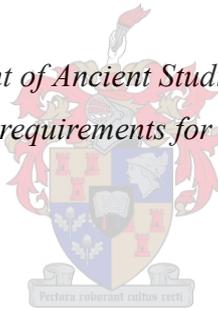


תזרת

A Cognitive Linguistic Analysis of the Biblical Hebrew Lexeme

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Declaration

I, the undersigned, hereby declare that the work contained in this thesis is my own original work and has not previously in its entirety or in part been submitted to any university for a degree.

Signature.....

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26 October 2010

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Opsomming

Hierdie tesis spreek die probleem aan van polisemie in die beskrywing van die Bybels-Hebreeuse lekseem תחת in die Biblia Hebraica Stuttgartensia. Tradisioneel word die lekseem meestal as ‘n voorsetsel beskou. In hierdie ondersoek word aangetoon dat die lekseem ook as as ‘n naamwoord, bywoord of voegwoord gebruik kan word. ‘n Kritiese analise van standaard Bybels-Hebreeuse woordeboeke toon aan dat hierdie bronne mank gaan ‘n leksikografies begronde raamwerk in terme waarvan polisemiese lekseme ge-orden kan word. Wat nodig is vir hierdie doeleindes, is leksikale beskrywings eerder as ‘n lys “oënskynlike” betekenis. Dit word verder duidelik aangetoon dat vertalingsekwivalente nie altyd gelykgestel kan word aan die betekenis van ‘n lekseem nie – ‘n praktyk wat al jare lank onkrities aanvaar word. Kognitief-linguistiese instrumente ten opsigte van kategorisering en leksikale semantiek word dan ingespan om die lekseem תחת beter te beskryf.

Hierdie studie verteenwoordig so ‘n kognitief-linguistiese analise van die polisemiese dimensies van die semantiese netwerk van תחת, wat ook bruikbaar kan wees in digitale leksikografie. Die voorgestelde netwerk word gekomplementeer deur semantiese diagramme wat die betekenis grafies uitbeeld in plaas daarvan om dit met behulp van vertalingsekwivalente te beskryf.

Die betekenisonderskeidings wat getref word, is die volgende: substantief (*onderkant*), plek (*spesifieke plek “spot”*), substitusie (*in die plek van*), uitruiling (*in ruil vir*), oorsaaklikheid (*omdat*) en implisiete perspektief (*x onder [die spreker]*). Hierdie betekenisonderskeidings word georganiseer met behulp van ‘n grafiese netwerk wat die semantiese verhouding tussen die verskillende nuanse illustreer. Die semantiese netwerk stel ook ‘n ontwikkelingsprofiel van die lekseem voor. Hierdie diagram bied ‘n moontlike verklaring waarom תחת ‘n bepaalde reeks poleemiese onderskeidings simboliseer.

Abstract

This thesis addresses the problem of polysemy in describing the biblical Hebrew lexeme תחת in the Biblia Hebraica Stuttgartensia. Traditionally treated as mainly a preposition, it is demonstrated in this study that תחת can also be used as a noun, adverb or conjunction. A critical analysis of standard biblical Hebrew lexica reveals that they typically lack a clear lexicographic framework with which polysemous lexemes can be organized. Ideally, this would offer lexical explanations to users of a lexicon rather than supply lists of alleged meanings. Further, it is also made clear that target language glosses can no longer be accepted as "meaning", a practice which has been uncritically accepted for years. In order to move beyond English glosses, cognitive linguistic tools for categorization and lexical semantics are utilized.

This thesis contributes a cognitive linguistic analysis of the polysemous lexeme תחת and a semantic network of תחת that can be useful for digital lexicography. The proposed network is complemented by frame semantic diagrams which describe meaning imagically rather than only with a target language gloss.

The various senses established are: substantive (*underpart*), place (*spot*), substitution (*in place of*), exchange (*in exchange for*), vertical spatial (*under*), approximately under (*at the foot of*), control (*under the hand*), causation (*because*), and implied perspective (*x below [the speaker]*). These senses are organized in the proposed network showing the semantic relationship between the senses. The semantic network also provides an evolutionarily plausible explanation of how תחת came to symbolize so many distinct polysemies.

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Abbreviations

BH	Biblical Hebrew
BHS	<i>Biblia Hebraica Stuttgartensia</i>
CL	cognitive linguistics
crs	cross-listed exemplar
GHCL	<i>Gesenius' Hebrew and Chaldee Lexicon</i>
GKC	Gesenius-Kautzsch-Cowley
JM	Joüon-Muraoka
HALOT	Köhler-Baumgartner-Stamm
LM 	landmark
pro sfx	pronominal suffix (appendix)
SDBH	<i>Semantic Dictionary of Biblical Hebrew</i>
TR ●	trajector
WO	Waltke-O'Connor

CHAPTER 1 Introduction: The Problem of the Pitchfork

Holding onto a long handle, a reaper lifts hay with the prongs of the fork and pitches it, separating the wheat from the chaff. The reaper lays the final form of the crop into stacks and bundles them. However, sometimes good wheat is dropped and sometimes chaff makes its way into the sheaves. The manual pitchfork is a useful tool that serves its purpose, but technology has developed and there are more efficient tools now available.

An analogy is drawn between the development of farming methods and the development of biblical Hebrew (BH) lexical resources by Michael O'Connor's (2002:200) description of Brown-Driver-Briggs' (1906) (BDB) lexicographic method. O'Connor wrote that the comparative Semitic data included in BDB seemed to have been figuratively done with a pitchfork. What is clear from O'Connor's criticism of BDB is that lexicography should be very careful about the use of cognate sources and how that information affects the arrangement of the lexical entry. While science and innovation has paradigmatically shifted the tools of modern farming from manual to mechanical, science and innovation have not yet swayed the creativity of BH lexicographers on a scale proportional to the mechanization of farming. Simply put, farmers now use machines to collect and bind their product. BH lexicographers for the most part still rely on the pitchfork.

A consequence of this method is the confusion and frustration experienced by students, especially new students, when using BH lexica. Instead of explanations, students often find lists of alleged meanings- which are simply English glosses- paired with particular morphologies.¹ It is not necessary to posit new reasons why uncritically accepting a target language gloss as equivalent to a source language meaning can be troublesome, as Barr (1968:288f) and De Blois (2001:5) have sufficiently addressed the issue. The problem is compounded with polysemous lexemes as often the glosses from different morphological categories of a single word overlap each other. Without a clear method of investigation, students often feel as if they

1. It will be shown in chapter 3 that cognitive linguistics advances a form-meaning pair description of language (See Langacker 2008:3). However, an English gloss is not a BH meaning.

should simply pick a meaning from the dictionary list when translating BH texts, often a theologically attractive reading (Barr 1962:159). If the analogy is true, this comes as no surprise for the lexical resources that new students are taught to use have organized complicated and interrelated bits of information with a pitchfork.

Consider 2 Sam 2.23

2Sam 2.23 וַיִּמָּאֵן לְסוּר וַיִּכְהוּ אֲבִנֵר בְּאַחֲרֵי הַחֲנִית מֵאַחֲרָיו וַיִּפְּל־שָׁם וַיָּמָת תַּחְתָּיו

But he (Asahel) refused to turn away, so Abner stabbed him in the belly with the back of his spear and the spear came out his (Asahel's) back. He then fell there. And he died *tahtav*.

What does *תחת* mean here? If a beginning student turned to a typical glossary in a standard first-year grammar,² the student would most likely translate spatially with *under*, meaning that Abner was spatially higher than Asahel who had fallen when he died. A second or third year BH student might turn to Köhler-Baumgartner-Stamm (HALOT) (2000:1722) and find more information including this verse given as an example of what HALOT calls a substantival use, translating *in his place* (*Asahel fell and died in his place/on the spot*). But how is it that one BH lexeme can do the job of two English glosses? What is the relationship between these two senses? How did they come to be? And specifically in HALOT, why should one not translate a spatial *under* in this case? What explanation is given for preferring this so-called substantival usage? There is none to be found.

This thesis addresses this problem of polysemy through the lexeme *תחת* as it occurs in the *Biblia Hebraica Stuttgartensia* (BHS). Typically treated as a preposition, it will be demonstrated that *תחת* has many functions of which preposition is only one. Further, these multiple functions can be organized in a principled manner, rather than haphazardly laid into piles.

2. Kelley (1992); Pratico and Van Pelt (2001); Ross (2001).

But how does one do that? What can motivate lexical organization? And how can the relationships between the senses of a polysemous lexeme like *תורה* be described? It will be argued that cognitive linguistics (CL) offers a suitable methodology. CL is a rich descriptive apparatus that, as a theory, sits well with empirical findings regarding language and the mind (see 3.1). For the last few decades CL has developed precise models of categorization (see 3.2), and as a linguistic endeavor is not loyal to a diachronic-only or a synchronic-only approach to language description. Rather CL is compatible with a theory of language change that explains contemporaneous synchronic phenomena with a diachronic approach (see 3.3). CL offers clear models for semantic description and categorization that are harmonious with neurological data and can describe language change.

However, tools like those of modern-day CL did not just appear, but stand in the timeline of linguistic thought. CL, with Langacker as the head of the movement, began as a reaction against Chomskyan³ generative linguistics, particularly against the idea that the language faculty is an isolated (autonomous) organ in humans.⁴ That deduction about autonomy made by generativists came from the need to give observational plausibility to structuralist notions of semantic arbitrariness and convention. Saussure's structuralist notions of arbitrariness arose as a reaction against the often messy linguistic description of the philologists and etymologists of the classical period. The insights of CL cannot be appreciated without knowing where it sits in the history of linguistics. For as Geeraerts (2010:281) notes, pre-structuralist philology and today's CL share fundamental commonalities.

Both schools are primarily concerned with meaning and both schools employ encyclopedic knowledge to describe that meaning (see chapters 2 and 3). Having a historical view of linguistic development is pertinent to BH scholars because Gesenius, the father of BH lexicog-

3. Many good Chomskyans would object to that statement as Chomsky's present-day linguistic views are no longer traditionally generative in nature (see Chomsky 1995). However the above statement is made with a historical view.

4. The flaws of generativism will not be dealt with here. Introductory CL texts like Croft and Cruse (2004) and Langacker (2008) and have already done that.

raphy, was well trained in the linguistic tradition of his day (pre-structuralist philology). Thus our BH resources like BDB and HALOT which are built upon Gesenius' method (see chapter 2) are exercises in that kind of pre-structuralist philology which Gesenius tailored to the investigation of BH. Since this has been the dominant school in BH lexicography and CL shares fundamental concerns with this pre-structuralist school, then cognitivists today are presented an opportunity to build upon traditional BH-English lexical resources with current CL tools. The area of lexical semantics in particular has developed heuristic tools that lend themselves to innovative lexicographic methodologies (see 3.2). This thesis aims to contribute a CL analysis of the polysemous lexeme תחת including a semantic network of תחת that may be useful for digital BH-English lexicography.

The layout of this thesis is as follows: Chapter 2 reviews relevant comparative Semitic information on the phoneme *tħt* and establishes that the form represents both nominals (*underpart*) and relationals (*under*). This polysemy for the Semitic phoneme is also seen in the BH lexeme תחת throughout the material reviewed. Upon reviewing the structure of the respective lexical entries of תחת, it is shown that lexica built on Gesenius' method result in inconsistent entries with overlapping semantic values for differing morphologies.

Chapter 3 introduces linguistic insights that offer methodological solutions to the problem. A three-part approach is advanced. 1) Neurolinguistics provides an empirical base from which theoretical models may move forward. 2) Cognitive linguistics offers theoretical models that are neurologically plausible, most notably prototype theory for dealing with categorization and frame schemas (frame semantics) for a precise method of lexical semantics. 3) Even in a final form as preserved by the BHS, BH is no monolith. There are regional and chronological factors that have influenced what is preserved in the BHS. As with all languages, BH evolved. Thus language change must be part of a method for investigating BH. What is the process, if a discernible one can be observed, by which תחת became polysemous? Chapter 3 posits a process of abstraction.

Chapter 4 presents the BH data on תחת. There are 544 occurrences of the lexeme in the BHS,⁵ all of which are treated in the appendix. For ease of reading, the data is organized morphologically in the chapter.⁶ The task of chapter 4 is to go beyond standard glosses and posit "meanings" useful to present-day BH students and scholars. These meanings take the form of frame semantic diagrams as employed throughout CL literature, starting with Lakoff (1987).

Chapter 5 orders this information into a semantic network displaying the polysemies that תחת can symbolize. The chapter presents 1) each node in the network, 2) its relationship to prior nodes across the network in 3) a process of language change moving from concrete to abstract to more abstract. This network can be used in future digital BH-English lexica.

5. See chapter 4 for details.

6. This results, as Gesenius, BDB, and HALOT do, in categories with messy overlapping semantic uses. It is a problematic way of making morphological categories and is supposed to be that way. After doing so, it should be clear that, if treated exhaustively, morphological categories serve little place in a second-language lexicon intended for students.

CHAPTER 2 Review of Semitic and BH Literature

The first thing to do is understand the present scholarly consensus on תחת. As this is a linguistic investigation, the literature review commences with a broad overview of the phoneme *tht* in comparative Semitics (2.1). Then the BH grammars of Gesenius-Kautzsch-Cowley ([1910]2006) (GKC), Joüon-Muraoka ([1990]2009) (JM), and Waltke-O'Connor (1990) (WO) are reviewed (2.2), followed lastly by a review of BH lexica (2.3). These include *Gesenius' Hebrew and Chaldee Lexicon* ([1857]1979) (GHCL), BDB (1906), HALOT ([1953] 2000), and the United Bible Societies' *Semantic Dictionary of Biblical Hebrew* (SDBH) based on DeBlois' (2001) dissertation.⁷

The literature review will display two things in addition to what is published on תחת. 1) The pre-structuralist philological school, of which Gesenius was a part, was fundamentally concerned about meaning (as is CL). 2) Formal criteria are more-often-than-not problematic for describing meaning.

2.1 Comparative Semitics

The goal of including comparative Semitic data is to ascertain whether or not the phonemic-semantic pairing of *tht* with some concept of under-ness is unique to BH or prevalent in the Semitic family.⁸ Do other Semitic languages also attest to polysemies of the lexeme outside of BH? If so, is it possible that these polysemies developed according to a process of abstraction (as argued for תחת in chapters 3 and 5)? This would not give new insight into biblical uses of the lexeme from cognates, as Barr (1962:158-1600) warned against, but rather provide evidence within a language family for the evolution of a semantic-phonemic pair.

7. The review of SDBH is purely a methodological review as there is no information on תחת in SDBH yet.

8. Which means I do not attempt to find underappreciated meanings in cognate languages that might in some arguable fashion influence BH. That is philology not linguistics.

To preview the comparative data, the phoneme *tḥt* is a West Semitic phenomena. It is attested in Northwestern and Southwestern Semitic and is used in a variety of contexts. The phoneme typically symbolizes a substantival *underpart* and it also symbolizes the spatial relationship of *under*.

2.1.1 Southwest Semitic

Wright's (1898:182) historic Arabic grammar records that *tḥt* symbolizes both nominals and relationals by way of case marking. The indefinite nominative *taḥtun* (*lower part*) becomes *taḥta* (*under, below*) in the accusative case. An example of this accusative case is given in which the relational use is clear, *mā taḥta-th-tharâ* (*what is under the soil*). The phoneme *taḥta* connects two things in a vertical spatial relationship. The relational phoneme *taḥta* is also extended metaphorically to symbolize the relationship between a husband and wife, *kānat taḥta tulānin* (*she was under [the authority of]...*).⁹ The phoneme *tḥt* is not used verbally in Arabic according to Wright and Lane.

Though quite late chronologically,¹⁰ Ge'ez attests to the widest variety of contexts for the phoneme *tḥt*. In addition to nominal and relational uses in Ge'ez, as in Arabic, Lambdin (1978:438-439) also documents verbal uses of *tḥt*. These include *teḥta* (*to be humble*), *aḥtäṭä* (*to make [someone] humble, to subject [someone]*), and *tateḥḥeta* (*to humble one's self, to act submissively*). Nominal uses include *mathett* (*lower part, inferior part* with prefix *m*), and relationals *taḥta* (*under, below*) and *mathetta* (*under, below* with prefix *m*).¹¹

9. For more examples of nominal and relational uses of *tḥt* in Arabic, see Lane's (1955:298) eight part Arabic-English lexicon. Relational uses are also attested in the Sabeian dialect of Arabic: *tḥt* 1) *under*, 2) *by the authority of*, 3) *lower, lowest* (Biella 1982:533).

10. No Ge'ez is attested before the common era. See Perkins (2008).

11. See 4.3 for *m+tḥt* used nominally and relationally in BH.

2.1.2 Northwest Semitic

In the North of the ancient Levant, the phoneme *tħt* more often symbolizes relationals. Ugaritic attests to relational usages glossed in English as *under*, *subordinate to*, and *among* (Del Olmo Lete and San Martin, 2004:865-866). Ugaritic also allegedly attests to a substitution usage of *tħt* where one thing substitutes for another, as in royal succession (*he ruled in place of his father*).¹² Similarly, Phoenician/Punic attest to the basic spatial sense *under* of *tħt*. This usage is present in all languages that invoke the phoneme.¹³ In addition, there are other usages glossed *place (in one's place)* and a specific directional *south of* (Krahmalkov, 2000:489-490). In epigraphic Hebrew *tħt* occurs infrequently.¹⁴

It is clear that the phoneme *tħt* is widely attested in West Semitic languages. In fact, it is so broadly used, that no conclusive position can be taken about where the phoneme "originally" comes from.¹⁵ Rather, it is a West Semitic phenomenon that most basically connotes verticality.

2.2 BH Grammars

While comparative Semitics offers no concrete answer to the question of origin regarding the phoneme *tħt*, BH grammars have long offered a plausible explanation to how the lexeme תחת came to be used as a preposition in BH. In fact, until the publishing of WO, BH resources nearly uniformly presented the same story. Prepositions, the explanation goes, originally came from nouns. תחת and other segholates like נגד, אחר, and עצל came to be used as a prepositional and adverbial modifiers through regular use in their construct form.

12. "tħt is attested only in one prose document where we read three times: PN¹ tħt PN²... Does this mean *under*?... An alternative interpretation is to understand the first name as representing a person substituting for the one mentioned second" (Parker, 1970:60). See 5.3 for this regular usage in BH.

13. Also, Hoftijzer and Jongeling (1995:1209-11) note attestations in Nabatean and Palmyrenean.

14. Ophel 3 - *mħt (under)* (Gogel 1998:426).

15. However a possible exception is granted to the re-constructed Proto-Semitic language, but there is no clear evidence of that. Fox's (2003) remarkable work *Semitic Noun Patterns* does not mention *tħt*. Neither do other comparative Semitic resources consulted provide any possible historical view of the phoneme's development.

2.2.1 GKC

In GKC §101, the paragraph begins "All words, which by usage serve as prepositions, were originally substantives."¹⁶ To explain the development from substantive to preposition, GKC (and JM see 2.2.2) fits BH into categories created for classical grammar and in doing so labels this developed prepositional usage as *adverbial accusative*. Further evidence for substantival origins is given in GKC §103n-o concerning the pronominal suffixes that תחת can take, "Several prepositions...are properly plural nouns...joined with the pronominal suffixes in the form of the plural *construct state*."¹⁷

GKC is also implicitly involved in semantics. In itself this is not a negative thing (in fact, I argue it is a necessity), but it does betray Gesenius' own lexicographic principle of separating the lexicon from the grammar (see 2.3.1). For Gesenius, meaning is for the lexicon and form is for the grammar. However, Gesenius does not consistently operate by this principle. For example, in describing תחת when used with other prepositions and conjunctions (a morphosyntactic category), GKC offers English glosses that delineate between different semantic categories. GKC §119e tags אֶל־תחת *down under* and §158b categorizes תחת אשר and תחת כי as causal conjunctions, rendering them in English *arising from the fact that* and *for the reason that* respectively. This by no means is the only time GKC gives information one might expect in a lexicon. As to the *meaning* of prepositions in general, GKC §119a gives a surprisingly cognitive explanation. "In the case of most prepositions some idea of a relation of *space* underlies the construction, which then, in a wider sense, is extended to the ideas of time, motive, or other relations conceived by the mind." Of course, there is no a priori reason to exclude semantic information from the grammar, and yet as shown in 2.3.1, Gesenius does. This explanation of תחת and prepositions is the first to confirm the two stated outcomes of this re-

16. If ב, ל, כ, and בן are not considered *words* then this statement needs no qualification.

17. As in the tsere-yod י suffix as in תחתיה *under it/her*.

view: 1) Gesenius was fundamentally concerned with meaning, and 2) despite efforts to separate the two into camps, meaning cannot be explained apart from formal considerations.

2.2.2 JM

JM describes BH within the same classical, Latin-based framework as GKC. Thus, much of what is said about prepositions and תחת is very similar to GKC. However even within the same framework, JM greatly expands upon GKC in some instances and in others even departs from GKC offering something different. One such expansion is a discussion on the inflection of plural segholate nouns, of which there are allegedly two types: an older type and a younger type. תחת, states JM (§96Ab), is the older type. The younger type is identified by its use of the vowel qamets in a segholate noun's primitive form, which תחת does not use, thus making it of the older variety.¹⁸

However, this expansion on the inflection of plural segholate nouns is established by JM on a questionable foundation. In footnote 7 of JM §96Ab, JM write, "That this pattern is older is shown by its attestation in types of lexemes mentioned below: some numerals, a preposition—*both parts of speech belong to a primitive component of any language...*" (italics added). This last statement is simply not factual. Not only does it ignore comparative Semitic data such as the verbal uses of the *tʰt* phoneme in Ge'ez (see 2.1.1), but such a statement does not take into account a number of languages, like Mandarin, to which a grammatical category like preposition is inapplicable.¹⁹ Relational concepts in Mandarin are expressed with *coverbs*, relational morphemes that derive from and orthographically attach to verbs. In the framework of GKC's and JM's Latin-based grammar, Mandarin coverbs are derivative (originating from verbs) not primitive (originating from nouns). Prepositions do not belong to a

18. It should also be pointed out that here JM assumes that תחת is primitive, or derived from a noun, not a verb. This contradicts the assertions in GHCL and BDB that תחת derives from an Arabic verb (see 2.3.1.1 and 2.3.1.2).

19. "If the Mandarin coverbs are simply prepositions, why, then, are they called coverbs rather than prepositions? The answer is simply that the class of coverbs contain words that are partly like verbs and partly like prepositions; the traditional term coverb was coined to avoid labeling them either verbs or prepositions." Li-Thompson (1981:360).

primitive component in "any" language, thus JM's argument for the two types of plural segholate noun inflections can be called into question.

JM agrees with Gesenius' notion that lexicon and grammar are properly separate,²⁰ yet JM has no problem crossing that border every time a preposition is described syntactically. Each subentry in JM §133 opens with a given preposition and its *meaning*. JM, like GKC, implicitly teaches us that syntactic description of BH cannot be divorced from semantics.

2.2.3 WO

At the end of the twentieth century, an intermediate-level BH grammar²¹ was published to fill the pedagogical hole for a new generation of BH students. WO's *Introduction to Biblical Hebrew Syntax* offers summaries of issues in BH that have been debated and re-worked for generations. Relevant to this project is WO's summation of the work that has been done on prepositions. Approaches to the word class are divided into three parts: the nominal perspective (WO §11.1.1), the particle perspective (WO §11.1.2), and the semantic perspective (WO §11.1.3). These paragraphs sufficiently describe how prepositions have been treated throughout BH scholarship.

The nominal perspective over-emphasizes the relationship between a preposition and the verb in whose clause the preposition occurs. In this view, prepositions are often labeled as nouns in the adverbial accusative, as in GHCL and BDB. The use of Latin-based case descriptions marks this perspective. This is still a dominant view and is used in GKC and JM, though WO simply records the view as a historic position held with regard to BH prepositions.

20. JM §132b; "It is the role of the lexicon to indicate these very varied uses..."

21. Grammar is an inclusive term of which syntax is a part. Further, it may be argued that calling WO a syntax book is due to its influence from generative grammar in which syntax is the pinnacle of linguistic inquiry.

In the particle perspective, prepositions are one kind of particle.²² Though not represented in GKC or JM, this view is popular in contemporary introductory texts²³ and even the BHS Westminster morphological database (1996). In this view, the preposition word class was developed on the grounds of particles' morphological diversity.

The semantic perspective, adopted by WO,²⁴ attempts to describe what prepositions relate. WO urges that such descriptions cannot just be between a preposition and its object, but also between the main verb of a clause and the prepositional phrase. In this perspective, the preposition word class is not based on classical grammar or morphology, but a functional category. Anything that makes a relationship can function prepositionally. Hence, WO §11.1a begins its prepositions chapter with a semantic description, "Prepositions are *relational* terms...". Specifically in regards to תחת, WO §11.2.15n117 identifies particular meanings, as did GKC and JM.²⁵ The semantics of תחת are given in a four-part description: 1) under (a place), 2) place, on the spot, 3) instead of, and 4) control. Though adapted for the conventions of CL, this functional approach is how תחת will be described in this thesis.

2.2.4 Summary

BH grammars have historically been based on the principles of classical (Latin-based) grammar. While this served a purpose for previous generations, it is clear that such methods are inherently flawed when applied to a language that does not employ a formal case system. In its place however, no clear and principled methodology has arisen. WO's semantic approach to prepositions, while a necessary step in the evolution of BH scholarship, is little more than questioning how an alleged preposition functions. There still is no clear linguistic framework

22. WO defines particles as a class of words that connects and subjoins nouns and verbs (including prepositions, some adverbs, the article etc.) or exists on the margins of utterances (e.g., exclamations and interjections) (WO 1990:692).

23. Kelley (1992:28) and Ross (2001: 45, 108-9).

24. This view is implicit in Long's (147-9:2002) book on grammatical concepts in BH.

25. However, WO labels their semantic description as semantic.

to replace the classical model of grammatical description in BH. However, in the field of BH lexicography, more progress has been made.

2.3 BH Lexica

We now have a general, comparative Semitic handle on the phoneme *tht* and also an understanding of how תחת and prepositions have been treated in standard BH grammars. Now our attention turns to lexical resources. How is the above comparative data (2.1) used in those lexica? How much, if any, grammar data (2.2) is included? How is that data organized and made relevant to biblical literature? To answer these questions, we look to the methodology that girded Gesenius' projects and the projects that followed in his place. Specific entries for תחת in Gesenius, BDB, and HALOT must be examined. But before that, we have a chance to examine the lexicographic framework that gives foundation to these lexica. This affords us an opportunity to judge Gesenius' work on his own principles, rather than criticize him for not living up to our standards.

2.3.1 Gesenius' Lexicographic Tradition

It does not take long for any contemporary student of BH to hear the name of the non-contemporary BH scholar Wilhelm Gesenius. Though dead for some time, the works of Gesenius- and more importantly the methodological ideas of Gesenius- live on. It is no stretch of fact to say that every major BH lexicon in print today has something to do with his lexicographic method, whether they build on his work or depart from it. Despite its value, this is a reminder that major BH lexica, for the most part, have not been scientifically innovative, for BH lexicographic method has changed little since Gesenius.

Giving us an insight into the time-tested lexicographic method, Miller (1927:22ff) summarized what he calls Gesenius' "rules on lexicography" into eight principles, which are as follows.

- 1) "What belongs to the lexicon should carefully be separated from what properly belongs to the grammar and commentary."

The problem with being faithful to this rule has already been demonstrated in GKC (2.2.1) and JM (2.2.2). However, this notion still holds weight today among many linguists, particularly of the generative camp. The argument goes that grammar and lexicon are two different parts of language and thus must be treated separately. However, for Gesenius, this is not so much a linguistically informed ideological view; rather it is a practical belief about saving space. So for example, there is no need to list all the conjugations of a verb (like פָּתַח) that follows a normal verb paradigm.

2) "The lexicon should contain a complete list of constructions and phrases formed with words."

This implicitly makes the lexicon a repository for syntax statistics, which is helpful, but oddly runs contrary to rule 1).

3) "The language must be treated historically..."

The lexicon should also note stages of Hebrew. For example, is a particular lexeme early or late? In conjunction with 7), this implies that the different senses a polysemous lexeme may symbolize are arranged in the way they occurred diachronically. However, this is not explicitly stated.

4) Variant readings should be noted.

Textual alternatives should be listed in the lexicon. However in practice, Gesenius only offers Ketiv/Qere differences with consistency. Faithfully observing this rule, HALOT consistently lists emendations (see 2.3.1.3).

5) "Proper names deserve a place in the lexicon, only in so far as they were originally appellatives, and contain verbal roots which would be otherwise lost."

Following this rule, GHCL (2.3.1.1), BDB (2.3.1.2), and HALOT (2.3.1.3) all list a second entry for תַּחַת, the proper name.²⁶

26. It will not be included in this study as there are only a few occurrences. This project is focusing on the

6) "A lexicographer must also study Oriental antiquities."

On this matter, Miller (1927:101) praises BDB, "The purely linguistical, comparative, geographical, and archaeological materials in the edition of Brown, Driver, and Briggs are more accurate than those in the (Gesenius) Thesaurus."

7) "The lexicographer should list progressively the significations of each word in the most natural order, as they may have developed themselves, and illustrate them by proper examples...The lexicographer thus gives a logical and historical view of each word in all its variations of signification."

Though this process has certainly played a role in the development of our knowledge of BH and how to present that in a lexicon, there is no set structure (other than the lexicographer's intuition) that relates the different "significations" to one another. Instead, different senses are simply numbered and listed in the lexicon. If a linguistic theory is to be offered as an alternative to the classical grammatical model, accounting for language change must be included.

8) Words should be listed alphabetically because that is best for students.

This provides sufficient ground for understanding and criticizing Gesenius lexicography (and those in his tradition) on his own terms. We can now go to the lexica better informed.

2.3.1.1 GHCL

GHCL is an English translation of Gesenius' Latin *Lexicon Manuale Hebraicum et Chaldaicum in Veteris Testamenti Libros*, one of many BH lexica that Gesenius worked on in his lifetime. Though much of the information might be considered dated, its economy of size, comparatively cheap price, and paperback edition has kept it in use.

GHCL's תחת entry begins by labeling the lexeme a substantive connoting *the lower part, that*

many relational senses, and their relationship to each other in a semantic network. It is interesting though that HALOT (2000:1723) tags the name as *substitute*.

which is below. Then תחת is compared to other Semitic forms: *tahta* (under) the Arabic accusative noun used as a relational, *athätä* (to subject [someone])²⁷ one of the Ge'ez verbs mentioned above, *tähtä* (to be lowered, depressed) another Ge'ez verb though not mentioned in Lambdin (1978), *thut* (low) apparently a Ge'ez adjective, and finally *tahta* (under) the Ge'ez relational as also mentioned above.

GHCL then records, "It may, however, be doubted whether ת final be primary and radical, or secondary, which latter opinion is supported by the Arab. *tah* to go down and dip (one's finger); whence תחת may be derived, like נחת from נית". No matter one's opinion of GHCL's argument here is, two things must be noted. 1) The alleged Arabic lexeme *tah* is not accessible in common Arabic lexica. Unless one uses the same Arabic manuscripts that Gesenius used in Oxford to prepare his lexicon,²⁸ there is no way to verify this information empirically. 2) Other versions of Gesenius' lexical works disagree. Gesenius' *Handwörterbuch* (1886:896) records that תחת is "nicht von תיח, *tah* (Arabic), *ṭah* (Arabic)", while a later edition of the *Handwörterbuch* (1921:876) omits the Arabic *tah* information altogether. Even within Gesenius' own school of thought, there is no consensus on the etymology of תחת.

This debatable hypothesis regarding etymology is the basis for the next assertion in GHCL about תחת. GHCL argues that because the substantival תחת comes from an Arabic verbal form, then in contexts like Gen 49.25 תחת can be described by Arabic-like case language as an adverbial accusative, as described in GKC (2.2.1) and later JM (2.2.2). The support for this hypothesis is questionable.

Gen 49.25 בְּרִכַּת תְּהוֹם רְבֻצָּת תַּחַת
 ...blessings of the deep lying below

Next, GHCL lists forms of this substantive in its construct state with various suffixes. These

27. It is notable that Lambdin (1978) and GHCL offer different English glosses for the Ge'ez verb *athätä*. Lambdin's is *to subject*, while GHCL glosses *to let down, to lower*.

28. Tregelles (GHCL 1979:xii) alleges that Gesenius used "The Book of Roots" by Abuwalid, an Arabic manuscript at Oxford (among two other special manuscripts at Oxford).

usages are labeled *prepositions* (though still under the same substantive heading) and are followed by prepositional phrase collocations. The example phrases are a mixed bag. Some are spatially "under" in nature (Ex 24.4), while others are more abstract (Num 5.19). This reflects the uses of *tht* across Semitic languages (see 2.1).

Ex 24.4 וַיִּבֶן מִזְבֵּחַ תַּחַת הָהָר
...and he built an altar at the foot of the mountain

Num 5.19 וְאִם-לֹא שָׁטִיתָ טְמֵאָה תַּחַת אִישׁךָ
If you have not turned to a state of uncleanness while under your husband's authority

Still under the substantive heading, GHCL moves to תחת with verbs of motion. In these cases, GHCL argues, תחת with such verbs indicates *beneath, under any thing*. An example is given, although why this example is not organized with other so-called adverbial uses is not explained.

Gen 18.4 וַהֲשָׁעֲנוּ תַּחַת הָעֵץ
...and rest under the tree

Next, in the first true subset, 1α , begins a series of subsets categorized by formal features: their prefixes. First is מתחת, labeled an adverb and understood semantically as a composite form (מן plus תחת) as all English glosses for מתחת are *from under, from beneath*. Second (1β), GHCL lists למתחת ל which is stated to be the opposite of מעל ל, followed by (1γ) למתחת ל, and (1δ) אל-תחת. The English glosses offered for each respective subset are strikingly similar: *below, under a thing*. Though the semantic overlap can be frustrating for new students, the division of תחת into various morphosyntactic categories seems to indicate a question asked implicitly by such division: Is there one-to-one correspondence of these different formations to different meanings? Or to put it another way, does למתחת ל mean something consistently different than אל-תחת? From GHCL's glosses, the answer seems to be *no*.²⁹

29. My own empirical findings regarding morphosyntactic-to-semantic correspondence are in 4.4.

GHCL then moves to its second (2) meaning, "*what is under any one, the place in which anyone stands*". Why this substantival sense is separated from the *lower part* substantival information at the beginning of the entry is not explained. An example is given.

וּבְתַחֲתָיו יִצְמַח
...and from his place he sprouts

This notion extends, in GHCL, to a concept of *replacement* in (2b) "*in the place of, for, instead of*" as in Psa 45.17. Though this categorization by GHCL seems to be motivated by nothing other than Gesenius' own intuition, it is substantiated by contemporary linguistic theory (see 5.2).

תַּחַת אֲבֹתָיִךְ יִהְיוּ בְנֵיֶיךָ
instead of your fathers will be your children...

The lexicon then moves on to collocations with particles: תַּחַת אֲשֶׁר (*instead of that*)³⁰ and כִּי תַּחַת (*because that*). Finally, (3) lists "*Thahath*", a proper noun that identifies an ancient site in Israel. To sum up GHCL's description, תַּחַת is a substantive derived from an Arabic verb³¹ meaning *to go down, dip*. While a substantive, תַּחַת in its construct state is used as a preposition and an adverb. Some meanings of תַּחַת can be identified by formal features, like prefixed particles.

More than one-hundred sixty years after its first publication, GHCL provides an example for lexicographers and a resource for students to which reference is still made. But how does this particular entry measure up against Gesenius' own rules as summarized by Miller (1927)?

As Gesenius' first rule is the separation of lexicon and grammar, one might expect purely semantic categories, and yet GHCL employs morphosyntactic categories (as in adverb or with other particles). This is more evidence that a strict separation between grammar and

30. It will be demonstrated in 4.3.2 that תַּחַת אֲשֶׁר is most often a causal conjunction, contra GHCL but in keeping with GKC's gloss.

31. This claim is made despite the fact that GHCL gives more verbal uses of *tht* in Ge'ez than in Arabic.

lexicon cannot be maintained, as GHCL cannot help but include grammatical information to fully describe what תחת means. The situation is further complicated as subsets divided by differing morphosyntax have very similar semantic value.³²

Looking at rules two and three, that phrases are provided and that the lexical item be treated historically, collocation lists are given and the philological connections to Arabic attempt a historical perspective. Despite these efforts, the thoroughness of these efforts must be questioned. Why is every instance and collocation of תחת not noted and categorized? Surely that is what is meant by a "complete list of constructions and phrases" (Miller 1927:22-23). And exactly how historical is this historical perspective that is presented? It is clear from comparative information that the phoneme *tht* is widely attested in West Semitic, but that says little of history. There is no conclusive presentation in GHCL of how תחת historically came to be as the comparative data invoked is not structured (around anything) nor explained in any way.

The Arabic and Ge'ez data used in GHCL (and other forms of Gesenius' lexica) poses a further problem: relevance. Surely helpful information about the phoneme *tht* can be gleaned from any Semitic language in which that phoneme occurs. But that information will only be useful to a Semitist or comparative linguist in a very general way. A clear distinction must be made between comparative linguistic data and diachronic linguistic data. GHCL conflates the two. While the Arabic and Ge'ez data is informative on a comparative level, it cannot speak to diachronic development nor explain BH instances of תחת as GHCL attempts to use it. The Arabic upon which GHCL bases its claims is "classical" Arabic, which is by-and-large Quranic.³³ This strata of Arabic is far too young to diachronically inform BH. Yet, it is assumed to be valid in the various lexica of Gesenius, and goes unchallenged in subsequent BH lexica (see 2.3.1.2 and 2.3.1.3).³⁴ Thus, not only is GHCL's argument regarding the

32. As stated above with subset 1a and 1α.

33. GHCL (1979:x) writes in the preface, "In Arabic roots, etc., Freytag's Lexicon has been used for verifying the statements of Gesenius which have been questioned." Freytag's Lexicon ([1837]2008) does not cover Arabic prior to the advent of Islam.

34. Arabic is useful for comparison as it has preserved some things that other Semitic languages have not (like

etymology of תחת a problematic one even within Gesenius' school of lexicography, it has been based on diachronically irrelevant Arabic data. The Ge'ez data presents similar problems, as it is also very late.

Rule six might well be Gesenius' standard for BH lexicographers, but this rule is hard to measure in the doing of lexicography. It is nearly impossible in projects that reject the inclusion of encyclopedic information, or as Gesenius might say, information suited for a commentary. I observe nothing that shows reference to "Oriental antiquities" in GHCL's תחת entry, with exception to the separate entry regarding תחת the proper name. It is clear that much attention has gone into satisfying the seventh rule, though the "natural" arrangement (from Arabic to Hebrew) is problematic for the reason above regarding the use of Quranic Arabic to inform BH.³⁵

One last issue needs to be addressed as it is a problem present in Gesenius which is inherited by BDB and HALOT. The issue is a combination of consistency and clarity. Problems of this mixture arise in a subsection like תחת *with verbs of motion* which is listed under the *prepositions* section. If distinctions between adverb and preposition are to be maintained, then should not any occasion of תחת modifying a verb be labeled and classified adverbially? Why do these instances of תחת with these verbs get to be labeled prepositional and only some others adverbial? It is not unreasonable to expect a consistent structure in lexical resources.

2.3.1.2 BDB

BDB clearly stands on GHCL's shoulders, not only in content as it is an English translation of Robinson's edition of GHCL, but in method, as the editors write of themselves (BDB 1906:vi), they "reached the conviction that their first and perhaps chief duty was to make a fresh and, as far as possible, exhaustive study of the Old Testament materials, determine the actual uses of words by detailed examination of every passage, comparing, at the same

cases), but the point remains that an etymology cannot be properly made from Quranic Arabic to BH.

35. For a general critique of using cognate languages to inform BH see Barr (1962).

time, their employment in the related languages, and thus fix their proper meanings in Hebrew." With one hand in synchronic, contextual study of the HB and the other in cognate philology, BDB takes the same classical approach that marked GHCL. This method, say the Editors, will give a *fixed meaning*.

BDB's (1906:1065-1066) entry for תחת is not all that different from that of GHCL on the whole. תחת is labeled a noun, compared to Arabic and Ge'ez cognates, and on that basis is said to be an adverbial accusative. BDB moves on to general categories of adverb and preposition, each of which have their own specific subsets. Finally like GHCL, a list is offered of תחת plus other particles with accompanying English glosses. This entry, though mostly the same as GHCL, holds a notable difference. BDB takes a further step and assigns gender to the form; it is masculine according to the Editors. GHCL, and HALOT as we will see, make no reference to gender. In fact, this statement on gender that BDB asserts is in direct contradiction to GKC §86h, which states that תחת is feminine.

Though similar to GHCL, BDB breaks some of Gesenius' rules. The most obvious violation is returning to an organization by root instead of alphabetical listing. Less obvious is the lack of (historical and logical) explanation in BDB. Whereas versions of Gesenius' lexica would step out on a limb and attempt an explanation even without a consensus (as with the argument that תחת derives from the Arabic *tah*), BDB simply lists data collected. Or as Miller (1927:101) criticized, as O'Connor would later echo, BDB's method is "not one of investigation, but simply a compilation of results".

The inconsistent structure of grammatical and semantic categories that began with Gesenius' many lexica is inherited by BDB. The editors categorize 2 Sam 2.23³⁶ as a preposition. But why not in the adverb category as it describes a verb? Why not mention the possibility of *spot* as many translations render?³⁷ Also, תחת אשר is categorized functionally as a conjunction (which it is), and then is followed by a morphological category for compounds (תחת plus a

36. See 4.2 for detail on this verse.

37. BDB has a category for this *place* sense in IIa (p1065).

particle) in which **תחת אשר** is not included. True, **תחת אשר** functions as a conjunction, but it is also morphologically a compound. **תחת אשר** should then be cross-listed in both categories in both functional and formal categories. For contemporary students of lexicography, this kind of inconsistency is a lesson in what not to do.

2.3.1.3 HALOT

It is said that HALOT is not based on Gesenius (De Blois 2001:14). That is not so. HALOT is not translated from GHCL like BDB is, but it is part of Gesenius' lexicographic tradition. In fact, HALOT is the epitome of Gesenius' method. The evidence speaks for itself. Not only is HALOT more informative than its predecessors (by benefit of history³⁸) but the comparative and diachronic information of cognates is used more conservatively to inform BH occurrences of the lexeme. This comparative work was not done with a pitchfork. As we will see with **תחת**, a clear historical explanation of a lexeme's development is offered, satisfying Gesenius' rules 3 and 8 with which GHCL and BDB struggled. Thus we should go into HALOT's entry for **תחת** expecting much of the same framework, but more and more specific information.

In regards to continuity of lexicographic framework, Köhler's preface (HALOT 2000: vol. 1, lxviii) to the Hebrew part³⁹ of the lexicon alludes, probably without intention, to Gesenius' rules. "The first thing to do," writes Köhler, "is to arrange all words alphabetically... The second thing to do is to enumerate the occurring forms of a word. Not all forms are named...The third thing to be expected is a a list of quotations of the word concerned". Köhler continues by stating that the job of any Hebrew lexicon is to "render accurately in modern language the meaning of the Hebrew words."⁴⁰ Getting at this

38. HALOT includes information (Qumran literature, Ugaritic, Akkadian) that was not available to any editions of Gesenius lexica, nor to the editors of BDB.

39. Unfortunately, as Köhler did the Hebrew part and Baumgartner did the Aramaic (and Stamm revised everything!), the **תחת** entry to be reviewed is largely the work of Köhler. It is unfortunate that we are not afforded the chance to see how Baumgartner would have organized the Hebrew information, as his Aramaic portion has received much praise. See O'Connor (2002).

40. This will prove to be a needed disclaimer, as Hebrew words do not *mean* anything in English (ex. **תחת** does

meaning is accomplished in HALOT by 1) "the context or exegesis of the whole" and 2) "linguistic reasoning". Linguistic reasoning in HALOT is a) cognate philology and b) semantics. The pre-structuralist semantics employed here is not at all different from that of Gesenius: words have a central meaning and derivations that extend from the semantic center, which is deduced by cognate philology. HALOT is a contemporary exercise of Gesenius' lexicographic method and the most faithful lexicon to that method.

HALOT's תחת entry begins as the others, by first labeling the form as a substantive, then HALOT offers clear information about language change stating, as said before, that תחת was a substantive that developed into a preposition. This information is set in a larger Ancient Near Eastern context: *tht* is "Semitic except for Akk(adian)". But where BDB and GHCL used Arabic philology, HALOT focuses more on biblical literature, like biblical Aramaic uses of תחת and the form in Qumran literature. It is also stated that the Samaritan Pentateuch records "*tēt*, with sf (suffix) *tētto* under, below". And again with the benefit of history, HALOT notes Phoenician and Ugaritic attestations of the phoneme, as in the comparative data above (2.1). Though Ge'ez is referred to briefly, HALOT is much more careful about what philological information to include. The etymology of תחת according to HALOT does not stem from any verb in a cognate language.

The remainder of the entry describes תחת into four parts: 1) substantive *what is located underneath, below*, 2) substantive as a preposition *below, underneath*, and 3) *in place of, instead of*, and 4) with particles. Though arranged a bit differently, the content of each category resembles those of GHCL and BDB.

2.3.2 De Blois and SDBH

The first true deviations from Gesenius' method of lexicography for BH have been in recent years. These two works are Swanson (1997), developed for Logos Information Systems, and De Blois (2001), the methodological framework for the United Bible Societies' *Semantic Dic-*

not mean *king*). But HALOT's goal is not to describe what the Hebrew words *mean*, but rather how that meaning might best be rendered to modern German (and eventually English) speakers.

tionary of Biblical Hebrew (=SDBH). They are both digital lexica based on the *semantic domains* model of lexicography developed by Eugene Nida (1964) and used in the Louw-Nida (1989) dictionary of New Testament Greek. This thesis project is, in part, a contribution to the ongoing SDBH project, so De Blois (2001) will be addressed only.

Nida's semantic domain method is well known. In translation theory form, it is the explanation of something that most humans do naturally, especially with children: explain words with related words. For example, a parent might tell a child, "We have to take you to the orthodontist." The child might respond, "What's an orthodontist?". To answer, the parent might say something about an orthodontist being a kind of doctor who works with teeth, but is not a dentist. In Nida's domain model, orthodontist is in a *doctor* or *medical* semantic domain and is connected to other domains related to medicine, the mouth, and relevant technology. Or to put another way, Nida understood that words do not occur in a vacuum. Words, like *orthodontist*, are related to other words, like *braces* and *overbite*, and yet contrast in some way to a word like *dentist*. It is this relationship of conventional features,⁴¹ be they shared or contrasted, Nida said, where meaning is expressed.

Continuing on Nida's work, De Blois (2001) uses a similar domain-based model, but organizes each domain along CL lines, specifically prototype theory (see 3.2.1.2). These lexical domains organized by prototype seek only to provide semantic information and thus are less concerned with grammatical and not at all concerned with diachronic-comparative information. De Blois (2001:10) writes, "A dictionary based on semantic domains... is structured in such a way that there is not much room for such a diachronic approach." While the contributions of De Blois and SDBH are apparent, like the Wierzbickian definitions⁴² and the exhaus-

41. Well within the structuralist period, Nida held to the orthodoxies of his day like the Saussurean "fact" that meaning is arbitrary, accidental conventions in a language community. So *orthodontist* can only be explained by other words conventionally associated with it. In addition, Nida (1975) also utilized the structuralist tools of his day, like componential analysis. For more, see Geeraerts' (2010:70-80) summary of componential analysis.

42. Wierzbicka (1985) is noted for her thorough (others might say long) definitions of lexemes. SDBH provides very clear definitions for second-language users of BH.

tive description of the BHS,⁴³ SDBH never attempts an explanation of how those definitions came to be. De Blois is correct that such data must be used carefully, but to simply not use it is no solution.

2.4 Summary

Specifically summarizing תחת, the following can be stated: 1) There is a consensus that תחת as a segholate developed functionally from a nominal to a relational. 2) Neither the etymology nor the gender of תחת can conclusively be determined.

The description of BH prepositions and the lexeme תחת has varied over generations. The contributions of Gesenius cannot be overstated. His BH grammar has been the basis for modern-day grammars and his lexica the basis for modern-day lexica. A revision of JM was just released in 2009 and HALOT and BDB have long been used on digital platforms. Gesenius' methodological tradition is alive and well, still being taught to BH students, and students still benefit from it. This tradition provides translation help, cognate information (which has turned up remarkable results in Akkadian and Ugaritic, reflected in HALOT), morphologies, and further biblical references.

However, it is not without its problems. As displayed, the separation between grammar and lexicon is gradual and a strict divorce of the two is impossible. Also some of the cognate data is sometimes anachronistic. And in all resources reviewed, morphosyntactic categories result in semantic overlap. Rather than individual fixes for each problem of Gesenius' lexicographic tradition as represented in modern BH lexica, a shift must be made from philological principle to linguistic theory (to be proposed in 3). Rather than lists, explanations are needed.

43. De Blois has done quite a job (and is still busy doing the job) having covered around 3,000 out of 7,000 BH lexemes.

CHAPTER 3 Linguistics

Linguists have made great strides forward in recent years. For the BH student and scholar, there is much to be gleaned and applied in the effort to read and teach an ancient language. Set forth here is a linguistic theory that can be called CL, but as not to cause confusion, it would most likely be dubbed (by the conventions of current linguistic literature) *panchronic neurocognitive linguistics*. As is apparent in the name, this three-part approach to language description and explanation includes 1) neurolinguistics, the study of the brain and language processing and use, 2) CL, a theoretical apparatus for language description, and 3) panchrony, a theory of language change that uses diachronic methods to explain synchronic phenomena.

The relevance of the three linguistic strains to the present study is paramount. Linguists have long postulated untouchable faculties of language and the interfaces between them and abstract rules that govern language use. But that time has ended. Medical science and imaging technology have given vast and quite precise information on the brain and how it facilitates all aspects of cognition, including language. Present and future work in linguistics must not ignore neurological information but rather adapt to it. To a degree, CL has already done so, hence the discipline of neurocognitive linguistics.⁴⁴ However, it will be shown that with BH, there still must be explanation for language change (diachronics), for which a panchronic view will be used, specifically *grammaticalization* theory. To summarize the approach, neurolinguistics offers an empirical basis to the method,⁴⁵ CL offers theoretical models to explain

44. Lamb (2006) coined the term as a cognitivist in search of an empirical basis for Langacker's (1987) grammar.

45. And acts as a "floor" beneath which nothing can pass. Simply put, by insisting on a neurological foundation, no fanciful or intuitive theories may sneak in. An empirical basis protects scientific quality. Many Chomskyans would say that generative linguistics is based on empirical evidence, and within generative linguistics own stated purposes and goals, that is true. Much like psychology of previous generations rejected study of the mind as intangible and thus unscientific object of study and thus focused on behavioral psychology, so did previous linguists study language based on behavioral findings (i.e. children fluently acquire their native language with imperfect input). CL along with cognitive psychology advances beyond behaviorism and posits theories based on empirical data from the brain (data unavailable to previous generations of psychologists and linguists).

semantics in natural languages, and grammaticalization offers a cross-linguistic explanation for language change.

3.1 Neurolinguistics

How exactly does language work? Much the same way as other human activities work, the brain has dedicated locations for certain things.⁴⁶ So as one reads this, the available light reflects off of one's screen or sheet of paper and creates the reflection of a page in the eyes. This image is converted into an electrical signal which is interpreted by the part of the brain dedicated to interpreting sight, the occipital lobe. If one is hearing this paper, the sound of the reader's voice creates air vibrations experienced by hair follicles on the eardrums. Those vibrations are converted into an electrical signal that is interpreted by the part of the brain dedicated to interpreting sound, the temporal lobe. From those reception and interpretation centers, connections are made to appropriate parts of one's angular gyrus and other parts of the frontal lobes where higher conceptualization occurs. This allows humans to not just see scribbles on a page, but read words; and not just hear sounds from a mouth, but process speech. These words and sounds can also be thought on over a period of seconds or hours or longer. They can even be memorized. And should one wish to respond to the interpretations of sights and sounds that have been mentally processed, the brain also has connections from the conception areas in the frontal lobes to areas in the motor cortex to make the mouth speak or hands write or type a response. Our brains, specifically the evolution of our cerebral cortex, are the greatest asset to our species.

3.1.1 Consequences of Neurolinguistics

Of immediate consequence to this project and linguistics in general is now the fact that form and meaning (grammar and lexicon) do not function separately in healthy humans. The first neurolinguistic theories and principles were behaviorist in nature, based on various types of *aphasia*, a kind of left brain trauma resulting in irregular communication. The examples of

46. See Ingram (2007) and Lamb (2006).

aphasia are well known.⁴⁷ A textbook example is *anomia*, a kind of aphasia wherein a patient is cognizant and thinks that their speech is normal and intelligible, yet when the patient has something in mind to say, like *table*, he instead might say something like *chair* or maybe *fable*.

The data from anomics and other aphasics is profound and gives neurological plausibility to an idea that cognitive linguists have been using for some time: the use of networks. The brain is an organ of networks. So, when the aphasic tries to say *table*, instead of igniting the proper node in the network he erroneously ignites a neighboring node in the network, like *chair* or *fable*. This kind of mistake educates neurologists and linguists about the nature of neurological networks in humans, namely that such networks are not made and maintained in one fashion. Instead, the number of connections one node might have to others could be numerous. So in place of *table* the aphasic might say *chair* because humans often experience tables and chairs together, or he might say *fable* because *fable* sounds like *table*. The impetus for connections in the language network might be from many external sources (seeing tables and chairs together often) or from many mental reflections on the language itself (recognizing that *table* sounds like *fable*).

But trauma to the left-hemisphere of the brain is not the only kind of trauma that results in communication problems. *Dyshyponia* (Paradis [2001]2009:54-73) is right-hemisphere lesions that impair the comprehension and use of pragmatics. Patients who suffer this kind of brain damage can use sentences in seemingly intelligible ways and can understand simple, literal statements. However *dyshyponics* cannot appropriately handle humor, sarcasm, metaphors, and other kinds of non-literal communication. Hypothesizing from these facts, Paradis ([2001]2009) argues that since the left-hemisphere of the brain goes unharmed in *dyshyponics*, the left brain must control grammar and vocabulary while the right brain is responsible for semantics-pragmatics. Although the technology is not yet available to empiri-

47. Reinvang (1985); Ashlén (2006); Ingram (2007).

cally verify this hypothesis, it is compelling in light of the data from aphasia and dyshyponoia.

For linguists this means, as stated above, that grammar and lexicon do not function separately in healthy humans. Damaging one side of the brain or the other negatively affects the whole human. It is true that this hypothesis indicates that the dedicated centers in the brain for form and meaning are physically located in different hemispheres.⁴⁸ And since damaging one side results in problematic communication, to say the least, and does not kill the patient nor even prohibit other cognitive functions, one may conclude that the hemispheres of the brain are and can be separate, and thus by analogy, so grammar and meaning are also separate. However, this is a completely wrong-headed direction. Despite their different locations in the brain, grammar and meaning are nonetheless handled by the brain as a whole. Practically speaking, they are not separate as their separation results in brain damage. Thus the idea that syntax and semantics can be studied separately is not neurologically plausible unless one intentionally studies brain damaged speakers. Linguistic theories and methods that separate grammar and meaning into autonomous camps must be abandoned in future linguistic work, as the autonomy of various language faculties has no physical basis.

3.2 Cognitive Linguistics

As the field of neurology progresses, theoretical linguistic models, like a description of תחב, must adapt to (or at least, not conflict with) findings in neuroscience. Upon surveying the academic landscape in linguistics, one movement in particular stands out: CL. Foundational to the enterprise of CL is Langacker's (1987:53-54; 2008:5) principle that grammar and lexicon are not separate parts of language, but rather opposite poles on a continuum. This is neurologically plausible. The brain is not a grouping of parts, but rather a long and thin tissue (think of a really long sheet of paper) that is folded so intricately so many times that it ap-

48. Remember, this is true for a majority of right-handed adults. A child's brain could undergo radical surgery, removing almost a whole hemisphere, and yet the plasticity of an immature brain will fashion an ad hoc "replacement" hemisphere for the lost portion and the child would develop rather normally. An adult, on the other hand, would be permanently retarded by such an operation.

pears to be, until unfolded, a three-dimensional oval shaped object. If unfolded and stretched out, what would have been the left and right hemispheres of the brain would be opposite sides of the long (very long) sheet of paper. In reality, Langacker's theoretical continuum is a meticulously folded length of specially evolved neural tissue.⁴⁹ Unfortunately, that is where what we know ends and so must return to the theoretical.

Also central to Langacker's principle is that the lexico-grammatical continuum is symbolic in nature. Thus as both grammar and lexicon symbolize, grammar is just as symbolically meaningful as lexicon. As Langacker (1987:11) puts it, language offers "an open-ended set of linguistic signs or expressions, each of which associates a semantic representation of some kind with a phonological representation." Linguistic symbols (words written or spoken or just thought) are form-to-meaning associations.⁵⁰ While the notion of creating semantic-phonological pairings is not disputed in neurolinguistics, the idea that these pairings are symbols is theoretical and has a questionable basis in neurophysiology.⁵¹ However, at issue for the present work is not necessarily how concepts are coded in the brain, but how they are coded and interpreted in language use (spoken and written), specifically in ancient language use (written). They are coded symbolically (meaning-form pairs) and organized categorically.

49. But rather than being dedicated to language specifically, it is dedicated to cognition in general, of which language is an integral experience.

50. Though as seen in neurolinguistics and as we will see with תחת, the number of associations that may be made can be numerous.

51. Lamb (2006:5) writes, "Most rejectable perhaps is this: the brain, hence the linguistic system, operates by means of symbols. Related to this false notion is the corollary that neurons or columns of neurons store symbolic information. But the symbolic information that seems to be so characteristic of language is not directly represented in the cortex at all. Neurons and cortical columns operate by emitting electrical activation to other nodes. This activation typically goes to multiple other nodes in parallel, and it varies in amount, depending on the amount of activation being received. A node accomplishes what it does by virtue of what other nodes it is connected to, not by virtue of any symbolic information it contains." For the purposes of this project, which is practically speaking an attempt to make better tools for second-language users of BH, CL provides an adequate model. However, future projects must reconcile CL's notion of symbolism to neuroscience's observations about electrical pulses.

3.2.1 Categorization

Categorization has long been an issue in philosophy, and since Wittgenstein's (1953) *game* the philosophical implications of categorization have been taken into account in linguistics. Here three approaches, useful for the proposed תהח semantic network in 5, are introduced: Aristotle's conditional semantics,⁵² prototype semantics, and frame semantics.

3.2.1.1 Conditional Semantics

The classical model of meaning is based on categories being established on conditions that must be met (necessary) and not lacking in anything appropriate for that category (sufficient). This Aristotelian model of necessary and sufficient conditions (Taylor 2003:19-40) has faced much criticism in the millennia that have passed. Yet this model, problematic and unacceptable on its own, still has value as there are concepts we think of and talk about that can be described conditionally. An obvious example is *even* or *odd* numbers. These two concepts are necessary and sufficient for talking mathematically about all numerals.

3.2.1.2 Prototype Semantics

However, many concepts cannot be adequately treated conditionally. Wittgenstein's example was *game*. *Game* is used in too many contexts (\pm fun, \pm competition, \pm prize, \pm team, etc.) to be defined in terms of set conditions. In response, the use of *prototypes*, from which there could be deviations, became a helpful tool in semantics. The idea is that meaning is categorized around prototypical exemplars of a particular category (Rosch 1973, 2009:41-52; Taylor 2003:41-83; Geeraerts 2006:141-165). So while a *lion* and a *household feline pet* are both *cats*, the pet variety is more prototypical as the pairing of the /cat/ phoneme and the household pet concept are more frequent in a greater percentage of the (North American) English speaking population.⁵³

52. Of course Aristotle did not call it that, but it is a convenient description for this project.

53. This is a simplified account of prototype theory. As Croft and Cruse (2004:87-91) write, there are properly, as developed from psychology, two kinds of prototype theories and in addition there are problems with prototype theory as used by linguists. However, the purpose here is not to exhaustively examine one theory of cognitive linguistics, but to create a semantic model adequate for describing תהח. In this project, prototype

Prototype semantics formalized the notion of *fuzziness* into linguistic explanation. Some concepts, like even and odd numbers, can be described by specific conditions required for those concepts. But a great number of the things humans talk about cannot. However, that is not to say that similarity cannot be understood. Rather, similarity becomes a matter of degree. From this perspective, a household feline, a lion, and even a human in a cat costume on Halloween, can all understandably be called *cats*. The difference is degree of prototypicality within the language community and within a specific speaker's memory.⁵⁴ Some things we call *cat* are very prototypical, while others are fuzzier members of the *cat* category.

To model prototypicality and fuzziness, linguists have used radial networks as a diagrammatical tool in recent years. A simple, non-exhaustive, pictorial diagram for *cat* is modeled below. The most prototypical image is central with fuzzier types of cats radiating outward.⁵⁵

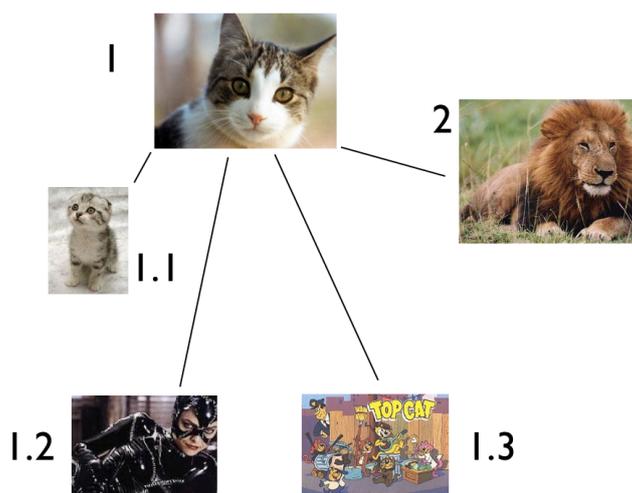


Fig. 1 *Cat* radial network

theory is tempered by other cognitivist tools like frame semantics and information from neurolinguistics and grammaticalization theory.

54. *Feline household pet* is certainly the prototypical usage of *cat* in English worldwide, however for a zoologist *cat* might well connote a lion or jaguar or cheetah more frequently than a household pet. Still, a zoologist can acknowledge that the use of *cat* between he and his colleagues is less prototypical for most English speakers.

55. 1 We start with a pet cat, prototypical for most English speakers. 1.1 We see a kitten, a smaller, younger kind of pet cat. 1.2 and 1.3 We see false cats in likeness of real pet cats. The first is a human in a costume and the second is a cartoon of anthropomorphic cats. 2 We see a lion, a kind of cat but not in the likeness of a pet cat. For a minority of English speakers, this cat is prototypical.

3.2.1.3 Frame Semantics

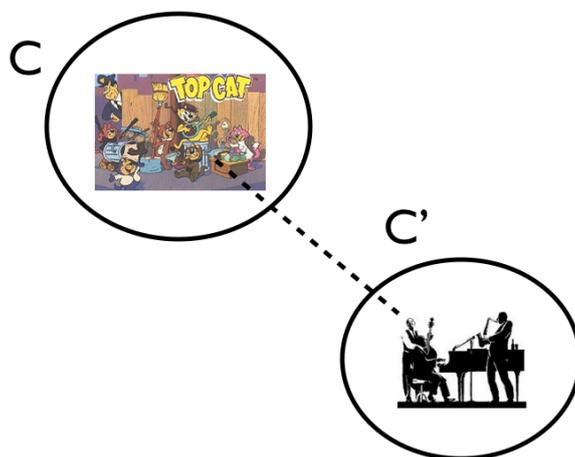
While prototype semantics has made great strides forward in categorization theory for linguistics, it still does not explain everything. Prototypicality can account for many uses of *cat*, but there is at least one wherein it is incomplete. In a jazz bar, for example, one might hear a musician say of a colleague *That cat can play!*, meaning that the speaker is impressed with the other musician's ability. But how is that meaning carried? How does the hearer understand that the speaker does not actually believe him to actually be a musically-able cat? Prototype theory alone is not capable of answering the question, as this talented musician in the bar does not in any way resemble any kind of cat.

Frame semantics (Fillmore 1985; Coulson 2001) can answer the question. The cat prototype, says the frame semanticist, is not just the household pet itself. The feline household pet prototype is actually a schema, an entrenched mental frame formed by repeated experience, that includes more than the animal. The notion of *pet cat* does not just invoke the cat, but the cat's owner, the litter box provided for the cat, the fact that the owner feeds the cat and the cat does not have to hunt, and also folk notions of pet cats chasing mice, for example. Prototypes then are not just frequent things, but frequent and entrenched mental scenes made up of often detailed, encyclopedic knowledge relevant to the thing being talked about. So when a pet owner talks about *cats* that pet owner's mental frame of household felines (and everything that goes with them) is ignited. When the zoologist talks about *cats*, a different frame is ignited. In the zoologists' *cat* frame, the subject is not a pet but a large animal. These big cats in the zoologists' mental frame do not use litter boxes and are only fed by humans when in captivity. This move from a *pet* frame to a *big cat* frame is called a *frame shift*.

But what about the cat in the jazz bar? This is where encyclopedic information must be utilized and as such the prototype model cannot take all into account. One must know that in the 20th century, there were popular cartoons in American magazines and newspapers of cartoon cats singing on fenceposts.⁵⁶ By analogy, those for whom this fictitious notion of singing cats

56. Inspired by the industrialization and subsequent urbanization of the North American workforce. Many city

became an entrenched mental frame began using it for humans who also made music. But this is not a simple shift from one common cat frame to another, as from cat to lion. This *conceptual blending* (Coulson 2001:151-202), or mapping of a cartoon cat frame onto a human musician frame, results in both being called *cat*.



Cool Cat Blend

Fig. 2 Blending for *That cat can play!*

Prototype and frame semantics provide useful tools for contemporary linguists. We have seen simple examples, with a word like *cat*. Now attention turns to how CL has progressed with prepositions.

3.2.1.4 A Model for English Prepositions: *Over*

While thing-words like *library* and event-words like *surfing* symbolize very specific frames, relational-words like *over*, *under*, *before*, *after*, etc. symbolize very general frames that, across CL literature, are reducible to a relationship between a landmark (LM) and a trajector (TR). Brugman's (1981) thesis began describing the polysemous relational *over*, and Lakoff (1987:416-461) continued the description positing multiple schemas⁵⁷ for *over*'s multiple

dwellers in the early 20th century noted how stray cats would climb atop fences and meow, disturbing poor, packed-together workers in the city trying to sleep at night. This came to be drawn and used for comedy by American cartoonists.

57. Frame diagrams describing LM/TR relationals in pictorial form.

senses. Most recently, Tyler and Evans (2007:64-106) have continued the work on *over* by organizing the multiple frames/schemas⁵⁸ into a principled radial network (which they call a semantic network, see Fig. 5). Simply put, Tyler and Evans (2007) have taken a tool from prototype semantics and coupled it with schemas from frame semantics (see Fig. 3-4). In their semantic network for *over*, nodes in the network are full TR/LM schemas motivated from a prototype (protoscene in Tyler and Evans (2007)). This kind of radial network will be used to model תחת in chapter 5, so here an overview of the Tyler and Evans model will be presented.

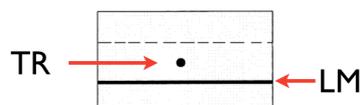


Fig. 3 Protoscene ("schema") for *over*

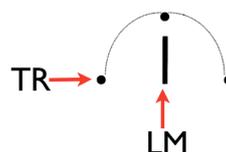


Fig. 4 ABC ("schema") trajectory cluster (ex. *The cat jumped over the rock.*)

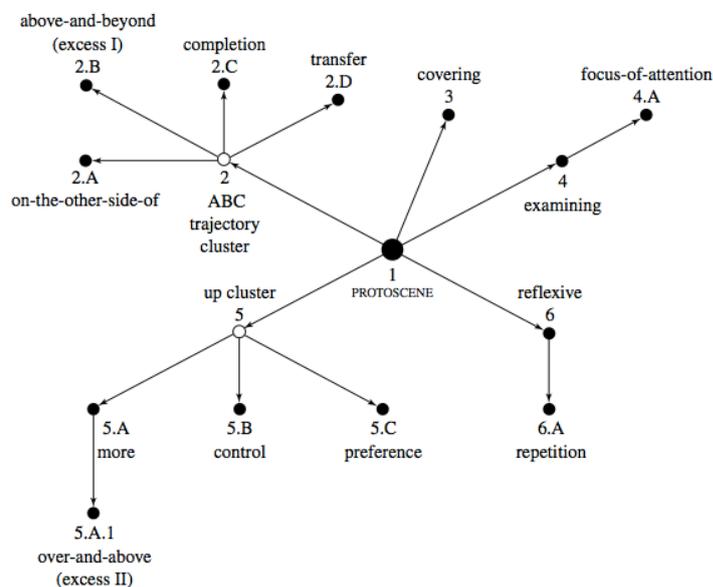


Fig. 5 Tyler and Evans 2007 semantic network of *over*

58. Two words for virtually the same thing. *Frame* does specifically invoke what one sees with the eyes while *schema* does normally refer to the imagic diagram of what one sees, but here they will be treated as synonymous.

Tyler and Evans' (2007) method for creating the network is to first establish the protoscene (the primary sense) and then other scenes (additional senses) that relate in a principled manner to the protoscene. How is the protoscene/primary sense established? For a primary sense, Tyler and Evans (2007:47) propose five criteria that independently do not make a sense primary, but taken together instantiate a *sanctioning* (Langacker 1987:157). The five criteria are 1) earliest attested meaning, 2) predominance in the semantic network, 3) use in composite forms, 4) relations to other spatial particles, and 5) grammatical predictions. These will provide useful criteria in examining the multiple sense that *תחת* symbolizes. To provide a preliminary English handle on this method, *over* is an appropriate cross-linguistic example.

To 1) the earliest attested meaning of *over*, Tyler and Evans (2007:48, 65) point to Sanskrit and Old Teutonic sources. Criteria 2) needs some clarification. It asks of the potential protoscene if its schema is represented throughout the network in other senses. The authors count that the majority of senses represented by *over* connote a frame wherein the TR is higher than the LM (as in Fig. 3). *Over* clearly satisfies criteria 3) with collocations like *overkill* and *look over*. To criteria 4), *over* has a clear semantic relationship with a preposition like *under*. As the authors put it (Tyler and Evans 2007:48-9), "...the particles *above, over, under, and below* appear to form a compositional set which divides up the vertical dimension into four related subspaces." By grammatical predictions, criteria 5), the authors mean that senses in the network not directly related to the primary sense should be related through intermediaries. So while a phrase like *the judge's power over me* might possibly connote the primary sense of *over*, as it satisfies criteria 2) by connoting a TR (*judge's power*) higher than a LM (*me*), one must take note that *over* here is not spatial but legal, and thus most likely not the protoscene.⁵⁹ The authors conclude that a schematic diagram like Fig. 3 describes *over's* protoscene.

59. All uses of *over* in a fixed corpus or a reasonable data set would have to be looked over before one could claim anything with certainty. Also, note that in Fig. 5, the *control sense* is related to the protoscene through the *up cluster*.

Other senses, and thus other frames, are then described schematically and finally all senses, represented by nodes, are organized into a network (Fig. 5) of principled relationships to the protoscene. But what are these relationships between senses and ultimately to the protoscene? Tyler and Evans (2007) continue and invoke tools like prototypicality, fuzziness, and metaphorical extension to give principle to the principled relationships. Yet it seems that the only use of diachronic information in Tyler and Evans (2007) model is for the protoscene. This leaves a vast amount of information untouched that might well inform the relationships between polysemic senses. So there is one last component to the linguistic methodology that will be used in describing תורה, that component is a phenomenon that occurs cross linguistically known as grammaticalization.

3.3 Language Change: Panchrony

It has been established that 1) linguistic theory must be neurologically plausible, 2) neurolinguistics proves the brain to be a system of networks, and 3) CL offers explanatory models of semantic networks. But CL has primarily focused on synchronic analysis to the neglect of diachrony, a necessity for grasping the relationships between senses of a polysemic lexeme in BH (and arguably in all natural languages).⁶⁰

Change in language is a necessary part of linguistic inquiry as natural languages are not just spoken by language communities in the present day world, but are passed down from generation to generation and change through that time. This is reflected in BH where older forms of BH coexist with younger forms in the BHS.⁶¹ Thus, a synchronic reading of the final form of the Hebrew Bible must allow for diachronic explanations of how distinct styles of BH came to coexist with each other. This general framework that unites diachrony and synchrony is

60. Tyler and Evans (2007:47-8) admit that the semantics of an early attested protoscene may well coexist with later developed senses of a word (like *over*), but what about other senses that have developed along the way? Which of those have altogether dropped out of usage and which still coexist with more recent semantic developments? For the most part, diachrony goes ignored in CL.

61. See Young, Rezetko, and Ehrensverd (2009). While they do not attempt any theoretical interpretation of the data, they clearly present data that challenges a standard view in BH scholarship: that so-called Early or Late BH can be used to date texts. This is not so as the diachronically distinct forms indeed coexist in the BHS.

panchrony (Heine, Claudi & Hünemeyer 1991:248–259). However, this is only a framework for answers, not an answer itself.

One answer, which is actually a cross-linguistic observation, that has been proposed is *grammaticalization* (Hooper and Traugott 1993; Bybee, Perkins, Pagliuca 1994; Heine 1997). Simply put, grammaticalization is the observation that frequently used lexemes come to be used more abstractly. Often this abstraction is semantic and phonemic (and eventually morphological in orthography) in nature.⁶² For example, there was a time in the history of English when the suffix *-(e)d* has not yet been used as a past tense morpheme. Instead, English speakers used the verb *did* as in *I did walk to the market*. Over time, as *did* became the standard past tense form, the /d/ phoneme (and subsequently the *-(e)d* morpheme) started to be used as the past tense symbol in suffix form as in *I walked to the market*. Eventually this suffixed way of talking about the past became standard and *did* went back to more restricted uses.⁶³

Specifically relevant to הַחַת and other BH segholates, Hooper and Traugott (1993:107) give brief cross-linguistic evidence of nouns that become functional prepositions,

"A relational noun is one the meaning of which is a location or direction potentially in relation to some other noun. *Top*, *way*, and *side*, and many body parts such as *foot*, *head*, and *back* often assume a relational meaning... The relational noun usually appears as the head noun of a phrase, such as *side* in *by the side of* (>*beside*), or as an inflected noun, such as German *Wegen* 'ways [dative plural]', > *wegen* 'because of,' as in *wegen das Wetters* 'because of the weather.'"

62. This does not happen with הַחַת, which calls into question whether or not הַחַת is actually an example of grammaticalization or just a general process of semantic abstraction. However, a proper linguistic treatment of an ancient language should have a mechanism to explain language change. Grammaticalization is a fruitful research area- well adjusted to panchrony- in which one may begin.

63. As *I did walk to the market* having a pragmatic force of certainty in certain contexts (like accusing someone of not walking to the market).

In these examples, the nouns in question clearly shift semantically from meaning a thing (location, direction, or body part) to a relationship. There is not, however, always a phonological-morphological reduction. In addition to English and German, this phenomenon also occurs in BH. Before תהה is treated exhaustively, let us briefly examine another segholate substantive turned relational: אהר. This lexeme is a perfect example as its earliest attestations are to a body part (back[side], buttocks).⁶⁴ Like many relational words, אהר was first used to refer to a part of the body. Over time, אהר came to be used more generally, not just in reference to a speaker's anatomical back, but to anything else spatially behind (in *back* of) the speaker. And as human experience does not just take place in space but also in time, the spatial notion of אהר (behind) gave way to a temporal use (after). These relational uses became so entrenched that they virtually eclipsed the use of anatomical אהר in BH. אהר symbolized a real thing and over time in a language community came to symbolize abstract relationships. This is ancient evidence for, at least, semantic abstraction, and at most, grammaticalization.

3.4 Summary

To summarize, this thesis posits a three-part approach to linguistic description and explanation which is neurocognitive and evolutionary in nature. Neurolinguistics provides a scientific basis for description. CL provides theoretical models used for explaining semantics. Grammaticalization provides an explanation for language change through time. All three are necessary to maintain scientific credibility and offer explanatory insight into an ancient language. Now attention turns to the 500+ instances of תהה in the BHS which must be categorized according to the proposed model.

64. Hoftijzer and Jongeling (1995:part 1, 38-40) record that *'hr* derives from the substantive *back* and comes to be used as *behind, after*. HALOT (Vol. 1:35) tags substantive אהר *rear end, buttocks* and its relational uses as *behind, after*.

CHAPTER 4 Data

In this chapter, the BH data on תחה will be presented according to תחה's various morphologies. All 544 instances of תחה⁶⁵ in the BHS may be referenced in the appendix. For ease of discussion, תחה is here divided into three morphological categories: 1) independent תחה, that is תחה with no affix nor used with other particles, 2) suffixed תחה, as in תחתון (with morphological indicators of gender and number)⁶⁶ or תחתיו (with pronominal suffixes), and 3) תחה with other particles (as in תחתה or תחת אשר). Within each morphological category, the distribution of each respective form across the BHS will be considered along with the semantic frames symbolized by each form in its various contexts. In the frame semantic diagrams, a solid dot ● will represent a TR while a solid line — will represent a LM. A red dotted circle ○ represents what תחה is focusing on within the frame. An arrow ← indicates movement.

4.1 Independent תחה

תחה occurs independently over 240 times. This morphologically accounts for approximately 40% of all the lexeme's appearances in the BHS. While the independent form of תחה is represented in all literature types of the BHS, it occurs the most in Exodus with 39 appearances, which averages to 1.5 occurrences every 1000 words in Exodus. However, the highest concentration of independent תחה is in Qohelet's wisdom with 33 appearances in the book averaging 7.35 occurrences every 1000 words. This is no doubt due to the phrase exclusive to Qohelet תחת השמש *under the sun*, which accounts for 29 of those 33 appearances in Qohelet. Amos-Jonah, Haggai-Zechariah, and Ezra-Nehemiah have no occurrences of independent תחה.

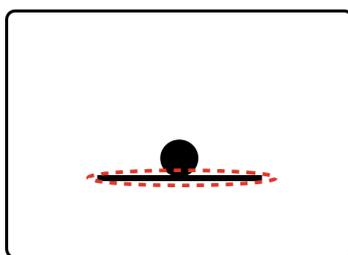
65. According to the Westminster Morphological Database, the root תחה occurs 555 times in the BHS. I have identified 544 as instances of BH, the others are Aramaic (as in תחתה) and will not here be considered. All statistical data has been compiled using the Westminster Morphological Database via *Accordance Bible Software v8* (Oak Tree Software).

66. Some may object to this as תחתי and תחתון are traditionally separated from the majority of תחה occurrences as they are adjectival. However, as stated above, this study covers all instance of the BH root תחה.

The semantic frames symbolized by independent תחת are many and cross traditional word-class boundaries. Independent תחת symbolizes nouns, adjectives, prepositions, adverbs, and conjunctions. Following De Blois' (2001) functional taxonomy based on CL, we will proceed with two basic word-class categories appropriate for תחת: nominals and relationals.⁶⁷

Morphologically independent תחת may symbolize a nominal conception tagged in English as *place* or *spot*. In Jos 4.9, תחת symbolizes a thing. Rather than a vertical spatial relationship, it is the LM itself that is connoted.

וּשְׁתִּים עֶשְׂרֵה אֲבָנִים הָקִים יְהוֹשֻׁעַ בְּתוֹךְ הַיַּרְדֵּן תַּחַת מַצֵּב רַגְלֵי הַכֹּהֲנִים Jos 4.9
 Joshua set twelve stones (TR) in the middle of the Jordan
 at the spot (LM) where the priests' feet were stationed.

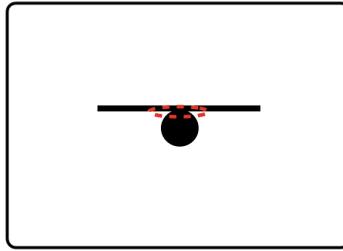


Place Frame

Independent תחת also symbolizes relationships, most often the vertical spatial relationship tagged in English as *under*.

וְכַפֹּתַר תַּחַת שְׁנֵי הַקָּנִים Ex 25.35
 and a bud (TR) under the (first) two branches [of the candlestick] (LM)...

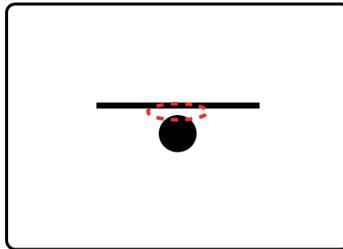
67. De Blois' (2001) taxonomy is three-part: things (what I call nominals), events, and relations. However as תחת is never verbal in nature, the event category does not apply.



Vertical Spatial Frame 1

וַיִּרְאֶתְךָ עַל־פְּנֵי הָעַמִּים תַּחַת כָּל־הַשָּׁמַיִם Deut 2.25

and the fear of you upon the faces of all people groups (TR) under all the heavens (LM)



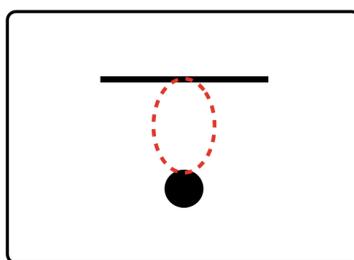
Vertical Spatial Frame 2

In Ex 25.35 and Deut 2.25, morphologically independent תחת is used spatially, symbolizing a vertical relationship between a TR and a LM. However they are non-equivalent in regards to contact between the TR and LM. Vertical Spatial Frame 1 shows contact, while Vertical Spatial Frame 2 shows no contact. In Ex 25.35 the context of a lamp stand with floral designs instantiates contact between "bud" and "branch". In Deut 2.25, it is not possible to interpret contact between every people group and the heavens. This phrase is an idiomatic way of connoting all people on earth, as everything on earth was perceived as being spatially *under* the sky dome.⁶⁸ This is very similar to Qohelet's mantra *under the sun* used to symbolize the spatial relationship between the sun and things on earth.

מַה־יִתְרוֹן לְאָדָם בְּכָל־עֲמָלוֹ שִׁיעֲמַבֵּל תַּחַת הַשָּׁמֶשׁ Qoh 1.3

What benefit is there for man in all his effort (TR) at which he labors under the sun (LM)?

68. See Cornelius and Venter (2006:161) Diagram 7.1 for an ancient near eastern understanding of the cosmos. Also Walton (2009:13).



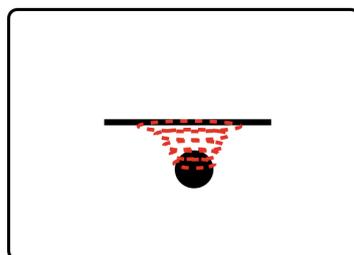
Vertical Spatial Frame 3

While Vertical Spatial Frame 2 could be used to diagram the TR-LM relationship for Qohelet's unique phrase, Vertical Spatial Frame 3 highlights the great space perceived to be between the TR and LM, as appropriate for celestial bodies, be they the heavens in general or the sun in particular.⁶⁹

Independent *תחת* also symbolizes a relational sense connoting *control* or *authority*.

וְהִתְעַנִּי פְתַח יְדֵיהָ Gen 16.9

and submit yourself (TR=Hagar) under her hand (LM=Sarai's control)



Control Frame

In this frame, the TR-LM vertical configuration is used as an analog to social classes and power structures, wherein the person with more social power is said to be "above" a person with less, who is "under" their social superior.⁷⁰ In Gen 16.9, the TR, Hagar the slave, is told

69. This raises a question however about to the two phrases (*under the heavens* and *under the sun*) since they are configurationally equivalent: Do they mean the same thing? Yes and no. They are configurationally equivalent and both contextually involve scanning downward to earth from celestial bodies (See Langacker 2008:82-83). However, the sun and the heavens are not the same thing. Encyclopedic knowledge about the sun, however, is not included in the TR-LM diagrams and cannot express the difference in these phrases, like the sun is hot thus work done under it is labor intensive. *Under the heavens* symbolizes nothing so specific. See also Psa 104.22-23 wherein the rising of the sun is associated with human work.

70. Tyler and Evans (2007:101-102) write how vertical relationships signal control even in the animal kingdom

to return to a relationship under the LM, Sarai's hand (metaphor and metonym for Sarai's power as a social elite). The red-dotted spiral indicates the relationship of control that Sarai may exert over Hagar.

The concept of control is not limited to human social interactions in the BHS, but also applies to general notions of control and authority, even parental care (Lev 22.27) and object possession (1Sam 21.4).

וְהָיָה שִׁבְעַת יָמִים תַּחַת אִמּוֹ Lev 22.27

It (TR=a newborn animal) will be under its mother (LM) for seven days.

וְעַתָּה מַה־יֵּשׁ תַּחַת־יָדְךָ 1Sam 21.4

Now what (TR) is there under your hand (TR)/at your disposal?

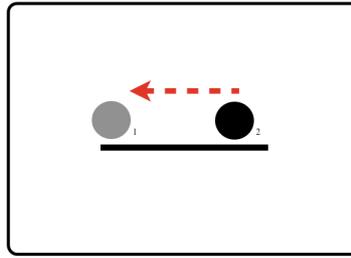
Though all above examples of control are semantically distinct due to contextual factors (Gen 16.9 interpersonal power struggle, Lev 22.27 natural mother/young animal relationship, 1Sam 21.4 general possession), the basic TR-LM configuration is the same throughout and thus the Control Frame is still adequately descriptive.

Related to the nominal sense *place*, independent הַחַה also symbolizes substitution relationships often tagged in English *in place of, instead of*. This is a good example of the process of semantic abstraction, from concrete to abstract, as demonstrated in 3.3 on grammaticalization. The majority of these substitution uses are in contexts of royal succession.

וַיָּשֶׁב שְׁלֹמֹה עַל־כִּסֵּא יְהוָה לְמַלְכֻת תַּחַת־דָּוִד אָבִיו 1Chr 29.23

Then Solomon (TR₂) sat on the throne of Yahweh as king
in place (LM) of David (TR₁) his father.

(a more powerful animal's head will be vertically higher than a weaker one).



Substitution Frame

The substitution sense is unique in that it necessitates two TRs. This frame focuses on the process of TR₂ taking the place of TR₁. However, תחת does not only symbolize substitution in royal succession contexts, but more diverse notions of substitution.

שָׁתַּלִּי אֱלֹהִים זֶרַע אַחֵר תַּחַת הַבֵּל Gen 4.25

God has given me another descendant (TR₂) in place of (LM) Abel (TR₁)

וַיַּעֲלֵהוּ לְעֹלָה תַּחַת בְּנוֹ Gen 22.13

He offered it (TR₂) up as burnt offering instead of (LM) his son (TR₁).

Again, contextual factors create semantic distinctions in each example. However, the TR-LM configuration is the same throughout, and thus the Substitution Frame still applies.

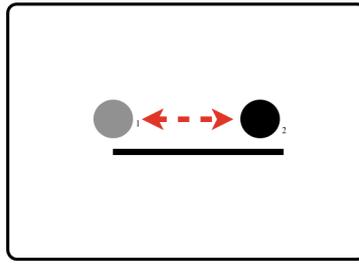
However, some instances of substitution are more specific and better termed *exchange*, though they are often still translated *in place of*, *instead of* in English.

יִשְׁכַּב עִמָּךְ הַלַּיְלָה תַּחַת הַיּוֹדָאִי בְּנֶיךָ Gen 30.15

He may sleep with you (TR₂) tonight in exchange for (LM) your son's mandrakes (TR₁).

יִשְׁלְמוּנִי רָעָה תַּחַת טוֹבָה Psa 35.12

They repay me evil (TR₂) instead of (LM) good (TR₁).



Exchange Frame

Though a kind of substitution, as two TRs are involved and the notion of place, there is no kind of succession or displacement happening. Rather than TR₂ assuming the place of TR₁, as in prototypical substitution, the two TRs are part of an exchange. In Gen 30, Rachel exchanges a night in bed with Jacob with Leah for her son Reuben's mandrakes. In Ps 35, the psalmist sings of receiving evil as payment for good performed.

Lastly, morphologically independent תחת also symbolizes causation.⁷¹ This metaphorical extension of the spatial Under exploits real-world experience of something collapsing under extreme weight. The "weight" is the cause of the collapse.

Prov 30.21-23 תחת שלוש רגזו ארץ ותחת ארבע לא־תוכל שאת

תחת־עבד כי ימלוך ונבל כי ישבע־לקחם

תחת שנואה כי תבעל ושבחה כִּי־תירש גברתה

Under three things (TR) earth (LM) quakes, and under four (TR) it cannot hold up:

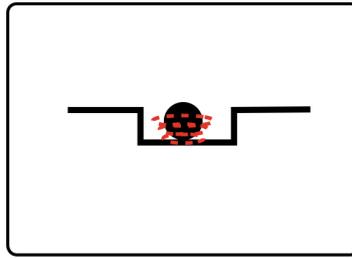
Under a slave (TR) who becomes king,

and a good-for-nothing (TR) who has his fill of food,

Under a hated woman (TR) who marries,

and a slave-girl (TR) who usurps her mistress.

71. WO 38.4a "If one situation constitutes the basis for another, that first or causal situation."



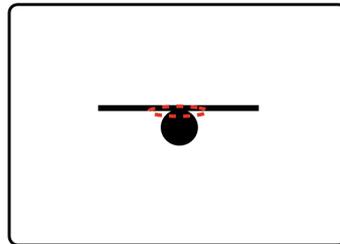
Causation Frame

In English, all instances of תחת in Prov 30.21-23 could either be translated *under* or *because*. However, more than translation value, these multiple TRs are poetically said to cause instability in the once stated LM, earth. This is a distinct frame from the *under* sense, even though *under* may be a illustrative way to render the irreal scenarios.

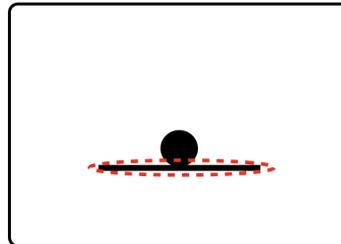
The above frame semantic diagrams for morphologically independent תחת are more or less clear about their connotation. However, not all instances of independent תחת are as semantically clear.

וַתִּקְרְבוּ וַתַּעֲמִדוּן תַּחַת הַהָר Deut 4.11

You approached and stood *tahat* the mountain.



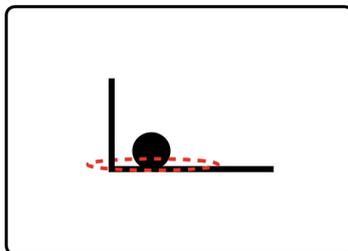
Vertical Spatial Frame 1



Place Frame

What does תחת symbolize in this context? Vertical Spatial Frame 1 does not accurately describe the scene as it would be nonsensical to think that someone would literally be under a mountain. Neither is the Place Frame adequate as the person does not stand in the mountain's place. Rather it is an approximation of the Vertical Spatial Frame that contextually marks a location. An adequate definition (yet awful translation) of תחת in this context might be *the*

place where the mountain base meets the ground. A nice translation into English is *foot of the mountain*.



Approximately Under Frame

This approximation also often applies to trees. Of course with encyclopedic knowledge about trees, these instances also connote the idea of sitting under shade. However, the basic TR-LM configuration (Approx. Under Frame) is the same whether the TR be near the base of a mountain or tree trunk.

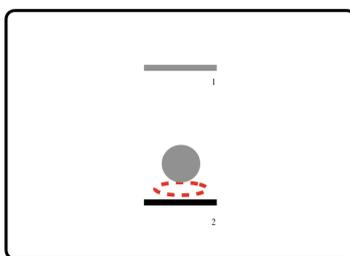
וְהָיָא יוֹשֶׁבֶת תַּחַת-הַתְּמָר דְּבוֹרָה Jdg 4.5

She used to sit at the foot of the palm of Deborah.

Independent תַּחַת also connotes an implied TR perspective as in *earth below (the speaker=TR)*. Most often this sense occurs in a merismus, as the below example. These instances are traditionally labelled as an adverbial accusative (see 2.3.1.1).

וַיְבָרֶכֶּךָ בְּרִכַּת שָׁמַיִם מֵעַל בְּרִכַּת תְּהוֹמוֹת רַבְּצֹת תַּחַת בְּרִכַּת שְׁדַיִם וְרֵחִים Gen 49.25

He blesses you (with) blessings of (the) heavens above (LM₁), blessings of (the) deep which lies below (LM₂), blessings of (the) breasts and womb.



Implied Perspective Frame

In this frame, independent תחת symbolizes the relationship between an implied TR and a lower LM. Most often, תחת is defined by the merismus⁷² (*the heavens and the deep*) in which it occurs. Within this merismus, תחת symbolizes the lower of the two extreme antonymic locations. This merismus is paralleled with another merismus regarding the female body. Interestingly, the elements of the female body merismus are also spatial in nature since breasts are spatially higher than the womb. Adding more evidence for this particular merismus, Wenham (1994:487) notes alliteration between parallel LMs in each merismus (שמים//ריים *heavens* and ריחם//החום *breasts* and רחם//החום *deep* *womb*). The traditional adverbial accusative description does not account for the merismus in which these instances occur. From a CL view, the adverbial accusative label is unnecessary.

4.2 Suffixed תחת

תחת also appears with suffixes, nominal and pronominal alike. The nominal suffixes mark those instances of תחת as nominals (typically adjectives) as in תחתון (*lower [part]*) or תחתית (*lower [part]*). Though few in number with only 33 occurrences across the BHS, their highest concentration is in Ezekiel with 12 occurrences.

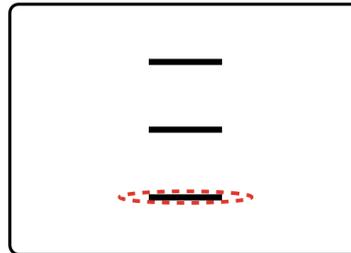
תחת with pronominal suffixes occurs much more frequently, 161 times (approximately 30% of all תחת occurrences are with a pronominal suffix). The majority of these are with a 3rd masculine singular suffix.⁷³ While תחת with pronominal suffixes occurs in all genres of the BHS, the heaviest concentration is in Samuel, Kings, and Chronicles, no doubt due to the succession passages that all have some form of the phrase וַיִּמְלֹךְ תַּחְתָּיו (then he [the successor] ruled in his [the one being succeeded] place).

72. In a merismus, extreme elements in a spectrum connote the totality of the whole, as in heavens and earth=everything; from morning to night=all day; covered from A-Z=completely covered.

73. תחת with the 3ms pronominal suffix occurs 103 times with the greatest concentration in 2Kgs, averaging 1.37 occurrences every 1000 words.

The 33 occurrences of תחת with nominalizing suffixes do not instantiate TR-LM semantic frames, as they are nominal. Thus in these frames, we should not expect relationships but things.

Gen 6.16 תחתים שנים ושלישים תעשה
 bottom, second, and third (decks)



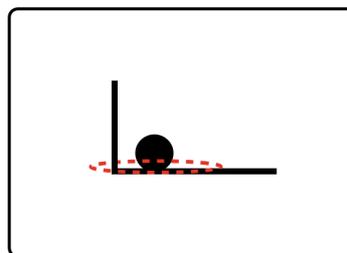
Substantive Frame 1

In this context, תחת plus the typical masculine plural suffix ים- functions as a substantival adjective (referring back to קנים *compartments, decks* in Gen 6.14).

The *foot of* sense is also symbolized by תחת with a nominal suffix. Configurationally, there is no difference between this instance of *foot of the mountain* and one symbolized by independent תחת (see 4.1).

Ex 19.17 ויתנצבו בתחתית ההר

They took their place at the foot of the mountain.

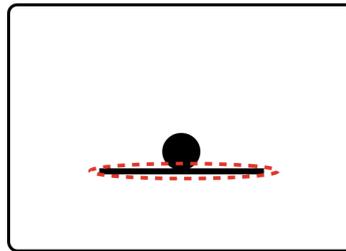


Approx. Under Frame

תחת plus pronominal suffixes symbolizes both nominals and relationals. As stated above, תחת plus the 3ms pronominal suffix account for the majority of uses of תחת with a pronominal suffix. The majority of these uses are semantically some kind of *place*.

שָׁבוּ אִישׁ תַּחְתּוֹ אֶל־מְצִיָּא אִישׁ מִמְּקוֹמוֹ Ex 16.29

Each one (TR) stay in his spot (LM), each one will not go out from his place.



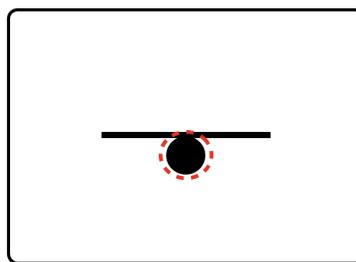
Place Frame

The Place frame, used initially for morphologically independent תחת, also adequately diagrams the Place frame symbolized by suffixed תחת. In both instances, the LM itself is connoted.

תחת with a pronominal suffix can also symbolize a substantive.

תַּחְתּוֹ חֲדוּדֵי חֶרֶשׁ Job 41.22

Its underparts are jagged shards.

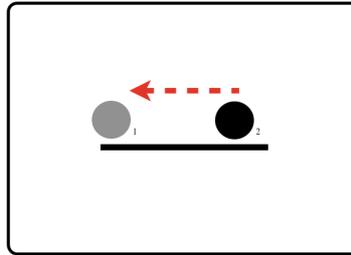


Substantive Frame 2

Suffixed תחת is also used relationally. As stated, most of these instances are in contexts of royal succession.

2Kgs 24.6 וַיִּשְׁכַּב יְהוֹאָקִים עִם־אָבוֹתָיו וַיִּמְלֹךְ יְהוֹאָכִין בְּנוֹ תַחְתָּיו

Then Jehoaqim lied down with his fathers and Jehoakin ruled in his stead.



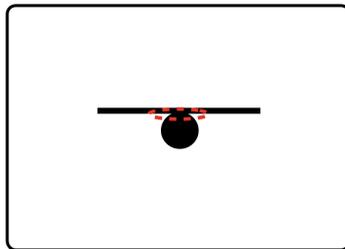
Substitution Frame

As is expected by now, there is no frame semantic difference between the substitution sense whether symbolized by independent תחת or suffixed תחת.

Suffixed תחת also symbolizes the vertical spatial relational sense tagged *under*. As is by now to be expected, this distinct morphological form is semantically equivalent to the relational sense symbolized by independent תחת.

Ex 17.12 וַיִּקְחוּ־אֶבֶן וַיִּשְׂמוּ תַחְתָּיו

They took a stone (TR) and put it under him (LM).

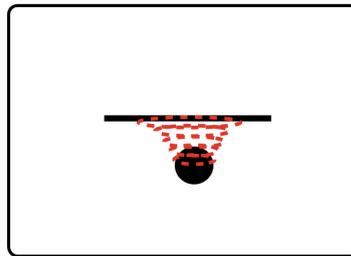


Vertical Spatial Frame 1

Suffixed תחת also symbolizes control/authority. The frame it instantiates is equivalent to the control/authority frames of independent תחת.

2Sam 3.12 וַיִּשְׁלַח אַבְנֵי מִלְּאָכִים אֶל־דָּוִד תַחְתָּיו

So Abner sent messengers (TR) to David under him⁷⁴ (his authority=LM).

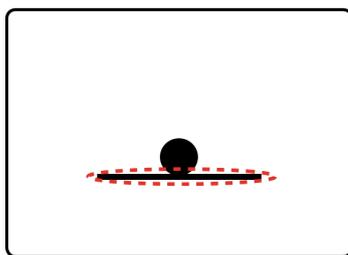


Control Frame

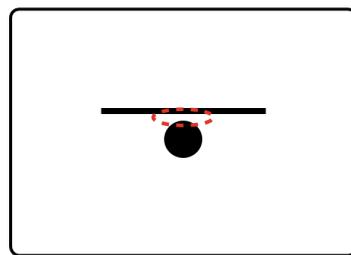
As with independent תחה, some instances of suffixed תחה are semantically fuzzy.

2Sam 2.23 וַיִּמְאַן לְסוּר וַיִּכְהוּ אַבְנֵר בְּאַחֲרֵי הַחֲנִית מֵאַחֲרָיו וַיִּכְּל־שָׁם וַיָּמָת תַּחְתָּיו
וַיְהִי כִּלְהֻבָּא אֶל־הַמָּקוֹם אֲשֶׁר־נָפַל שָׁם עָשָׂה אֵל וַיָּמָת וַיַּעֲמְדוּ

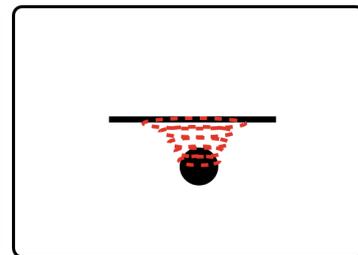
But he (Asahel) refused to turn away, so Abner stabbed him in the belly with the back of his spear and the spear came out his (Asahel's) back. He then fell there. And he died *tahtav*. So now all who come to the place where Asahel there fell and then died, they stand (in respect).



Place Frame



Vertical Spatial Frame 2



Control Frame

Many English translations render תחה plus the 3ms pronominal suffix in this verse as symbolizing place (*his spot*), as in the Place frame.⁷⁵ This has contextual support as מקום *place* is used in the b line of the verse, giving evidence for a kind of synthetic parallelism building up information about the location Asahel died (*he died in his spot...so people come to the place he died*). The place sense of תחה is used a few times as a near synonym of מקום.⁷⁶ However, that does not mean that every time תחה and מקום are used in near proximity they must be near

74. Abner is the referent.

75. The KJV, NIV, JPS, and NRSV all translate along these lines.

76. See Ex 16.29 and Isa 46.7.

synonyms.⁷⁷ In fact, the Old Greek translations preserved by Rahlf (1931), render (in at least one source maintained by Rahlf) תחת as the spatial preposition *ὑποκατω* *under* in this verse.⁷⁸ This connotes that Asahel died spatially under Abner, as in the *under* frame. Building on the Old Greek translation, it may further be hypothesized that תחת might also connote a control/authority semantic force (*he died under him=under Abner's power*), as in the control frame. Within a context of murder, such a reading is plausible. All three above frame semantic diagrams can describe תחתיו in 2 Sam 2.23 and thus present three possibilities to Bible translators.⁷⁹

4.3 תחת with particles

The most frequent use of תחת with other particles is the composite form מתחת occurring 42 times.⁸⁰ מתחת's heaviest concentration is in the narratives of the Pentateuch. מתחת also occurs 15 times as לתחת.⁸¹ However, תחת ל (no composite מן) only occurs 3 times.⁸² Following the various forms of מתחת, the most frequent use of תחת with another particle is תחת אשר with 13 occurrences.⁸³ The compound occurs most in Deuteronomy. The next most frequent use of

77. See Gen 1.9.

78. *καὶ ἀποθνήσκει ὑποκατω αὐτοῦ.*

79. תחת followed by מוח only occurs 3 times in the BHS: Ex 21.20; 2Sam 2.23; Jer 38.9.

80. Gen 1.9; 6.17; Ex 6.6, 7; 10.23; 17.14; 18.10; 20.4; Num 33.27; Deut 4.39; 5.8; 7.24; 9.14; 25.19; 29.19; 33.27; Jos 2.11; Jdg 7.8; 1Kgs 8.23; 2Kgs 8.20, 22; 13.5; 14.27; 17.7; Isa 14.9; 51.6; Ezk 1.8; 42.9; 46.23; 47.1; Hos 4.12, Amos 2.9; Zech 6.12; Job 18.16; 26.5; Prov 22.27; Lam 3.66; 2Chr 21.8; 21.10

81. Gen 1.7; 35.8 (1); Ex 20.4; 30.4; 37.27; Deut 4.18; 5.8; Jdg 3.16; 1Sam 7.11; 1Kgs 4.12; 7.24; 7.29, 30, 32 (למתחת); Jer 38.12.

82. Technically 4 times, but 2Sam 3.12 does not count syntactically. The others are Ezk 10.2; Sng 2.6; and 2Chr 4.3.

83. Num 25.13; Deut 21.14; 22.29; 28.47, 62; 1Sam 26.21; 2Kgs 22.17; Isa 53.12; Jer 29.19; 50.7; 36.34; 2Chr 21.12; 34.25.

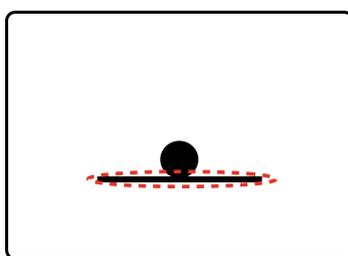
תחת with another particle is אל־תחת with 10 occurrences.⁸⁴ There are also 2 occurrences of תחת כי.⁸⁵

4.3.1 מתחת

As with all cases of תחת thus far, מתחת is no semantic monolith and some exemplars are clearer than others. מתחת symbolizes both nominals and relationals. The nominal frames it ignites are typically *place*.

Ex 10.23 וְלֹא־קָמוּ אִישׁ מִתַּחַתוֹ שְׁלֹשֶׁת יָמִים

and no one (TR) rose from his spot (LM) for three days



Place Frame

The basic Place frame adequately describes the place sense symbolized here, as in all instances of place it is the LM itself on which attention is focused. The מִן is used in a typical ablative manner.⁸⁶

As with independent תחת, the composite form מתחת also connotes the implied perspective frame.

Ex 20.4 (1) לֹא תַעֲשֶׂה־לְךָ פֶסֶל וְכָל־תְּמוּנָה אֲשֶׁר בַּשָּׁמַיִם מִמַּעַל וְאֲשֶׁר בָּאָרֶץ מִתַּחַת

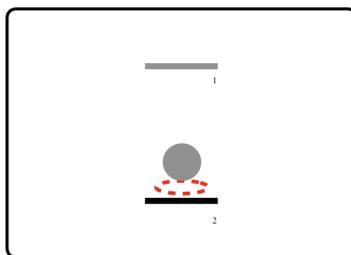
You will not make for yourself an idol,

84. Lev 14.42; Jdg 6.19; 1Sam 21.5; 1Kgs 8.6; Jer 3.6; 38.11; Ezk 10.2; Zech 3.10; 2Chr 5.7

85. Deut 4.37 and Prov 1.29

86. See WO 11.2.11b on the ablative use of מִן

nor any form which is in the skies above or which is in the earth below.



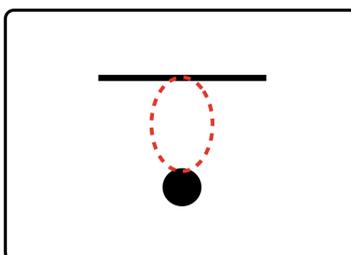
Implied Perspective Frame

The Implied Perspective frame is symbolized by both suffixed תחת and תחת with particles. In this case, the use of מן seems to be conventional rather than compositional. There is no distinguishable semantic force symbolized by מן, other than to possibly identify it as a place merismus, as מתחת symbolizes this sense with some regularity (See 5.6).

מתחת also symbolizes relationals.

Gen 6.17 לְשַׁחַת כָּל־בָּשָׂר אֲשֶׁר־בּוֹ רוּחַ חַיִּים מִתַּחַת הַשָּׁמַיִם

in order to destroy all flesh which has breath of life from under the heavens

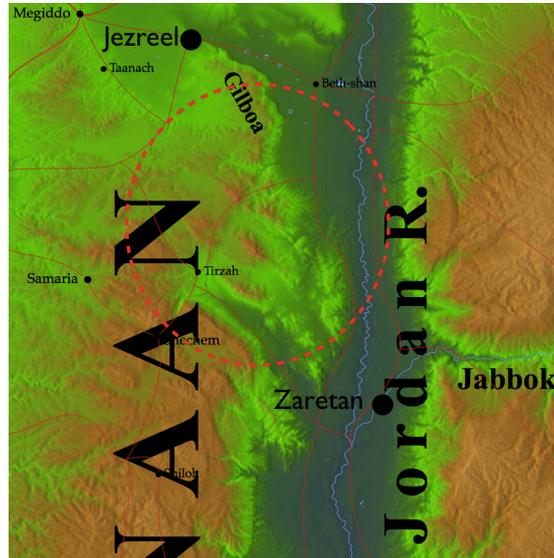


Vertical Spatial Frame 3

Here the spatial relationship tagged *under* is symbolized. It is quite similar to instances of תחת as the TR-LM relationship is one of celestial bodies. The composite מן may be interpreted with a typical ablative force, as translated above.

Related to the Vertical Spatial Frame is a contextually specific kind of the Vertical Spatial frame preserved in other Northwest Semitic attestations of the *tht* phoneme (See 2.1.2): a directional, translated *south of*.

זָרְתָנָה מִתַּחַת לְיִזְרְעֵאל 1Kgs 4.12
to Zaretan south of Jezreel



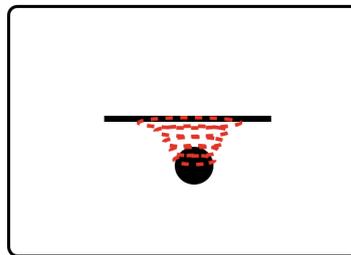
Map 1: Jezreel and Zaretan

In this case a map is more helpful. Though the precise location of Zaretan is not known, the available data fits well with תחת and its Northwest Semitic cognates.

תחת also symbolizes control.

בְּשַׁע אֲדוֹם מִתַּחַת יַד־יְהוּדָה 2Chr 21.8

Edom (TR) rebelled from under the hand (LM) of Judah



Control Frame

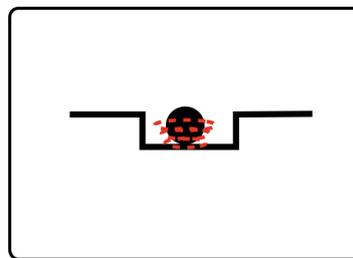
The control frame, used in both independent and suffixed תחת, is adequate here. The relationship of control is clearly understood and the מִן function in an expected ablative manner.

תחת never symbolizes substitution or causation in the BHS.

4.3.2 תחת אשר

תחת אשר tends to symbolize causation in contexts more abstract than those associated with independent or suffixed תחת.⁸⁷

Num 25.13 וְהָיְתָה לּוֹ וּלְזַרְעוֹ אַחֲרָיו בְּרִית כְּהֵנָּה עוֹלָם תַּחַת אֲשֶׁר קָנָא לְאֱלֹהָיו
So it will be for him and his offspring a covenant of eternal priesthood (LM)
because he was zealous (TR) for his god.



Causation Frame

In this frame, the TR (his having been zealous for his god) is the cause for the change made to he and his offspring: that for they would now have a covenant between them and Yahweh (LM=the covenant of eternal priesthood, covenant of peace v12). While the Causation frame describes all instances of causative תחת, the instances of תחת אשר tend not to deal with issues of weight causing collapse, real or unreal, but more abstract contexts of causation.

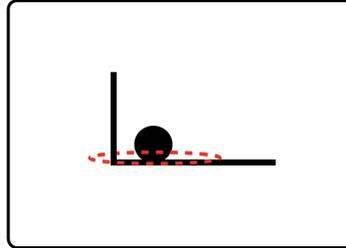
תחת is also coupled with the preposition אל.⁸⁸ As previous morphological categories have shown, אל-תחת is no semantic monolith, but rather can symbolize multiple frames.

87. Num 25.13; Deut 21.14; 22.29; 28.47, 62; 1Sam 26.21; 2Kgs 22.17; Isa 53.12; Jer 29.19; 50.7; Ezk 36.34; 2Chr 21.12; 34.25. All of these symbolize causation with exception of Deut 28.62 and Ezk 36.34. These are debatable.

88. Lev 14.42, Jdg 6.19; 1Sam 21.5; 1Kgs 8.6; Jer 3.6; 38.11; Ezk 10.2; Zech 3.10 (2x); 2Chr 5.7

Jdg 6.19 וַיּוֹצֵא אֵלָיו אֶל־תַּחַת הָאֵלֶּה

He brought (the food) to him (TR) to the foot of the oak tree (LM).



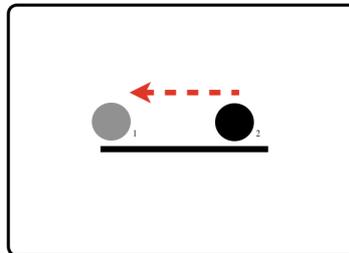
Approx. Under Frame

Here, the *foot of* sense is symbolized by אֶל־תַּחַת. This configuration is semantically equivalent to the *foot of* sense when used with morphologically independent or suffixed תַּחַת.

אֶל־תַּחַת also symbolizes substitution.

Lev 14.42 וְלָקְחוּ אֲבָנִים אַחֵרוֹת וַהֲבִאוּ אֶל־תַּחַת הָאֲבָנִים

They will take other stones (TR2) and bring them in place (LM) of the stones (TR1).



Substitution Frame

4.4 Summary

Clearly, the lexeme תַּחַת is polysemous. In this chapter, the many meanings that תַּחַת can symbolize has been presented using a CL frame semantic methodology. Here is a brief summary of those frames.

Nominals

Substantive Frame - *underpart*

Place Frame - *spot, place*

Relationals

Vertical Spatial Frame - *under*

Approximately Under - *foot of*

Control Frame - *under the control/authority of*

Causation Frame - *because, under*

Implied Perspective - *x below* (the speaker)

Substitution Frame - *in place of*

Exchange Frame - *in exchange for*

It has also been shown that there is no clean one-to-one correspondence between form and meaning. Rather, the form to meaning connections are many. With one BH lexeme this exhaustively displays the inevitability of semantic overlap in categories created on a morphosyntactic basis.

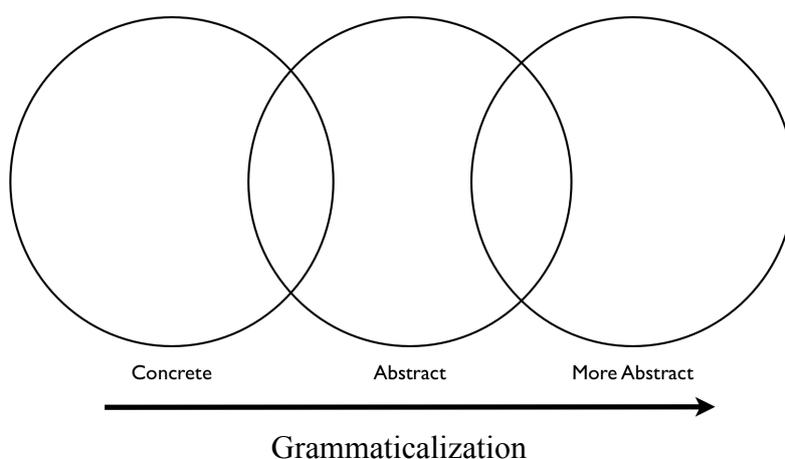
However, that is not to say that formal distinctions should be completely thrown out. It is helpful to know that *תחת אשר* mostly symbolizes cause, though independent *תחת* may as well. It is helpful to know that *מתחת* is often a composite form, connoting an ablative, even though this is not always the case. It is also helpful to know that *מתחת* never symbolizes substitution or causation.

In the next chapter, formal distinctions will take secondary position to semantic configurations. The task at hand is to organize the *תחת* data according to semantic frame in a prototype model that is cognitively and evolutionarily plausible. The data has been presented but now it must be principled and answer questions like *What is the relationship between place and substitution?* and *How did תחת come to symbolize so many frames?*

CHAPTER 5 Model

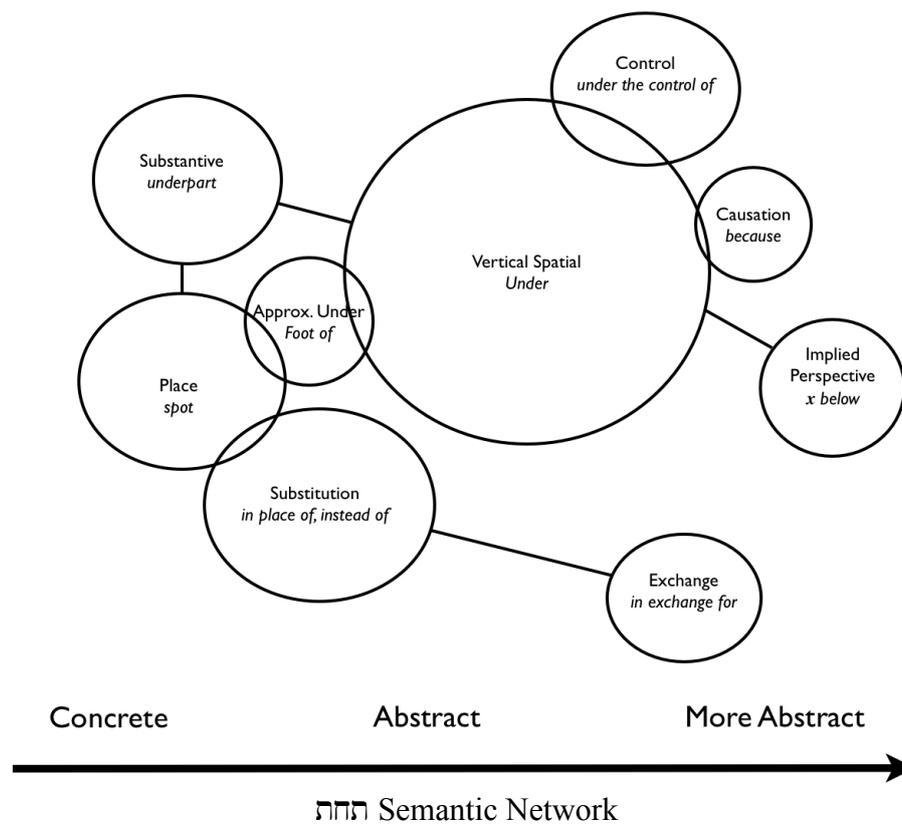
It is clear that תחת is polysemous. In the previous chapter, the multiple schemas it may symbolize were presented. In this chapter, that data will be made sense of, as the question *How are these senses related?* remains. Ultimately, this is a question about language change. How is it that תחת has come to symbolize both nominals and relationals in the BHS? Traditional wisdom holds that some segholate nouns, including תחת, came to function as prepositions in BH. Hebrew philologists, like Gesenius and the lexicographers that followed, have noted the semantic variety of תחת according to their principles of etymology and classical grammar. But, as demonstrated in the previous chapter with regard to lexical semantics, there are now more precise tools available for linguistic description. In the last two decades, the study of language change has flourished in the area that has come to be known as grammaticalization.

Research in grammaticalization is by no means complete. So for this project grammaticalization theory is invoked in a general way. As introduced in 3.3, grammaticalization is the observation that many grammatical features (like the *[-e]d* past tense suffix in English) evolved from full lexemes (*[-e]d* evolved from *did*). Over time, frequently used lexical items can undergo a process of abstraction. תחת originally symbolized nominals and over time came to symbolize relationals. As a frequently used lexeme, תחת came to be used in a variety of contexts. Over time, these polysemies became entrenched. These entrenched semantic frames range from concrete to abstract to more abstract.



In terms of classical grammar, these are categorical shifts to a different word class. This broad process of abstraction is grammaticalization. Thus all the concrete nominal frames (substantive and place) are related to the relational frames (under, substitution) by a process of abstracting the nominal frames in new contexts. The relational frames are related to the "more relational" (control, implied perspective, causation, and exchange) by further abstraction from the first order of relational frames. Further, the boundaries between concrete, abstract, and more abstract are fuzzy as there can be semantic overlap (see 2Sam 2.23 in 4.2).

The above image, which loosely depicts grammaticalization, can be used as a basis for constructing a radial network prototype model (see 3.2.1.2). Rather than simply a central prototype with less similar exemplars radiating outward, semantic relationships can be organized from a protoscene (see 3.2.1.4) to exemplars that move across the lexico-grammatical spectrum. The following is such a radial network that shows the process of abstraction at work. I look forward to using such tools as lexical entries themselves.



Some nodes in the network overlap, others are simply related to each other. In the case of overlap, cross listed (crs) exemplars sit in the overlap space, like Lev 14.42 which could be the place frame or substitution. As a whole, the model diagrams the semantics of תחת according to a theory of language change, and thus offers an explanation of how the polysemies theoretically developed.⁸⁹ The remainder of the chapter will detail the above semantic network of תחת. Whereas the previous chapter focused on describing the data (lexical semantics), this section will focus on organizing the data for present-day use (lexicography). Detailed lexical semantic descriptions will not be provided again, as all the frame semantic diagrams have been explained in chapter 4.

5.1 Substantive:⁹⁰ The Protoscene

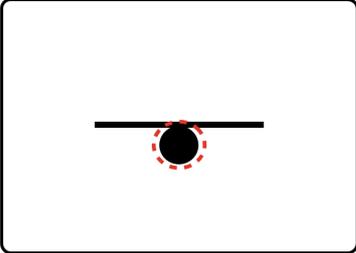
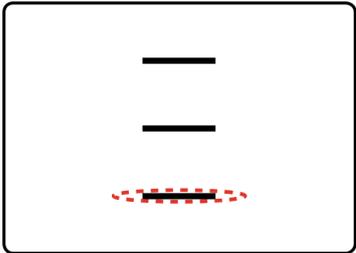
The protoscene for תחת is its substantival frame. This is established according to the principles of Tyler and Evans (2007) as summarized in 3.2.1.4.⁹¹ The most helpful criteria offered by Tyler and Evans for establishing the protoscene (for BH) is not a new one, but rather in part continues the philological tradition: looking to the earliest attested meaning. As stated in 2.4, it has long been understood that תחת and many segholates evolve from substantives. As a concrete thing, the substantival sense is set on the left side of the concrete-abstract-more abstract scale.

Looking at the semantic network, imagine zooming in on the substantival node. The node holds information like relevant frame semantic schemas, possible morphological forms, some examples, and a complete list of references.

89. The question still remains whether or not תחת in BH is a true example of grammaticalization. There is semantic abstraction but no phonological reduction, as is the case with most studied cases of the phenomenon. However, most grammaticalization literature has focused on the evolution of verbal grams. The paragraph quoted from Heine (1997) regarding noun>preposition grammaticalization in 3.3 is one of the few written on the subject. More research needs to be done cross-linguistically on nominal>relational grammaticalization before תחת may be decided on conclusively. It is sufficient now to use the grammaticalization literature as a starting point for recognizing abstraction processes in BH.

90. This title is intentional as grammar is meaningful and cannot be separated from semantic description.

91. See 3.2.1.4

Substantive⁹² <i>lower part/thing, underpart of</i>	
	תְּחָתָיו חֲדָרָי חֲרָשׁ Job 41.22 Its underparts are jagged shards.
	תְּחָתַיִם שְׁנַיִם וּשְׁלֹשִׁים תַּעֲשֶׂה Gen 6.16 make bottom, second, and third (decks)
תְּחָתַי - Gen 6.16; Jos 15.19; Jdg 1.15; Isa 44.23; Ps 63.10; 88.7; 139.15; Job 41.16; Lam 3.55; Neh 4.7	
תְּחָתוֹן - Jos 16.3; 18.13; 1Kgs 6.6; 9.17; Isa 22.9; Ezk 40.18, 19; 41.7; 42.5, 6, 9; 43.14; 1Chr 7.24; 2Chr 8.5	
תְּחָתַי + noun/pro sfx - Job 28.5; 41.22;	
אֶל־תְּחָתַי - 1Kgs 8.6 (crs Approx. Under); Jer 38.11; Ezk 10.2; 2Chr 5.7 (crs Approx. Under)	

This frame makes up about 8% of all occurrences of the lexeme.⁹³ The low frequency and distribution of this sense does not allow for much hypothesizing about anything. All that can be stated is that these occurrences (the majority of which have a nominal suffix) are coexistent with the rest of תְּחָתַי's uses.

It should be noted that the notion of substantive in the network differs from that of HALOT. What this thesis calls substantive and place would all fall under substantive in HALOT. In attempting to be specific, the title substantive has been reserved for things and specific places

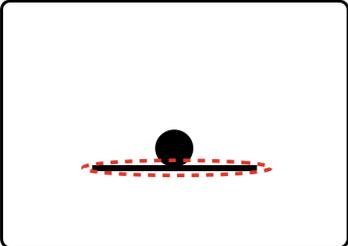
92. It should be noted that this substantive always has to do with some kind of space.

93. Statistical data will be imperfect as there are cross-listed exemplars in each category.

(as in *lower Bet Horon* in 2Chr 8.5). The nominal Place frame has been left for general locations (*place, spot*).

5.2 Place

From the Substantive node, the network moves down to the Place node. This node contains another nominal frame symbolizing a LM in a vertical TR-LM relationship. The Place node is located on the left side of the concrete-abstract-more abstract scale along with the proto-scene because they are both nominal. There is no change from concrete to abstract. This is a secondary nominal node.⁹⁴

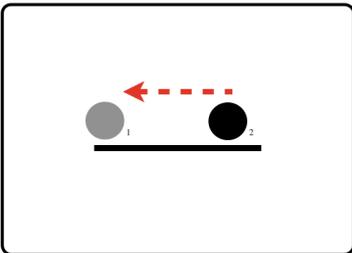
Place <i>spot, place</i>	
	<p>אֲבָנִים הָקִים יְהוֹשֻׁעַ בְּתוֹךְ הַיַּרְדֵּן תַּחַת מַצֵּב רַגְלֵי הַכֹּהֲנִים Jos 4.9</p> <p>Joshua set stones in the middle of the Jordan at the place where the priests' feet were stationed.</p>
<p>תַּחַת + noun/pro sfx - Ex 16.29; Lev 13.23, 28; 14.42 (crs Substitution); Jos 4.9; 5.8; 6.5, 20; Jdg 7.21; 2Sam 2.23 (crs Vertical Spatial and Control); 7.10; Isa 25.10; 46.7; Jer 38.9 (crs Vertical Spatial and Control); Amos 2.13; Zech 12.6; Job 30.14 (crs Vertical Spatial and Control); 40.12; 1Chr 17.9;</p>	
<p>בְּתַחַת - Ex 10.23; Jdg 3.16 (crs Vertical Spatial); 1Sam 7.11; Zech 6.12; 14.10;</p>	

While providing a concrete basis for the abstract substitution sense, the Place frame only makes up roughly 5% of all instances of the lexeme.

94. The relationship between these two nodes requires more investigation into theories of language change that exceed the purposes of this thesis. How does grammaticalization theory handle polysemies in the same functional category?

5.3 Substitution

The Place sense is abstracted and developed into the Substitution frame.⁹⁵ This node is located to the right of the concrete sense from which it originates, indicating its abstractness.

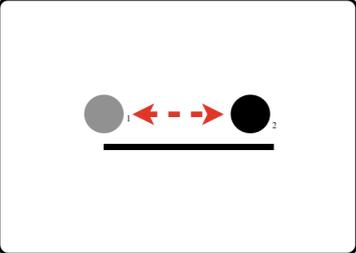
Substitution <i>in place of, instead of</i>	
	<p>1Chr 29.23 וַיֵּשֶׁב שְׁלֹמֹה עַל־כִּסֵּא יְהוָה לְמֹלֶךְ תַּחַת־דָּוִד אָבִיו</p> <p>Then Solomon sat on the throne of Yahweh as king in place of David his father.</p>
<p>תַּחַת + noun/pro sfx - Gen 2.21; 4.25; 22.13; 36.33-39 (1-7); 44.33; Ex 29.30; Lev 6.15; 16.32; Num 3.12, 41 (1-2), 45 (1-2); 8.16, 18; 32.14; Deut 2.12, 21-23, 10.6; Jos 5.7; Jdg 15.2; 2Sam 10.1; 16.8; 17.25; 19.1, 14; 1Kgs 1.30, 35; 2.35 (1-2); 3.7; 5.15; 19; 8.20; 11.43; 14.20, 27, 31; 15.8, 24, 28; 16.6, 10, 28; 19.16; 20.24; 22.40, 51; 2Kgs 1.17; 3.27; 8.15, 24; 10.35; 12.22; 13.9, 24; 14.16, 21, 29; 15.7, 10, 14, 22, 25, 30, 38; 16.20; 17.24; 19.37; 20.21; 21.18, 24, 26; 23.30, 34; 24.6, 17; Isa 3.24 (1-5); 10.16; 37.38; 55.13 (1-2); 60.15, 17 (1-4); 61.3 (1-3); Jer 22.11; 28.13; 29.26; 37.1; Ezk 4.15; 16.32; Ps 45.17; Job 31.40 (1-2); 34.24; 36.20; Prov 11.8; 21.18; Qoh 4.15 (2); Est 2.4, 17; Dan 8.8, 22; 1Chr 1.44-50 (1-7); 4.41; 5.22; 19.1; 29.23, 28; 2Chr 1.8; 6.10; 9.31; 12.10, 16; 13.23; 17.1; 21.1; 22.1; 24.27; 26.1, 23; 27.9; 28.27; 32.33; 33.20, 25; 36.1, 8</p>	
<p>תַּחַת - Gen 30.2; 50.19</p>	
<p>אֶל־תַּחַת - Lev 14.42 (crs Place)</p>	
<p>תַּחַת אֲשֶׁר - Ezk 36.34 (crs Causation)</p>	

As one of the most frequently used senses, the Substitution frame occurs just under 30% of all תַּחַת occurrences. This does not make the Substitution frame more prototypical. Rather it simply shows that there are many instances of royal succession and dispossession of land in the BHS.

95. Exactly what the nature of this abstraction is (metaphor or reanalysis in grammaticalization) will not be considered here. The fact that the abstraction happens will suffice.

5.4 Exchange

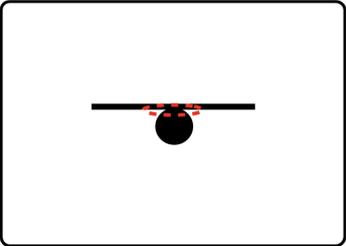
A further abstraction from Substitution leads to Exchange. As this is more abstract than its parent node, this node is set further to the right as *more abstract*.

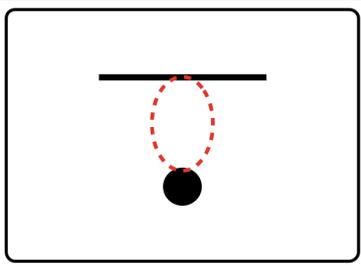
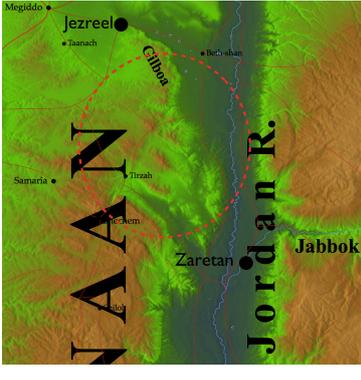
Exchange <i>in exchange/compensation for, in place of</i>	
	<p>יִשְׁכַּב עִמָּךְ הַלַּיְלָה תַּחַת דִּוְדָאֵי בְנֶךָ Gen 30.15 He may sleep with you tonight in exchange for your son's mandrakes.</p>
<p>תַּחַת + noun/pro sfx - Gen 30.15; 44.4; Ex 21.23-27 (1-5), 36, 37; Lev 24.18; Jos 2.14; 1Sam 2.20; 24.20; 25.21; 2Sam 16.12; 1Kgs 20.39, 42 (1-2); 21.2, 6; 2Kgs 10.24; Isa 43.3-4 (1-2); Jer 18.20; Zeph 2.10; Ps 35.12; 38.21 (1); 109.4, 5 (1-2); Job 16.4; 28.15; Prov 17.13</p>	

Occurring just under 6% of all instances of the lexeme, it is interesting that the exchange sense is only realized as תַּחַת plus a noun or pronoun.

5.5 Vertical Spatial

To the right of the Substantival node in the network is the Vertical Spatial *under* node. It is an abstraction on the Substantival frame into a relational use.

Vertical Spatial <i>under, beneath</i>	
	<p>וַיִּקְחוּ אֶבֶן וַיִּשְׂמוּ תַּחְתָּיו Ex 17.12 They took a stone and put it under him.</p>

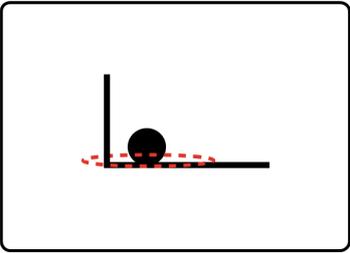
	<p>Qoh 1.3 מה־יתרון לאדם בכל־עמלו שיעמל תחת השמש What benefit is there for man in all his effort at which he labors under the sun?</p>
	<p>1Kgs 4.12 צָרְתָנָה מִתַּחַת לְיִזְרְעֵאל to Zaretan south of Jezreel</p>
<p>תַּחַת + noun/pro sfx⁹⁶ - Gen 7.19; *21.15; *24.2, *9; *47.29; Ex 17.12; *23.5 (crs Causation); *24.10; *25.35 (1-3); *26.19 (1-3), *21 (1-2), *25 (1-2), *33; 27.5; *36.24 (1-3), *26 (1-2), *30; *37.21 (1-3); *38.4; Lev 15.10; 27.32; Num 6.18; *16.31; *22.27; Deut 2.25; 4.19, 49; Jos 7.21, *22; *11.3, *12.3; Jdg 1.7; 2Sam 2.23 (crs Place and Control); 18.9 (1-2); *22.10; *22.37, *39-40&48 (crs Control); 1Kgs 5.5 (1-2); *7.44; 2Kgs 9.13; *16.17; Isa 10.4 (1-2 crs), *14.11; *57.5 (2); Jer 38.9 (crs Place and Control), *12 (1); *52.20; Ezk 1.23; *10.8, *20, *21; *17.6, *23; *20.37; *24.5; *31.6; Joel 1.17; Obd 7; Jonah 4.5; Micah 1.4; 4.4 (1-2); Hbk 3.16; Mal 3.21 (crs Control); Ps 10.7; *18.10, *37, *39-40 (crs Control); *45.6 (crs Control); *66.17; *91.4; *140.4; Job 20.12; *26.8 (crs Causation); 28.24; *30.7, 14 (crs Place and Control); *36.16; *37.3; 41.3; Ruth 2.12; Sng 2.6; *4.11; *8.3; Qoh 1.3, 9, 13, 14; 2.3, 11, 17-20, 22; 3.1, 16; 4.1, 3, 7, 15 (1); 5.12, 17; 6.1, 12; 7.6; 8.9, 15 (1-2), 17; 9.3, 6, 9 (1-2), 11, 13; 10.5; Lam 3.34 (crs Control); Dan 9.12; Neh 2.14; 1Chr 17.1; *29.24; 2Chr 4.3, *15</p>	
<p>מִתַּחַת - Gen 1.7 & 9; 6.17; 35.8 (1); Ex 17.14; 20.4 (2); *30.4 *37.27; Deut 4.18; 5.8 (2); 7.24; 9.14; 25.19; *33.27; Jdg 3.16; 7.8; 1Kgs 4.12; *7.24 & 29-30; 2Kgs 14.27; Jer 38.12 (2); Ezk 1.8; 46.23; *47.1 (1-2); Job 26.5; Prov 22.27; Lam 3.66;</p>	

This sense accounts for the majority of instances of the lexeme תַּחַת with over 33%.

5.6 Approximately Under

The Approximately Under frame is a concrete-abstract blend. As such, it is located in between a concrete nominal node (Place) and an abstract node (Vertical Spatial).

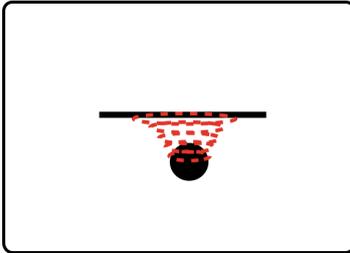
96. + contact exemplars will show a superscript ⁺. - contact exemplars will show a superscript ⁻.

Approximately Under <i>at the foot of, under (the shade of)</i>	
	<p>וְהִקְרַבְוֹן וַתַּעֲמִדוּן תַּחַת הַהָר Deut 4.11 You approached and stood at the foot of the mountain.</p>
<p>תַּחַת + noun/pro sfx - Gen 18.4, 8; 35.4, 8 (2); Ex 24.4; 32.19; Deut 4.11; 12.2; Jos 11.17; 13.5; 24.26; Jdg 4.5; 6.11, 19; 1Sam 14.2; 22.6; 31.13; 1Kgs 13.14; 14.23; 19.4-5; 2Kgs 16.4; 17.10; Isa 57.5 (1); Jer 2.20; 3.6, 13; Ezk 6.13 (1-2); Hos 4.13; Job 40.21; Sng 8.5; 1Chr 10.12; 2Chr 28.4</p>	
<p>תַּחְתֵּי - Ex 19.17;</p>	
<p>אֶל־תַּחַת - 1Kgs 8.6 (crs Substantive); 2Chr 5.7 (crs Substantive);</p>	

Though infrequent (6.5% of all occurrences), this frame is realized by independent תַּחַת, nominalized תַּחַת, and תַּחַת with the preposition אֶל.

5.7 Control

Abstracting the Vertical Spatial frame, the Control frame symbolizes a specific kind of relationship between the TR and LM. As this frame is more abstract than its abstract parent, it is placed further to the right of the grammaticalization scale.

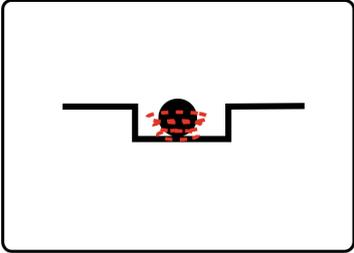
Control <i>under (the hand/control/authority of)</i>	
	<p>וְהִתְעַנִּי תַחַת יְדֵיהָ Gen 16.9 and submit yourself under her hand</p>

תַּחַת + noun/pro sfx - Gen 16.9; 41.35; Ex 21.20; Lev 22.27; Num 5.19, 20, 29; Jdg 3.30; 1Sam 21.4, 9; 2Sam 2.23 (crs Place & Vertical Spatial); 3.12; 22.39-40&48; 1Kgs 5.17; Isa 3.6; 24.5 (crs Cause); Jer 38.9 (crs Place and Vertical Spatial); Hbk 3.7; Mal 3.21 (crs Vertical Spatial); Ps 8.7; 18.39-40 (crs Vertical Spatial), 48; 45.6 (crs Vertical Spatial); 47.4 (1-2); 106.42; 144.2; Job 9.13; 30.14 (crs Place and Vertical Spatial); Lam 3.34 (crs Vertical Spatial);
בַּתַּחַת - Ex 6.6, 7; 18.10; 2Kgs 8.20, 22; 13.5; 17.7; Hos 4.12; 2Chr 21.8, 10 (1-2)
אֶל-תַּחַת - 1Sam 21.5

This frame accounts for 8% of all occurrences.

5.8 Causation

Also moving from the spatial under node, the Causation frame begins with a spatial TR-LM configuration and very concretely shows the TR causing a change in the LM. This frame has come to be used in more abstract contexts as in 4.1 with Prov 30.21-23 (see 4.1).

Causation <i>under, because</i>	
	<p>חֲמוֹר שֶׁנֶאֱדָר רִבִּין תַּחַת מִשְׂאוֹ Ex 23.5 your enemy's donkey fallen under/because of its load</p>
תַּחַת + noun/pro sfx - Ex 23.5 (crs Vertical Spatial); Isa 24.5 (crs Control); 61.7; Ps 38.21 (2); Job 26.8 (crs Vertical Spatial); Job 34.26; Prov 30.21-23;	
אֶשֶׁר תַּחַת - Num 25.13; Deut 21.14; 22.29; 28.62; 1Sam 26.21; 2Kgs 22.17; Isa 53.12; Jer 29.19; 50.7; Ezk 36.34; 2Chr 21.12; 34.25	
כִּי תַחַת - Deut 4.37; Prov 1.29;	
הַתַּחַת - 2Sam 19.22;	
מִתַּחַת - Jer 5.19;	

This sense is rare (under 5% of all occurrences) and is most often realized by תחת אשר.

5.9 Implied Perspective

The spatial sense is slightly abstracted by ellipting the TR and thus making the perspective of the speaker implied (thus *earth below [the speaker]*).

Implied Perspective <i>x below (the speaker)</i>	
	<p>וַיְבָרֶכֶדְךָ בְּרִכְתֵּי שָׁמַיִם מֵעַל בְּרִכְתֵּי תְהוֹם רִבְצֹת תְּחַת בְּרִכְתֵּי שְׂדֵיִם וְרֵחֶם Gen 49.25</p> <p>He blesses you with blessings of the heavens above, blessings of the deep which lies below, blessings of the breasts and womb.</p>
תחת - Gen 49.25; Deut 33.13	
תחתו - Deut 32.22; Ezk 26.20; 31.14, 16, 18; 32.18, 24; Ps 86.13	
מתחת - Ex 20.4 (1); Deut 4.39; 5.8 (1); Jos 2.11; 1Kgs 8.23; Isa 14.9; 51.6; Amos 2.9; Job 18.16	

This sense is the most infrequent, making up 3.5% of all occurrences.

5.10 Conclusion: Gesenius' rules and the network

The proposed network is clearly organized around meaning, the goal of pre-structuralist philology and CL. Much of what Gesenius' rules aim to do for are precisely the things expressed in the network. As such, this network style lexical entry may be compared to Gesenius rules.⁹⁷

97. Rule 8 is ignored as it does not apply to only one lexeme but a whole lexicon.

- 1) What belongs to the lexicon must be separated from what belongs to the grammar and commentary.

One repeated argument in this thesis has been that this rule is without linguistic foundation. In a digital age, there is no practical (paper-saving) reason to separate lexicon and grammar. There are only ideologies of linguistic camps that still enforce such a separation, which are neurologically implausible and thus unscientific in regards to language. While the network is organized semantically, morphology is not discarded.

- 2) The lexicon should contain a complete list of constructions and phrases.

An exhaustive semantic taxonomy of the BHS makes such lists obsolete, particularly in a digital format where an exemplar could be viewed in context by simply hovering over the BHS reference with a mouse.

- 3) The language must be treated historically.

This has certainly been attempted, though in a different manner than that of Gesenius. Gesenius, BDB, and HALOT treat the language historically by offering comparative Semitic data. The semantic network treats the language historically by interpreting the comparative Semitic data and structuring the BH lexical entry accordingly. The comparative data is not offered to the end user in the semantic network, but is used as a tool by the lexicographer.

- 4) Variant readings should be noted.

In the 500+ instances of תחת in the BHS, there are not many variant readings. A few times the masoretes correct תחתו with תחתיו. Rather than listing the difference, the Qere has been adopted.

- 5) Proper names deserve a place in the lexicon.

For the sake of time, the proper name *Tahat* was not included in this study. In a full lexicon, the name warrants inclusion, as GHCL, BDB, and HALOT do. Whether or not it deserves a separate entry or inclusion in the network (see HALOT 2000:vol. 4, 1722 for the English tag *substitute* of the proper name) is a problem I leave for another day.

- 6) A lexicographer must also study Oriental studies.

Since the experience of space is universal and reducible to TR-LM configurations, there is not much in the way of ancient near eastern studies that can come from an analysis of תחתי. The exception of course is the southern direction uses of the lexeme, best represented by a map (see 5.5).

7) Give a historical and logical view of the lexeme's "significations".

This is central to a panchronic approach. However, the lexicographer's sense of logic is replaced with a theory that is comparative-linguistically verifiable: grammaticalization. While it cannot conclusively be stated whether or not תחתי is a proper exemplar of the process, it certainly does exemplify semantic abstraction, a key component of grammaticalization.

CHAPTER 6 Conclusion

6.1 Chapter summaries

Chapter 2 reviewed Semitic and BH literature and concluded that תחת along with other segholates was a substantive that came to be used as a preposition. In particular, we looked at Gesenius' lexicographic method which insisted on a strict separation between lexicon and grammar. It was shown that this has never been done well in BH, and it was argued from a CL standpoint that this in fact should not be done. However, the problem with chapter 2 is that the cognate resources consulted only offer word-level information. A full comparative linguistic look would also approach the phoneme *tʰt* in comparative Semitics at a discourse level. Though of course this goes beyond the purposes of this thesis.

Chapter 3 introduced neurolinguistics, CL, and language change literature as an alternative methodological direction of inquiry. It was established that linguistic theories and frameworks need to be neurologically (and thus cognitively) and evolutionarily plausible. Specific tools from CL which are represented in the semantic network are prototype theory, frame semantics, and grammaticalization.

Chapter 4 presented the data on תחת in the BHS. It was shown that תחת is polysemous and these multiple senses can be adequately described with the diagrammatical tools of frame semantics. The analysis of the data confirmed that organizing a lexical entry around morphosyntax resulted in an unclear and inconsistent entry. However, formal considerations were not altogether abandoned. Keeping track of the morphologies used to symbolize the senses of תחת allows the user of the semantic network to better anticipate what might be found in the BHS. For example, the network clearly presents תחת אשר as always causative.

Chapter 5 organized this data into a model that combines the conventions of prototype theory, frame semantics, and grammaticalization tendencies. The purpose of this model is to clarify the information found in traditional BH lexica. So, instead of stating comparative Semitic data in the network (as was done in 2.1), the data was interpreted to show a process of ab-

straction which has been applied to the network. The semantic overlap has completely been done away with. I look forward to future digital lexicography which can employ this method. The problem of the pitchfork has been resolved through time and technology. So has the problem of polysemy in BH lexicography. The task now is to make new lexica that are neurologically plausible, organized semantically, and offer a principled explanation of the lexemes' evolutionary steps.

6.2 The network

As stated in 3.1.1, the neurological plausibility of the proposed model is more of a step in the right direction than a full solution. A more accurate statement is that the semantic network is more neurologically plausible than the lists found in traditional lexical entries. It is true that the brain is an organ of networks and the concepts we think are inter-connected in the network. However, nodes in a neural network do not contain concepts as nodes in the proposed semantic network contain frame semantic information. Though this limits the semantic network from being purely neurological in nature, it is an acceptable limitation. The standard is neurological plausibility, which such an approach achieves, and the goal is a clearer tool for BH students, for which I think this model can serve as a base. Future projects might make node clusters instead of individual nodes. In a digital model, each tiny node could be an exemplar from the BHS gathered in a cluster of similar exemplars arranged in a principled manner to other clusters.

The organization of the network, as per its name, is semantic. This differs from BH tradition which, as shown in chapter 2, organizes lexical entries morphologically resulting in overlapping English glosses. Conversely, this semantic organization results in overlapping morphologies, allowing the user to anticipate polysemy and only recognize a strict one-to-one relationship between form and meaning on the rare occasions that it occurs (for example, תחת אשר, arguably always symbolizes causation).

The semantic network is also organized in a linear fashion from concrete to abstract to more abstract, offering a plausible explanation to the diachronic development of the lexeme while

acknowledging that all semantic categories are synchronically coexistent in the BHS. This panchronic approach utilizes diachronic information without giving too much priority to cognate attestations when interpreting BH. Rather than looking to comparative Semitics for alternative readings of BH data, comparative Semitics is invoked to establish an evolutionary trend for the phoneme *t/ht* which, from a panchronic view, evolved semantically along a process of abstraction. This trend in ancient Semitics at large is reflected in the polysemies that תחת symbolizes in the BHS. The pitchfork has served its purpose, but more efficient methods have now been developed. So it also goes with BH lexicography.

Appendix: תחת in Canonical Order

BHS Reference	Phrase	Semantic Category	Gloss
Gen 1.7	הַמַּיִם אֲשֶׁר מֹתַחַת לְרַקִּיעַ	Vertical Spatial	the waters which were under the expanse
Gen 1.9	יִקְוּוּ הַמַּיִם מִתַּחַת הַשָּׁמַיִם	Vertical Spatial	let the waters under the heavens be gathered
Gen 2.21	וַיִּסְגֹר בְּשָׂרׁ תַּחְתָּנָהּ	Substitution	he shut flesh in its place
Gen 4.25	שָׁם־לִי אֱלֹהִים זָרַע אַחֵר תַּחַת הַקֶּבֶל	Substitution	God has granted me another offspring in place of Abel
Gen 6.16	תָּשִׂים תַּחְתִּים שְׁנַיִם וּשְׁלִישִׁים תַּעֲשֶׂהָ	Substantive	make it with bottom, second, and third decks
Gen 6.17	כָּל־בְּשָׂרׁ ... מִתַּחַת הַשָּׁמַיִם	Vertical Spatial	all flesh...under the heavens
Gen 7.19	הַהָרִים ... אֲשֶׁר־תַּחַת כָּל־הַשָּׁמַיִם	Vertical Spatial	the mountains which are under the heavens
Gen 16.9	וְהִתְעַנִּי תַּחַת יָדֶיהָ	Control	and submit yourself to her authority (under her hand)
Gen 18.4	וְהִשְׁעֵנּוּ תַּחַת הָעֵץ	Approx. Under	make yourself comfortable at the foot of the tree
Gen 18.8	וְהוֹאֵד־עִמָּד עֲלֵיהֶם תַּחַת הָעֵץ	Approx. Under	he was standing near them at the foot of the tree
Gen 21.15	וַתִּשְׁלַח אֶת־הַיֶּלֶד תַּחַת אֶחָד הַשִּׁיחִים	Vertical Spatial	then she shoved the boy under one of the shrubs
Gen 22.13	וַיַּעֲלֵהוּ לְעֹלָה תַּחַת בְּנוֹ	Substitution	so he offered it up as a burnt offering instead of his son
Gen 24.2	שִׁים־נָא יָדְךָ תַּחַת יָרְכִי	Vertical Spatial	Put now your hand under my thigh
Gen 24.9	וַיִּשֶׂם הָעֶבֶד אֶת־יָדוֹ תַּחַת יָרֵךְ אַבְרָהָם	Vertical Spatial	So the servant place his hand under Abraham's thigh
Gen 30.2	הֲתַחַת אֱלֹהִים אֲנִכִּי	Substitution	Am I in the place of God...?
Gen 30.15	וַיִּשְׁכַּב עִמָּךְ הַלַּיְלָה תַּחַת הַיּוֹדָאִי בְּגִדְךָ	Exchange	"He may sleep with you tonight in exchange for your son's mandrakes."
Gen 35.4	וַיִּטְמֵן אֹתָם יַעֲקֹב תַּחַת הָאֵלֶּה	Approx. Under	Jacob buried them at the foot of the oak tree
Gen 35.8 (1)	וַתִּקָּבֵר מִתַּחַת לְבֵית־אֵל	Vertical Spatial	and she was buried under/ south of Bethel
Gen 35.8 (2)	תַּחַת הָאֵלֶּון	Approx. Under	at the foot of the oak tree
Gen 36.33	וַיִּמְלֹךְ תַּחְתָּיו	Substitution	he reigned in his place
Gen 36.34	וַיִּמְלֹךְ תַּחְתָּיו	Substitution	he reigned in his place
Gen 36.35	וַיִּמְלֹךְ תַּחְתָּיו	Substitution	he reigned in his place
Gen 36.36	וַיִּמְלֹךְ תַּחְתָּיו	Substitution	he reigned in his place

Gen 36.37	וַיִּבְלֶךְ תַּחְתָּיו	Substitution	he reigned in his place
Gen 36.38	וַיִּבְלֶךְ תַּחְתָּיו	Substitution	he reigned in his place
Gen 36.39	וַיִּבְלֶךְ תַּחְתָּיו	Substitution	he reigned in his place
Gen 41.35	וַיִּצְבְּרוּ לָךְ תַּחַת יַד־פַּרְעֹה	Control	and they should store up grain by Pharaoh's authority
Gen 44.4	שְׁלַמְתֶּם רָעָה תַּחַת טוֹבָה	Exchange	you have repaid evil instead of good
Gen 44.33	וַיִּשְׁבַּע נָא עַבְדְּךָ תַּחַת הַנְּעָר	Substitution	please let your servant remain instead of the boy
Gen 47.29	שִׁים־נָא יָדְךָ תַּחַת יָרְכִי	Vertical Spatial	Put now your hand under my thigh
Gen 49.25	בְּרַכַּת תְּהוֹם רַבָּצַת תַּחַת	Implied Perspective	blessings from the deep lying below
Gen 50.19	הֲתַחַת אֱלֹהִים אָנִי	Substitution	"Am I in the place of God?"
Ex 6.6	וְהוֹצֵאתִי אֶתְכֶם מִתַּחַת סִבְלַת	Control	I will bring you out from under the control of forced labor
Ex 6.7	הַמוֹצֵיא אֶתְכֶם מִתַּחַת סִבְלוֹת מִצְרַיִם	Control	who has caused you to come out from the control of Egypt's forced labor
Ex 10.23	וְלֹא־קָמוּ אִישׁ מִתַּחְתָּיו	Place	and no man could rise from his spot
Ex 16.29	שָׁבוּ אִישׁ תַּחְתָּיו	Place	each man must stay in his spot
Ex 17.12	וַיִּקְחוּ אֶבֶן וַיִּשְׂמוּ תַּחְתָּיו וַיִּשָּׁב עָלֶיהָ	Vertical Spatial	they took a stone and put it under him and he sat on top of it
Ex 17.14	אֶמְחָה אֶת־זְכַר עַמְלֹק מִתַּחַת הַשָּׁמַיִם	Vertical Spatial	I will wipe out the memory of Amalek from under the heavens
Ex 18.10	הֲצִיל אֶת־הָעָם מִתַּחַת יַד־מִצְרַיִם	Control	he has delivered the people from the control of Egypt
Ex 19.17	וַיִּתְנַצְּבוּ בְּתַחְתֵּית הַהָר	Approx. Under	They presented themselves at the foot of the mountain
Ex 20.4 (1)	אֲשֶׁר בַּשָּׁמַיִם מִמַּעַל וְאֲשֶׁר בָּאָרֶץ מִתַּחַת	Implied Perspective	that which is in the heavens above and that which is in the earth below
Ex 20.4 (2)	וְאֲשֶׁר בַּמַּיִם מִתַּחַת לָאָרֶץ	Place-Vertical Spatial	and that which is in the waters under the earth
Ex 21.20	וְכִי־יִכֶּה אִישׁ אֶת־עַבְדּוֹ... בַּשֵּׁבֶט וּמַת תַּחַת יָדוֹ	Control	If a man strikes his slave... with a staff and he dies under his hand...
Ex 21.23	וְנָתַתָּה נַפְשׁ תַּחַת נַפֶּשׁ	Exchange	then you will give a life for a life
Ex 21.24 (1)	עֵין תַּחַת עֵין	Exchange	an eye for an eye

Ex 21.24 (2)	שן תחת שן	Exchange	tooth for tooth
Ex 21.24 (3)	יד תחת יד	Exchange	hand for hand
Ex 21.24 (4)	רגל תחת רגל	Exchange	foot for foot
Ex 21.25 (1)	כְּוִיָּה תחת כְּוִיָּה	Exchange	burn for burn
Ex 21.25 (2)	פצע תחת פצע	Exchange	wound for wound
Ex 21.25 (3)	הבֹּרֶחַ תחת הבֹּרֶחַ	Exchange	bruise for bruise
Ex 21.26	וְשָׁלַחְנוּ תחת עֵינוֹ	Exchange	he will set him free in exchange for his eye
Ex 21.27	וְשָׁלַחְנוּ תחת שֵׁנוֹ	Exchange	he will set him free in exchange for his tooth
Ex 21.36	וְשָׁלַם שׂוֹר תחת הַשׂוֹר	Exchange	he will pay an ox for the ox
Ex 21.37 (1)	חֲמִשָּׁה בָּקָר וְשָׁלַם תחת הַשׂוֹר	Exchange	he will pay five oxen for the (one) ox
Ex 21.37 (2)	וְאַרְבַּע־צֹאן תחת הַשֶּׁה	Exchange	and for four sheep for the (one) sheep
Ex 23.5	חֲמוֹר ... רֹבֵץ תחת מְשָׂאוֹ	Vertical Spatial-Causation	a donkey fallen under its load
Ex 24.4	וַיִּבֶן מִזְבֵּחַ תחת הַהָר	Approx. Under	and he built an altar at the foot of the mountain
Ex 24.10	וְתַחַת רַגְלָיו כְּמַעֲשֵׂה לְבַנְתֵּי הַסַּפִּיר	Vertical Spatial	under his feet was like pavement of sapphire
Ex 25.35 (1)	וְכִפְתֹּר תחת שְׁנֵי הַקָּנִים	Vertical Spatial	with a bud under the two branches
Ex 25.35 (2)	וְכִפְתֹּר תחת שְׁנֵי הַקָּנִים	Vertical Spatial	with a bud under the two branches
Ex 25.35 (3)	וְכִפְתֹּר תחת־שְׁנֵי הַקָּנִים	Vertical Spatial	with a bud under the two branches
Ex 26.19 (1)	וְאַרְבָּעִים אֲדָנִי־כֶסֶף תַּעֲשֶׂה תחת עֲשָׂרִים הַקָּרָשׁ	Vertical Spatial	you will make forth silver bases (to go) under the twenty frames
Ex 26.19 (2)	שְׁנֵי אֲדָנִים תחת־הַקָּרָשׁ הָאֶחָד	Vertical Spatial	two bases under the one frame
Ex 26.19 (3)	וּשְׁנֵי אֲדָנִים תחת־הַקָּרָשׁ הָאֶחָד	Vertical Spatial	also two bases under the one (other) frame
Ex 26.21 (1)	שְׁנֵי אֲדָנִים תחת־הַקָּרָשׁ הָאֶחָד	Vertical Spatial	two bases under the one frame
Ex 26.21 (2)	וּשְׁנֵי אֲדָנִים תחת־הַקָּרָשׁ הָאֶחָד	Vertical Spatial	also two bases under the one (other) frame
Ex 26.25 (1)	שְׁנֵי אֲדָנִים תחת־הַקָּרָשׁ הָאֶחָד	Vertical Spatial	two bases under the one frame
Ex 26.25 (2)	וּשְׁנֵי אֲדָנִים תחת־הַקָּרָשׁ הָאֶחָד	Vertical Spatial	also two bases under the one (other) frame
Ex 26.33	וְנָתַתָּה אֶת־הַפְּרָכֶת תחת הַקָּרָסִים	Vertical Spatial	You will hang the curtain under the clasps
Ex 27.5	וְנָתַתָּה אֹתָהּ תחת כַּרְכַּב הַמִּזְבֵּחַ	Vertical Spatial	You will put it under the ledge of the altar

Ex 29.30	וְלִבְשָׁם חִפְהֵן תַּחֲתָיו מִבְּנָיו	Substitution	the priest in his place from his sons will wear them
Ex 30.4	וְשָׁתִי טַבַּעַת זָהָב תַּעֲשֶׂה-לָּוּ מִתַּחַת לְזָרוּ	Vertical Spatial	You will make two gold rings for it under its border
Ex 32.19	וַיִּשְׁבַּר אֹתָם תַּחַת הַהָר	Approx. Under	and he broke them to pieces at the foot of the mountain
Ex 36.24 (1)	וְאַרְבָּעִים אֲדָנִי-כֶסֶף עָשָׂה תַּחַת עֲשָׂרִים הַקְּרָשִׁים	Vertical Spatial	He made forty silver bases under the twenty frames
Ex 36.24 (2)	שְׁנֵי אֲדָנִים תַּחַת-הַקְּרָשׁ הָאֶחָד	Vertical Spatial	two bases under the one frame
Ex 36.24 (3)	וּשְׁנֵי אֲדָנִים תַּחַת-הַקְּרָשׁ הָאֶחָד	Vertical Spatial	also two bases under the one (other) frame
Ex 36.26 (1)	שְׁנֵי אֲדָנִים תַּחַת-הַקְּרָשׁ הָאֶחָד	Vertical Spatial	two bases under the one frame
Ex 36.26 (2)	וּשְׁנֵי אֲדָנִים תַּחַת-הַקְּרָשׁ הָאֶחָד	Vertical Spatial	also two bases under the one (other) frame
Ex 36.30	שְׁנֵי אֲדָנִים תַּחַת-הַקְּרָשׁ הָאֶחָד	Vertical Spatial	two bases under the one frame
Ex 37.21 (1)	וְכַפְתֹּר תַּחַת שְׁנֵי הַקָּנִים	Vertical Spatial	with a bud under the two branches
Ex 37.21 (2)	וְכַפְתֹּר תַּחַת שְׁנֵי הַקָּנִים	Vertical Spatial	with a bud under the two branches
Ex 37.21 (3)	וְכַפְתֹּר תַּחַת שְׁנֵי הַקָּנִים	Vertical Spatial	with a bud under the two branches
Ex 37.27	וְשָׁתִי טַבַּעַת זָהָב תַּעֲשֶׂה-לָּוּ מִתַּחַת לְזָרוּ	Vertical Spatial	You will make two gold rings for it under its border
Ex 38.4	וַיַּעַשׂ... נְחֹשֶׁת תַּחַת כַּרְכָּבוֹ	Vertical Spatial	And he made... bronze under it ledge
Lev 6.15	וְהַכֹּהֵן הַמְּשִׁיחַ תַּחֲתָיו מִבְּנָיו יַעֲשֶׂה	Substitution	And the anointed priest in his place from his sons will do it
Lev 13.23	וְאִם-תִּתְקַחְתִּיהָ תַּעֲמֹד תִּבְהַרְתָּ	Place	But if the bright spot stays in its place
Lev 13.28	וְאִם-תִּתְקַחְתִּיהָ תַּעֲמֹד תִּבְהַרְתָּ	Place	But if the bright spot stays in its place
Lev 14.42	וַהֲבִיאוּ אֶל-תַּחַת הָאֲבָנִים	Place-Substitution	they put them in place of the stones
Lev 15.10	וְכֹל-הַנֹּגֵעַ בְּכֹל אֲשֶׁר יִהְיֶה תַּחֲתָיו	Vertical Spatial	And anyone who touches anything that is under him...
Lev 16.32	לִכְהֵן תַּחַת אָבִיו	Substitution	to be priest in place of his father
Lev 22.27	וְהָיָה שִׁבְעַת יָמִים תַּחַת אִמּוֹ	Control	it will be under its mother seven days
Lev 24.18	וְשִׁלְּמָהּ נֶפֶשׁ תַּחַת נֶפֶשׁ	Exchange	he will make restitution, life for life
Lev 24.20 (1)	שִׁבְרַת תַּחַת שִׁבְרַת	Substitution	fracture for fracture
Lev 24.20 (2)	עֵינַי תַּחַת עֵינַי	Substitution	eye for eye

Lev 24.20 (3)	שֵׁן תַּחַת שֵׁן	Substitution	tooth for tooth
Lev 27.32	אֲשֶׁר-יַעֲבֹד תַּחַת הַשֶּׁבֶט	Vertical Spatial	which pass under the rod
Num 3.12	לָקַחְתִּי אֶת-הַלְוִיִּם ... תַּחַת כָּל-בְּכוֹר	Substitution	I have taken the Levites instead of all firstborn...
Num 3.41 (1)	וְלָקַחְתָּ אֶת-הַלְוִיִּם ... תַּחַת כָּל-בְּכוֹר	Substitution	You will take the Levites instead of all firstborn...
Num 3.41 (2)	וְאֵת בְּהֵמַת הַלְוִיִּם תַּחַת כָּל-בְּכוֹר	Substitution	and the Levite's cattle instead of all firstborn...
Num 3.45 (1)	קַח אֶת-הַלְוִיִּם תַּחַת כָּל-בְּכוֹר	Substitution	Take the Levites instead of all firstborn
Num 3.45 (2)	וְאֵת-בְּהֵמַת הַלְוִיִּם תַּחַת בְּהֵמָתָם	Substitution	and the Levite's cattle instead of their cattle
Num 5.19	וְאִם-לֹא שָׁטִית טְמֵאָה תַּחַת אִישְׁךָ	Control	If you have not turned to uncleanliness (while) under your husband
Num 5.20	כִּי שָׁטִית תַּחַת אִישְׁךָ	Control	But if you have turned aside (while) under your husband
Num 5.29	הַשָּׁטָה אִשָּׁה תַּחַת אִישָׁהּ	Control	A wife turns aside (while) under her husband
Num 6.18	הָאֵשׁ אֲשֶׁר-תַּחַת זֶבַח הַשְּׁלָמִים	Vertical Spatial	the fire which is under the peace offering
Num 8.16	נְתִנִּים הֵמָּה ... תַּחַת פֶּטֶרֶת כָּל-רֶחֶם	Substitution	they are given...instead of the first issue of the womb
Num 8.18	וְאָקַח אֶת-הַלְוִיִּם תַּחַת כָּל-בְּכוֹר	Substitution	I take the Levites instead of all firstborn
Num 16.31	וַתִּפְקַע הָאֲדָמָה אֲשֶׁר תַּחְתֵּיהֶם	Vertical Spatial	The ground which was under them split (open)
Num 22.27	וַתִּרְבֵּץ תַּחַת בַּלְעָם	Vertical Spatial	Then she crouched under Balaam
Num 25.13	וְהָיְתָה לוֹ וּלְזֶרְעוֹ אַחֲרָיו בְּרִית כְּהֹנֵן עוֹלָם תַּחַת אֲשֶׁר קָנָא לְאֱלֹהָיו	Causation	It will be to him and his seed after him an eternal covenant of priesthood because he has been zealous for his God
Num 32.14	וְהִנֵּה קַמְתֶּם תַּחַת אֲבֹתֵיכֶם	Place-Substitution	Look, you stand in place of your fathers
Num 33.26	וַיִּחַנוּ בְּתַחַת	Name	They camped at Taḥat
Num 33.27	וַיִּסְעוּ מִתַּחַת	Name	They set out from Taḥat
Dt 2.12	וַיֵּשְׁבוּ תַּחְתָּם	Substitution	They lived (there) instead of them
Dt 2.21	וַיֵּשְׁבוּ תַּחְתָּם	Substitution	They lived (there) instead of them
Dt 2.22	וַיֵּשְׁבוּ תַּחְתָּם	Substitution	They lived (there) instead of them

Dt 2.23	וַיֵּשְׁבוּ תַּחְתָּם	Substitution	They lived (there) instead of them
Dt 2.25	הָעַמִּים תַּחַת כָּל־הַשָּׁמַיִם	Vertical Spatial	the people under all the heavens
Dt 3.17	וְיָם הַמֶּלַח תַּחַת אַשְׁדֹּת הַפִּסְגָּה	Vertical Spatial	the salt sea under the streams of Pisgah
Dt 4.11	וַתַּעֲמִדוּן תַּחַת הַהָר	Approx. Under	You stood at the foot of the mountain
Dt 4.18	כָּל־דָּגָה אֲשֶׁר־בַּמַּיִם מִתַּחַת לָאָרֶץ	Place-Vertical Spatial	all fish that are in the waters at the underpart of/ under the land
Dt 4.19	הָעַמִּים תַּחַת כָּל־הַשָּׁמַיִם	Vertical Spatial	the peoples under all the heavens
Dt 4.37	וְתַחַת כִּי אָהַב אֶת־אֲבוֹתֶיךָ	Causation	because you have loved your ancestors
Dt 4.39	הָאֱלֹהִים בַּשָּׁמַיִם מִמַּעַל וְעַל־הָאָרֶץ מִתַּחַת	Implied Perspective	The god in the heavens above and over the earth below
Dt 4.49	וְיָם הַיַּרְדֵּן תַּחַת אַשְׁדֹּת הַפִּסְגָּה	Vertical Spatial	the Arba'ah sea under the streams of Pisgah
Dt 5.8 (1)	אֲשֶׁר בַּשָּׁמַיִם מִמַּעַל וְאֲשֶׁר בָּאָרֶץ מִתַּחַת	Implied Perspective	which is in the heavens above and which is in earth below
Dt 5.8 (2)	וְאֲשֶׁר בַּמַּיִם מִתַּחַת לָאָרֶץ	Place-Vertical Spatial	and that which is in the waters below the land
Dt 7.24	וְהִמָּחַדְתָּ אֶת־שֵׁמֶם מִתַּחַת הַשָּׁמַיִם	Vertical Spatial	you will erase their name from under the heavens
Dt 9.14	וְאִמָּחַח אֶת־שֵׁמֶם מִתַּחַת הַשָּׁמַיִם	Vertical Spatial	I will wipe out their name from under the heavens
Dt 10.6	וַיִּכְהֵן ... תַּחְתָּיו	Substitution	he became priest in his place
Dt 12.2	וְתַחַת כָּל־עֵץ רֵאָנָן	Approx. Under	and under every green tree
Dt 21.14	לֹא־תִתְעַמֵּר בָּהּ תַּחַת אֲשֶׁר עֲנִיתָהּ	Causation	You will not mistreat her because you (already) violated her
Dt 22.29	וְלֹא־תִהְיֶה לְאִשְׁהָ תַּחַת אֲשֶׁר עָנָהּ	Causation	And she will be his wife because he violated her
Dt 25.19	תִּמָּחַח אֶת־זִכְרָם מִתַּחַת הַשָּׁמַיִם	Vertical Spatial	You will wipe out the memory of Amaleq from under the heavens
Dt 28.23	וְהָאָרֶץ אֲשֶׁר־תַּחְתֶּיךָ	Vertical Spatial	and the land which is under you
Dt 28.47	תַּחַת אֲשֶׁר לֹא־עֲבַדְתָּ אֶת־יְהוָה	Causation	Because you have not served Yahweh....
Dt 28.62	וְנִשְׁאַרְתֶּם בְּמִתֵּי מִעַט תַּחַת אֲשֶׁר הָיוּתֶם כְּכֹכְבֵי הַשָּׁמַיִם	Substitution	and you will be few in number instead of that which you had been- as the stars of the heavens

Dt 29.19	וּמָחָה יְהוָה אֶת־שְׁמוֹ מִתַּחַת הַשָּׁמַיִם	Vertical Spatial	Yahweh will wipe out his name from under the heavens
Dt 32.22	וַתִּיבֶר עַד־שְׂאוֹל תַּחְתִּית	Implied Perspective	it burns as far as Sheol below
Dt 33.13	וּמְתָחוּם רִבְצֹת תַּחַת	Implied Perspective	the depths which lie below
Dt 33.27	מִעֵנָה אֱלֹהֵי קֶדֶם וּמִתַּחַת זְרַעַת עוֹלָם	Vertical Spatial	The ancient god is a refuge, and under (are you)
Jos 2.11	הָאֱלֹהִים בַּשָּׁמַיִם מִמַּעַל וְעַל־הָאָרֶץ מִתַּחַת	Implied Perspective	the god in the heavens above and over the land below
Jos 2.14	נַפְשֵׁנוּ תַחְתִּיכֶם	Exchange	our lives for theirs
Jos 4.9	בְּתוֹךְ הַיַּרְדֵּן תַּחַת מַצֵּב רַגְלֵי הַכֹּהֲנִים	Place	in the middle of the Jordan in the spot where the priests' feet stood
Jos 5.7	וְאֶת־בְּנֵיהֶם תִּקְוֶם תַּחְתָּם	Substitution	He raised up their sons in their stead
Jos 5.8	וַיֵּשְׁבוּ תַחְתָּם	Place	They stayed in their spot
Jos 6.5	וְנָפְלָה חוֹמַת הָעִיר תַּחְתֶּיהָ	Place	the wall of the city will fall in its spot
Jos 6.20	וַתִּפֹּל הַחוֹמָה תַּחְתֶּיהָ	Place	and the wall fell in its place
Jos 7.21	בְּתוֹךְ הָאֹהֶלִי וְהַכֶּסֶף תַּחְתֶּיהָ	Vertical Spatial	in the middle of the tent with the silver under it
Jos 7.22	בְּאֹהֶלוֹ וְהַכֶּסֶף תַּחְתֶּיהָ	Vertical Spatial	in his tent with the silver under it
Jos 11.3	וַחֲחִוֵי תַחַת הַרְמוֹן	Vertical Spatial	the Hivites under Hermon
Jos 11.17	בְּבִקְעַת הַלְבָנוֹן תַּחַת הַר־הַרְמוֹן	Approx. Under	the Lebanon valley under mt. Hermon
Jos 12.3	וּמִתַּיִן תַּחַת אֲשֵׁרוֹת הַפִּסְגָּה	Vertical Spatial	from the south below the streams of Pisgah
Jos 13.5	מִבְּעַל גַּד תַּחַת הַר־הַרְמוֹן	Approx. Under	from Baal Gad below/south of Mount Hermon
Jos 15.19	וְאֵת גְּלוֹת תַּחְתִּיּוֹת	Substantive (adj)	and lower springs
Jos 16.3	עַד גְּבוּל בֵּית־חֹרֶן תַּחְתּוֹן	Substantive (adj)	as far as the territory of lower Bet Horon
Jos 18.13	מִנֶּגֶב לְבֵית־חֹרֶן תַּחְתּוֹן	Substantive (adj)	south of lower Bet Horon
Jos 24.26	וַיִּקְיָמָהּ שָׁם תַּחַת הָאֵלֶּה	Approx. Under	he set it up at the foot of the oak tree
Jdg 1.7	מִלְקָטִים תַּחַת שְׁלֹחֵנִי	Vertical Spatial	they used to gather (food scraps) under my table
Jdg 1.15	וְאֵת גְּלוֹת תַּחְתִּית	Substantive (adj)	and the lower springs
Jdg 3.16	וַיַּחְגֹּר אוֹתָהּ מִתַּחַת לְמַדְיוֹ	Place-Vertical Spatial	he strapped it under his coat
Jdg 3.30	וַתִּכְנַע מוֹאָב ... תַּחַת יַד וְיִשְׂרָאֵל	Control	Moab was humiliated under the hand of Israel

Jdg 4.5	וְהָיָא יוֹשֶׁבֶת תַּחַת־תְּמָר דְּבוֹרָה	Approx. Under	She would sit under the palm tree of Deborah
Jdg 6.11	וַיֵּשֶׁב תַּחַת הָאֵלֶּה	Approx. Under	and he sat at the foot of the oak tree
Jdg 6.19	אֶל־תַּחַת־הָאֵלֶּה	Approx. Under	and they went out to him at the foot of the oak tree
Jdg 7.8	וּמַחֲנֵה מִדְּיָן הָיָה לוֹ מִתַּחַת בְּעַמְקָא	Vertical Spatial	and the Midianite camp was under him in the valley
Jdg 7.21	וַיַּעֲמֵדוּ אִישׁ תַּחְתּוֹ	Place	and each one stood in his place
Jdg 15.2	תְּהִי־נָא לְךָ תַּחְתֶּיהָ	Substitution	please take her for yourself in place of her
1Sam 2.20	זָרַע מִן־הָאִשָּׁה הַזֹּאת תַּחַת הַשָּׂאֵלָה	Exchange	...descendants from this woman in place of the one who was obtained by request...
1Sam 7.11	וַיַּכּוּם עַד־מִתַּחַת לְבֵית כָּר	Place	they struck them as far as an area below Bet Kar
1Sam 14.2	תַּחַת הָרְמוֹן	Approx. Under	foot of the pomegranate tree
1Sam 14.9	וַנִּעַמְדֵנוּ תַּחְתֵּינוּ	Place	and we will stand in our place
1Sam 21.4	מִה־יֵשׁ תַּחַת־יָדְךָ	Control	What do you have at your disposal?
1Sam 21.5	אֵין־לָחֶם חַל אֶל־תַּחַת יָדִי	Control	there is no common bread at my disposal
1Sam 21.9	וְאֵין יִשְׂפָה תַּחַת־יָדְךָ חֲנִית	Control	Is there not a spear at your disposal?
1Sam 22.6	יֹשֵׁב בַּנֶּבֶעָה תַּחַת־הָאֶשֶׁל	Approx. Under	he was sitting in Gibeah at the foot of the tamarisk tree
1Sam 24.20	וַיְהוּהוּ וַיִּשְׁלַמְךָ טוֹבָה תַּחַת	Exchange	May Yahweh repay you goodness instead
1Sam 25.21	וַיִּשְׁבֹּב־לִי רָעָה תַּחַת טוֹבָה	Exchange	He has returned to me evil instead of good
1Sam 26.21	לֹא־אָרַע לְךָ עוֹד תַּחַת אֲשֶׁר יִקְרָה נַפְשִׁי בְּעֵינֶיךָ	Cause	I won't harm you because my life was valued in your eyes
1Sam 31.13	תַּחַת־הָאֶשֶׁל	Approx. Under	foot of the tamarisk tree
2Sam 2.23	וַיָּמָת תַּחְתּוֹ	Place-Vertical Spatial-Control	he died in his spot/under him
2Sam 3.12	וַיִּשְׁלַח אַבְנֵר מִלְּאָכִים אֶל־דָּוִד תַּחְתּוֹ	Control	Abner sent messengers to David on his behalf
2Sam 7.10	וַיִּשְׁכְּנוּ תַּחְתּוֹ	Place	they will dwell in their place
2Sam 10.1	וַיִּמְלֹךְ... תַּחְתּוֹ	Substitution	he reigned in his place
2Sam 16.8	מִלְּכֶת תַּחְתּוֹ	Substitution	you reign in his stead
2Sam 16.12	וַהֲשִׁיב יְהוָה לִי טוֹבָה תַּחַת קְלָלָתוֹ	Exchange	Yahweh will give me back goodness instead of his curse

2Sam 17.25	אבשלום תחת יואב על הצבא	Substitution	Abshalom instead of Joab over the army
2Sam 18.9 (1)	הפרד תחת שוכד האלה	Vertical Spatial	the mule under the branches of the oak tree
2Sam 18.9 (2)	והפרד אשר תקויו עבר	Vertical Spatial	the mule which was under him passed
2Sam 19.1	כי יותן מותי אני תחתיך	Substitution	I wish that I myself had died in your place
2Sam 19.14	שר צבא ... תחת יואב	Substitution	(you are) chief of the army instead of Joab
2Sam 19.22	התחת זאת לא יומת שמעי	Cause	because of this should not Shemei die?
2Sam 22.10	וערפל תחת רגליו	Vertical Spatial	and a thick cloud under his feet
2Sam 22.37	תרחיב צעדי תחתני	Vertical Spatial	You widen my path beneath me
2Sam 22.39	ויפלו תחת רגליו	Vertical Spatial-Control	they fall under my feet
2Sam 22.40	תכריע קמי תחתני	Vertical Spatial-Control	those who stand against me bow under me
2Sam 22.48	ומוריד עמי תחתני	Vertical Spatial-Control	under me
2Sam 24.6	ואל ארץ תחתים חדשי	Place (name)	and to the land of Tahtiyim Hodshiy
1Kgs 1.30	ישב על כסאי תחתי	Substitution	he will sit on my throne in my place
1Kgs 1.35	ימלך תחתי	Substitution	he will rule in my place
1Kgs 2.35 (1)	וימת המלך את בניהו ... תחתי	Substitution	the king appointed Benaiah in his place
1Kgs 2.35 (2)	צדוק ... תחת אביאטר	Substitution	Zadok instead of Abiathar
1Kgs 3.7	המלכת את עבדך תחת דוד	Substitution	you made your servant king in place of David
1Kgs 4.12	צרתנה מתחת לזרעאל	Vertical Spatial	Zaretan below Jezreel
1Kgs 5.5 (1)	איש תחת גפנו	Vertical Spatial	each under his vine
1Kgs 5.5 (2)	ותחת תאנתו	Vertical Spatial	and under his fig
1Kgs 5.15	אתו משחו למלך תחת אביו	Substitution	they anointed him as king in place of his father
1Kgs 5.17	תתייהו אתם תחת כפות רגלי	Vertical Spatial-Control	... Yahweh to deliver them under the soles of his feet
1Kgs 5.19	אתן תחתיך על כסאך	Substitution	I place (him) in your place on your throne
1Kgs 6.6	התצוה התחתנה חמש באמה רחבה	Substantive (adj)	the lowest story was five cubits wide
1Kgs 7.24	ופקעים מתחת לשפתו	Place-Vertical Spatial	gourds were under/on the underpart of its brim

1Kgs 7.29	ומתחת לאריות ולבקר ליות מעשה מורד	Vertical Spatial	underthe (images of) lions and of the cattle were spirals of hammered metal
1Kgs 7.30	מתחת לכיר	Vertical Spatial	under the basin
1Kgs 7.32	למתחת ל...	Vertical Spatial	to the underpart of
1Kgs 7.44	הבקר שנים־עשר תחת הים	Vertical Spatial	12 bulls under the sea
1Kgs 8.6	אל־מקומו... אל־תחת כנפי הכרובים	Substantive - Approx. Under	to the place, to the underpart/foot of of the cherub's wings
1Kgs 8.20	ואקם תחת דוד	Substitution	I arose in David's place
1Kgs 8.23	בשמים ממעל ועל־הארץ מתחת	Implied Perspective	below
1Kgs 9.17	ואת־בית חרן תחתון	Substantive (adj)	and lower Bet Ḥoron
1Kgs 11.43	וימלך... תחתיו	Substitution	he ruled in his place
1Kgs 13.14	תחת האלה	Approx. Under	foot of the oak
1Kgs 14.20	וימלך... תחתיו	Substitution	he ruled in his place
1Kgs 14.23	ותחת כל־עץ רנן	Approx. Under	at the foot of every green tree
1Kgs 14.27	ויעש... תחתם מנני נחשת	Substitution	he made in their place bronze shields
1Kgs 14.31	וימלך... תחתיו	Substitution	he ruled in his place
1Kgs 15.8	וימלך... תחתיו	Substitution	he ruled in his place
1Kgs 15.24	וימלך... תחתיו	Substitution	he ruled in his place
1Kgs 15.28	וימלך... תחתיו	Substitution	he ruled in his place
1Kgs 16.6	וימלך... תחתיו	Substitution	he ruled in his place
1Kgs 16.10	וימלך... תחתיו	Substitution	he ruled in his place
1Kgs 16.28	וימלך... תחתיו	Substitution	he ruled in his place
1Kgs 19.4	וישב תחת רהם	Approx. Under	he sat at the foot of a shrub
1Kgs 19.5	ויישן תחת רהם	Approx. Under	he fell asleep at the foot of a shrub
1Kgs 19.16	לנביא תחתיו	Substitution	as priest in your place
1Kgs 20.24	ושים פחות תחתיהם	Substitution	put governors in their places
1Kgs 20.39	נפשך תחת נפשו	Exchange	your life for his life
1Kgs 20.42 (1)	נפשך תחת נפשו	Exchange	your life for his life
1Kgs 20.42 (2)	ועמך תחת עמו	Exchange	your people for his people
1Kgs 21.2	ואתנה לך תחתיו כרם טוב במקומו	Exchange	I will give you in its place a better vineyard
1Kgs 21.6	אתנה לך כרם תחתיו	Exchange	I will give you a vineyard in its place
1Kgs 22.40	וימלך... תחתיו	Substitution	he ruled in his place
1Kgs 22.51	וימלך... תחתיו	Substitution	he ruled in his place

2Kgs 1.17	וַיִּמְלֹךְ ... תַּחְתָּיו	Substitution	he ruled in his place
2Kgs 3.27	וַיִּמְלֹךְ תַּחְתָּיו	Substitution	he will rule in his place
2Kgs 8.15	וַיִּמְלֹךְ ... תַּחְתָּיו	Substitution	he ruled in his place
2Kgs 8.20	בְּיָמָיו פָּשַׁע אֲדוֹם מִתַּחַת יַד־יְהוֹנָדָה	Control	In the days Edom rebelled from the control of Judah
2Kgs 8.22	וַיִּפְשַׁע אֲדוֹם מִתַּחַת יַד־יְהוֹנָדָה	Control	Edom rebelled from the control of Judah
2Kgs 8.24	וַיִּמְלֹךְ ... תַּחְתָּיו	Substitution	he ruled in his place
2Kgs 9.13	וַיִּקְחוּ אִישׁ בְּגָדוֹ וַיִּשְׁיִמוּ תַּחְתָּיו	Vertical Spatial	each took off his cloak and put it under him
2Kgs 10.24	נָפְשׁוֹ תַּחַת נַפְשׁוֹ	Exchange	his life for his life
2Kgs 10.35	וַיִּמְלֹךְ ... תַּחְתָּיו	Substitution	he ruled in his place
2Kgs 12.22	וַיִּמְלֹךְ ... תַּחְתָּיו	Substitution	he ruled in his place
2Kgs 13.5	וַיֵּצְאוּ מִתַּחַת יַד־אַרָם	Control	they went out from the control of Aram
2Kgs 13.9	וַיִּמְלֹךְ ... תַּחְתָּיו	Substitution	he ruled in his place
2Kgs 13.24	וַיִּמְלֹךְ ... תַּחְתָּיו	Substitution	he ruled in his place
2Kgs 14.16	וַיִּמְלֹךְ ... תַּחְתָּיו	Substitution	he ruled in his place
2Kgs 14.21	וַיִּמְלֹכוּ אֹתוֹ תַּחַת אָבִיו	Substitution	they made him king in place of his father
2Kgs 14.27	לְמַחֲזֹת אֶת־שֵׁם יִשְׂרָאֵל מִתַּחַת הַשָּׁמַיִם	Vertical Spatial	to wipe out the name of Israel from under the heavens
2Kgs 14.29	וַיִּמְלֹךְ ... תַּחְתָּיו	Substitution	he ruled in his place
2Kgs 15.7	וַיִּמְלֹךְ ... תַּחְתָּיו	Substitution	he ruled in his place
2Kgs 15.10	וַיִּמְלֹךְ תַּחְתָּיו	Substitution	he ruled in his place
2Kgs 15.14	וַיִּמְלֹךְ תַּחְתָּיו	Substitution	he ruled in his place
2Kgs 15.22	וַיִּמְלֹךְ ... תַּחְתָּיו	Substitution	he ruled in his place
2Kgs 15.25	וַיִּמְלֹךְ תַּחְתָּיו	Substitution	he ruled in his place
2Kgs 15.30	וַיִּמְלֹךְ תַּחְתָּיו	Substitution	he ruled in his place
2Kgs 15.38	וַיִּמְלֹךְ ... תַּחְתָּיו	Substitution	he ruled in his place
2Kgs 16.4	וּתַחַת כָּל־עֵץ רִנָּן	Approx. Under	at the foot of every green tree
2Kgs 16.17	הַבָּקָר הַנְּחֹשֶׁת אֲשֶׁר תַּחְתֶּיהָ	Vertical Spatial	the bronze bulls which were under it
2Kgs 16.20	וַיִּמְלֹךְ ... תַּחְתָּיו	Substitution	he ruled in his place
2Kgs 17.7	מִתַּחַת יַד פַּרְעֹה	Control	from the control of Pharaoh
2Kgs 17.10	וּתַחַת כָּל־עֵץ רִנָּן	Approx. Under	at the foot of every green tree
2Kgs 17.24	וַיָּשֶׁב בְּעָרֵי שֹׁמְרוֹן תַּחַת בְּנֵי יִשְׂרָאֵל	Substitution	they settled in the cities of Shomron in place of the children of Israel

2Kgs 19.37	וַיִּמְלֹךְ ... תַּחְתָּיו	Substitution	he ruled in his place
2Kgs 20.21	וַיִּמְלֹךְ ... תַּחְתָּיו	Substitution	he ruled in his place
2Kgs 21.18	וַיִּמְלֹךְ ... תַּחְתָּיו	Substitution	he ruled in his place
2Kgs 21.24	וַיִּמְלִיכוּ ... תַּחְתָּיו	Substitution	they made him king in his place
2Kgs 21.26	וַיִּמְלֹךְ ... תַּחְתָּיו	Substitution	he ruled in his place
2Kgs 22.17	תַּחַת אֲשֶׁר עָזְבוּנִי	Cause	(this will happen) because they have abandoned me
2Kgs 23.30	וַיִּמְלִיכוּ ... תַּחְתָּיו	Substitution	they made him king in his place
2Kgs 23.34	וַיִּמְלֹךְ ... תַּחַת ... אָבִיו	Substitution	they made him king in place of his father
2Kgs 24.6	וַיִּמְלֹךְ ... תַּחְתָּיו	Substitution	he ruled in his place
2Kgs 24.17	וַיִּמְלֹךְ ... תַּחְתָּיו	Substitution	he ruled in his place
Isa 3.6	תַּחַת יָדְךָ	Control	under your control
Isa 3.24 (1)	וְהָיָה תַּחַת בִּשְׂמֵם מִן	Substitution	decay will be in place of spices
Isa 3.24 (2)	וְתַחַת הַגִּזְרָה נִקְשָׁה	Substitution	in place of a belt will be a rope
Isa 3.24 (3)	וְתַחַת מַעֲשֵׂה מְקַשָּׁה קְרָחָה	Substitution	in place of braided hair will be baldness
Isa 3.24 (4)	וְתַחַת פְּתִיגֵיל מִחֲנֹרֶת שֶׁק	Substitution	in place of fine robes will be a sackcloth
Isa 3.24 (5)	כִּי־תַחַת יָפִי	Substitution	branding in place of beauty
Isa 10.4 (1)	בְּלֹתֵי כְרַע תַּחַת אַסִּיר	Vertical Spatial	from collapsing under prisoners
Isa 10.4 (2)	וְתַחַת הַרוּגִים וַפְּלוּ	Vertical Spatial	and under the fallen slain
Isa 10.16	וְתַחַת כְּבֹדוֹ יִבָּרַח	Vertical Spatial	And under its body it will burn
Isa 14.9	שְׂאוֹל מִתַּחַת רָנְנָה	Implied Perspective	Sheol below quaked
Isa 14.11	תַּחְתֶּיךָ יִצָּע רִמָּה	Vertical Spatial	under you are spread worms
Isa 22.9	אֲתַדְמִי הַבְּרִיחַ הַתַּחְתּוֹנָה	Substantive adj	water of the lower pool
Isa 24.5	וְהֶאֱרִץ חֲנֻפָּה תַּחַת יִשְׁכְּבֶיהָ	Control-Cause	this earth is defiled under the control of/because of its inhabitants
Isa 25.10	וְנִדְוֶשׁ מוֹאָב תַּחְתָּיו	Place	Moab will be trampled in its spot/under him (his power)
Isa 37.38	וַיִּמְלֹךְ ... תַּחְתָּיו	Substitution	he ruled in his place
Isa 43.3	נָתַתִּי כְּפָרְךָ מִצְרַיִם כּוֹשׁ וּסְבָא תַּחְתֶּיךָ	Exchange	I gave your ransom (to) Egypt, Kush and Sheba in place of you
Isa 43.4 (1)	וְנָתַתִּי אָדָם תַּחְתֶּיךָ	Exchange	I gave mankind in your place
Isa 43.4 (2)	וְלֵאמֹים תַּחַת נַפְשְׁךָ	Exchange	and people instead of your life

Isa 44.23	תחתיות ארץ	Substantive	subterranean parts of earth
Isa 46.7	וינחהו תחתיו וינעמד במקומו	Place	they put it in its spot and it stand in its place
Isa 51.6	שאו לשמים עיניכם והביטו אל־הארץ מתחת	Implied Perspective	lift your eyes to the heavens (above), and look at the earth below
Isa 53.12	ונאת־עצומוים יחלק שלל תחת אשר הערה לפנות נפשו	Cause	he will divide the spoils of the mighty because he submitted his life to death
Isa 55.13 (1)	תחת הנעצוין יעלה ברז	Substitution	instead of a thorn bush will grow a fir tree
Isa 55.13 (2)	ותחת הסרפד יעלה הדס	Substitution	instead of nettles will grown a myrtle tree
Isa 57.5 (1)	ותחת כל־עץ רנן	Approx. Under	at the foot of every green tree
Isa 57.5 (2)	תחת סעפי הסלעים	Vertical Spatial	under the rocky cliffs
Isa 60.15	תחת היותך עזובה... ושמתיך לנאון עולם	Substitution	instead of you being abandoned I will make you an eternal (source of) pride
Isa 60.17 (1)	תחת הנחשת אביא זהב	Substitution	instead of bronze I will bring gold
Isa 60.17 (2)	ותחת הברזל אביא כסף	Substitution	instead of iron I will bring silver
Isa 60.17 (3)	ותחת העצים נחשת	Substitution	instead of wood, bronze
Isa 60.17 (4)	ותחת האבנים ברזל	Substitution	instead of stone, iron
Isa 61.3 (1)	פאר תחת אפר	Substitution	turban instead of ashes
Isa 61.3 (2)	שמן ששון תחת אבל	Substitution	oil of joy instead of mourning
Isa 61.3 (3)	תהלה תחת רוח כהה	Substitution	praise instead a faint spirit
Isa 61.7	תחת בשחכם משנה	Substitution	instead of your shame, a double portion
Jer 2.20	ותחת כל־עץ רנן	Approx. Under	at the foot of every green tree
Jer 3.6	ואל־תחת כל־עץ רנן	Approx. Under	at the foot of every green tree
Jer 3.13	תחת כל־עץ רנן	Approx. Under	at the foot of every green tree
Jer 5.19	תחת מה עשה יהוה אלהינו לנו את־כל־אלה	Cause	Why (because of what) has Yahweh done all this to us?
Jer 18.20	הישלם תחת טובה רעה	Exchange	Should it be paid back in place of good, evil?
Jer 22.11	המלך תחת... אביו	Substitution	who ruled in place of his father
Jer 28.13	ועשית תחתיהן משות ברזל	Substitution	and you will make in their place iron yokes
Jer 29.19	תחת אשר־לא־שמעו אל־דברי נאם־יהוה	Cause	Because they did not listen to the words of the utterance of Yahweh

Jer 29.26	יהוה נתנך כהן תחת יהויָדע	Substitution	Yahweh put you as priest in place of Jehoiada
Jer 37.1	וַיִּמְלֹךְ ... תחת כְּנִיָּהוּ	Substitution	then he ruled in place of Coniah
Jer 38.9	וַיָּמָת תַּחְתּוֹ	Place-Vertical Spatial-Control	he died in his spot
Jer 38.11	וַיָּבֹא בֵּית הַמִּלֵּךְ אֶל־תַּחַת הָאוֹצָר	Substantive	He went (in) the palace to the underpart/room beneath the treasury
Jer 38.12 (1)	שִׁים נָא בְּלוֹאֵי הַפְּתוּבוֹת וַיִּדְדֵךְ	Vertical Spatial	now put the worn out clothes and rags under your armpits
Jer 38.12 (2)	מִתַּחַת לַחֲבָלִים	Vertical Spatial	under the ropes
Jer 50.7	לֹא נֹאשָׁם תַּחַת אֲשֶׁר הִטָּאוּ לַיהוָה	Cause	We're not guilty for they sinned against Yahweh
Jer 52.20	וְהַבָּקָר שְׁנַיִם־עָשָׂר נְחֹשֶׁת אֲשֶׁר־תַּחַת הַמְּכֻנּוֹת	Vertical Spatial	the 12 bronze bulls which are under the moveable stands
Ezk 1.8	וַיְדִי אֲדָם מִתַּחַת כַּנְּפֵיהֶם	Place-Vertical Spatial	and human hands under/at the underpart of their wings
Ezk 1.23	וְתַחַת הַרְקִיעַ	Vertical Spatial	and under the platform
Ezk 4.15	צְפִיעֵי הַבָּקָר תַּחַת גִּלְגֵי הָרֶם	Substitution	cow's droppings instead of human excrement
Ezk 6.13 (1)	וְתַחַת כָּל־עֵץ רֵעָנָן	Approx. Under	and at the foot of every green tree
Ezk 6.13 (2)	וְתַחַת כָּל־אֵלֶּה עֲבָתָהּ	Approx. Under	and at the foot of every leafy oak
Ezk 10.2	בֹּא אֶל־בֵּינֹת לַנְּלִיל אֶל־תַּחַת לְכַרֹּב	Substantive	go the the spot between the wheel-work to the spot under the cherubs
Ezk 10.8	וְדֹאֲדָם תַּחַת כַּנְּפֵיהֶם	Vertical Spatial	human hand under their wings
Ezk 10.20	רָאִיתִי תַּחַת אֱלֹהֵי־יִשְׂרָאֵל בְּנְהַר־כְּבָר	Vertical Spatial	I saw under the god of Israel the river Kevar
Ezk 10.21	וְדִי אֲדָם תַּחַת כַּנְּפֵיהֶם	Vertical Spatial	human hands under their wings
Ezk 16.32	תַּחַת אִישָׁה תִּקַּח אֶת־זָרִים	Substitution	instead of her husband, she takes strangers
Ezk 17.6	וְשָׂרְשָׁיו תַּחְתּוֹ	Vertical Spatial	its roots under him
Ezk 17.23	וְשָׁכְנוּ תַּחְתּוֹ כָּל צִפּוֹר	Vertical Spatial	and every bird will live under it (shade)
Ezk 20.37	וְהַעֲבַרְתִּי אֶתְכֶם תַּחַת הַשֶּׁבֶט	Vertical Spatial-Control	I will make you pass under the rod
Ezk 23.5	וַתֵּן אֶהְלֵה תַּחְתִּי	Control	Oholah was a prostitute while under my control
Ezk 24.5	וְגַם דּוֹר הַעֲצָמִים תַּחְתֶּיהָ	Vertical Spatial	also pile the bones under it

Ezk 26.20	והושבתיך בארץ תחתיות	Implied Perspective	I will make you live in the earth below
Ezk 31.6	ותחת פארתיו ילדו כל חית השדה	Vertical Spatial	under its branches all the beasts of the field gave birth
Ezk 31.14	אל־ארץ תחתית	Implied Perspective	to the earth below
Ezk 31.16	בארץ תחתית	Implied Perspective	in earth below
Ezk 31.18	אל־ארץ תחתית	Implied Perspective	to the earth below
Ezk 32.18	אל־ארץ תחתיות	Implied Perspective	to the earth below
Ezk 32.24	אל־ארץ תחתיות	Implied Perspective	to the earth below
Ezk 32.27	וינתנו את־הרבותם תחת ראשיהם	Vertical Spatial	they put their swords under their heads
Ezk 36.34	והארץ הנשמה תעבד תחת אֶשֶׁר היתה שוממה לעיני כל־עובר	Causation-Substitution	the desolate land will be worked for it has been/instead of being a desolation in the eyes of all passers-by
Ezk 40.18	הרצפה התחתונה	Substantive adj	the lower pavement
Ezk 40.19	השער התחתונה	Substantive adj	the lower gate
Ezk 41.7	וכן התחתונה יעלה על־העליונה	Substantive	so it went from the bottom (story) to the top (story)
Ezk 42.5	מהתחתנות	Substantive	from the bottom (rooms)
Ezk 42.6	מהתחתנות	Substantive	from the bottom (rooms)
Ezk 42.9	ומתחת הלשכות האלה	Substantive	the underpart of these rooms
Ezk 43.14	עד־העזרה התחתונה	Substantive	up to the lower ledge
Ezk 46.23	ומבשלות עשוי מתחת הטירות קביב	Vertical Spatial	cooking hearths were made under the rows all around
Ezk 47.1 (1)	והנה־מים יצאים מתחת מפתן הבית	Vertical Spatial	and look running water under the threshold of the temple
Ezk 47.1 (2)	והמים ירדו מתחת מפתח הבית	Substantive-Vertical Spatial	and water going from the side of the temple
Hos 4.12	ויזנו מתחת אלהיהם	Control	they fornicate under their god
Hos 4.13	ועל־הגבעות יקטרו תחת אלון ולבנה ואלה	Vertical Spatial	on high hills they sacrifice, (and) under the oak, poplar, and terebinth
Joel 1.17	עבשו פרות תחת מגרפתיהם	Vertical Spatial	seeds shriveled under their shovels
Amos 2.9	ואשמיר פרוו מפעל ושרשיו מתחת	Implied Perspective	I will destroy his fruits above and his roots below
Amos 2.13	הנה אנכי מעיק תחתיתם כאֶשֶׁר תעיק העגלה המלאה לה עמיר	Place	I will press you down in your place just as the cart is pressed down full of sheaves

Obd 7	וְשִׂימוּ מְזוּר תַּחְתֶּיךָ	Vertical Spatial	they will set an ambush under you
Jonah 4.5	וַיַּעַשׂ לֹא שָׁם סִכָּה וַיֵּשֶׁב תַּחְתֶּיהָ	Vertical Spatial	Then he built for himself a booth and he sat under it
Mic 1.4	וְנִמְסוּ הַהָרִים תַּחְתָּיו	Vertical Spatial	the mountains will melt under him
Mic 4.4 (1)	וַיֵּשְׁבוּ אִישׁ תַּחַת גַּפְנוֹ	Vertical Spatial	each will sit under his vine
Mic 4.4 (2)	וְתַחַת תְּאֲנָתוֹ	Vertical Spatial	and under his fig
Hbk 3.7	תַּחַת אָנֹן רָאִיתִי אֶת־אֹהֲלֵי כוּשָׁן	Control	under affliction I saw the tents of Kushan
Hbk 3.16	וַתַּחֲתִי אֶרְנָז	Place	I shook where I stood
Zeph 2.10	זֹאת לָהֶם תַּחַת גְּאוֹנָם	Exchange	this is for them instead of their arrogance
Zech 3.10 (1)	תִּקְרְאוּ אִישׁ לְרֵעֵהוּ אֶל־תַּחַת גַּפֵּן	Vertical Spatial	each will invite his friend to the underplace of his vine
Zech 3.10 (2)	וְאֶל־תַּחַת תְּאֲנָה	Vertical Spatial	and to the underplace of his fig
Zech 6.12	הִנֵּה־אִישׁ צֶמַח שְׁמוֹ וּמִתַּחְתָּיו יֵצֵא	Place	here is one named Branch and from his spot will he sprout up
Zech 12.6	וַיֵּשְׁבָה יְרוּשָׁלַם עוֹד תַּחְתֶּיהָ בִּירוּשָׁלַם	Place	Jerusalem will settle again in her place, in Jerusalem
Zech 14.10	וְרוּשָׁלַם וְרֵאמָה וַיֵּשְׁבָה תַּחְתֶּיהָ	Place	Jerusalem will rise and will settle in her place
Mal 3.21	כִּי־יִהְיוּ אֲפֵר תַּחַת כַּפּוֹת רַגְלֵיכֶם	Vertical Spatial-Control	for they will be like ashes under the soles of your feet
Ps 8.7	כָּל־שֵׁתָה תַּחַת־רַגְלָיו	Control	you placed everything under his feet/authority
Ps 10.7	תַּחַת לְשׁוֹנוֹ עֵקֶל וְאָוֶן	Vertical Spatial	under his tongue is trouble and deception
Ps 18.10	וַעֲרַפֵּל תַּחַת רַגְלָיו	Vertical Spatial	and thick darkness under his feet
Ps 18.37	תַּרְחִיב צִעְדֵי תַּחְתִּי	Vertical Spatial	you widen the steps under me
Ps 18.39	וַיִּפְּלוּ תַּחַת רַגְלִי	Vertical Spatial-Control	they fall under my feet
Ps 18.40	תַּכְרִיעַ קַמֵּי תַּחְתִּי	Vertical Spatial-Control	you make my foes bow under me
Ps 18.48	וַיִּדְבַר עַמִּים תַּחְתִּי	Control	he submits people under me
Ps 35.12	וַיִּשְׁלְמוּנִי רָעָה תַּחַת טוֹבָה	Exchange	they repay me evil instead of good
Ps 38.21 (1)	וּמְשַׁלְמֵי רָעָה תַּחַת טוֹבָה	Exchange	those repaying me evil instead of good
Ps 38.21 (2)	וַיִּשְׁטְנוּנִי תַּחַת רַדְפֵי־טוֹב	Substitution-Cause	they are adversarial against me instead of pursuing me (for) goodness OR because of my pursuing good

Ps 45.6	עמים תתקיף יפלו	Vertical Spatial-Control	people fall under you
Ps 45.17	תחת אבותיך יהיו בניך	Substitution	in place of your fathers will be your sons
Ps 47.4 (1)	נדבר עמים תתנינו	Control	he subdued people under us
Ps 47.4 (2)	ולאמים תחת רגלינו	Control	and people under our feet
Ps 63.10	בתחתיות הארץ	Substantive	in the bottom parts of the earth
Ps 66.17	ורומם תחת לשוני	Vertical Spatial	and exaltation under my tongue
Ps 86.13	משאול תתניה	Implied Perspective	from Sheol below
Ps 88.7	שתיני בבור תחתיות	Substantive	you put me in the lowest pit
Ps 91.4	ותחת־כנפיו תחסה	Vertical Spatial	under his wings you have taken refuge
Ps 106.42	ויכנעו תחת ידם	Control	they were subdued under their hand
Ps 109.4	תחת־אהבתי ישננוני	Exchange	instead of my love, they oppose me
Ps 109.5 (1)	וישימו עלי רעה תחת טובה	Exchange	they set over me evil instead of good
Ps 109.5 (2)	ושנאה תחת אהבתי	Exchange	and hate instead of my love
Ps 139.15	רקמתי בתחתיות ארץ	Substantive	I was woven in the lower parts of earth
Ps 140.4	חמת עקשוב תחת שפתיהם	Vertical Spatial	viper's venom is under their lips
Ps 144.2	הרודד עמי תתני	Control	who makes people submit under me
Job 9.13	תחתיו שחזו עגרי רהב	Vertical Spatial-Control	Rahab's helpers lie under him
Job 16.4	נפשכם תחת נפשי	Exchange	your life instead of my life
Job 18.16	מתחת שרשיו יבשו	Implied Perspective	then from below his roots dry
Job 20.12	יכחידנה תחת לשונו	Vertical Spatial	he hides it under his tongue
Job 26.5	הרפאים יחוללו מתחת מים ושכניהם	Vertical Spatial	the dead writhe under the water, and all that live in it
Job 26.8	צרר־מים בעביו ולא־נבקע ענן תחתם	Vertical Spatial-Cause	he locks water in the clouds but the clouds do not burst under/because of it
Job 28.5	ארץ ממנה יצא־לקח ותתתיה נחפד כמו־אש	Substantive	the earth from which comes food- its underpart is overturned as though by fire
Job 28.15	לא־יתן סגור תתתיה	Exchange	gold cannot be given in its place
Job 28.24	תחת כל־השמים יראה	Vertical Spatial	under all the heavens he sees
Job 30.7	תחת חרול יספחו	Vertical Spatial	under the nettles they were huddled

Job 30.14	תחת שאה התגלגלו	Place-Vertical Spatial-Control	under/at the spot of the crash they roll on
Job 31.40 (1)	תחת חטה יצא חוח	Substitution	instead of wheat let thorns sprout
Job 31.40 (2)	ותחת־שערה באשה	Substitution	and instead of barley, weeds
Job 34.24	ויעמד אחרים תחתם	Substitution	he erected others in their place
Job 34.26	תחת־רשעים ספקם	Causation	because of their evil he struck them
Job 36.16	רחב לא־מוצק תחתיה	Vertical Spatial	an expanse with no distress under it
Job 36.20	לעלות עמים תחתם	Substitution	for people to go up in their place
Job 37.3	תחת־כל־השמים ישרהו	Vertical Spatial	under all the heavens he lets it go
Job 40.12	והרדך רשעים תחתם	Place	crush the evil in their spot
Job 40.21	תחת־צאלים ישקב	Approx. Under	at the foot of the lotus tree it lies
Job 41.3	תחת כל־השמים ליהוא	Vertical Spatial	under all the heavens, it is mine
Job 41.16	כפלח תחתית	Substantive adj	as the lowest millstone
Job 41.22	תחתיו חודדי חרש	Substantive	its underparts are the points of potsherds
Prov 1.29	תחת כי־שנאו דעת	Causation	because they hated knowledge
Prov 11.8	צדיק מצרה נחליץ ויבא רשע תחתיו	Substitution	the righteous are delivered from distress and the evil are brought in their place
Prov 17.13	משיב רעה תחת טובה	Exchange	the one who repays evil instead of good...
Prov 21.18	ותחת ישרים בוגד	Substitution	instead of the just are the treacherous
Prov 22.27	יחם משכבך מתחתידך	Vertical Spatial	your bed will be taken from under you
Prov 30.21 (1)	תחת שלוש רגזה ארץ	Vertical Spatial-Causation	under/because of three things the earth quakes
Prov 30.21 (2)	ותחת ארבע לא־תוכל שאת	Vertical Spatial-Causation	under/because of four things it cannot bear up
Prov 30.22	תחת־עבד כי ימלוך	Vertical Spatial-Causation	under/because of a slave who becomes king
Prov 30.23	תחת שנואה כי תבול	Vertical Spatial-Causation	under/because of a hated woman who marries
Ruth 2.12	יהוה ... אשר־באת לחסות תחת־כנפיו	Vertical Spatial	Yahweh to whom you've come to take refuge under his wings
Song 2.6	שמאלו תחת לראשי	Vertical Spatial	his left hand under my head

Song 4.11	וּקְלָב תַּחַת לְשׁוֹנֶךָ	Vertical Spatial	milk under your tongue
Song 8.3	שְׂמָאלוֹ תַּחַת רֵאשִׁי	Vertical Spatial	his left hand under my head
Song 8.5	תַּחַת הַתְּפוּחַ עוֹרְרֵתִיךָ	Approx. Under	at the foot of the apple tree I aroused you
Qoh 1.3	תַּחַת הַשָּׁמֶשׁ	Vertical Spatial	under the sun
Qoh 1.9	תַּחַת הַשָּׁמֶשׁ	Vertical Spatial	under the sun
Qoh 1.13	תַּחַת הַשָּׁמַיִם	Vertical Spatial	under the heavens
Qoh 1.14	תַּחַת הַשָּׁמֶשׁ	Vertical Spatial	under the sun
Qoh 2.3	תַּחַת הַשָּׁמַיִם	Vertical Spatial	under the heavens
Qoh 2.11	תַּחַת הַשָּׁמֶשׁ	Vertical Spatial	under the sun
Qoh 2.17	תַּחַת הַשָּׁמֶשׁ	Vertical Spatial	under the sun
Qoh 2.18	תַּחַת הַשָּׁמֶשׁ	Vertical Spatial	under the sun
Qoh 2.19	תַּחַת הַשָּׁמֶשׁ	Vertical Spatial	under the sun
Qoh 2.20	תַּחַת הַשָּׁמֶשׁ	Vertical Spatial	under the sun
Qoh 2.22	תַּחַת הַשָּׁמֶשׁ	Vertical Spatial	under the sun
Qoh 3.1	תַּחַת הַשָּׁמַיִם	Vertical Spatial	under the heavens
Qoh 3.16	תַּחַת הַשָּׁמֶשׁ	Vertical Spatial	under the sun
Qoh 4.1	תַּחַת הַשָּׁמֶשׁ	Vertical Spatial	under the sun
Qoh 4.3	תַּחַת הַשָּׁמֶשׁ	Vertical Spatial	under the sun
Qoh 4.7	תַּחַת הַשָּׁמֶשׁ	Vertical Spatial	under the sun
Qoh 4.15 (1)	תַּחַת הַשָּׁמֶשׁ	Vertical Spatial	under the sun
Qoh 4.15 (2)	אֲשֶׁר יַעֲמֹד תַּחְתּוֹ	Substitution	who will stand in his place
Qoh 5.12	תַּחַת הַשָּׁמֶשׁ	Vertical Spatial	under the sun
Qoh 5.17	תַּחַת הַשָּׁמֶשׁ	Vertical Spatial	under the sun
Qoh 6.1	תַּחַת הַשָּׁמֶשׁ	Vertical Spatial	under the sun
Qoh 6.12	תַּחַת הַשָּׁמֶשׁ	Vertical Spatial	under the sun
Qoh 7.6	כְּקוֹל הַסִּירִים תַּחַת הַסִּיר	Vertical Spatial	like the sound of a thorny plant under the cooking pot
Qoh 8.9	תַּחַת הַשָּׁמֶשׁ	Vertical Spatial	under the sun
Qoh 8.15 (1)	תַּחַת הַשָּׁמֶשׁ	Vertical Spatial	under the sun
Qoh 8.15 (2)	תַּחַת הַשָּׁמֶשׁ	Vertical Spatial	under the sun
Qoh 8.17	תַּחַת הַשָּׁמֶשׁ	Vertical Spatial	under the sun
Qoh 9.3	תַּחַת הַשָּׁמֶשׁ	Vertical Spatial	under the sun
Qoh 9.6	תַּחַת הַשָּׁמֶשׁ	Vertical Spatial	under the sun
Qoh 9.9 (1)	תַּחַת הַשָּׁמֶשׁ	Vertical Spatial	under the sun
Qoh 9.9 (2)	תַּחַת הַשָּׁמֶשׁ	Vertical Spatial	under the sun

Qoh 9.11	תחת השמש	Vertical Spatial	under the sun
Qoh 9.13	תחת השמש	Vertical Spatial	under the sun
Qoh 10.5	תחת השמש	Vertical Spatial	under the sun
Lam 3.34	לדבא תחת רגליו כל אסירי ארץ	Vertical Spatial-Control	to crush under his feet all (the) land's prisoners
Lam 3.55	מבור תחתיות	Substantive adj	from the lowest pit
Lam 3.66	ותשמדם מתחת שמי יהוה	Vertical Spatial	wipe them out from under Yahweh's heavens
Est 2.4	תמלך תחת ושתי	Substitution	let her become queen instead of Vashti
Est 2.17	וימליכה תחת ושתי	Substitution	so he made her queen in place of Vashti
Dan 8.8	ותעלנה חזות ארבע תחתיה	Substitution	then four prominent horn ascended in its place
Dan 8.22	ותעמנה ארבע תחתיה	Substitution	and four (horns) arose in its place
Dan 9.12	אשר לא נעשתה תחת כל השמים	Vertical Spatial	which has not been made under all the heavens
Neh 2.14	ואין מקום לבהמה לעבר תחתי	Vertical Spatial	and there's no room for (my) animal to pass under me
Neh 4.7	ואעמיד מתחתיות למקום	Substantive	And I was stationed on the lower levels of the place
1Chr 1.44	וימלך תחתי	Substitution	he reigned in his place
1Chr 1.45	וימלך תחתי	Substitution	he reigned in his place
1Chr 1.46	וימלך תחתי	Substitution	he reigned in his place
1Chr 1.47	וימלך תחתי	Substitution	he reigned in his place
1Chr 1.48	וימלך תחתי	Substitution	he reigned in his place
1Chr 1.49	וימלך תחתי	Substitution	he reigned in his place
1Chr 1.50	וימלך תחתי	Substitution	he reigned in his place
1Chr 4.41	וישבו תחתיהם	Substitution	they lived in place of them
1Chr 5.22	וישבו תחתיהם	Substitution	they lived in place of them
1Chr 6.9	תחת	Name	Taḥat
1Chr 6.22	בן תחת	Name	son of Taḥat
1Chr 7.20 (1)	ותחת	Name	Taḥat
1Chr 7.20 (2)	ותחת	Name	Taḥat
1Chr 7.24	ותבן את בית חורון התחתון ואת העליון	Substantive	she built Bet Ḥoron, the lower and the upper
1Chr 10.12	ויקברו את עצמותיהם תחת האלה	Approx. Under	they buried their bones at the foot of the oak tree

1Chr 17.1	וְאָרוֹן... תַּחַת יְרִיעוֹת	Vertical Spatial	but the ark...is under a tent curtain
1Chr 17.9	וְשָׁכְנוּ תַּחְתָּיו	Place	they will dwell in their own place
1Chr 19.1	וַיִּמְלֹךְ... תַּחְתָּיו	Substitution	he reigned in his place
1Chr 29.23	וַיֵּשֶׁב שְׁלֹמֹה עַל־כִּסֵּא... תַּחַת־דָּוִד	Substitution	Solomon sat on the throne in place of David
1Chr 29.24	נָתַנוּ יָד תַּחַת שְׁלֹמֹה	Vertical Spatial	they gave a hand under/in support of Solomon
1Chr 29.28	וַיִּמְלֹךְ... תַּחְתָּיו	Substitution	he reigned in his place
2Chr 1.8	וְהִמְלַכְתָּנִי תַּחְתָּיו	Substitution	you have made me king in his place
2Chr 4.3	וְדַמּוֹת בָּקָרִים תַּחַת לוֹ	Vertical Spatial	and images of bulls were under it
2Chr 4.15	הַבָּקָר שְׁנַיִם־עָשָׂר תַּחְתָּיו	Vertical Spatial	twelve bulls under it
2Chr 5.7	וַיָּבִיאוּ... אֶל־תַּחַת כַּנְּפֵי הַכְּרוּבִים	Substantive	they brought it to the place beneath the cherubs wings
2Chr 6.10	וְאָקוּם תַּחַת דָּוִד אָבִי	Substitution	I have taken the place of David my father, I have stood in place of of David my father
2Chr 8.5	וְאֶת־בֵּית חוֹרֹן הַתַּתְּיוֹן	Substantive adj	and Bet Horon, the lower
2Chr 9.31	וַיִּמְלֹךְ... תַּחְתָּיו	Substitution	he reigned in his place
2Chr 12.10	וַיַּעַשׂ... תַּחְתֵּיהֶם מִנְּגִי נְחֹשֶׁת	Substitution	and he made...in place of them bronze shields
2Chr 12.16	וַיִּמְלֹךְ... תַּחְתָּיו	Substitution	he reigned in his place
2Chr 13.23	וַיִּמְלֹךְ... תַּחְתָּיו	Substitution	he reigned in his place
2Chr 17.1	וַיִּמְלֹךְ... תַּחְתָּיו	Substitution	he reigned in his place
2Chr 21.1	וַיִּמְלֹךְ... תַּחְתָּיו	Substitution	he reigned in his place
2Chr 21.8	מִתַּחַת יָד	Control	under the hand of
2Chr 21.10 (1)	מִתַּחַת יָד	Control	under the hand of
2Chr 21.10 (2)	מִתַּחַת יָד	Control	under the hand of
2Chr 21.12	תַּחַת אֲשֶׁר לֹא־הָלַכְתָּ	Causation	because you have not walked...
2Chr 22.1	וַיִּמְלִיכוּ... תַּחְתָּיו	Substitution	they made him king in his place
2Chr 24.27	וַיִּמְלֹךְ... תַּחְתָּיו	Substitution	he reigned in his place
2Chr 26.1	וַיִּמְלִיכֵהוּ תַּחַת־אָבִיו	Substitution	they made him king in place of his father
2Chr 26.23	וַיִּמְלֹךְ... תַּחְתָּיו	Substitution	he reigned in his place
2Chr 27.9	וַיִּמְלֹךְ... תַּחְתָּיו	Substitution	he reigned in his place

2Chr 28.4	ותחת כל־עץ רענן	Approx. Under	and at the foot of every green tree
2Chr 28.27	וימלך... תחתיו	Substitution	he reigned in his place
2Chr 32.33	וימלך... תחתיו	Substitution	he reigned in his place
2Chr 33.20	וימלך... תחתיו	Substitution	he reigned in his place
2Chr 33.25	וימליכו... תחתיו	Substitution	they made him king in his place
2Chr 34.25	תחת אשר עזבני	Cause	(this will happen) because they have abandoned me
2Chr 36.1	וימליכוהו תחת־אביו	Substitution	they made him king in place of his father
2Chr 36.8	וימלך... תחתיו	Substitution	he reigned in his place

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