

INDIANA UNIVERSITY

DIRECTIONAL STRATEGIES IN BIBLICAL HEBREW:  
INFLUENCES ON THE USE OF LOCATIVE HEY

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## 1. Introduction

Biblical Hebrew (BH) has been a source of interest for philologists for hundreds of years. While there has been considerable debate over the precise dating of specific Biblical Hebrew texts, few scholars would question the fact that the BH corpus as a whole reflects more than a thousand years of linguistic development.<sup>1</sup> In recent years, Hebraists have produced studies in which they either trace the development of particular linguistic phenomena across time, or suggest that varying uses of a given item in different BH texts indicate time-depth between the texts. Following in their footsteps, this paper explores the behavior of a particular morpheme (*-ah*) across time, in order to discover what factors (whether temporal, syntactic, or phonological) impact the likelihood that it will surface.

The phenomenon of interest in this paper is the BH directional morpheme *-ah*, meaning ‘to, toward, into, onto’ (usually referred to as the directional or locative *hey*, *hey* being the Hebrew letter H).<sup>2</sup> From different forms of this item attested in Ugaritic and Arabic, locative *hey* seems to have developed from ‘a consonantal postposition <h> expressing movement toward a place.’<sup>3</sup> The locative *hey* in Biblical Hebrew attaches to the end of a stem of place or direction.

<u>(1) Basic Form of Noun</u>		<u>Noun with directional <i>hey</i> suffix<sup>4</sup></u>	
yerušalaím	‘Jerusalem’	yerušalaím- <b>ah</b>	‘to/ into/ toward Jerusalem’
ha-‘ír	‘the city’	ha-‘ír- <b>ah</b>	‘to/ into/ toward the city’
ṭsafôn	‘north’	ṭsafôn- <b>ah</b>	‘northward; to/ toward the north’
šám	‘there’	šámm- <b>ah</b>	‘there-ward; thither’

Biblical Hebrew had three different ways of coding movement toward a place or in a direction. First, as noted above, a suffixal *hey* could be added. Second, the bare noun

<sup>1</sup> Acknowledgements to Clancy Clements, Robert Botne, Barbara Vance and Anna Wilson for their very helpful comments.

<sup>2</sup> Also known as *he locale* or H-locale. ‘Locative *hey*’ is the most common name for this suffix, even though it carries the meaning ‘to, toward, into, onto,’ rather than the ‘in, on’ usually expressed by a locative morpheme. Locative *hey* has no apparent derivational relationship with the Proto-Semitic locative/instrumental case in *-u(m)*, meaning ‘in, on, by means of’ [Edward Lipinski, *Semitic Languages: Outline of a Comparative Grammar* (Leuven: Uitgeveru Peeters, 2001), 268].

<sup>3</sup> Before the development of Ugaritic scholarship, most Hebraists derived the directional *-ah* from the West Semitic accusative *-a*; remnants of the accusative *-a* can carry a directional meaning in Ge’ez and South Ethiopic (Lipinski, *Semitic Languages*, 269-270).

<sup>4</sup> In this paper, data has been transcribed with vowels for the convenience of the reader. However, original BH texts were consonantal. For vocalizations, this paper follows the Masoretic text given in the Jewish Publication Society’s 2003 *Hebrew-English Tanakh*.

stem could be used (null accusative marking, see below). Third, movement could be indicated with a preposition, which could either stand alone or attach to the beginning of the noun. The choice of one strategy over another did not seem to affect the meaning of the directional construction.

(2) One translation, four constructions: ‘I went up to Jerusalem’

<b>Locative <i>hey</i>:</b>	(‘aní)	‘alí-	ti	yerušalaím- <b>ah</b>
	(1SG.PRO)	go up-	1SG.PERF	Jerusalem <b>-hLOC</b>
<b>Null ACC marking:</b>	(‘aní)	‘alí-	ti	yerušalaím
	(1SG.PRO)	go up-	1SG.PERF	Jerusalem <b>-(ØACC)</b>
<b>Free preposition:</b>	(‘aní)	‘alí-	ti	<b>el</b> yerušalaím
	(1SG.PRO)	go up-	1SG.PERF	<b>PREP</b> Jerusalem
<b>Bound preposition:</b>	(‘aní)	‘alí-	ti	<b>I-</b> irušalaím
	(1SG.PRO)	go up-	1SG.PERF	<b>PREP</b> Jerusalem

This paper shows the results of a quantitative variationist analysis of tokens of locative *hey* and its competitors, and discusses the features in Biblical Hebrew that favor and disfavor this construction, with particular attention to the diachronic changes that take place in BH writers’ use of these directionals, and to the morphological and syntactic factors which cause synchronic variation. This study is organized as follows: Section 2 of this paper provides scholarly context for the topic; Section 3 defines and discusses the different directional strategies; Section 4 outlines the study’s methodology; Section 5 contains the results; and Section 6 lays out the conclusions reached in this study.

The BH writers’ variation between three morphosyntactically distinct directional constructions presents a unique opportunity to look at the morphological and syntactic factors that impact variation. Of the few BH variation studies that do exist, most are qualitative and focused on extra-linguistic factors such as authorship. This is also an opportunity to fill in a gap in Hebrew studies with research on locative *hey*. This phenomenon, which receives less than a page’s discussion in most grammars of BH, has the potential to increase our understanding of language change.

## 2. Background

‘Biblical Hebrew’ refers to the Hebrew which was used from before 1000 B.C. until the second century A.D.<sup>5</sup> During the long history of this language, its speakers were conquered, relocated, and enslaved many times, yet a core group of the community always

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<sup>5</sup> Joel M. Hoffman, *In the Beginning: A Short History of the Hebrew Language* (New York: New York University Press, 2006), 23, 165. Biblical Hebrew developed into Rabbinic (Mishnaic) Hebrew, a language which gradually became restricted to the religious elite.

managed to remain in, or return to, Palestine. The conquerors, allies, and enemies of the Hebrew people, each bringing with them their own languages and varieties, included almost every people group in the Ancient Near East.<sup>6</sup>

Biblical Hebrew is a part of the Semitic language family, which in turn is part of the larger Afro-asiatic family. Proto-Semitic developed into three daughter families: Southern Semitic (which includes Arabic and Ethiopic), Northeast Semitic (Akkadian in all its varied incarnations), and Northwest Semitic (Hebrew, Phoenician, Ugaritic, Eblaite, and Aramaic).<sup>7</sup>

The label ‘Biblical Hebrew’ is an umbrella term which encompasses various dialects and stages of development.<sup>8</sup> Biblical scholars have hotly debated which texts represent which stages of BH development, and have failed to reach agreement regarding the real-world dates during which each BH stage was used. At one extreme, Young, Rezetko, & Ehrensvard have argued that the traditional division of Biblical Hebrew into diachronic stages is incorrect; instead, the differences usually attributed to time-depth are merely characteristics of co-existing styles.<sup>9</sup> However, most Hebraists do not agree with this view. Instead, they hold to a model which divides Biblical Hebrew into Standard Biblical Hebrew (SBH) and Late Biblical Hebrew (LBH),<sup>10</sup> with the dividing line falling circa 586 B.C.<sup>11</sup>

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<sup>6</sup> A list including but not limited to the Egyptians, Phoenicians, various Canaanite peoples, Elamites, Assyrians, Babylonians, Persians, Medians, Hittites, Cushites—and, during the last few centuries of BH usage, Greeks and Romans.

<sup>7</sup> Richard Caplice, *Introduction to Akkadian* (Rome: Biblical Institute Press, 1988), 3.

<sup>8</sup> Most dialectal work has concentrated on the supposed differences between Israelite and Judean Hebrew. The linguistic features which are to be assigned to each dialect have been difficult to identify, although recent scholarship has made significant progress in this area [Edward Kutscher, *A History of the Hebrew Language* (Leiden: Brill, 1982), 70.]; c.f. Gary Rendsburg, “Hurvitz Redux,” in *Biblical Hebrew: Studies in Chronology and Typology* (ed. Ian Young; New York: T&T Clark International, 2003), 104-128; and Richard M. Wright, “Further Evidence for North Israelite Contributions to LBH,” in *Biblical Hebrew: Studies in Chronology and Typology* (ed. Ian Young; New York: T&T Clark International, 2003), 129-148. In much BH scholarship, the dialectal discussion is dependent on the identification of J (Judean/Southern) and E (Israelite/Northern) texts using the JEDP model of source criticism.

<sup>9</sup> Ian Young, Robert Rezetko, and Martin Ehrensvard, *Linguistic Dating of Biblical Texts* (London: Equinox, 2008). See also Philip Davies, “Biblical Hebrew and the History of Ancient Judah,” in *Biblical Hebrew: Studies in Chronology and Typology* (ed. Ian Young; New York: T&T Clark International, 2003), 150-163. For cogent arguments against Young, Rezetko, & Ehrensvard 2008, see Avi Hurvitz, “The Linguistic Dating of Biblical Texts,” in *Diachrony in Biblical Hebrew*. (ed. Cynthia Miller-Naude & Ziony Zevit. Winona Lake, Ind.: Eisenbrauns, 2012), 265-280; Jan Joosten, “The Evolution of Literary Hebrew in Biblical Times, in the same volume, 281-292.

<sup>10</sup> Hoffman, *In the Beginning*, 149; Mark F. Rooker, *Biblical Hebrew in Transition: the Language of the Book of Ezekiel* (Sheffield, England: Sheffield Academic Press, 1990). SBH is also known as Classical Biblical Hebrew, while LBH may be called Post-Classical Biblical Hebrew. Some scholars also identify a stratum known as Archaic Biblical Hebrew, which is ‘reflected mainly in early Biblical poetry’ and represents Hebrew from before the SBH period (Kutscher, *History*, 79). ABH and SBH together make up Early Biblical Hebrew [Ian Young, “Introduction: Origin of the Problem,” (ed. Ian Young; New York, T&T

Hebrew scholars who were looking for diachronic change in Hebrew often started with texts like Kings and Chronicles, which address the same material and are thus easy to compare. Chronicles, by internal evidence, could not have been written before the Judean exile; since the last chapter of Kings only mentions the beginning of the exile, Kings is believed to have been written earlier. Therefore, the Hebraists working on this problem assumed that a time-depth existed between the two books, and associated the characteristic differences between them with different stages of Hebrew development.<sup>12</sup> These same characteristics, appearing in other books in the biblical corpus, were then used to date the composition of those books.

Hebraists have identified many differences between Standard and Late Biblical Hebrew.<sup>13</sup> In addition to the usual lexical drift and replacement,<sup>14</sup> LBH writers show distinctly different spellings,<sup>15</sup> tend to use bound preposition *l-* to mark definite direct objects rather than *'et*,<sup>16</sup> include pronoun subjects instead of dropping them,<sup>17</sup> use the

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Clark International, 2003), 3]. However, scholars like Bloch have argued that the distinctive features of so-called Archaic poetry continued in use into the exilic period, and that no ABH stratum can therefore be distinguished [Yigal Bloch, "The Third-Person Masculine Plural Suffix *-mw* and Its Implications for the Dating of Biblical Hebrew Poetry," in *Diachrony in Biblical Hebrew* (ed. by Cynthia Miller-Naude and Ziony Zevit; Winona Lake, Ind.: Eisenbrauns, 2012), 147-170. Rooker argues that the exilic book of Ezekiel occupies a transitional position between SBH and LBH (Rooker, *BH in Transition*, 32-33), reflecting the modern conception of SBH-LBH as a stylistic and temporal continuum rather than a dichotomy. This study does not use any poetic texts, and thus does not include any tokens which may belong to ABH.

Naude has argued that EBH and LBH both contain too much variation and too much overlap to be useful categories [Jacobus Naude, "The Transitions of Biblical Hebrew in the Perspective of Language Change and Diffusion," (ed. Ian Young; *Biblical Hebrew: Studies in Chronology and Typology*. Edited by Ian Young. New York: T&T Clark International, 2003), 189-214.]

<sup>11</sup> The year in which King Nebuchadnezzar took the largest group of exiles from Judah. Nebuchadnezzar had taken smaller groups twice before; for instance, Daniel and his friends were probably taken in 604 B.C.

<sup>12</sup> Hoffman, *In the Beginning*, 151; Rooker, *BH in Transition*, 30-31. Rezetko has pointed out some of the weaknesses of this method [Robert Rezetko, "Dating Biblical Hebrew: Evidence from Samuel-Kings and Chronicles," in *Biblical Hebrew: Studies in Chronology and Typology*. (ed. Ian Young; New York: T&T Clark International, 2003), 215-250.]

<sup>13</sup> For a more complete listing of these, see Additional Tables A1.0, in Appendix A.

<sup>14</sup> For which see particularly Avi Hurvitz' works, including *Biblical Hebrew in Transition* (1972).

<sup>15</sup> LBH writers use far more *matres lectiones* than SBH writers. The term *matres lectiones* (mothers of reading) indicates the use of consonants *w*, *y*, and *h* to flag the presence of vowels. <w> is used for back rounded vowels, <y> for high front vowels, and <h> for final [a]. Many scholars have noted this impressionistically, but Forbes & Andersen have done empirical work to validate this characteristic [A. Dean Forbes and Francis I. Andersen, "Dwelling on Spelling: An Empirical Study," in *Diachrony in Biblical Hebrew*. (ed. Cynthia Miller-Naude & Ziony Zevit. Winona Lake, Ind.: Eisenbrauns, 2012), 127-144].

<sup>16</sup> Robert Polzin, *Late Biblical Hebrew: Toward an Historical Typology of Biblical Hebrew Prose* (HSM 12; Missoula, Mont.: Harvard University Press, 1976), qtd Rooker, *BH in Transition*, 36.

<sup>17</sup> Hoffman, *In the Beginning*, 153-154.

‘imperfect’ as a tense as well as an aspect,<sup>18</sup> and treat collective nouns as plural rather than singular,<sup>19</sup> among other changes.

The dating of SBH texts as SBH has been fraught with difficulty. Hebraists have created a list of LBH features, but no extensive list of SBH features, which means that for the most part SBH texts are really being identified as not-Late. Thus, whenever a scholar identifies a new Late feature or two, the old list of SBH texts must be reviewed. A few scholars, however, have made arguments for particular features as characteristic of SBH. Eskhult has pointed out that Persian loanwords, so common in LBH texts—which were begun or completed during Persian domination of the Levant—are scarce in books on the SBH list—which were composed during a period when the Jews had little or no contact with Persians—and are not present in the Torah at all.<sup>20</sup> Polak has argued that there is diachronic variation in the preferred written style of BH texts; SBH texts have quasi-oral characteristics, while LBH texts demonstrate a reified literary style.<sup>21</sup>

The issue of textual dating has been further complicated by some scholars’ assertion that, since some SBH texts (such as the so-called ‘Third Isaiah,’ Haggai, Zechariah, and Malachi) were written in the late exilic and post-exilic periods (according to their own internal witness), we cannot date biblical texts as early based on their lack of LBH features.<sup>22</sup> However, as Joosten pointed out, later writers working in SBH are doing so as a conscious attempt to duplicate the earlier style; they sometimes slip, lapsing into

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<sup>18</sup> Kutscher, *History*, 44-45.

<sup>19</sup> Polzin, *LBH*, qtd Rooker, *BH in Transition*, 35.

<sup>20</sup> Mats Eskhult, “The Importance of Loanwords for Dating Biblical Hebrew Texts,” in *Biblical Hebrew: Studies in Chronology and Typology* (ed. Ian Young; New York: T&T Clark International, 2003), 21-23.

<sup>21</sup> Frank Polak, “Style is More Than the Person: Sociolinguistics, Literary Culture, and the Distinction between Written and Oral Narrative,” in *Biblical Hebrew: Studies in Chronology and Typology* (ed. Ian Young. New York: T&T Clark International, 2003), 38-103.

<sup>22</sup> The fact that all of these ‘pseudoclassical’ works are prophetic, and thus usually studied apart from (and less frequently than) ordinary prose texts, has made this contention harder to address. For elaboration of this view, see the work of Philip Davies (*op. cit.*); also Martin Ehrensvar, “Linguistic Dating of Biblical Texts,” in *Biblical Hebrew: Studies in Chronology and Typology* (ed. Ian Young; New York: T&T Clark International, 2003), 164-188; and Ian Young, “Late Biblical Hebrew and Hebrew Inscriptions,” in *Biblical Hebrew: Studies in Chronology and Typology*. (ed. Ian Young; New York: T&T Clark International, 2003), 276-311.

Talshir has argued that, rather than these styles co-existing in the repertoire of individual speakers, the styles were used in different speech communities in Judah. SBH was retained by the Jews who were never exiled from the land, while LBH originated among the exiles in Babylonia and was brought back with them when they returned to Judea in the 530’s B.C. The LBH speakers were more educated and tended to be wealthier, so LBH quickly became the prestige variety [David Talshir, “The Habitat and History of Hebrew during the Second Temple Period,” in *Biblical Hebrew: Studies in Chronology and Typology* (ed. Ian Young; New York: T&T Clark International, 2003), 251-275].

LBH forms.<sup>23</sup> They also fail to control aspects of their language use which they do not recognize as having changed over time.

The dating of core LBH texts has been much less controversial. Books which mention late exilic or post-exilic events, like Chronicles, Ezra, Nehemiah, Esther, and Daniel, cannot have been finished before the end of the Judean exile (in the 530's B.C).<sup>24</sup> In addition, since identifiable fragments of all of these works except Esther were found at Qumran, versions of each of these books must have existed by the year zero.<sup>25</sup> The Persian loanwords so frequent in these books, many of which are not present in later Judean texts like the Dead Sea Scrolls, suggest that the LBH texts were composed while the Jews were in close contact with Persians. Thus, these LBH texts were composed closer to the 530 B.C. than to the year zero.

Scholars have made various attempts to assign additional texts to the LBH period on linguistic grounds.<sup>26</sup> Hurvitz has argued that *Qohelet* (Ecclesiastes) and some Psalms use too many LBH features to belong to the SBH period.<sup>27</sup> Others have argued that Jonah and Genesis 24 are late texts, based on the strong Aramaic influence evident in these works.<sup>28</sup> Rendsburg has been one of the most outspoken opponents of these assignments, arguing that certain features have been misidentified as Aramaic, and therefore Late, but are in fact features of the Israelite (Northern) Hebrew dialect.<sup>29</sup>

While scholars have debated which Biblical Hebrew texts were written in which eras, scholars agree that the Biblical Hebrew language changed significantly over time. The process of language change impacted Biblical Hebrew lexically, phonologically, and syntactically. Some properties of BH affixation are known to have changed over time. For instance, in earlier texts, nouns took distinct third masculine and third feminine possessive suffixes; however, in later texts, both third masculine and third feminine meanings were

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<sup>23</sup> For example, later Hebrew writers using words from SBH may not be sensitive to the register in which these lexical items were originally used. Joosten discusses the use of *'arits*, 'tyrant,' in the Qumran text *Pesher Habakkuk*. This word was extremely literary in SBH texts, used only in poetry, but appears in a prosaic context in the Qumran version (Joosten, "Evolution of Literary Hebrew," 285-286).

<sup>24</sup> Young, "Introduction," 4.

<sup>25</sup> Doudna, "Sect of the Qumran Texts," 108.

<sup>26</sup> Not to mention the many scholars, like Lemche, Thompson, and Whitelam, who have attempted to 'date virtually the entire biblical canon to the Persian period' without dealing with the linguistic evidence at all (Rendsburg, "Hurvitz Redux," 107).

<sup>27</sup> Young, "Introduction," 4, referencing Hurvitz's 1976 article on *Qohelet*.

<sup>28</sup> However, scholars like Landes, Hurvitz, and Rendsburg have combatted this claim, along with the late dating of *Qohelet*, pointing out that BH writers were in contact with Aramaic well before the LBH period [Avi Hurvitz, "Hebrew and Aramaic in the Biblical Period: The Problem of 'Aramaisms' in Linguistic Research on the Hebrew Bible," in *Biblical Hebrew: Studies in Chronology and Typology*. (ed. Ian Young; New York: T&T Clark International, 2003), 36; Rendsburg, "Hurvitz Redux," 108-109]. See discussion of Aramaic influence below.

<sup>29</sup> For example, Rendsburg argues that the root *br'* 'to make fat' in 1 Samuel 2:29 is a northern, Israelite feature rather than an Aramaism, as Marc Brettler has argued (Rendsburg, "Hurvitz Redux," 109; see also Wright, "Further Evidence").

expressed via the third masculine suffix. To take another example, in earlier texts, BH writers preferred to use the infinitive absolute, an un-affixed form of the infinitive identifiable only from its templatic shape. However, in later texts, BH writers were more likely to use the infinitive construct with *l-* or *b-*, reduced forms of common prepositions.<sup>30</sup> Hoftijzer has even noted that the frequency of prepositional constructions seems to increase over time, and, as a separate observation, that locative *hey* is more frequent in earlier texts.<sup>31</sup>

Biblical Hebrew's contact with other languages may also have impacted its use of directional strategies.<sup>32</sup> The LBH writers, in particular, could have been influenced by their knowledge of Imperial Aramaic, a Semitic language closely related to Hebrew, which was used as a *lingua franca* throughout the Babylonian Empire.<sup>33</sup> Most LBH writers had spent years in Babylonia, and were likely fluent in Aramaic. The writer of Ezra certainly was; he wrote more than a quarter of his short book in Aramaic. The SBH writers were impacted by their (less intensive) contact with earlier Aramaic varieties.<sup>34</sup>

Aramaic had wide-spread impact on Biblical Hebrew. It affected Hebrew verb endings, determined the inflectional pattern of the causative gerund, may have caused the loss of the *waw* conversive, and contributed the material for many loanwords and calqued phrases.<sup>35</sup> Aramaic interfered with LBH syntax, leading to the avoidance of 'et plus pronominal endings (sometimes anachronistically referred to as the 'object pronoun') and its replacement by object suffixes on verbs; as well as the rise of *bešel* as a causal conjunction, to the detriment of *ki*.<sup>36</sup>

Biblical Aramaic (found primarily in the books of Ezra and Daniel) showed little variation in its use of directional strategies. Of the 11 relevant directional constructions in the Biblical Aramaic corpus, all nine constructions containing nominal stems use prepositions to show direction, while the two adverbial constructions ('*ara*' 'below' and '*ela*' 'above,' in Daniel 2:39 and 6:3 respectively) use an *-a*' (or sometimes *-ah*) ending

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<sup>30</sup> Rooker, *BH in Transition*, 35, 38

<sup>31</sup> Jacob Hoftijzer, *A Search for Method: A Study in the Syntactic Use of the H-Locale in Classical Hebrew* (Leiden: Brill, 1981).

<sup>32</sup> Rooker, *BH in Transition*, 11.

<sup>33</sup> Kutscher, *History*, 73. Hurvitz particularly favors Aramaic as a catalyst in BH language change, although Polzin prefers to explain convergences between BH and Aramaic as parallel development (Rooker, *BH in Transition*, 32).

<sup>34</sup> Thus, not all texts containing 'Aramaisms' should be dated to the LBH period (Hurvitz, "Hebrew and Aramaic," 29-33). Some Aramaisms can be dated, by comparing different stages of Aramaic texts.

<sup>35</sup> Kutscher, *History*, 76.

<sup>36</sup> Naomi Pat-el, "Syntactic Aramaisms as a Tool for the Internal Chronology of Biblical Hebrew," in *Diachrony in Biblical Hebrew*. (ed. Cynthia Miller-Naude & Ziony Zevit; Winona Lake, Ind.: Eisenbrauns, 2012), 252-257. For a study of the development of Aramaic during biblical times, see Michael Sokoloff, "Outline of Aramaic Diachrony," in *Diachrony in Biblical Hebrew* (ed. by Cynthia Miller-Naude and Ziony Zevit; Winona Lake, Ind.: Eisenbrauns, 2012), 379-405.

that may be derived from the locative postposition *\*-h*, like the Hebrew locative *hey*.<sup>37</sup> Interference from Aramaic would most likely lead LBH writers to favor prepositional marking of directionals containing noun stem.

Biblical Hebrew was also in contact with Akkadian, which was the governmental and literary language of Babylon (and, in earlier days, the language of the Assyrian Empire). The Judean exiles who, like other conquered peoples, were trained as Babylonian government officials (e.g. Daniel and his compatriots), would have had to learn to read Akkadian in order to fulfill their duties, and perhaps to speak it.

Scholars have found many Akkadian loans in BH, verifying that the two languages were in contact. Mankowski, who has done the most extensive work on this topic, has located eighty distinct Akkadian words which were borrowed into Hebrew (although about a quarter of them were borrowed via Aramaic), appearing primarily in exilic prophets (Isaiah, Jeremiah, Ezekiel), and LBH texts such as Nehemiah and Chronicles.<sup>38</sup> This pattern reflects the greater degree of contact between BH and Akkadian during the exilic and post-exilic periods.<sup>39</sup>

It is possible that contact with Akkadian may have influenced BH writers' choice of directional strategies. Akkadian allowed several directional constructions. In Standard Babylonian, the literary variety of Akkadian which survived into the first century A.D., traces of a terminative case in *-iš* (meaning 'to' or 'into a place') can be found.<sup>40</sup> While this suffix does not come from the same origin as Hebrew's locative *hey*, it is at least parallel. Akkadian had several directional prepositions, such as *adi* 'as far as' and *ana* 'to(ward)'.<sup>41</sup> Akkadian also retained an accusative case in *-am* (later *-a*) which functioned as either the object case or as an adverbial. Akkadian adverbial accusatives were sometimes interpreted as 'to(ward) a place'.<sup>42</sup> Thus, Akkadian had three directional

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<sup>37</sup> Franz Rosenthal, *A Grammar of Biblical Aramaic* (Wiesbaden: Otto Harrasowitz, 1961), 39; and Stanislav Segert, *Altaramäische Grammatik* (Leipzig: Verlag Enzyklopädie, 1975), 193, 237-238. Rosenthal lists these tokens, but, as he wrote his grammar before the recent advances in Ugaritic scholarship, he classes them together with nouns showing remnants of the Proto-Semitic accusative *\*-a*, written as *-a* or *-ah* in Biblical Aramaic. Segert likewise. Lipinski, however, derives the final *-a*/'-ah of Aramaic from a different adverbial suffix, *\*-am*, the Hebrew descendant of which appears in *yom-am* 'daily, by day' and *reqam* 'empty-handed' (Lipinski, *Semitic Languages*, 268-269).

<sup>38</sup> Paul V. Mankowski, *Akkadian Loanwords in Biblical Hebrew* (Winona Lake, Ind.: Eisenbrauns, 2000), 174-175. For the most part, these borrowings were specialized vocabulary, particularly legal, technical, and religious (Mankowski, *Akkadian Loanwords*, 175-176).

<sup>39</sup> Kutscher, *History*, 48-49.

<sup>40</sup> Caplice, *Intro Akkadian*, 13. Both Cushitic and East Semitic have terminative endings which appear to derive from *-iš*, Cushitic using *-s* and East Semitic using *-uš*. Lipinski believes that terminative *-iš* was originally a postposition, like the Proto-Semitic ancestor of locative *hey* (Lipinski, *Semitic Languages*, 267).

<sup>41</sup> Caplice, *Intro Akkadian*, 36, 15.

<sup>42</sup> Caplice, *Intro Akkadian*, 12. Of all the ancient Semitic languages, Akkadian has the largest corpus and is attested earliest. It maintained a multi-case system for over a thousand years. During the Old Babylonian period (2000-1530 B.C.) Akkadian speakers had three singular cases (Nom, Gen, and Acc), two

strategies, just as Hebrew did; the suffixal option was least frequent, while the other two options were more frequent. Interference from Akkadian would influence BH writers against locative *hey*.

### 3. Directional Strategies

By the time that early Biblical Hebrew texts were composed, three different methods of coding directionals were available in the grammar: suffixing with locative *hey*, adding an appropriate preposition, and null accusative marking. These strategies (all of which can express ‘to,’ ‘toward,’ ‘into,’ and ‘onto’) affect nouns and adverbs of place or direction (i.e. ‘Jericho,’ ‘sky,’ ‘north’) and are associated with verbs of movement, dwelling, and directed action (such as ‘come,’ ‘live,’ ‘bring’).<sup>43</sup>

In the following examples, notice that all three strategies are used in the book of Joshua, one of the oldest books in the Hebrew Bible. The quotes come from historical narrative texts (the BH genre in which directional constructions are most frequent).<sup>44</sup>

(3) Joshua 2:22a

wa- ye-	lkh- u	wa- ya-	vo-u	<u>ha- har- ah</u>
CONJ-3M.IMP-	walk- PL	CONJ-3M.IMP-	go- PL	DEF- hill – <b>ward</b>

‘and/so they walked and went to the hill(s)’

(4) Joshua 8:19b

wa- ya-	vo- u	<u>ha- ‘ir</u>	wa- yi-	lked- u- ha
CONJ- 3M.IMP-	go- PL	DEF- city- <b>ØACC</b>	CONJ- 3M.IMP-	capture- PL- 2F.OBJ

‘(and) they came into the city and conquered it’

(5) Joshua 24:11b

wa- ta-	vo- u	<u>el yeriho</u>
CONJ- 2M.IMP-	go- PL	<b>to</b> Jericho

‘and/then y’all came to Jericho’

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dual cases (Nom, Oblique), and two plural cases (Nom, Obl). After the OB period a number of varieties developed with simplified case repertoires, but no known variety lost the case system completely (Caplice, *Intro Akkadian*, 11-12).

<sup>43</sup> Bill Arnold and John Choi, *A Guide to Biblical Hebrew Syntax* (Cambridge, Mass.: Cambridge University Press, 2003), 18.

<sup>44</sup> Several scholars have remarked on the necessity of treating BH poetry and prose separately; these genres are stylistically distinct, although the distinction is more fluid in BH texts than in many other literatures. Prophetic books, which are a mixture of prose and poetry, present their own set of problems (Rooker, *BH in Transition*, 40, 42).

(6) Judges 1:34b

ki lo netan- o la- red- et l- a- 'emek  
C.CONJ NEG give- 3M.OBJ INFIN- go down to- DEF- valley  
'because they would not allow them to come down into the valley'

Although Biblical Hebrew does not have overt case marking,<sup>45</sup> Hebraists are able to reconstruct null-marked directionals as accusative by comparing Hebrew with other Semitic languages. In addition to marking direct objects as accusative, Proto-Semitic also used its accusatives adverbially. Like its mother language, Biblical Hebrew had adverbial 'accusatives' of time, manner, and place.<sup>46</sup> In this paper, we are only concerned with the local accusative showing 'movement toward,' which contrasts with the directional *hey*.<sup>47</sup>

Directional constructions with null accusative marking are interpretable primarily from context. Since there is no overt case marking, accusative nouns are formally identical with their nominative counterparts; word order is also of little help, as adverbial accusatives may appear preceding or following the subject noun.<sup>48</sup> Verb agreement sometimes provides a clue; in the Josh 8:19b example above, readers understand 'they came into the city' rather than 'the city came' because of the form of the verb, which indicates a masculine plural subject rather than a feminine singular subject like *ir*.

Directional constructions with prepositions are very common. In fact, Waltke & O'Connor state that directionals are 'usually marked by a prepositional phrase.'<sup>49</sup> While this may be true of place-relations in general, it is misleading as regards 'movement toward' in particular. (See below.) The prepositions used to form directional constructions may be either bound or free. The ones most commonly used for 'to/toward' are *'el* and its bound form *l-*. However, BH prepositions are versatile, capable of carrying many meanings; thus, other prepositions may sometimes be used to show 'movement toward.'<sup>50</sup> In Table 1, a list of common directional prepositions is provided; notice that several may express 'movement toward.'

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<sup>45</sup> BH did indicate definite direct objects with the preposition *'et*. As directional constructions are not definite direct objects, this does not impact the current study. However, the LBH tendency to mark definite direct objects with *l-* instead of *'et* is confusing; the only way to distinguish a directional in *l-* and a direct object in *l-* is by context (Rooker, *BH in Transition*, 97-99).

<sup>46</sup> Bruce K. Waltke & Michael P. O'Connor, *Syntax of Biblical Hebrew* (Winona Lake, Ind.: Eisenbrauns, 1990), 161.

<sup>47</sup> There are several other types of local accusative, which show 'movement from,' or 'presence in/with.' See Waltke and O'Connor for more information.

<sup>48</sup> While definite direct object accusatives are marked with the preposition *'et*, this is of no help in identifying adverbial accusatives, which can be neither definite nor objective.

<sup>49</sup> Waltke and O'Connor, *Syntax of BH*, 170.

<sup>50</sup> Arnold and Choi, *Guide*, 18; GKC 377-84. For a detailed study of the syntactic uses of prepositional directionals, see Hofstijzer, *A Search for Method*.

Table 1: Some Prepositions of Place Relation and their Meanings		To/Toward
'el, l-	to, toward a place or person; in, near a place; until a time; possessive; in order to	often
batok, b-	in, on, with, when, to	sometimes
'ad	as far as a place, until a time	rarely
lifnei	in front of, in the presence of	no
'aharei	behind, following	no
min, m-	from a place or person, comparative	no

Locative *hey* exists in a more restricted set of environments than do null accusative marking and prepositional constructions. Unlike the local accusative and the directional prepositions, which can carry a variety of meanings, the only meaning of locative *hey* is movement.<sup>51</sup> Furthermore, locative *hey* can only be used with noun and adverb stems of place or direction, not with persons or pronouns, even in figurative expressions or when movement is involved. Thus, 'the prince of Moab brought gifts to David' may be rendered with 'el David, or David-( $\emptyset$ ACC), but not \*David-ah.<sup>52</sup>

There are several restrictions on the use of the directional *hey* suffix simply because it is a suffix. For instance, a Hebrew noun has only one suffixal slot in addition to a slot for a gender/number suffix. This second suffix slot may be filled with either a possessive ending (my, your, *et cetera*) or locative *hey*. Both of these secondary suffix types are derived from free postposed particles, which weakened and became bound to the nouns they followed;<sup>53</sup> but while the locative *hey* cannot carry stress, the possessive suffixes can.<sup>54</sup> In the following examples, notice that the older form of the feminine singular noun ending surfaces when any suffixes are attached.<sup>55</sup>

#### (7) Suffix Slots for BH Stems

Nominal.stem +  [gender.number]  +  [possessive/locative hey]   
 Adverb.stem +  [locative hey]

<sup>51</sup> Waltke and O'Connor, *Syntax of BH*, 185; Hoftijzer, *Search for Method*. This movement is almost always physical; however, there are a few instances in which it is used for movement through time (*me-yam-im yamim-ah* 'from days to days = from year to year,' Exodus 13:10; noted Waltke and O'Connor, *Syntax of BH*, 186). No such examples occurred in this corpus.

<sup>52</sup> Therefore, only tokens containing stems of place or direction were included in this analysis. For a detailed study of the syntactic uses of locative *hey* constructions, see Hoftijzer, *Search for Method*.

<sup>53</sup> Thus, Proto-Semitic only allowed gender/number suffixes for nouns. Adverbs had no suffixes whatsoever.

<sup>54</sup> Donald R. Vance, *Introduction to Classical Hebrew* (Boston, Mass.: Brill Academic, 2004), 68. For this reason, it appears that locative *hey* is best understood as a clitic; the possessive endings have become fully integrated as suffixes.

<sup>55</sup> Vance, *Intro to Hebrew*, 69.

(8) Regular Gender/ Number Suffixes in BH

‘ohel	+ <b>Ø</b> (M.SG)	= ‘óhel <sup>56</sup>	‘tent’
bam	+ <b>ah</b> (F.SG; < *at)	= bamáh	‘shrine’
‘ohel	+ <b>im</b> (M.PL)	= ‘ohelím	‘tents’
bam	+ <b>ot</b> (F. PL)	= bamót	‘shrines’

(9) Adding Secondary Suffixes

‘ohel	+ <b>w</b> (3M.SG.POSS)	= ‘oheló	‘his tent’
bamah (<*bamat)	+ <b>w</b> (3M.SG.POSS)	= bamató	‘his shrine’
‘ohelim	+ <b>w</b> (3M.SG.POSS)	= ‘ohelaív	‘his tents’
bamot	+ <b>w</b> (3M.SG.POSS)	= bamotaív	‘his shrines’
‘ohel	+ <b>ah</b> (hLOC)	= ‘ohélah	‘tent-ward’
bamah (<*bamat)	+ <b>ah</b> (hLOC)	= bamátah	‘shrine-ward’
‘ohelim	+ <b>ah</b> (hLOC)	= ‘ohelímah	‘to the tents’
bamot	+ <b>ah</b> (hLOC)	= bamótah	‘to the shrines’

BH writers’ use of locative *hey* was further restricted because BH nouns do not usually take secondary suffixes (whether possessive or locative) if they have other modifiers. No Hebrew noun can carry both a possessive suffix and a locative suffix.<sup>57</sup> As Hebrew modifiers follow their heads, the secondary suffixes’ postposition ancestors would have had to break in between the head and the modifier in order to occupy the immediate postverbal position. Nouns take three types of modifiers in Hebrew: adjectives, other nouns, and dependent clauses.

Hebrew adjectives follow their nouns and match them in gender, number, and definiteness. They are very hard to dislodge from their immediate post-nominal position, although they may occasionally be moved on rare occasions.<sup>58</sup> To the best of my knowledge, neither possessive suffixes nor locative *hey* can be added to a noun followed by an adjective.<sup>59</sup>

(10) ha-‘ohel ha-gadol DET-tent DET-big	‘the big tent’	*ha-‘ohel- <b>ah</b> ha-gadol
ha-bamah ha-gdolah DET-shrine DET-big	‘the big shrine’	*ha-bamat- <b>ah</b> ha-gdolah

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<sup>56</sup> ‘ohel is classified as a segholate and thus has penultimate stress as a bare noun.

<sup>57</sup> Therefore, directional constructions where the noun carried a possessive suffix were excluded from this analysis; the environment is noncontrastive for locative *hey*. In such cases, direction was usually indicated with a preposition.

<sup>58</sup> For instance, adjectives may be fronted for emphasis in poetry, as in Psalm 1:1: ‘ashre ha-‘ish ‘happy is the man’ instead of the more usual ‘ha-‘ish asher,’ ‘the man is happy.’

<sup>59</sup> Therefore, tokens of nouns modified by adjectives were excluded from the analysis.

Hebrew nouns may form into compounds known as construct chains (*semikhutot*). The second noun modifies the head noun, functioning as a possessive or an adjective.<sup>60</sup> Construct chains are very hard to break. When an adjective is added to a construct chain, it must follow the second noun, even if it modifies the first noun.<sup>61</sup>

(11) bayit + lehem → beyt lehem  
 house bread house.CONST bread  
 ‘house of bread’

(12) ha-‘ohel-im + ‘anaš-im → ‘ohel-ei ha- ‘anaš-im  
 DET-tent-PL man-PL tent-PL.CONST DET- man-PL  
 ‘the tents of the people’/ ‘the people’s tents’

(13) ha-‘ohel-im ha-gdol-im + ‘anaš-im → ‘ohel-ei ha-‘anaš-im ha-gdol-im  
 DET-tent-PL DET-big-PL man-PL tent-PL.CONST DET-man-PL DET-big-PL  
 ‘the big tents of the people’/ ‘the tents of the big people’?

It is rare to find a locative *hey* intervening between members of a construct chain.<sup>62</sup> However, according to Waltke & O’Connor, it is possible. They cite one example: *beyt-ah Yosef* ‘toward the house of Joseph’ (Gen 43:17).<sup>63</sup>

While nouns are unlikely to carry possessive or locative suffixes when they are followed by dependent clauses—whether the clauses are introduced by complementizers or resumptive pronouns—it is possible for secondary suffixes to exist here, as in the following example.<sup>64</sup>

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<sup>60</sup> However, the second noun has not grammaticalized as an adjective. When a noun is modified by an adjective, if the noun is definite, both the noun and the adjective must carry the definite article. In a construct chain, only the second noun can carry the definite article. Also, the first noun of a construct chain may undergo phonological changes, as its primary stress is weakened—a change that does not occur in N + Adj phrases.

<sup>61</sup> The adjective is also forced to match the gender and number of the first noun, even if it modifies the second noun. Broken construct chains (chains in which the two nouns are separated by an intervening word) are so unusual that, when single examples are found, they receive special mention (e.g. the single biblical example of a chain broken by a verb, mentioned in David Noel Freedman, “The Broken Construct Chain,” *Biblica* 53 (1972): 534-536.)

<sup>62</sup> And it is impossible to find a possessive suffix doing so, according to several informants.

<sup>63</sup> Waltke and O’Connor, *Syntax of BH*, 185; c.f. Hoftijzer, *Search for Method*. No such tokens occurred in the selected texts; therefore, all directional constructions involving construct chains have been excluded.

<sup>64</sup> The following example from Numbers is the only token in this corpus in which the locative suffix came between a noun and its dependent clause. Since such constructions are rare, they were excluded from the present analysis.

(14) Numbers 21:16

u- mi- šam be'er-**ah** hu' ha-be'er 'ašer 'amar YHWH le-mošeh  
CONJ-from-there well- **ward** [it DEF-well COMP he.said YHWH to-Moses]  
'and from there toward the well which (was) the well (where) YHWH said to Moses...'

Locative *hey*, prepositions, and null accusative marking appear to be interchangeable in some environments. Waltke & O'Connor note in particular that locative *hey* and null accusative marking may appear on the same noun stem in different phrases of the same biblical sentence.<sup>65</sup> This suggests that, if null marking and locative *hey* are in complimentary distribution, it is not a distribution based on the age of the text.

(15) 1 Kings 2:40-41

wa- ye- lekh gat-**ah** 'el-'aḥiš le-vaqeš 'et 'avad-ai-w...  
CONJ-3M.IMP- walk Gath-**ward** to-Achish to-claim OBJ slave-PL-3M.SG.POSS  
'and he went **to Gath**, to Achish, to claim his slaves...'

... wa-y- u- gad li- šlomoh ki halakh šime'i mi-rušalaim gat  
CONJ-3M.IMP-PASS-tell to-Solomon COMP 3M.SG.walk Shimei from-Jerusalem Gath-(**ACC**)  
'and it was told to Solomon that Shimei had gone from Jerusalem **to Gath**'

Locative *hey* and directional prepositions have a complex relationship. While BH writers usually avoided marking a noun with both a locative suffix and a directional preposition, Vance notes that such double marking is possible, as in the form *le-bayt-ah*, 'to-home-ward.'<sup>66</sup> One such example of double marking occurred in the corpus, on a construct chain.<sup>67</sup>

(16) Judges 14:5

wa- ya- vo'-u 'ad karm-ei timnat-**ah**  
CONJ-3M.IMP-go- PL **to** vineyard-PL.const Timna-**ward**  
'and they came to the vineyards of Timna'

Waltke & O'Connor also note a few examples where prepositions and locative *hey* are attached to the same stem. In each of these examples, the preposition overrides the usual 'movement toward' sense of the *hey*.<sup>68</sup>

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<sup>65</sup> Waltke and O'Connor, *Search for Method*, 170.

<sup>66</sup> Vance, *Intro to Hebrew*, 69. Hoftijzer, who made an extensive survey of directional constructions in BH, found only 13 tokens of prep-stem-loc in the Hebrew Bible's prose, ten of which have stems which are compass points (Hoftijzer, *Search for Method*, 60, 199).

<sup>67</sup> Hoftijzer found 52 such tokens. In 51 cases, the second noun, to which *he locale* was attached, was a compass point (Hoftijzer, *Search for Method*, 199).

<sup>68</sup> Waltke and O'Connor, *Syntax of BH*, 185-186. These cases are interesting and deserve further study. However, no such examples occurred in this corpus.

(17) <u>1 Sam 23:15</u>	<b>be-ḥoreš-ah</b>	<b>in</b> -Horesh-ward	‘in Horesh’
<u>1 Kings 4:12</u>	‘ <b>etsel tsartan-ah</b>	<b>near</b> Tsaretan-ward	‘near Tsaretan’
<u>Jer 27:16</u>	<b>me-vavel-ah</b>	<b>from</b> -Babylon-ward	‘from Babylon’

The three types of directional marking used in Biblical Hebrew are not in any obvious complimentary distribution. They are sometimes interchangeable, and may even be combined. The factors that determine BH writers’ choice of one strategy over another are not immediately obvious. The rest of this study is dedicated to identifying and explaining some of these factors, with particular reference to those factors which impact BH writers’ choice to use or not use locative *hey* in their directional constructions.

#### 4. Data and Methods

In order to add a controlled diachronic element to the study, roughly equal numbers of ‘directional phrase’ tokens were drawn from texts in Standard Biblical Hebrew and in Late Biblical Hebrew. For the SBH sample, several narratives from Numbers (chapters 3, 14, 21, and 33) were selected, as well as the entire books of Joshua and Judges, a corpus of some twenty-two thousand words. According to the majority of Hebraists, these are some of the oldest texts in the Hebrew Bible.<sup>69</sup>

For the LBH sample, tokens were collected from the books of Ezra, Nehemiah, and Second Chronicles, as well as First Chronicles 9-21 (omitting the genealogies in the first eight chapters of the book, and the name lists and cult documents in the last seven chapters)—a corpus of more than twenty-five thousand words.<sup>70</sup> Some scholars believe that all four of these books had the same author because they share so many linguistic features.<sup>71</sup>

Since the focus of this study is the use of the locative *hey* suffix, only tokens of directional constructions where the *hey* suffix either was or could have been used were collected. As discussed above, BH writers could not use this suffixal strategy in all environments. Therefore, directional constructions were omitted if 1) the phrase did not express ‘movement to(ward),’ 2) the stem was not a stem of place or direction; 3) the noun already carried a suffix in addition to gender/number; or 4) the noun had a modifier,

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<sup>69</sup> Martin Ehrensvar, “Diachronic Change in the Biblical Hebrew Verbal System,” in *Diachrony in Biblical Hebrew* (ed. Cynthia Miller-Naude & Ziony Zevit; Winona Lake, Ind.: Eisenbrauns, 2012), 186, 188. Scholars who assert that SBH and LBH represent a sequence of BH developmental stages have agreed on certain ‘core texts’ from each era. Core SBH texts include the Torah, Joshua, First and Second Kings, and others. Core LBH texts include First and Second Chronicles, Ezra, Nehemiah, Esther, and others (see Hurvitz, “Linguistic Dating,” 2012).

<sup>70</sup> Although the book of Esther was originally to be included in this study, no applicable tokens were found therein.

<sup>71</sup> Hoffman, *In the Beginning*, 154-155.

whether it was another noun (construct phrase), an adjective, or a dependent clause. With these constructions excluded, there are a total of 200 tokens.<sup>72</sup>

These tokens were coded for a variety of factors including 1) directional strategy (locative *hey* suffix, null, bound preposition, free preposition), 2) age of the text (SBH versus LBH), 3) book, 4) stem identity, 5) root of associated verb, 6) verb person/number, 7) verb aspect (imperfect or perfect), 8) whether the stem was marked as definite or not, 9) whether the stem ended in a vowel or a consonant, 10) whether the end of the stem resembled a common inflectional suffix, 11) whether the stem was a place-name or not, 12) whether the verb carried an object suffix, 13) what syntactic element followed the directional construction, and 14) whether another directional construction was nearby and what kind of directional strategy it employed (see Appendix A for a complete list of factor groups and factors).

<b>Example Coding</b>					
<u>Joshua 8:19b</u>					
wa-	ya-	vo- u	<u>ha- 'ir</u>	wa- yi-	lked- u- ha
CONJ-	3M.IMP-	go- PL	DEF- city	CONJ- 3M.IMP-	capture- PL- 2F.SG.OBJ
'(and) they came into the city and conquered it'					
Strategy	-	null	Definite	-	yes
SBH/LBH	-	SBH	V/C end	-	C
Book	-	Joshua	End mimics suf-		no
Stem	-	ir	Placename	-	no
Verb	-	bw'	V obj suf	-	no
Pers/#	-	3pl	Comes before	-	clause end
Aspect	-	imperfect	Proximate direc-		none

These factors represent a range of phonological, lexical, morphological, and syntactic variables, which, although not an exhaustive set, should identify the types of factors to which the morphosyntactic directional construction variation is most sensitive. Factor 1, directional strategy, is the application value. Factor 2, age of the text, locates the diachronic variation. Factor 3, book, should point out any important differences between authors/editors. Factors 4 (noun stem identity), 5 (verb identity), and 11 (placename or not) are lexico-semantic; if particular verbs or nouns, or particular types of verbs or nouns, are more likely to take one directional construction than another, these factors should highlight them. Factors 6-8 and 12-14 are syntactic; they correlate various syntactic features of a clause with the types of directional constructions used within it. Factor 9 (whether the noun stem ends in a vowel or a consonant) is phonological; since BH does not

<sup>72</sup> In addition, a few ambiguous tokens were excluded, mostly tokens of 'to the camp at X,' which could also be interpreted as 'to the camp, to X.'

allow vowel hiatus, stems ending in vowels might disprefer the vowel initial *-ah* of locative *hey*. Factor 10 (whether the end of the noun resembles a noun suffix) is morphological. BH writers might prefer not to add locative *hey* to a stem whose termination is phonetically ambiguous.<sup>73</sup>

After each token was coded, GoldVarb X was used to run a logistical regression analysis of the tokens, running tokens of locative *hey* against all other tokens, then null against all other tokens, and prepositional against all other tokens. In the summary tables of the analyses (below) p values, weights of each individual factor, numbers of applicable tokens against total tokens for each factor, and percentage breakdowns for each factor are supplied.

## 5. Results

The frequency with which BH writers used locative *hey* was impacted by a variety of factors, including the age of the text, whether the end of the stem resembled an inflectional suffix, the aspect of the verb, the definiteness of the stem, and the directional strategies used in nearby directional constructions.

### 5.1 Analysis Using Locative Hey as the Application Value

#### 5.1.1 Age of the Text

The factor with the most obvious impact on the use of directional *hey* is the age of the text.<sup>74</sup> In the older, SBH tokens, Hebrew writers use locative *hey* 52% of the time, as is shown in Table 2. In later LBH, writers only use the suffixal *hey* 24% of the time, preferring to use directional constructions with prepositions (particularly bound prepositions). While the frequencies of null accusative and free prepositional constructions remain fairly stable across time, constructions with bound prepositions, which account for only 6.7% of the earlier SBH tokens, climb to 29% in the later texts.

**Table 2: Frequencies of each directional construction in SBH and LBH**

Hebrew Era	Loc <i>hey</i> #tkn (%tot)	Null Acc #tkn (%tot)	Preposition			Total
			<i>bound</i> #tkn (%tot)	<i>free</i> #tkn (%tot)	<i>total preps</i> #tkn (%tot)	
<b>SBH</b>	54 (52%)	25 (24%)	7 (6.7%)	18 (17%)	25 (24%)	104
<b>LBH</b>	23 (24%)	25 (26%)	28 (29%)	19 (20%)	47 (49%)	95

Within each era, different books show different rates of locative *hey* use (see Table 3). The narratives in Numbers, the oldest material in the SBH corpus, prefer locative *hey* over other strategies, and do not use any directional constructions with prepositions. The

<sup>73</sup> Factor groups which were found to be significant are discussed at greater length in the Results section.

<sup>74</sup> Pace Hoftijzer, *Search for Method*, 201.

LBH books of Ezra and Nehemiah—often suggested to have been put together by the same author—both show very low frequencies of locative *hey* (0% and 1% respectively) and very high frequencies of prepositional constructions (72% and 68%).

**Table 3: Frequencies of each directional construction in biblical books**

Book	Loc <i>hey</i>	Null Acc	Preposition			Total Tokens
	#tkn (%tot)	#tkn (%tot)	<i>bound</i> #tkn (%tot)	<i>free</i> #tkn (%tot)	<i>total preps</i> #tkn (%tot)	
Numbers	11 (69%)	5 (31%)	0 (0%)	0 (0%)	0 (0%)	16
Joshua	19 (45%)	13 (31%)	2 (4.7%)	8 (19%)	10 (24%)	42
Judges	24 (52%)	7 (15%)	5 (11%)	10 (22%)	15 (33%)	46
1 Chronicles	7 (33%)	4 (19%)	5 (24%)	5 (24%)	10 (48%)	21
2 Chronicles	15 (28%)	16 (30%)	16 (30%)	6 (11%)	22 (41%)	53
Nehemiah	1 (7%)	3 (21%)	5 (34%)	5 (34%)	10 (68%)	14
Ezra	0 (0%)	2 (29%)	2 (29%)	3 (43%)	5 (72%)	7

The slight correlation between the absence of an object suffix on the verb and the presence of locative *hey* (shown in Table 4) is a final piece of evidence for directional choice as a function of change over time. As Pat-El points out, in SBH, pronominal objects are coded using the object preposition ‘*et* (revocalized as ‘*wt*) plus a pronominal ending (-*y*, -*ka*, -*ek*, -*w*, -*ah*, and so on).<sup>75</sup> However, LBH writers do not use this method unless they have no other options. Instead, they code pronominal objects by attaching object suffixes (-*ny*, -*ka*, -*ek*, -*hw*, -*ha*, et cetera) to the verb.<sup>76</sup> Since locative *hey* is most common in earlier texts, it has a negative correlation with verbal object suffixes, which are more common in late texts.

<sup>75</sup> Pat-El, “Syntactic Aramaisms,” 252-253.

<sup>76</sup> Pat-El, “Syntactic Aramaisms,” 252-254.

**Table 4: Eight factors that favor locative *hey* marking**

Factor Groups 1-2: Corrected mean = 0.360, Log likelihood = -114.408, p=0.001

Factor Groups 3-8 (step-down<sup>77</sup>): Corrected mean= 0.245, Log like. = -81.162, p=0.590

<b>Factors</b>	weight	hey/hey+not	Percentage of tokens
<b>1. Stem ending mimics inflection</b>			
Yes	.31	17/87	19.5%
<sup>f</sup> No	<b>.65</b>	60/112	53.6%
<i>Range</i>	34		
<b>2. BH Era</b>			
<sup>f</sup> SBH (older)	<b>.63</b>	54/104	51.9%
LBH (newer)	.36	23/95	24.2%
<i>Range</i>	27		
<b>3. Proximate directional</b>			
<sup>f</sup> Construction with -ah	-	5/5	100%
No proximate directional	<b>.60</b>	58/139	41.7%
Construction with prep	.32	12/45	26.7%
Construction with null	.09	2/10	20.0%
<i>Range</i>	51		
<b>4. Book<sup>78</sup></b>			
Numbers	<b>.88</b>	11/16	68.8%
Joshua	<b>.52</b>	19/42	45.2%
Judges	<b>.72</b>	24/46	52.2%
Ezra - Nehemiah	.09	1/21	4.8%
1 Chronicles	<b>.64</b>	7/21	33.3%
2 Chronicles	.31	15/53	28.3%
<i>Range</i>	79		

<sup>77</sup> In step-up analysis, p-values below .05 are significant. In step-down analysis, p-values above .05 are significant. Ideally, the step-up and step-down portions of the Varbrul analysis should select identical sets of factors as significant. However, due to the large number of factors and factor groups in this study, as well as some factor interactions that have yet to be fully sorted out, this analysis selected additional factor groups as significant in the step-down that were not selected in the step-up. These factor groups are included here, as their selection sheds additional light on the variation of BH directional constructions.

<sup>78</sup> Notice that the factor weights and the percentages here do not line up in a linear fashion. Peculiarities in their ordering here and in later tables are caused by this factor's heavy interaction with BH Era.

<b>5. Stem<sup>79</sup></b>			
Yerušalaim	.04	1/37	0.03%
ir	.48	2/7	28.6%
mizraḥ	.74	1/3	33.3%
Yarden	.51	1/3	33.3%
misc. locations	.65	14/38	36.8%
Bavel	.47	3/8	37.5%
misc. placenames	.49	28/64	43.8%
Give'ah	.86	2/4	50.0%
misc. directions	.81	10/15	66.6%
midbar	.89	4/6	66.6%
har	.98	3/4	75.0%
šemaim	.99	4/5	80.0%
Šeḥem	.87	4/5	80.0%
<i>Range</i>	95		
<b>6. Verbal aspect</b>			
<sup>f</sup> Imperfect	.63	54/124	43.5%
Perfect	.27	12/42	28.6%
Not applicable	.31	11/33	33.3%
<i>Range</i>	36		
<b>7. Definite article on noun</b>			
<sup>f</sup> No	.61	55/140	39.3%
Yes	.26	22/59	37.3%
<i>Range</i>	35		
<b>8. Object suffix on verb</b>			
Yes	.84	5/13	38.5%
<sup>f</sup> No	.47	72/186	38.7%
<i>Range</i>	37		
Factor groups not selected: vocalic ending on stem, placename, verb root, syntactic element that follows, parsing			
Factor groups excluded from analysis: none			

There are two major possibilities which may explain the difference between early and late Hebrew writers' choice of directional strategies. First, the change in BH writers' preferences could be due to language contact. LBH writers were in much more intensive contact with both Aramaic and Akkadian than their SBH forebears (see Section 2). As

<sup>79</sup> For a discussion of Stem's interaction with other factors, see Section 5.2.1.

Aramaic strongly favored prepositional marking of directionals, and as Akkadian disfavored the use of a directional suffix, contact with these languages could have eroded the use of locative *hey* and promoted the use of other directional constructions.<sup>80</sup> Second, the shift in writer preferences could have a language-internal explanation. Over the course of history, a typological shift in word-order took place in Biblical Hebrew, which caused a shift from primarily VSO to primarily SVO order (among other changes).<sup>81</sup> The writers' gradual shift from using postpositional elements to using prepositions may also have been part of this typological change.<sup>82</sup> In all likelihood, both possible explanations are valid, and BH writers' choice of directional strategies was impacted both by language contact and by language-internal developments.

### 5.1.2 Stems with Suffix-Like Endings

Several factors other than the age of the text significantly impact Hebrew writers' choice to use or not use locative *hey*. One factor with a powerful influence on this choice was whether the end of the stem to which the locative *hey* was to be attached sounded like (or was) another suffix. Only 19.5% of stems with suffix-like endings take a directional *hey* marking, while 53.6% of stems without such endings take it (see Table 4).

Stems with suffix-like endings disprefer locative *hey*. These stems include those ending in *-im*, homophonous with the masculine plural/dual noun ending, like *mitsraim* 'Egypt,' *šemaim* 'heavens,' and *yerušalaim* 'Jerusalem;'<sup>83</sup> stems in *-ot*, mimicking the

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<sup>80</sup> The level of contact between the Hebrew-speaking exiles in Babylon and Aramaic speakers was a 3-4 on the Thomason scale, judging from the description of this work given by Trask and Millar (Robert Millar, *Trask's Historical Linguistics*, 389-390). Such contact can lead not only to lexical borrowing, but also to syntactic and morphological change. Witness the case of Armenian, which, due to intense contact with Turkish, developed an invariant system of case and number noun suffixes (Robert Millar, *Trask's Historical Linguistics*, 394).

<sup>81</sup> Talmy Givon, "The Drift from VSO to SVO in Biblical Hebrew: the Pragmatics of Tense-Aspect," in *Mechanisms of Syntactic Chang.* (ed. Charles N. Li; Austin, Tex.: University of Texas Press, 1977), 181-252.

<sup>82</sup> Typological shifts in word order which impact several different kinds of elements (objects and verbs, verbs and auxiliaries, adjectives and nouns, pre- or post-positions, case marking, etc.) have been identified in many languages, including Northwest Germanic and Mandarin Chinese. All elements concerned in the shift tend to change toward either Head-Modifier or Modifier-Head order (Robert Millar, *Trask's Historical Linguistics*, 187-190). The Biblical Hebrew shift from VSO to SVO word-order does not change the order of the head (V) and the modifier (O); BH remains a VO language on both sides of the shift. (As it is presently understood, the Subject does not participate in a Head-Modifier relationship with either Verb or Object.) However, the Proto-Semitic loss of overt case-marking, and the BH shift away from postpositions toward prepositions, are both shifts toward greater Head-Modifier harmony.

<sup>83</sup> Lipinski notes that the *-(a)im* ending of some place names is a relic of an 'archaic locative morpheme,' which is attested in full and reduced forms in a variety of Afro-Asiatic languages including Egyptian, Aramaic, Ugaritic, and Hebrew (Lipinski, *Semitic Languages*, 234).

feminine plural noun ending, like *bamot* ‘Bamoth;’<sup>84</sup> stems ending in *-w*, homophonous with the third masculine singular possessive suffix, like *yeriḥo* ‘Jericho;’ stems ending in *-y*, similar to the first person singular possessive suffix, like *ai* ‘Ai;’ and the numerous class of stems ending in *-ah*—the feminine singular noun ending, which is also homophonous with the feminine singular possessive suffix—like *maḥaneh* ‘camp,’ *livnah* ‘Libnah,’ and many more. Stems which have endings that resemble possessive suffixes (terminations in *-w* or *-y*) never appear to take locative *hey*.

This is an intriguing phenomenon. BH writers avoid adding locative *hey* not only after actual suffixes; but after phonetic sequences which are homophonous with suffixes but are in fact part of the unsuffixed stem. It seems that, when processing these stems as strings, the BH writers react to suffix-like endings in the same way that they react to true suffixes.<sup>85</sup>

### 5.1.3 Types of Directional Constructions in the Same Clause

Additional factors which favor locative *hey* were selected only in the step-down portion of the binomial Varbrul analysis (see Table 4). Of these factors, one, ‘the types of marking used on directional constructions in the same clause,’ was significant. When a directional construction is in the same clause as another directional construction which uses locative *hey*, it will take locative *hey* 100% of the time. Locative *hey* appears in a moderate 41.7% of constructions without another directional construction nearby (control); but in only 26.7% of constructions in the same clause as prepositional directionals, and only 20.0% of constructions sharing clauses with null accusatives. Thus, locative *hey* is favored by proximity with locative *hey*, but is disfavored by proximity to directional constructions using other strategies.

This result is not surprising. When a language user uses a given word or linguistic structure, the user is primed to use it again. In other words, having just used the word or

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<sup>84</sup> Some token directionals had endings which mimicked the above suffixes, while others actually carried them.

<sup>85</sup> While, to the best of my knowledge, there is no literature on this exact phenomenon, there is literature on a cognitive science concept known as WORDLIKENESS. Essentially, speakers process and evaluate non-words differently based on how similar they are to actual words in the speakers’ language. The degree to which the non-words are similar, as well as the frequency with which the words to which they are similar appear, both impact speakers’ phonological processing of non-words. WORDLIKENESS research has generally focused on identifying illegal and legal non-words, with implications for phonotactics (Stefan Frisch, Bushra Zawaydeh, “The Psychological Reality of OCP-Place in Arabic,” *Language* 77, no. 1 (2001): 93-94, 102-103). However, this research also demonstrates that speakers are sensitive to the neighborhood densities of non-real words, and that they are more likely to treat non-real words as real when they have neighborhoods thick with numerous or frequent real words.

That being the case, one can hypothesize a similar concept of MORPHEMELIKENESS, under which non-morphemes are treated as morphemes when they have high neighborhood densities. Since most BH noun suffixes are very frequent, any stem ending that was homophonous with one of them would automatically have a high neighborhood density.

structure, the writer is able to mentally access that structure more rapidly than other semantically-similar structures which may be in his lexicon. The effects of both lexical and syntactic priming have been studied extensively.<sup>86</sup> BH writers frequently repeat the same type of directional construction in a given clause, in accordance with known processes of syntactic priming.

#### 5.1.4 Curious Factors

The other factors selected by the logistical regression were not transparently related to the choice of locative *hey* at this stage of the analysis. It was not obvious why the identity of the stem to which the *hey* suffix was added, the stem's being marked as definite, or the aspect of the clause's verb should affect BH writers' use of locative *hey*. Additional analyses (of the factors which favored null accusative and prepositional marking) were undertaken in the hope that the results of these analyses would cast light on the situation vis-à-vis locative *hey*.

#### 5.2 Analysis Using Null Accusative as Application Value

The analysis of the factors that favored null accusative marking bore out the conclusions of the locative *hey* analysis (see Table 5). As noted above, the frequency with which BH writers use null accusative marking remains stable over time; no time-linked factors were selected in the analysis. However, 'type of proximate directional construction' was selected, showing once again that directional constructions in the same clause tend to use the same strategy—a continuing effect of syntactic priming. 80% of directionals which share clauses with null accusative directionals are also null accusative directionals, while null accusative constructions are only willing to share with prepositional directionals 20% of the time.

In the null accusative analysis, 'whether the stem has an inflection-like ending' was also chosen again. This time, the strategy is favored rather than disfavored by this factor. 33.3% of stems with inflection-like endings are null-accusative marked, whereas only 19.5% of such stems take locative *hey* marking. Many stems with inflection-like endings are marked with null accusative rather than the directional *hey*, avoiding any possibility of apparent suffix conflict.

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<sup>86</sup> Jay Ruekl, "Letter-level effects in repetition priming," *American Journal of Psychology* 108, no. 2 (1995): 213; Kerry Ledoux, Matthew Traxler, and Tamara Swaab, "Syntactic Priming in Comprehension," *Psychological Science* 18, no. 2 (2007): 135.

**Table 5: Factors that favor null marking**

Factor Groups 1-2: Corrected mean =0.239, Log likelihood = -101.369, p=0.009

Factor Group 3 (step-down): Corrected mean = 0.169, Log likelihood = -83.649, p=0.520

<b>Factors</b>	weight	null/null+not	Percentage of tokens
<b>1. Proximate directional</b>			
<sup>f</sup> Construction with null	<b>.93</b>	8/10	80.0%
No proximate directional	.49	33/139	23.7%
Construction with –prep	.38	9/45	20.0%
Construction with –ah	-	0/5	0.0%
<b>2. Stem ending mimics inflection</b>			
<sup>f</sup> Yes	<b>.63</b>	29/87	33.3%
No	.40	21/112	18.8%
<b>3. Stem</b>			
<sup>f</sup> Ai	<b>.93</b>	3/4	<b>75.0%</b>
<sup>f</sup> maḥaneh	<b>.67</b>	2/4	<b>50.0%</b>
<sup>f</sup> Yerušalaim	<b>.85</b>	18/37	<b>48.7%</b>
‘Ir	<b>.81</b>	3/7	42.9%
Šomeron	<b>.80</b>	2/5	40.0%
midbar	<b>.86</b>	2/6	33.3%
mizraḥ	<b>.78</b>	1/3	33.3%
Misc. Directions	.33	4/15	26.7%
har	<b>.66</b>	1/4	25.0%
šeḥem	<b>.60</b>	1/5	20.0%
Misc. Placenames	.48	11/62	17.7%
Bavel	.45	1/8	12.5%
Misc. Locations	.08	1/39	2.6%

Factor groups not selected: vocalic ending on noun, placename, verb, imperfect/perfect, object suffix on verb, syntactic element that follows, parsing, BH era, book

Factor groups excluded from analysis: none

### 5.2.1 Stem of Place or Direction

As in the locative *hey* analysis, the ‘stem of place or direction’ was selected only in the step-down part of the logistical regression. However, the reason for this factor’s selection is much clearer here. The three noun stems most likely to be marked with null-accusative are *ai*, *maḥaneh*, and *yerušalaim*, each of which has an inflection-like ending. Using null-accusative marking rather than locative *hey* here allows the BH writers to avoid apparent suffix conflict. Thus, the selection of ‘stem’ as a significant factor is dependent on the

selection of ‘stems with inflection-like endings.’ The interaction between these two factors causes the irregularities in the factor weights and percentages of the Stem data.

### 5.3 Analysis Using Prepositional Construction as Application Value

The analysis of the prepositional tokens correlates with and extends the conclusions of the previous two analyses. Once again, BH writers’ choice of strategies is impacted by age of text (newer texts are more likely to use prepositional marking), stems with inflection-like endings (stems with such endings are more likely to be prepositionally marked than ones without), and types of nearby directional constructions (prepositional directionals are most likely to share clauses with other prepositional directionals).

#### 5.3.1 Verb Aspect

As in the locative *hey* analysis, ‘verb aspect’ was selected as significant only in the step-down. (It was eliminated in the same round, so its status remains ambiguous.) There does appear to be a correlation, however; according to the data in Table 6, imperfect verbs favor the use of locative *hey* (which appeared with imperfects in 43.5% of cases, but only 28.6% of cases with perfect verbs), while perfect verbs favor prepositional marking (prepositional directionals accompanying perfect verbs in 47.6% of cases, versus 33.1% with imperfect verbs).

This link between verb aspect and choice of directional strategy may be due to transitivity. Hopper and Thompson have shown that ‘more transitive’ verbs, which indicate action directed toward a goal, are more likely to be telic or perfect in aspect.<sup>87</sup> ‘Less transitive’ verbs may be imperfect or atelic. However, clauses with directional constructions contain, by nature, verbal action directed toward a goal. Thus, one might expect all three types of directional constructions to appear more frequently with perfect verbs than with imperfect verbs. Yet, it is the imperfect aspect, not the perfect, which appears to favor locative *hey*.

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<sup>87</sup> Paul J. Hopper and Sandra A. Thompson, “Transitivity in Grammar and Discourse,” *Language* 56, no. 2 (1980): 252, 261, 271, 273.

**Table 6: Factors that favor prepositional marking of direction**

Factor Groups 1-2: Corrected mean =0.338, Log likelihood = -116.860, p=0.029

Factor Groups 3-4 (step-down): Corrected mean =0.336, Log like. = -115.525, p=0.017

Factor Groups 5-6<sup>88</sup>

<b>Factors</b>	weight	p/p + not-p	Percentage of tokens
<b>1. BH Era</b>			
SBH (older)	.33	25/104	24.0%
<sup>f</sup> LBH (newer)	.69	47/95	49.5%
<b>2. Stem ending mimics inflection</b>			
<sup>f</sup> Yes	.60	41/87	47.1%
No	.42	31/112	27.7%
<b>3. Verb aspect</b>			
<sup>f</sup> Perfect	.62	20/42	47.6%
Imperfect	.46	41/124	33.1%
Not applicable	.50	11/33	33.3%
<b>4. Definite article on noun</b>			
<sup>f</sup> Yes	.68	24/59	40.7%
No	.42	48/140	34.3%
<b>5. Proximate directional</b>			
<sup>f</sup> Construction with prep	[ ] <sup>88</sup>	24/45	[53.3%]
No proximate directional		48/139	[34.5%]
Construction with –ah		0/5	[0.0%]
Construction with null		0/10	[0.0%]
<b>6. Book</b>			
Numbers	[ ] <sup>88</sup>	0/16	[0.0%]
Joshua		10/42	[23.8%]
Judges		15/46	[32.6%]
Ezra		5/7	[71.4%]
Nehemiah		10/14	[71.4%]
1 Chronicles		10/21	[47.6%]
2 Chronicles		22/53	[41.5%]

Factor groups not selected: stem, vocalic ending on stem, placename, verb root, parsing, object suffix on verb, syntactic element that follows

Factor groups excluded from analysis: none

<sup>88</sup> Factor groups 5 and 6 could not be run effectively in the logistical regression because of the number of knockouts (factors with no tokens). Thus, no factor weights are provided. However, it is compelling in itself that these factors have no tokens. Therefore, the data for these factor groups is presented here.

This correlation could be coincidental, if both verb aspect and directional strategy choice are time-linked factors. Givon's work on a typological shift in Hebrew suggests that verb aspect use could indeed have changed over time. Givon performed a study in which he found that imperfect verbs (and VSO word order) slowly gave way to perfect verbs (and SVO word order) over the course of Biblical Hebrew's development.<sup>89</sup> In this case, the higher frequency of locative *hey* in earlier texts should lead to a positive correlation between directional *hey* and imperfect verbs, which is the result found in the present study.<sup>90</sup>

However, when a cross-tabulation of verbal aspect and BH era was run in order to validate this theory, the relative frequency of imperfect verbs was found to increase, rather than decrease, across time. Imperfects account for 59.6% of SBH verbs, and 65.3% of LBH verbs, problematizing the applicability of Givon's hypothesis to this data.<sup>91</sup>

### 5.3.2 Definiteness

As in the locative *hey* analysis, prepositional marking and the 'definiteness of the noun' show a slight correlation. Prepositional directionals are more likely to appear when the noun is marked as definite (40.7% of the time), while locative *hey* is more likely to be used when the noun is not marked as definite (39.3% of the time). However, the effect of the noun's definiteness or indefiniteness is small—a 6% change for prepositional constructions, and a 2% change for locative *hey* (see Table 6 above).

Hopper and Thompson's work is relevant here. In Section 5.3.1, above, it was stated that the link between directional strategy choice and verb aspect could be an artifact of their both varying over time. However, there is no evidence that definiteness in BH is similarly time-linked. Perfect aspect and definiteness (both of which make a clause 'more transitive,' according to Hopper and Thompson) both favor prepositional marking, while imperfect aspect and indefiniteness (which are 'less transitive') both favor locative *hey*.<sup>92</sup> It is possible that more transitive clauses are more likely to include prepositional constructions, while locative *hey* is favored in less transitive clauses. This would make sense if prepositions in BH were inherently more telic than locative *hey*, as 'more telic' clauses are also 'more transitive,' according to Hopper and Thompson.

Zwarts, who discusses telic and atelic prepositions from a semantic perspective, notes that 'to' is a telic meaning, whereas 'toward' is an atelic meaning.<sup>93</sup> It is my general

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<sup>89</sup> Givon, "The Drift from VSO to SVO."

<sup>90</sup> For an alternative explanation, see Section 5.3.2.

<sup>91</sup> Givon, "The Drift from VSO to SVO." See cross-tabulation of era and aspect, in Additional Tables, Appendix A. A recode and reanalysis of the factor 'syntactic element that follows' would be useful here.

<sup>92</sup> Hopper and Thompson, "Transitivity," 252.

<sup>93</sup> Josef Zwarts, "Prepositional Aspect and the Algebra of Paths," *Linguistics and Philosophy* 28, no. 6 (2005): 739-740.

impression that, while locative *hey* and directional prepositions can mean both ‘to’ and ‘toward,’ locative *hey* means ‘toward’ more often than the directional prepositions do. Empirical studies should be done in order to validate or invalidate this impression.<sup>94</sup>

### 5.3.3 Type of Prepositional Construction Correlates with Age of Text

In addition, the type of prepositional marking (‘bound’ versus ‘free’) chosen by BH writers seems to change over time.<sup>95</sup> SBH writers use bound prepositions only 28.0% of the time, but LBH writers use bound prepositions 59.6% of the time. ‘Stems with inflection-like endings’ are also significant; stems without such endings are more likely to take bound prepositions than free ones, as is shown in the table below.

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<sup>94</sup> Relatively little work has been done on transitivity in BH. However, Fariss’ work on transitivity as an influence on word-order variation in BH poetry deserves mention, as does Heller’s book on the uses of different verb conjugations in BH narrative. Heller makes the general observation that narratives use foregrounded (and therefore more transitive) clauses with *wayyiqtol* verbs in order to move the narrative along, but use less transitive clauses with other verb conjugations for background information. (Sherry Lynn Fariss, “Word-Order in Biblical Hebrew Poetry” [PhD diss., University of Texas at Arlington, 2003]; Roy L. Heller, *Narrative Structure and Discourse Constellations* [Harvard Semitic Studies 55; Winona Lake, Ind.: Eisenbrauns, 2004]).

<sup>95</sup> Although there were only 72 tokens of prepositional constructions, the influence of these factors was significant. See Table 7, below.

**Table 7: Factors that favor bound over free prepositional marking**

Factor Groups 1-2: Corrected mean =0.481, Log likelihood = -42.279, p=0.006

Factor Group 3 (step-down): Corrected mean = 0.486, Log likelihood = -39.607, p=0.149

<b>Factors</b>	weight	bound/b + f	Percentage of tokens
<b>1. Stem ending mimics inflection</b>			
Yes	.34	15/41	36.6%
<sup>f</sup> No	<b>.71</b>	20/31	64.5%
<b>2. BH Era</b>			
SBH (older)	.24	7/25	28.0%
<sup>f</sup> LBH (newer)	<b>.65</b>	28/47	59.6%
<b>3. Book</b>			
Numbers	-	0/0	0.0%
Joshua	.11	2/10	20.0%
Judges	.33	5/15	33.3%
Ezra	<b>.52</b>	2/5	40.0%
Nehemiah	<b>.63</b>	5/10	50.0%
1 Chronicles	.43	5/10	50.0%
2 Chronicles	<b>.78</b>	16/22	72.3%
Factor groups not selected: noun stem, vocalic ending on noun, placename, verb, imperfect/perfect, object suffix on verb, syntactic element that follows			
Factor groups excluded from analysis: parsing			

The impact of time on BH writers' structuring of prepositional directionals is not surprising. Although both bound and free prepositions are present throughout the corpus, free prepositions are more common in earlier texts, while bound prepositions are more common in later texts. The free prepositions, which are very frequent elements, are being reduced more often as time goes on, to the point that the bound prepositions, which were a marked option in earlier texts, became the default following the exile.<sup>96</sup>

## 6. Conclusions

In this study's analyses, four major factors were found which influence BH writers' choice to use or not use locative *hey*. First is the presence of a 'suffix-like ending on the stem' to

<sup>96</sup> Trask and Millar discuss similar processes of morpheme reduction and grammaticalization in English, Swedish, Turkish, and other languages. A given morpheme may be used in both grammaticalized and ungrammaticalized forms during the same era; the grammaticalized version may gradually come to be the only version used, or the versions may coexist in a stable relationship (Robert McColl Millar, *Trask's Historical Linguistics* [2d ed.; London: Hodder Education, 2007], 148-149, 182-186.

which *hey* would have been attached; locative *hey* is strongly disfavored by such a presence, while prepositional marking is favored. Second is the ‘directional strategy used on any nearby directional construction.’ When BH writers put several directionals in the same clause, they usually use the same strategy for both. Third, the clause’s ‘degree of transitivity’ may play a role; imperfect verbs and indefinite nouns (both ‘less transitive’) favor locative *hey*. Last, but perhaps most interesting, is the influence of the age of the text. Older SBH texts favor locative *hey*, while LBH texts favor prepositions (particularly bound prepositions). This same trend can be seen in the impact of ‘biblical book,’ ‘object suffix on the verb,’ and perhaps ‘verbal aspect.’ Table 8 provides a summary of these factors and their effects.

<b>Table 8: Factors that influence choice of directional strategies, in terms of locative <i>hey</i></b>	
Factors	Outcomes
1. Stem has a suffix-like ending ‘Stem has a suffix-like ending’ ‘Stem identity’	Stems with suff-like endings disfavor locative <i>hey</i>
2. ‘Proximate directional construction’	Proximate DC with locative <i>hey</i> favors locative <i>hey</i>
<sup>?</sup> 3. ‘Degree of transitivity’-linked factors ‘Aspect’: Imperfect (less transitive) ‘Definiteness’: Indefinite (less transitive)	Less transitive favors locative <i>hey</i> Imperfect favors locative <i>hey</i> Indefinite favors locative <i>hey</i>
4. ‘Age of text’-linked factors ‘SBH vs. LBH’ ‘Biblical book’ ‘Object suffix on verb’ (common in LBH) <sup>?</sup> ‘Aspect’: Imperfect (common in SBH)	SBH favors locative <i>hey</i> Earlier books favor locative <i>hey</i> Obj suffix on verb negatively correlated with locative <i>hey</i> Imperfect favors locative <i>hey</i>

These facts contribute new information to Biblical Hebrew scholarship and to linguistic research in general. The first conclusion may be most interesting to morphologists. Hebrew has a set number of slots for affixes which can only be filled by certain kinds of markers; only possessives and locative *hey* can be added in the secondary slot. However, locative *hey* can be blocked even when the secondary slot is available, if the stem ends with a phonetic shape which is the same as another suffix. Were Hebrew writers re-analyzing these terminations as other morphemes as they wrote, due to some kind of processing ambiguity? While there is insufficient evidence to support this hypothesis, this would be a promising direction for future research.

Second, directional constructions with given structures are favored by the presence of constructions using the same structures. Writers are primed by their first use of a construction to use it again in the same clause; and they do so in a majority of cases. The

fact that BH writers did not use two of the same directional construction in a given clause in 100% of cases is a testimony to the influence of the other significant factors.

The third conclusion, connecting BH writers' choice of directional strategies with the clause's degree of transitivity, is less strongly supported by the data. However, if research regarding the relative telicity of locative *hey* and BH prepositional directionals were to support the hypothesis that locative *hey* is less telic, this conclusion could be motivated via transitivity theory. Recoding of tokens (to reflect Heller's correlation of verb conjugation and degree of transitivity) would help to identify clauses containing directional construction as more or less transitive. Further research on this question would be valuable to Hebraists, in that it would demonstrate the effect of transitivity in BH on elements other than verbs.

The final conclusion, regarding the influence of the age of the text, is the most important for Hebraists. From a linguistic perspective, this conclusion is uncontroversial: all languages are always changing, and, in a specific language, degree of change will increase as time-depth increases.<sup>97</sup> However, the issue of whether there is a real time-depth (and what texts should be assigned to what time) in the texts of the Hebrew Bible has been challenged repeatedly. The results of this study support three of the contentions of the Hebraists who believe that some biblical texts were composed before the exile. First, the results show that there is a difference between LBH texts and texts which have been identified as SBH. The core SBH and LBH texts which the current study addresses behave in distinct fashions. Second, the results suggest that these SBH and LBH texts were composed at different times. The choice of different types of directional constructions was not a conscious one for BH writers; in other words, BH writers were not aware of this feature of SBH/LBH variation, and therefore would be unlikely to control it in their writing. Joosten has shown that late writers trying to use SBH often fail; the distinct, unconscious differences between SBH and LBH directionals show that the texts in this corpus were written at different times. Third, these results are consistent with the theory that BH may have converged with Aramaic during the LBH period due to intense contact. Later BH texts use more prepositional constructions, the construction type favored by Aramaic.

This study is limited in a number of ways. First, the corpus chosen contains only 200 relevant directional constructions. A larger study with an expanded corpus could yield more significant results. Second, the coding system used has a number of problems. Several important factors (such as VSO versus SVO word order, verb binyan) were not

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<sup>97</sup> This is not to say that degree of change and time-depth can necessarily be correlated according to a mathematical function. Language change does not always proceed at the same rate. However, if one could sample a language's literature at a year X, then at years X+100, X+200, and so on, one could reasonably expect that texts farther removed from year X, taken as a whole, would be more linguistically different from the texts of year X, even if only slightly so, than texts written closer to year X.

overtly coded;<sup>98</sup> while several of the factors that were coded, were coded too simplistically, or without regard to linguistic theory ('definiteness,' 'syntactic element that follows,' 'aspect'), or might play a clearer part if they were organized differently ('stem identity,' 'verb root'). Third, this study does not address double-marked directionals, or directionals whose stems are followed by modifiers.

BH writers' choice of directional strategies was impacted by diachronic change as well as a variety of other factors. Earlier writers, who inherited a system in which postpositions were unmarked in morphosyntax, preferred to use the cliticized suffix locative *hey* to indicate 'movement toward.' Later writers, whose language was continuing to harmonize toward a Head-Modifier structure, preferred to use prepositions—and not just any prepositions, but the bound prepositions reduced by frequent usage. The study of a small issue—the use of a single morpheme—illuminates a vast panorama of change.

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<sup>98</sup> A deeper reading of Hoftijzer on the syntactic uses of different directional constructions would be especially helpful in determining what additional syntactic factors might be relevant.

## APPENDIX A

### ADDITIONAL TABLES

**Table A1.0: Some Proposed Differences between SBH and LBH**

Standard Biblical Hebrew	Late Biblical Hebrew	From Study
Fewer <i>matres lectiones</i>	More <i>matres lectiones</i>	Forbes & Andersen, “Dwelling on Spelling”
Favor emphatic verbs (verb + infin. abs.)	Disfavor emphatic verbs	Hoffman, <i>In the Beginning</i> , 153-154; Polzin (Rooker, <i>BH in Transition</i> , 35)
Drop pronoun subjects	Include pronoun subjects	Hoffman, <i>In the Beginning</i> , 153-154
Disfavor derivational <i>-ut</i>	Favor derivational <i>-ut</i>	Kutscher, <i>History</i> , 43; Rooker, 57
Imperfect as aspectual	Imperfect becoming more tense-like	Kutscher, 44-45
Intense contact with Canaanite languages	Intense contact with Aramaic	Kutscher, 81
1 <sup>st</sup> Sg. pronouns ‘ <i>anoki</i> and ‘ <i>ani</i>	1 <sup>st</sup> Sg. pronoun ‘ <i>ani</i>	Kutscher, 40
1 noun of chain pluralized	Both nouns of chain pluralized	Kutscher, 82
‘ <i>az</i> ‘then’ plus imperfect	‘ <i>az</i> plus perfect	Kutscher, 82
Favor ‘ <i>et</i> plus pronominal suffix	Disfavor ‘ <i>et</i> plus pronom. suff	Polzin (Rooker, 35)
Disfavor ‘ <i>et</i> before subject	Can use ‘ <i>et</i> before subject	Polzin (Rooker, 35)
?Possession w/ noun + suffix	?Possession with prep + suffix	Polzin (Rooker, 35, 37-8)
Collectives are singular	Collectives are plural	Polzin (Rooker, 35)
Disfavor infin. const. with <i>b-</i>	Favor infin. const. with <i>b-</i>	Polzin (Rooker, 35)
Don’t repeat word for emph.	Repeat word for emphasis	Polzin (Rooker, 35)
Use distinct 3.f and 3.m poss. suffixes	3.f suffix merging with 3.m poss. suffix	Polzin (Rooker, 35)
‘Long imperfects’ in all persons	No ‘long imperfects’ in 1.sg	Polzin (Rooker, 35)
Favor <i>wa-yi-hi</i>	Disfavor <i>wa-yi-hi</i>	Polzin (Rooker, 35)
?Noun singular & after numeral	?Noun plural & before numeral	Polzin (Rooker, 35-36)

Disfavor infin. const. with <i>l-</i>	Favor infin. const. with <i>l-</i>	Polzin (Rooker, 35, 38); Ehrensvarð, “Diachronic Change” <sup>99</sup>
?Change in order of material weighed/measured and its weight/measurement		Polzin (Rooker, 35, 37)
Definite accusative marked with <i>et</i>	Definite accusative may be marked with <i>l-</i>	Polzin (Rooker, 36)
Assimilate <i>nun</i> of <i>min</i> before noun without an article	May assimilate <i>nun</i> of <i>min</i> before noun without an article	Polzin (Rooker, 36)
Not →	<i>rabbim</i> adjectival before noun	Polzin (Rooker, 36)
Disfavor ‘ <i>ad l-</i>	Favor ‘ <i>ad l-</i>	Polzin (Rooker, 36)
<i>hlk</i> in pa’al	<i>hlk</i> in pa’al and pi’el	Paul S., 2012: 295
Some contact with Old and other forms of Aramaic	Intense contact with Imperial Aramaic	Hurvitz, “Hebrew and Aramaic”

**Table A2.0: Factors and Possibilities**

	Factor	Possibilities
0	Directional strategy	Locative <i>hey</i> Null (accusative marking) Preposition (bound) Preposition (free)
1	BH Era	SBH LBH
2	Stem	Miscellaneous placenames (2 tokens or less, knockouts) Miscellaneous locations (2 tokens or less, knockouts) Miscellaneous directions (2 tokens or less, knockouts) <i>Ai</i> – ‘Ai’ <i>Bavel</i> – ‘Babylon’ <i>Give’ah</i> – ‘Gibeah’ <i>Hevron</i> – ‘Hebron’ <i>Lahiš</i> – ‘Lachish’ <i>Mitsraim</i> – ‘Egypt’ <i>Šeḥem</i> – ‘Shechem’ <i>Šomeron</i> – ‘Samaria’ <i>Yarden</i> – ‘Jordan River’

<sup>99</sup> Ehrensvarð is here discussing a 2005 paper by Mats Eskhult. Polzin and Eskhult believe that this is a valid distinction, while Rooker and Ehrensvarð believe that it is not.

		<i>Yehuda</i> – ‘Judah’ <i>Yerušalaim</i> – ‘Jerusalem’ <i>‘arets</i> – ‘land’ <i>har</i> – ‘mountain, hill country’ <i>ir</i> – ‘city’ <i>maḥaneh</i> – ‘camp’ <i>midbar</i> – ‘wilderness’ <i>šamaim</i> – ‘heaven(s)’ <i>hen</i> – ‘here’ <i>mizraḥ</i> – ‘east’ <i>šam</i> – ‘there’ <i>tsafon</i> – ‘north’ <i>yam</i> – ‘west, sea’
3	Stem marked as definite <sup>100</sup>	Marked Not marked
4	Ending of stem	Vocalic Consonantal
5	Stem ending mimics suffix	Mimics Does not mimic
6	Stem is a placename <sup>101</sup>	Placename Not placename
7	Verb root	No verb miscellaneous (verbs with 2 or fewer tokens) <i>bw</i> – ‘come/go’ <i>‘sp</i> – ‘gather’ <i>glh</i> – ‘go into exile’ <i>hlk</i> – ‘walk/go/come’ <i>‘lh</i> – ‘go up’ <i>nws</i> – ‘flee’ <i>pnh</i> – ‘turn’ <i>qhl</i> – ‘gather’ <i>šwb</i> – ‘return’ <i>šlh</i> – ‘send’ <i>yts</i> – ‘go out’ <i>‘br</i> – ‘cross over/pass by’ <i>swr</i> - <i>ḥnh</i> – ‘camp’ <i>yrd</i> – ‘go down’

<sup>100</sup> The coding of this factor used in the present study was inadequate. Stems can either be 1) indefinite, but able to take definite article; 2) indefinite and unable to take definite article (adverbs, compass directions); 3) definite and unable to take definite article (placenames); 4) definite, marked with definite article *ha-*; or 5) definite, marked with elided definite article *-a-* carried by bound preposition. In this analysis, possibilities 1-3 and possibilities 4&5 were coded together, which does not accurately reflect the situation.

<sup>101</sup> A more productive distinction might have been ‘nominal stem’ versus ‘adverb stem.’

8	Verb parsing	No verb Infinitive Participle 3 <sup>rd</sup> M Sg 3 <sup>rd</sup> F Sg 3 <sup>rd</sup> pl 1 <sup>st</sup> (sg & plural separated when not knocked out) 2 <sup>nd</sup> M pl 2 <sup>nd</sup> M Sg
9	Verb aspect	Imperfect (prefixed) Perfect (affixed) No verb
10	Object Suffix on Verb	Present Absent
11	Biblical book	Numbers Joshua Judges Ezra Nehemiah 1 Chronicles 2 Chronicles
12	Proximate directional	Locative <i>hey</i> Null (accusative marking) Preposition (bound) Preposition (free) None
13	Element that follows <sup>102</sup>	Directional construction Clause boundary AdvP V NP PP Causal conjunction PP that resembles direction [Adj]

**Table A3.0: Cross-Tabulation of BH Era and Verbal Aspect**

	<b>Imperfect</b>	<b>Perfect</b>	No verb	TOTAL
<b>SBH</b>	62/104 (59.6%)	24/104 (23.1%)	18/104 (17.3%)	104
<b>LBH</b>	62/95 (65.3%)	18/95 (18.9%)	15/95 (15.8%)	95
TOTAL	124	42	33	199

<sup>102</sup> Data for this factor should be recoded and run again after assimilating Hoftijzer's conclusions.

## APPENDIX B

### KEY TO HEBREW TRANSCRIPTION

<b>Transcribed</b>	<b>Represents</b>	<b>Hebrew letter(s)</b>
‘	formerly a pharyngeal stop, silent in BH	<i>alef</i> or <i>ayin</i>
b	/b/	<i>bet</i> (with <i>dagesh</i> )
d	/d/	<i>dalet</i>
f	/f/	<i>pey</i> (no <i>dagesh</i> )
g	/g/	<i>gimel</i>
h	/h/ or silent	<i>hey</i>
ḥ	/x/	<i>khet</i>
k	/k/	<i>kaf</i> (with <i>dagesh</i> ) or <i>qof</i>
kh	/x/	<i>kaf</i> (no <i>dagesh</i> )
l	/l/	<i>lamed</i>
m	/m/	<i>mem</i>
n	/n/	<i>nun</i>
p	/p/	<i>pey</i> (with <i>dagesh</i> )
r	/r/	<i>resh</i>
s	/s/	<i>samek</i> or <i>sin</i>
š	/š/	<i>shin</i>
t	/t/	<i>tet</i> or <i>tav</i>
ts	/ts/, an affricate	<i>tsade</i>
v	/v/	<i>bet</i> (no <i>dagesh</i> )
w	/w/	<i>waw</i> (aka <i>vav</i> )
y	/y/	<i>yod</i>
z	/z/	<i>zayin</i>

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