal clause "our sister is as a whore". Furthermore, if the \supset phrase is to refer to the manner of action, it would refer back to the subject of the action, as in "he acted like a whore", but no one suggests such a significance. The double-object construction would indicate that the translation should be: "he makes our sister to be as a whore"

6.6 Without Direct Object

Although the verb $\psi \psi$ most commonly occurs with a direct object, there are also cases where it occurs without an object, without even an object which could be assumed from the direct context. The verb then has an intransitive meaning: "take action, act".

Gen 6:22 וַיַּעַשׂ גָח בְּכֹל אֲשֶׁר צִוְּה אֹתֶוֹ אֱלֹהֶים בֵּן עָשֵׂה

Frequently, translations add a "dummy" pronoun, such as "it" or "this", as direct object:

ESV "Noah did this; he did all that God commanded him".²⁵

²⁴ Cf., also DBY; KJV; NAB; NLT; TNK; SVV; WEB.

²⁵ Cf., also GWN; NJB; RSV; SVV.

Some translations circumvent the problem by combining the two clauses into a single one:

NIRV "Noah did everything exactly as God commanded him".²⁶

Another solution is to move the comma between the clauses, contra the Masoretic punctuation, so that the first clause is expanded with an adverbial of manner from the second clause:

YLT "And Noah doth according to all that God hath commanded him; so hath he done".

Some translations remain fairly close to the Hebrew text, but add an extra "thus" or "so" of manner to the first clause:

TNK "Noah did so; just as God commanded him, so he did".²⁷

The Masoretic punctuation clearly indicates that the \sub ... \sub construction belongs together, and that leaves \checkmark in the first clause without further satellites. The sense of \checkmark without a direct object and without an adverbial stating how something is done can be seen in:

Gen 41:34 יַעֲשֶׂה פַּרְעֶה וְיַפְקֵד פְּקָדֵים נוּצאָ

Yet there are a number of translations which translate the verb here in its intransitive sense:

NAB "Pharaoh should also take action to appoint overseers".

NJB "Pharaoh should take action and appoint supervisors".

TNK "And let Pharaoh take steps to appoint overseers".

Another example of עשה without direct object occurs in:

Num 23:19 הַקּוּא אָמַר וְלָא יַעֲשֶׂה

²⁶ Thus also GNB; NIB; NIRV; NLT; TNIV.

²⁷ Thus also KJV; WEB.

²⁸ Thus ASV; BBE; CJB; DBY; JPS; KJV; NET; TNK; WEB.

²⁹ E.g., NBV ("krachtige maatregelen" – "strong measures"); GWN ("arrangements").

³⁰ Thus ESV; GNV; RSV, YLT.

³¹ Thus NIB; NIRV; NIV; NLT; TNIV.

Many translations again add a direct object, sometimes also adding one to the preceding verb אמר. However, without direct objects, these two verbs express the action in itself, which can be translated as "Has he spoken and shall he not act?", as can be found in a fair number of translations.³²

An interesting example in this regard is a well-known verse from the Psalms:

Ps 118:24 אָה־הַיּוֹם עָשָׂה יְהוָה נְגִילָה וְנִשְׂמְחָה בוֹ "This is the day the LORD has made. We will rejoice and be glad in it". (NLT)

The translations are nearly unanimous concerning this verse: the LORD has made this day. Yet it is also possible that "this day" at the beginning of the sentence is not the direct object but a time phrase. That would leave the verb without a direct object, and therefore a candidate for the intransitive significance.

A German theologian, Becker (1998:44-51), came to the same conclusion on the basis of a totally different line of reasoning. According to Becker, "day" does not occur as a direct object of $\psi w \pi$ and, therefore, must be taken to be a time phrase. As translation, Becker suggests "This is the day the LORD has acted".

There are some translations which do indeed take "day" as a time phrase, though usually with the addition of a "dummy" object:

NIRV "The LORD has done it on this day. Let us be joyful and glad in it".

TNIV "The LORD has done it this very day; let us rejoice today and be glad".

Notwithstanding, there are a few which translate without the added object, extending the effect of taking action to render "assert oneself":

CAB "El Señor ha actuado en este día: cantemos y alegrémenos en él" ("the Lord has acted in this day: let us sing and rejoice in it / him").

NVI "Éste es el día en que el SEÑOR actuó; regocijémenos y alegrémenos en él" ("This is the day in which the LORD acted; let us glory and rejoice in it / him").

W95 "Dit is de dag dat de HEER zich laat gelden, een dag van jubel en vreugde" ("This is the day that the LORD asserts himself, a day of rejoicing and joy").

³² Cf., DBY; NAB; NIRV; NJB; NLT; TNIV; TNK.

Though not all existent translations have been perused, the relative distribution of the types of renderings would probably not alter much by added information.

7. VALENCE FLOW CHART OF THE VERB עשה (QAL)

The verb we are looking at occurs with different constellations of elements which result in distinct renderings. The following questions need to be answered in order to capture the significance of in a construction: Does the verb have an object?³³ If so, does it have another object? \rightarrow results in meaning: "make X [to be] Y". If a single object, is a particular idiom necessitated by the object present? \rightarrow results in meaning: "do, make, observe, perform", depending on the object involved. If no object \rightarrow "act, take action, produce".

It is possible to arrange these questions such that a flow chart guides one through the pertinent questions and to the appropriate significance.



Figure: Flow Chart of the Verb עשה

33 Often translations will, quite rightly, choose a verb, not so much because it is the usual equivalent for the verb in the source language, but because in the target language the verb matches the object present.

8. THE QUESTION OF INHERENT VALENCE

We return to the question about positing an inherent valence for a verb. Tallying the occurrences of Qal forms of $\psi \psi$ in non-relative clauses found in a selection of texts, the following picture emerges, leaving aside direct objects to be assumed from the context:

	Number of Constructions with Direct Objects					
	None	Single	Double	Three	Four	Totals
Genesis	26	81	6	0	0	113
Exodus	51	235	76	17	2	381
Leviticus	10	52	9	0	0	71
Numbers	38	61	15	3	0	117
1 Kings	28	68	12	1	0	109
2 Kings	24	65	2	0	0	91
Psalms	13	88	2	0	0	103
Proverbs	0	25	0	0	0	25
Ecclesiastes	2	13	3	0	0	18
Song of Songs	0	3	1	0	0	4
Totals	192	691	126	21	2	1032

Table: Distribution of the Number of Direct Objects in Selected Texts

If one were to argue that the most frequently occurring pattern represents the basic valence of this verb, this would be the pattern with a single object, which occurs in more than half of the cases. As a consequence, the patterns without object would have undergone "valence reduction" and the patterns with more than one object "valence expansion".

There is, however, another way of looking at it, namely, from the perspective of the simplest construction, that is, the pattern without an object, and then projecting the other significances from the bare, intransitive meaning of "act, take action", which significance is made more specific by added elements. For lexicographers, this might be a more attractive option.

9. CONCLUSIONS AND PERSPECTIVES

By consistently registering the formal elements of language data occurring with a verb and analysing the various combinations encountered in the text, new insights into the significance of the text emerge. Making the various patterns and their resulting meanings visible in a flow chart confronts the researcher, Bible translator, and exegete with the syntactic pattern present in the text and the consequences of this pattern.

In this study, our research has been illustrated with examples from a single verb. In subsequent studies, we would like to present the application of this method to other transitive verbs, such as שׁים, נתן, ברא and שׁים, נתן, looking at the similarities and differences between the verbs occurring with double-object constructions. Our focus will be particularly on the exegetical value of valence research.

In a third study, we propose to apply the same method and flow chart to verbs in which primarily the use of prepositions is determinate, with the focus on verbs of motion. The methodological challenge is to find out what the limits are of a unified approach to verbs. Furthermore, we will be looking for differences between texts in the distribution of the patterns occurring with a particular verb. Such information could contribute to delimiting characteristics of particular text types, exposing variation in use due to factors such as dialect or individual style, and tracing a shift in usage which could point to language change.

BIBLIOGRAPHY

Allerton, D J 1982. Valency and the English Verb. London: Academic Press.

Allerton, D J 2006. Valency Grammar, in: Brown, K (ed.). *Encyclopedia of Language* & *Linguistics. Second Edition.* Vol. 13. Amsterdam: Elsevier, 301–314.

BDB

Becker, J 1998. Zur Deutung von Ps 118:24. Biblische Notizen 94, 44-51.

- Dyk, J W 2008. The Cognate Verbs שים and מסמר in the Books of Kings: Similarities and Differences, in: Heal, K & Salveson, A (eds). *Foundations for Syriac Lexicography* IV (Perspectives on Syriac Linguistics 5). Piscataway: Gorgias Press, 185-198.
- Dyk, J W & Talstra, E 1999. Paradigmatic and Syntagmatic Features in Identifying Subject and Predicate in Nominal Clauses, in: Miller, C L (ed.). *The Verbless Clause in Biblical Hebrew: Linguistic Approaches*. Winona Lake: Eisenbrauns, 133-185.
- Günther, H 1978. Valence in Categorical Syntax, in: Abraham, W (ed.). *Semantic Case and Grammatical Relations* (Studies in Language Companion Series 1). Amsterdam: Benjamins, 127-156.
- Haegeman, L 1991. Introduction to Government & Binding Theory. Oxford: Blackwell.

- Polanyi, L & Zaenen, A 2004. Contextual Valence Shifters, in: Shanahan, J, Qu, Y & Wiebe, J (eds). *Computing Attitude and Affect in Text: Theory and Applications* (The Information Retrieval Series 20), 1-10.
- Richter, W 1980. Grundlagen einer Althebräischen Grammatik. St. Ottilien: EOS.
- Richter, W 1985. Untersuchungen zur Valenz althebräischer Verben 1. 'RK. St. Ottilien: EOS.
- Richter, W 1986. Untersuchungen zur Valenz althebräischer Verben 2. GBH, ^CMQ, QSR II. St. Ottilien: EOS.
- Talstra, E 1999. Reading Biblical Hebrew Poetry: Linguistic Structure or Rhetorical Device? *JNSL* 25, 101-126.
- Talstra, E, & Sikkel, C J 2000. Genese und Kategorienentwicklung der WIVU-Datenbank. Oder: ein Versuch, dem Computer Hebräisch beizubringen, in: Hardmeier, C et al. (eds). Ad Fontes! Quellen erfassen – lesen – deuten. Was ist Computerphilologie? (Applicatio 15). Amsterdam: VU University Press, 33-68.
- Tesnière, L 1969. Éleménts de syntaxe structurale. Paris: Klincksieck, 2nd ed.
- Van der Merwe, C H J 2002. Discourse Linguistics and Biblical Hebrew Grammar, in: Bergen, R (ed.). *Biblical Hebrew and Discourse Linguistics*, Dallas: Summer Institute of Linguistics, 13-49.
- Vater, H 1978. Distinguishing between Complements and Adjuncts, in: Abraham, W (ed.). Semantic Case and Grammatical Relations (Studies in Language Companion Series 1). Amsterdam: Benjamins, 21-45.