

Linguistic Theory and the Biblical Text

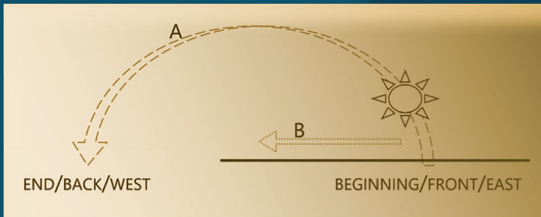
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Cognitive Linguistic Theory

Functional Grammar

Historical Linguistics

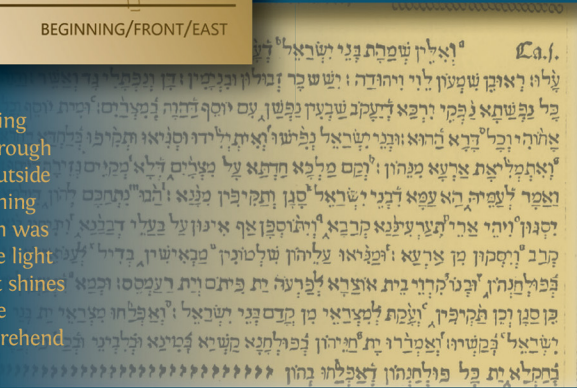
οὗτος ἦν ἐν ἀρχῇ πρὸς τὸν θεόν. πάντα δι' αὐτοῦ ἐγένετο, καὶ χωρὶς αὐτοῦ ἐγένετο οὐδὲ ἓν ὃ γέγονεν. ἐν αὐτῷ ζωὴ ἦν, καὶ ἡ ζωὴ ἦν τὸ φῶς τῶν ἀνθρώπων· καὶ τὸ φῶς ἐν τῇ σκοτίᾳ φαίνει, καὶ ἡ σκοτία αὐτὸ οὐ κατέλαβεν.



Complexity Theory

Generative Linguistics

This was in the beginning with God. All things through him came to be, and outside of him came to be nothing that came to be. In him was life and the life was the light of people, and the light shines in the darkness and the darkness did not comprehend it (Jn. 1:2-5)



Pragmatics of Information Structure

Computational Linguistic Analysis





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GENERATIVE LINGUISTICS AS A THEORETICAL FRAMEWORK FOR THE EXPLANATION OF PROBLEMATIC CONSTRUCTIONS IN BIBLICAL HEBREW¹

Jacobus A. Naudé and Cynthia L. Miller-Naudé

1.0. Introduction

Do linguistic theories, in general, and generative linguistics, in particular, benefit the interpretation of a biblical text in any way and, if so, how? This is the question addressed in this chapter.

In the meaning-making process of textual interpretation, linguistic knowledge provides interpreters of the text with knowledge of language structure, metalanguage, and methodology through which they can describe and explain problematic instances of language use in the text under consideration. The

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process of linguistic inquiry proceeds by observation, description, and explanation of language use. Explanation of language use is the stage at which linguists endeavour to establish the underlying rules that speakers internalise to construct and use sounds, words, and sentences, as well as the ways in which meanings are assigned to these units of language in order to communicate (Naudé and Miller-Naudé 2020, 15). By developing a consistent analysis of the systematic regularities in the language of a text, linguistics contributes to interpretation (Traugott and Pratt 1980, 20). A linguistic reading that is sensitive to the grammatical, sociological, and psychological aspects of language (such as choices of words and sentence types) possesses conventional reverberations and associations for readers (Fowler 1977, 4). We will argue that the linguistic knowledge contributed by linguistic theories, in particular generative linguistics, is indispensable for the text interpretation process.

2.0. Historical Development and Concepts of Generative Linguistics

2.1. Goal of the Generative Enterprise

Noam Chomsky (1928–), Institute Professor Emeritus in the Department of Linguistics and Philosophy at the Massachusetts Institute of Technology, introduced generative grammar with his book *Syntactic Structures* (1957). The main purpose of the generative enterprise is to suggest an explanatory hypothesis concerning the nature of language and ultimately human thought (Chomsky 1982a, 5–58; 2019, 265–66). Accordingly, the object of linguistic

study from a generative point of view is the knowledge that native speakers possess that enables them to produce and understand sentences. A generative grammar is thus an analysis of the mental mechanisms that enumerate all the grammatical sentences of a language—and only those that are grammatical—and assign to each an appropriate structural description (Chomsky 1965, 4–5). Chomsky (1986a, 3; 1991a, 6) formulated three basic questions that frame this inquiry: (1) what constitutes knowledge of language, (2) how is such knowledge acquired, and (3) how is such knowledge put to use?

Concerning the first question, the internalised knowledge of speakers is called ‘language competence’ (Chomsky 1965, 3–9). It refers to the knowledge of finite sounds and rules of phonology, finite words and rules for the formation of meaningful words, as well as finite rules for the production of an infinite number of sentences and their meanings. The notion of language as generative (i.e., language as a system that provides for infinite use of finite means) lies at the heart of generative linguistics and provides a solution to Von Humboldt’s problem of what constitutes knowledge of language (Chomsky 1991a, 6–14).

The second problem is known as ‘Plato’s problem’: how is it possible that children acquire language so early, effortlessly, and with so little experience with language data, in comparison to the acquisition of number systems and writing systems, which take many years to learn? Furthermore, how is this rich system of language knowledge shared (Chomsky 1986a, 51–220; 1991a, 15–17)? Chomsky proposed that the innate component of the language faculty as represented in the mind/brain makes early child

language acquisition effortless. This biologically innate language faculty (or Universal Grammar, UG) helps children to make sense of the language data to which they are exposed and to build an internal grammar (I[nternal]-language; Chomsky 1986a, 21–24), which is used to produce the sentences the children utter (E[xternal]-language; Chomsky 1986a, 19–21).

The third question concerns the individual's use of language knowledge in acts of communication—namely speech production and speech perception—which Chomsky (1965, 10–15) called 'language performance'. In this regard, Descartes and his followers made three observations (Chomsky 1972a, 5–14). Firstly, normal use of language is innovative; utterances are mostly new and not a repetition or even similar in pattern to previous utterances. This is similar to Chomsky's (1957, 15) view that a speaker is able to understand/interpret and produce an infinite number of new, previously unheard utterances. Secondly, humans do not have to communicate in response to stimuli or instinct; humans are free to think and express themselves at will. This is similar to Chomsky's (2002 [1966], 52–62) view that normal use of language is free from stimulus control and can therefore serve as an instrument of thought and self-expression. Thirdly, the normal use of language is coherent and appropriate to the situation. This creative aspect of language use provides an answer to Descartes's problem of how knowledge of language is put to use (Chomsky 2002 [1966], 51–71; 1991a, 15–19). One can explain the complex creative linguistic behaviour of humans only by concluding that it is determined by intrinsic properties of mental organisation. This happens as an internal grammar

(I-language) generates structural descriptions or representations that specify the linguistic elements for each expression (E-language; Chomsky 1964c, 7–9; 2002 [1966], 72–93; 1991a, 17–20).

The goal of generative linguistics is therefore “to construct a formalized general theory of linguistic structure” to account for these states of affairs and provide solutions for many other related problems for which the theory was not actually designed (Chomsky 1957, 5). To achieve this goal, focus is specifically on “syntactic structure, both in the broad sense (as opposed to semantics) and the narrow sense (as opposed to phonemics and morphology)” (Chomsky 1957, 5). Although generative linguists use deduction and intuition to construct theories of language structure, they test them against actual language data.

2.2. Autonomy of Syntax

Chomsky’s *Syntactic Structures* (1957) introduced the theoretical study of syntax. To derive sentences, Chomsky (1957, 45–46) formalised a tripartite arrangement of grammar, consisting of phrase structure, transformational structure, and morphophonemics. The output of phrase structure is a sequence of morphemes, though not necessarily in the correct order. The rules of the transformational structure may rearrange, add, or delete morphemes to yield a string of words. The morphophonemic rules convert this string of words into a string of phonemes. In short, to encode dependencies between sentence parts (word order), a system of phrase structure rules produces basic sentences, while transformational rules derive all other sentences from these basic

sentences. For example, active sentences are considered basic, whereas passive sentences are derived from active sentences by means of transformational rules (Chomsky 1957, 42–43). Accordingly, transformations must involve important semantic consequences.

Although Chomsky (1957, 13–17, 92–105) considered the question of how the meaning of a sentence is related to its syntactic form, his conclusion was that grammar is “best formulated as a self-contained study independent of semantics” (106). To avoid misunderstanding of the nature of the relationship between syntax and semantics, this conclusion must be understood in light of the following statement by Chomsky (1957, 102):

We can judge formal theories in terms of their ability to explain and clarify a variety of facts about the way in which sentences are used and understood. In other words, we should like the syntactic framework of the language that is isolated and exhibited by the grammar to be able to support semantic description, and we shall naturally rate more highly a theory of formal structure that leads to grammars that meet this requirement more fully.

Instead of viewing the emergence of the theory of linguistic structure as a succession of different models with numerous modifications, it must rather be viewed as a single model that is continually subject to critical assessments in terms of new questions and insights, and that is accordingly modified (Van Riemsdijk and Williams 1986, 171). The various terms used to designate the model are used to refer to the respective periods in the history of generative linguistics over nearly seven decades. The following sections provide an overview of these respective periods.

2.3. Standard Theory Model

The success of a linguistic theory is tested for adequacy by the degree to which the structures generated by the syntactic rules form a suitable basis for semantic interpretation. In 1962, Chomsky (1964a, 936; 1964b, 77; 1964c, 51) considered the incorporation of semantics into generative grammar:

In general, as syntactic description becomes deeper, what appear to be semantic questions fall increasingly within its scope; and it is not entirely obvious whether or where one can draw a natural bound between grammar and ‘logical grammar’, in the sense of Wittgenstein and the Oxford philosophers. Nevertheless, it seems clear that explanatory adequacy for descriptive semantics requires, beyond this, the development of an independent semantic theory (analogous, perhaps, to the theory of universal phonetics as mentioned below) that deals with questions of a kind that can scarcely be coherently formulated today, in particular, with the question: what are the substantive and formal constraints on systems of concepts that are constructed by humans on the basis of presented data?

This role of semantics was addressed by Katz and Fodor (1963) and Katz and Postal (1964; see Chomsky 1964c, 14). In the same way that Chomsky (1957) wanted to make explicit what the speaker knows of *syntactic* structure, they wanted to make explicit what the speaker knows of the *meanings* of words and sentences. These proposals led to the incorporation of semantics into the model known as the Standard Theory (ST; Chomsky 1969, 5), which was described by Chomsky (1965, 132–36).

The ST exhibits a triangular organisation containing a syntactic component and two interpretive components, one

phonological and one semantic (Chomsky 1964c, 9–10; 1965, 15–18; Katz and Postal 1964, 161). Chomsky (1965, 135) puts forward the hypothesis that semantic interpretation is made only in the underlying or deep structure. Specifically, the syntactic component consists of a base sub-component and a transformational sub-component (Chomsky 1965, 106–11, 141). The former generates a deep structure where words from the lexicon are inserted into a preterminal string of dummy elements of the categorial part (Chomsky 1965, 120), which is submitted to the semantic component for semantic interpretation. Without changing meaning, the transformational sub-component maps deep structure into surface structure by reordering elements (Chomsky 1965, 123–24), which enter the phonological component for phonetic interpretation by the rules for pronunciation (Chomsky 1965, 135).

The interpretive components play no part in the recursive generation of sentence structures (Chomsky 1965, 141). Syntax is self-contained (see Chomsky 1965, 226 n. 15). For the interpretation of a sentence, the syntactic component of the grammar relates a semantic interpretation of the underlying structure to a phonetic representation on surface level (Chomsky 1965, 136). Chomsky (1965, v–vi) clearly states that this hypothesis is merely tentative and emerging.

2.4. Generative Semantics

Katz and Postal (1964, 71) argued that semantic interpretations are uniquely assigned to deep structures, a viewpoint also reflected in the ST. This requirement means that the

transformational sub-component of the syntactic component does not contribute in any way to semantic interpretation. “Transformations do not affect meaning” became known as the Katz-Postal Hypothesis (Chomsky 1965, 132, 135; 1977a, 140–43). Katz and Postal (1964, 72–156) defend their hypothesis by re-examining apparent counterexamples, for example, the derivations of active/passive, negatives, imperatives, questions, etc., and claim that “their present formulation is not entirely adequate” (71). Unsurprisingly, this model, known as ‘interpretive semantics’ (Chomsky 1977a, 145), was soon challenged, especially because of the exclusive link it postulated between semantics and deep structure.

In his exposition of the ST, Chomsky (1965, 224 n. 9) already expressed his doubts about the Katz-Postal Hypothesis. Chomsky (1977a, 151) mentioned the critique of Ray Jackendoff as the first to show that surface structure plays a role in semantic interpretation. Chomsky (1972a, 100–14) argued that this restriction on the nature of transformations is too strong; there are cases where transformations have semantic effects. Both deep and surface structure enter into the determination of meaning: deep structure *inter alia* for predication and modification, and surface structure for focus, presupposition, topic and comment, the scope of logical elements (including quantifiers), and pronominal reference, a view that eventually led to the Extended Standard Theory model (see §2.5).

George Lakoff laid the foundations for the development of Generative Semantics in his dissertation published in 1970. Lakoff and others argued that, if the deep component were of a

semantic rather than a syntactic nature, and if the difference between the semantic component and the deep syntactic component were erased, meaning differences could all be expressed as an underlying semantic representation. Consequently, the independent deep syntactic component of the ST would cease to exist as an independent level of description and become indistinguishable from the semantic level. From 1966 until the early 1970s, the theory of Generative Semantics was developed, which replaced the base of the ST with an abstract semantic level from which meanings were mapped into surface structures by transformations according to a unilinear structure of input-output relations (Lakoff 1968, 1–84; 1971, 232–96). This approach is known as the transformationalist position (Chomsky 1972b, 17).

Chomsky argued that transformational derivation in Generative Semantics cannot naturally capture structures that exhibit significant syntactic differences, when they are assigned identical underlying structures (Chomsky 1966, 48–49; 1972b, 11–61). Jackendoff (1972, xi) opted for the formulation of proper rules of semantic interpretation to account for semantic phenomena and to leave the syntactic component as free of semantic intervention as it was in *Syntactic Structures*. Katz (1972; 1977) continued to pursue the basic approach to semantics as exposed in Katz and Fodor (1963).

Although Generative Semantics was eventually unsuccessful because of the failure to distinguish between syntactic and non-syntactic properties of sentence structure, it served as a catalyst for the further study of semantics (Van Riemsdijk and Williams 1986, 88).

2.5. Extended Standard Theory Model

In 1972, Chomsky published a more refined theory of semantic interpretation. Chomsky (1972b, 11–202) described in three essays the shortcomings that arose within the ST, resulting in the emergence of the Extended Standard Theory (EST; Chomsky 1970, 10). In EST, the semantic component does not operate solely on the output of the deep syntactic component, but also on the output of the transformational component (Chomsky 1972b, 5). This constitutes the Chomskyan departure from the ST set out in Katz and Postal (1964) and Chomsky (1965). In EST, semantic representation is shared between the underlying structure (for thematic and case structure) and the surface structure (for rules of anaphora and quantification; Chomsky 1972b, 62–119). In other words, the semantic component relates both the deep structure and the surface structure to a semantic representation. However, the grammatical relations expressed in a sentence are inherent in the syntactic deep structure. A separate semantic component with a purely interpretive role is still assumed (Chomsky 1972b, 120–202).

Chomsky (1972b, 11–61) also extends grammatical theory to incorporate syntactic features, thus formulating the ‘lexicalist position’. He also presents evidence that EST is to be preferred over Generative Semantics on methodological as well as empirical grounds (62–202).

2.6. Revised Extended Standard Theory Model

Chomsky (1975a) proposed further theoretical refinements, in particular the Revised Extended Standard Theory (REST), where

semantic representation appears only in the surface structure. The syntactic and semantic properties of the deep structures of the ST and the EST are dissociated (Chomsky 1975a, 81–82). Chomsky (1975a, 82) also dropped the term ‘deep structure’, utilising instead ‘initial phrase marker’, but retaining the term ‘surface structure’ (see also Chomsky 1977a, 169–79). This theoretical change was made possible by the introduction of ‘traces’ (called ‘copies’ since 1995), which mark the original positions of moved elements in the underlying structure (Chomsky 1975a, 86–103; 1977a, 165). As a result, the rules of thematic and case structure were applied to surface structure, thereby simplifying the semantic component (Chomsky 1975a, 116–18).

Accordingly, derivations within the REST model are as follows (Chomsky 1975a, 103–5; 1977a, 165). The rules of the categorial component (i.e., the lexical categories) and the lexicon provide initial phrase markers. The rules of the transformational component convert the initial phrase markers to surface structures (including traces), which undergo semantic interpretation (involving bound anaphora, scope, thematic relations, etc.) to convert the surface structures into logical forms (Chomsky 1977a, 165–66). For fuller representation of meaning, the generated logical forms are subject to further interpretation by other semantic rules that interact with other cognitive structures.

The picture which emerged with the REST model suggests that the grammar consists of various autonomous components (syntax, phonology, semantics), which have their own rules and interact with each other only at the relevant interface (Van Riemsdijk and Williams 1986, 174). In the description and

explanation of a particular language, each of these components and their interrelations must come into its own.

Enriched with idiosyncratic transformational rules, the model at this stage faced the problem of how to characterise the initial state of the language faculty (to have explanatory adequacy) and show how it maps language experience to the final state attained (to have descriptive adequacy). To achieve explanatory adequacy, a theory of the initial state can allow only limited variation. This insight led to a refinement of generative grammar with the shift towards the Principles-and-Parameters approach (Chomsky 1981a; 1991b, 417), discussed below, where the initial state of language is represented as a system of innate formal principles with associated open parameters, the values of which are fixed by linguistic experience for each specific language.

2.7. Principles-and-Parameters Approach

So far the emphasis was on the *similarities* between languages. The question was how to account for the *differences* between languages. Chomsky realised that the apparent complexity and variety of languages can be viewed as superficial, the result of minor changes in a fixed and invariant system. Accordingly, it is possible to attribute only limited variation to the innate language faculty (or UG) so that explanatory adequacy can be achieved.

In a series of publications, Chomsky (1977b; 1977c; 1978; 1980; Chomsky and Lasnik 1977) dismantled the rich idiosyncratic transformational rules of the previous models. The rethinking of many problematic aspects of the theory of grammar during this period is discussed in Chomsky (1982a, 61–120). The process

resulted in the Pisa Lectures (Chomsky 1981b), which are an exposition of the Principles-and-Parameters approach (Chomsky 1991b, 417) or so-called Government-Binding theory—the principle of ‘government’ relates items to one another; the principle of ‘binding’ determines which nominals in a sentence are co-referential. Chomsky (1991b, 448 n. 1) depicted the name Government-Binding theory as “a misleading term that should be abandoned.” The model consists of a subsystem of rules and a subsystem of parameterised principles. Chomsky (1982b, 7) remarked:

In the course of this work, there has been a gradual shift of focus from the study of rule systems, which have increasingly been regarded as impoverished (as we would hope to be the case) to the study of systems of principles, which appear to occupy a much more central position in determining the character and variety of possible human languages.

According to Chomsky (1991b, 417), “a language is not, then, a system of rules, but a set of specifications for parameters in an invariant system of principles of Universal Grammar (UG).”

The subsystem of rules is reduced as follows: the notions of deep- and surface-structures have been renamed D-structure and S-structure, respectively, since their roles are similar but not identical. The levels of D-structure and S-structure are mapped by the transformational operation of Move α (‘move alpha’), where α is a variable, meaning that a structure may be altered by movement of one or more elements; independent principles determine what can move and where it can move (Chomsky 1981b, 5). Semantic representation is replaced by the notion

Logical Form (LF) as a level of representation, which is a partial representation of the structural meaning of a sentence. Quantifier scope, the scope of question-words, and reflexive interpretation are examples that are dealt with on this level. Similarly, the phonetic representation is replaced by Phonetic Form (PF; Chomsky 1981b, 18).

The subsystem of universal principles consists of bounding theory (subjacency), government theory, theta-theory (assignment of thematic roles), binding theory (co-referentiality of nominals), Case theory (assignment of abstract Case), and control theory (reference of abstract pronominals; Chomsky 1981b, 5–6). Each of these theories comprises a principle or set of principles. Each of the principles has a parameter which has to be set as plus/minus on the basis of language-specific evidence. Parametric settings account for variation across languages, as well as for language acquisition (Hyams 1986). The rules of a specific language are the principles of UG as parameterised for that specific language (Chomsky 1991b, 417).

The setting of parameters provides the opportunity for a new comparative syntax to explain language variation historically and cross-linguistically. An example is the null subject or pro-drop parameter, which distinguishes languages that do not allow a subject pronoun to be omitted (e.g., English) and those that do (e.g., Italian; Rizzi 1982, 117–84). Certain properties systematically correlate with the null subject property, for example that an overt subject can occupy a postverbal position (Chomsky 1981b, 240–48). In §3.2, the null subject or pro-drop parameter

is used to explain the syntactic distribution of independent personal pronouns in Biblical Hebrew.

Generative grammar, and specifically the Principles-and-Parameters approach, is couched in traditional grammatical terminology. Lexical categories include N(oun), V(erb), A (adjective/adverb), and P(reposition); functional/grammatical categories include D(eterminer), T(ense), Asp(ect), M(ood), and C (complementiser/coordinator). Whereas lexical categories are acquired, can be translated, borrowed, and have meaning, functional grammatical categories do not have lexical meaning, are rarely borrowed, and may be contracted or lack stress. All of these categories project into phrases (i.e., groups of words that belong together), which are named after their most important part, the head. Phrases may be formed from lexical categories (verb phrase, noun phrase, etc.) and functional/grammatical categories (determiner phrase, tense phrase, etc.).

From 1982 to 1991, Chomsky proposed numerous refinements to the Principles-and-Parameters approach (see 1982b; 1986a; 1986b; 1988; Chomsky and Lasnik 1993). The most important of these refinements (which directly influenced existing syntactic analyses of Biblical Hebrew syntax and have implications for further analyses) concerns functional projections (Pollock 1989; Abney 1987; Rizzi 1997). These include the VP-Internal Subject Hypothesis, which proposes that the thematic position of the subject is internal to the VP (verb phrase), as well as the Split INFL (Inflection) Hypothesis, which proposes that Inflection be decomposed into two separate functional heads, AGR (Agreement) and T (Tense; Pollock 1989). These two

functional projections have implications for the analysis of the infinitive in Biblical Hebrew as well as for verb agreement and pro-drop (see §§3.2, 3.4, 3.5, and 3.8). A third functional projection is the DP (determiner phrase) Hypothesis, which proposes that noun phrases are in fact projections of a functional head, the determiner (D; Abney 1987). This functional projection has implications for the analysis of the quantifier *כָּל*, which may occur inside or outside of the DP to produce different meanings (see §3.6). A fourth innovation is the Split CP (complementiser phrase) Hypothesis, which concerns “the fine structure of the left periphery” (Rizzi 1997, 281). A central point of departure is that the discourse-pragmatic orientation of sentences is expressed within the CP domain. Accordingly, the C (complementiser) head is divided into four heads, each with its own projection, namely, Topic, Focus, Force (overt morphological encoding for declaratives, questions, relatives, etc.), and Finiteness (expresses a distinction related to tense and other inflectional specifications). This refinement accounts for at least the distribution of the *wayyiqṭol/waw* consecutive construction as well as for left dislocation and topicalisation in Biblical Hebrew (see §3.3).

2.8. Minimalist Programme

Considerations of conceptual naturalness that have some independent plausibility, which the human language faculty should be expected to satisfy—such as simplicity, economy, symmetry, and nonredundancy (see Chomsky 1975b, 113–28; 1991b, 417–54; 2019, 264–65)—led to further refinements in the 1990s with the Minimalist Programme, the most recent instantiation of

generative syntax. Despite some differences, many of the concepts developed in the Principles-and-Parameters approach carry over to the Minimalist Programme and the challenge is how to integrate them (e.g., V[erb]-movement).

Chomsky introduced the Minimalist Programme in three publications (1992; 1994; 1995). In the main source (Chomsky 1995), the computational system of language (i.e., the syntactic component) is assumed to contain only what is necessary to build representations that connect meaning to sound (or signs or writing); these representations are the same for all languages. In other words, the computational system of language serves as input to the semantic component, which maps (or converts) the syntactic structure into a corresponding semantic representation (i.e., a representation of linguistic aspects of its meaning). The semantic representation interfaces with systems of thought, namely, the Conceptual-Intentional system (responsible for interpretation and non-linguistic knowledge). The computational system of language serves also as input to the Phonetic Form (PF) component, which maps the syntactic structure into a PF representation (i.e., a representation that provides a phonetic 'spellout', or pronunciation, of sentences). The PF representation interfaces with the Sensory-Motor system (responsible for externalising the derivation in speech systems, i.e., providing spoken, but also signed or written, representations). The Minimalist model for deriving a sentence involves making a selection from the lexicon (which contains all the lexical items in a language as well as their linguistic properties) and then using the computational operation 'Merge' to bring these items together from

bottom to top. Merge includes what was previously referred to as ‘move’ (e.g., when the merging element is taken from inside the derivation and copied). Refinements of the Minimalist Programme followed (Chomsky 1998; 1999).

Derivations and structural representations have become extremely bare in the Minimalist Programme. In recent years, the focus has shifted from a rich UG to innate mechanisms that are part of more general cognitive principles of organic systems (Chomsky 2004; 2005; 2007; 2013; 2015; 2019):

a) Chomsky (2004; 2005) identifies the factors that are crucial in the development of language, namely, the previous two factors—UG and experience (the input of a specific language)—and a new factor, principles of efficient computation (not specific to the language faculty), which include the Economy Principles.

b) Chomsky (2007) follows Borer (1984), where parameters are seen as choices of feature specifications as the child acquires a lexicon, the so-called Borer-Chomsky Conjecture (see Baker 2008, 156). The computational system of every language is identical, but the parametric choices are lexical and account for the variety of languages, as well as, for example, the determination of linear order.

c) Representation by means of trees is common in generative grammar, but they are no longer used in the Problems-of-Projection approach to phrase/clause structure, according to Chomsky (2013; 2015). A derivation is not labelled when it is built. The labelling is done when the syntax hands over its combined sets to the interfaces, the interaction between components of grammar.

d) Chomsky (2019) reviews some foundational aspects of the theory of structure building—essentially, Merge and Label—while still accounting for recursive structure, displacement, and reconstruction (as the main empirical goals of the Minimalist Programme).

To summarise, Chomsky's vision of a fixed syntactic component with cross-linguistic variation triggered by differences in the lexicon continues as the most productive avenue of research in the Minimalist Programme, whose core assumption is that grammars are minimally complex systems of optimal design with parameters set by features of lexical items. The main innate mechanism of UG is seen as Merge, an operation by which two constituents are combined to form a single larger constituent (e.g., a complement merges first with its head and then the specifier of the head is merged to this complex). In other words, a derivation starts with a selection from the lexicon and then merges these elements from bottom to top. The derivation proceeds as follows: a verb phrase (VP), which includes the verb with its aspectual information and the arguments with their thematic roles; a tense phrase (TP), which connects the VP to information on finiteness, tense, agreement, and case; a complementiser phrase (CP), which connects the TP to pragmatic information (mood, topic, focus) or to another clause. Movement of constituents may include movement of topic, focus, and *wh*-elements (that is, a question/interrogative word or relative item, such as *what*, *who*, *which*, *when*, *why*, *how*) as well as head-movement of the verb (V) and tense (T).

The most productive work using generative grammar to explain syntactic constructions in Biblical Hebrew has been done in terms of the Principles-and-Parameters approach and the refinements in the Minimalist Programme. An overview of these contributions will be provided in the following section.

3.0. Contributions of Generative Linguistics to Biblical Hebrew

3.1. Introduction

As is clear from the overview of the development of Chomskyan generative linguistics in the preceding section, the focus has been on the syntactic structure of language. For this reason, the examples selected for discussion in this section relate primarily to syntax. The focus on syntax, however, should not detract from the fact that generative linguistics has developed and contributed to other linguistic subdisciplines (e.g., phonology, morphology, semantics, pragmatics), which have also benefitted Biblical Hebrew.²

² These linguistic subdisciplines include: phonology and morphology (e.g., Prince 1975; Rappaport 1984; McCarthy 1985 [1979]; Malone 1993; Dresher 1994; Churchyard 1999; Coetzee 1999; DeCaen 2003; Dresher 2009a; 2009b; Himmelreich and Bat-El Foux 2021); phonological aspects of the Masoretic accentual system (e.g., Dresher 1994; DeCaen and Dresher 2021; Pitcher 2021); and the morphology, syntax, and semantics/pragmatics of the Biblical Hebrew verbal system and verb phrase (e.g., DeCaen 1995; Hatav 1997; DeCaen 1999; Harbour 1999; Pereltsvaig 2002; Hatav 2004; 2006; Holmstedt 2009;

3.2. Null Subjects, Constituent Order, and the Meaning-Making of Independent Pronouns

An important typological classification based on the Principles-and-Parameters approach concerns the observation that languages can be divided into those with grammatically *optional* subjects (i.e., null subject languages or pro-drop languages) like Hebrew and those with *obligatory* subjects (i.e., non-null subject languages or non-pro-drop languages) like English. In this regard, Chomsky (1981b, 65) introduced the ‘Avoid Pronoun Principle’, which imposes the choice of a null subject over an overt subject pronoun where possible. The availability of null subjects in Hebrew correlates with the inflectional richness of agreement on the finite verb form (Borer 1989). Naudé (1991a; 1993b; 1994a; 1994b) demonstrates the specific aspects of null subjects for BH and Qumran Hebrew, where the *qatal*/perfect, *yiqtol*/imperfect, *wayyiqtol*, and *wəqatal* verb forms allow null subjects. Subject pronouns that are used with null subject verb forms can be utilised only as subject topics (see §3.3 below on topicalisation and the differences between Biblical Hebrew and Qumran Hebrew in this regard). By contrast, participles functioning as the predicate in clauses do not allow null subjects. As a result, an overt subject with a participial predicate, as in (1), is not ‘marked’ for topic or focus; it is neutral because an overt subject is grammatically required:

Hatav 2011; 2017; 2020; Boulet 2021; Cowper and DeCaen 2021; Doron 2021; Grasso 2021; Hatav 2021).

(1) כְּחֻצַת הַלַּיְלָה אֲנִי יֹצֵא בְּתוֹךְ מִצְרַיִם

‘Towards midnight I will go out in the midst of the Egyptians.’ (Exod. 11.4)

The ‘Avoid Pronoun Principle’ of the Principles-and-Parameters approach and the Economy Principles of the Minimalist Programme explain the distribution of independent subject pronouns as opposed to null subjects in BH in a principled syntactic way for the first time. With the *qatal*/perfect and *yiqtol*/imperfect, the subject pronouns as topics appear only in preverbal position, but with *wayyiqtol* and *wəqatal* verb forms they occur only in postverbal position. In the following section, we demonstrate that there are syntactic mechanisms that explain this asymmetry.

Government and Binding also provides insight into the syntax of BH participial forms. For example, the structure of BH allows the use of participles in attributive constructions while maintaining the verbal characteristics of the verbal form (i.e., its verbal valency; e.g., Num. 13.32, הָאָרֶץ אֲשֶׁר עָבְרָנוּ בָּהּ לְתוֹר אֶתָּהּ אָרֶץ, ‘the land which we crossed into it to explore it is a land *eating* its inhabitants’). English, in contrast, does not allow attributive participial constructions, but requires that a relative clause be used.

3.3. Non-Canonical Constituent Order and Meaning-Making at Sentence Edges

From its conception, one of the central concerns of generative linguistics has been to characterise the positions in which nominal elements can appear in a specific language, that is, word order (both canonical and non-canonical positions). In early

forms of generative linguistics, this was achieved by a transformation (see §2.7) in Principles-and-Parameters and by ‘Merge’ in the Minimalist Programme, which also entails movement. These theoretical advances made it possible to formally identify and differentiate the constituents that occur at the edges of sentences, a necessary prerequisite for determining what each construction contributes to meaning.³

A syntactic construction involving constituents moved to non-canonical positions at the initial sentence periphery is topicalisation. This construction was described in Naudé (1994a) as involving movement to the preverbal topic position:

(2) הַכּוֹזֵנָה יַעֲשֶׂה אֶת־אֶחָיוֹתָנוּ

‘Like a whore should he treat our sister like a whore?’ (Gen. 34.31)

In this example, the topicalised constituent (underlined) is a prepositional phrase that has been moved to the very beginning of the sentence from its normal position at the end of the sentence. A zero trace (or copy) marks the location where the constituent originally occurred in the sentence (indicated by subscripted type; see §2.6 and §3.8). As indicated in the previous section, the *qatal*/perfect and *yiqtol*/imperfect verbal forms in BH and Qumran Hebrew allow an independent subject pronoun as a subject topic before these verbal forms, but not after them (Naudé 2001).

Naudé (1996a, 181) demonstrates that when the verb is one of the so-called consecutive verb forms in BH, this topic

³ Five of these six edge-constructions in BH were treated together for the first time from a generative perspective in Holmstedt (2014).

position is not preverbal but postverbal. Independent pronouns that occur with consecutive verbs in BH sentences are still subject topics, even though they occur postverbally:

- (3) לְקוֹחַ מֵאֵת הַגּוֹלָהּ מִחֶלְדַּי וּמֵאֵת טוֹבִיָּה וּמֵאֵת יְדֵעִיָּה וּבָאתָ אֶתָּה בַּיּוֹם הַהוּא
 וּבָאתָ בֵּית יִאֲשֻׁיָּה בְּנֵי־צִפְנְיָה אֲשֶׁר־בָּאוּ מִבָּבֶל
 ‘Take from the exiled community, from Heldai, Tobijah, and Jedaiah, who have come from Babylon—and (you) will go, you, proceed on that day—you will go to the house of Josiah son of Zephaniah.’ (Zech. 6.10)

Naudé (1996a) argues that the sentence-initial position of the consecutive verb forms is the result of obligatory verb movement (‘verb raising’ in generative grammar). This parameter occurs in BH, but not in later forms of Hebrew (e.g., Qumran Hebrew and Mishnaic Hebrew) or Biblical Aramaic. As a result, consecutive verb forms in Qumran Hebrew, for example, are not attested with the independent subject pronoun following the verb. Generative grammar thus provides a principled means to distinguish the appearance and absence of independent subject pronouns with finite, pro-drop verbs. It also assists in identifying the locus of both language difference and language change (see further §3.9 below).

The second construction, left dislocation (identified in Naudé 1990), involves a constituent that occurs outside of the sentence (indicated by double underlining) and has a resumptive element that occurs within the sentence (indicated by underlining and bold type):

- (4) וּלְמִיכַל בַּת־שָׁאוּל לֹא־הָיָה לָהּ יֶלֶד עַד יוֹם מוֹתָהּ
 ‘To Michal daughter of Saul, there was **to her** no child (i.e., she had no child) until the day of her death.’ (2 Sam. 6.23)

In this example, the resumptive element occurs *in situ*, that is, in the normal position of the constituent in the sentence. It is also possible for the resumptive element itself to be in a preverbal topic position so that it occurs at the beginning of the sentence proper:

- (5) וְעַם־הָאֲמָהוֹת אֲשֶׁר אָמַרְתָּ עִמָּם אֶבְבְּדָהּ
 ‘...and among the slave girls that you speak of, **among them** I will be honoured _{among them}.’ (2 Sam. 6.22)

In other words, the example exhibits both left dislocation of a constituent and its resumption in the matrix sentence, and also topicalisation of the resumptive element within the matrix sentence. Because topicalisation and left dislocation may occur in the same sentence, they must be distinct constructions. Analyses that indiscriminately merge the two constructions into ‘fronting’ (or *casus pendens*) obscure the distinctive features and thus the meanings of the constructions.

A third construction is like topicalisation in having no resumptive element within the sentence, although a constituent apparently occurs outside of the left edge of the sentence. Naudé (1990, 124; see also 1999), who first identified this construction, referred to it as a variety of topicalisation. Holmstedt (2014) refers to it as ‘heavy topic fronting’. We use the term ‘heavy topicalisation’ (Miller-Naudé and Naudé 2019; 2021):

- (6) וְאֵדֹנָי הַמֶּלֶךְ לָמָּה חִפֵּץ בְּדַבַּר הַזֶּה
 ‘...but (as for) my lord the king, why does he delight _{my lord the king} in this thing?’ (2 Sam. 24.3)

In this example, the initial boundary of the matrix sentence is indicated by the interrogative particle, but the constituent outside of the left edge of the sentence is not resumed within the sentence proper.

The fourth construction is extraposition. In the same way that topicalisation moves a constituent out of its canonical position to the preverbal topic position at the beginning of a sentence, extraposition involves a constituent that is moved to the end of the sentence outside of its canonical position:

- (7) יהיו כְּאֵין וּכְאֵפֶס אַנְשֵׁי מִלְחָמָתְךָ
 ‘...the men who battle against you will be as nothing and non-existent
the men who battle against you.’ (Isa. 41.12)

Like topicalisation, extraposition does not involve resumption within the matrix sentence.⁴

The fifth construction is right dislocation. In many ways this construction is the mirror image of left dislocation in that a constituent occurs outside of the end-periphery of the sentence and a co-referential element occurs within the sentence proper:

- (8) וַיֵּצֵא מֶלֶךְ-סֹדֶם וּמֶלֶךְ עֶמְרָה וּמֶלֶךְ אַדְמָה וּמֶלֶךְ צְבִיִּים וּמֶלֶךְ בְּלַע הוּא-צֶעֶר
 וַיַּעֲרְבוּ אֹתָם מִלְחָמָה בְּעֵמֶק הַשָּׂדִים אֵת כְּדֹרְלֹעַמֶר מֶלֶךְ עֵילָם וְתִדְעַל
 מֶלֶךְ גֹּזִים וְאַמְרָפֶל מֶלֶךְ שִׁנְעַר וְאַרְיִיזֹד מֶלֶךְ אֶלְסַר אַרְבָּעָה מְלָכִים אֶת-
 הַחֲמִשָּׁה

‘The king of Sodom and the king of Gomorrah and the king of Admah and the king of Zeboiim and the king of Bela, which is Zoar, went forth and engaged **them** in battle in the Valley of Siddim—Chedorlaomer king of Elam and

⁴ For an approach to the differentiation of extraposition from extraposed apposition, see Holmstedt and Jones (2017, 42–47).

Tidal king of Goiim and Amraphel king of Shinar and Arioch king of Ellasar—four kings against five.’ (Gen. 14.8–9)

The sixth construction is heavy extraposition, which is the counterpart of heavy topicalisation in having a constituent that is moved beyond the end-periphery of the sentence without resumption inside the sentence. It was identified for the first time in Miller-Naudé and Naudé (2019):

- (9) וּבַיָּמִים אֲחָדִים יִשָּׁבֵר וְלֹא בְּאַפִּים וְלֹא בְּמִלְחָמָה:
 ‘And in a few days he will be broken not by anger and not in battle and not by anger and not in battle.’ (Dan. 11.20)

If the *waw* is understood as indicating a sentence boundary, then the negated prepositional phrases occur outside of the sentence boundary. Another possible example of heavy extraposition occurs in the following example, where a *waw* introduces a prepositional phrase:

- (10) וְאַעֲלֶה בְּאֵשׁ מַחְנֵיכֶם וּבְאַפְכֶם וְלֹא־שָׁבְתֶם עָדִי נְאֻם־יְהוָה
 ‘...and I made the stench of your armies rise in your nostrils and in your nostrils. But you did not turn back to me—declares the LORD.’ (Amos 4.10)

Furthermore, generative linguistics allows for the differentiation of various kinds of left dislocation on the basis of the nature of agreement features between the dislocated element and the resumptive element. In addition to the heavy topicalisation construction discussed above, Miller-Naudé and Naudé (2021) identify five kinds of left dislocations, namely: clitic left dislocation, where a dislocated constituent exhibits case agreement with its resumptive (11); hanging topic, where the dislocated constituent is always a noun phrase, but the resumptive within the matrix

sentence may bear any grammatical relation to the predication (12); left dislocation with deictic resumptive which is coreferential with the dislocated constituent (13); left dislocation with independent pronoun resumptive (14); and left dislocation with a noun phrase resumptive (15).

- (11) אֶת־זַמְתְּךָ וְאֶת־תּוֹעֲבוֹתֶיךָ אֵת גְּשָׁאֲתִים
 ‘Your wickedness and your abominations, you bear **them**’
 (Ezek. 16.58)
- (12) צָפוֹן וְיָמִין אֵתָּה בְּרָאָתָם
 ‘North and south, you created **them**’ (Ps. 89.13)
- (13) וְלִבְנֹתַי מִה־אֲעַשֶׂה לְאֵלֶּה הַיּוֹם אוֹ לִבְנֵיהֶן אֲשֶׁר יִלְדוּ
 ‘...and for my daughters, what should I do **for these** today
 or for their sons which they have borne?’ (Gen. 31.43)
- (14) יְהוָה אֱלֹהֵיכֶם הֵהָלֵךְ לְפָנֵיכֶם הוּא יִלָּחֵם לְכֶם
 ‘The LORD your God who goes before you, **he** will fight for
 you.’ (Deut. 1.30)
- (15) וְהַנֶּפֶשׁ אֲשֶׁר־תֹּאכַל בְּשֶׁר מִזֶּבַח הַשְּׁלָמִים אֲשֶׁר לַיהוָה וְטָמְאָתוֹ עָלָיו
 וְנִקְרְתָה הַנֶּפֶשׁ הַהוּא מֵעַמִּיָּה
 ‘But the person who eats flesh from the sacrifices of
 wellbeing which belong to the LORD and his uncleanness
 is upon him, **that person** shall be cut off from his relatives.’
 (Lev. 7.20)

A further insight was the discovery of the ‘frame of reference’ construction, which is neither left dislocation nor topicalisation, but rather a detached noun phrase, which provides the frame of reference for the discourse that follows (Miller-Naudé and Naudé 2021):

- (16) וְהַדְבָר אֲשֶׁר דִּבַּרְנוּ אֲנִי וְאַתָּה הִנֵּה יְהוָה בֵּינִי וּבֵינְךָ עַד-עוֹלָם
 ‘And the word which we spoke, I and you—behold the LORD is between me and between you forever.’ (1 Sam. 20.23)

3.4. Pronominal Syntax and the Meaning-Making of Pronominal Reference

The so-called tripartite verbless clause in BH consists of two nominal phrases and a 3ms pronominal element. In the differentiation of the pronominal element, it is either a resumptive element of a left dislocation construction or it is a ‘last resort’ syntactic strategy in which the pronominal element is a pronominal clitic, providing agreement features for the subject in order to prevent ambiguity in the assignment of subject and predicate (Naudé 1990; 1993b; 1994c; 1999; 2002a; 2002b). Disjunctive and conjunctive accents provide important evidence for prosodic phrasing, which can be utilised for differentiating the role of the pronoun in these two types of sentences, which are otherwise structurally identical (Naudé and Miller-Naudé 2017). Cross-linguistically, left dislocation involves a ‘gap’ at the boundary between the dislocated constituent and the matrix sentence. In spoken language, this gap may be realised by a small pause or an interjection (Berman and Grosu 1976); in the MT it is marked by a disjunctive accent. In this case the pronominal element is a resumptive of a left dislocation construction:

- (17) וְדָוִד הוּא הַקָּטָן
 ‘And (as for) David, he was the youngest.’ (1 Sam. 17.14)

Where it is marked by a conjunctive accent, there is no gap and the pronominal element is utilised as a ‘last resort’ syntactic

strategy. The pronominal element is a pronominal clitic, which is used to prevent ambiguity in the assignment of subject and predicate (see Doron 1986):

(18) צְדִיק הוּא יְהוָה

‘A righteous one (he) is the LORD.’ (Lam. 1.18)

The pronominal clitic is used to indicate that the adjectival constituent should be understood as the subject, rather than the predicate. The conjunctive accent on the first constituent and the pronominal clitic that follows it indicates that the sentence should be interpreted as ‘A righteous one is the LORD’, not as ‘The LORD is righteous’ (with the adjective as the predicate).

Generative linguistics has also been used to provide new and insightful analysis of several syntactic constructions involving pronouns. First, the so-called ethical dative with the preposition *lamed* is not a sentence constituent but a reflexive anaphor that is translated in English as *x-self* (e.g., Gen. 22.2 וְלָךְ-לְךָ אֶל-אֶרֶץ מֹרְיָה ‘and take *yourself* to the land of Moriah’; Naudé 1995, 1997).

Second, all of the dative constructions in BH can be differentiated with attention to their syntactic features as identified by generative grammar (Naudé 2013); these are summarised in Table 1.

Table 1: Summary of Dative Constructions in Biblical Hebrew

	Ethical	Possessive	Indirect object	Commodi	Experiential
Subcategorised	–	–	+	–	–
Compulsory clitic	+	–	–	+	+
Reflexive anaphor	+	–	–	–	–
Bound to external argument	+	–	–	+	–
Bound to internal argument	–	+	+	–	+

Third, coordinate subjects consisting of an independent personal pronoun and a noun phrase should be understood as an adjunct to the null subject of the finite verb rather than as its subject (Naudé 1999; cf. Holmstedt 2009; Scheumann 2020). In light of the characteristics of null subject languages generally, it is preferable to identify so-called coordinate subjects with independent personal pronouns in BH as adjuncts rather than sentence subjects (e.g., Judg. 11.37 *וְאֶלְכָה וְיִרְדָּתִי עַל־הַהָרִים וְאֶבְכָּה* ‘and I will go up and down on the mountains and mourn for my virginity, *I and my companions*’). The structural position of an independent pronoun as a coordinate subject coincides with that of a dislocated constituent in a left/right dislocation, namely, a constituent that is base generated in an adjunct position (Naudé 1999, 75–99).

Finally, generative syntax provides a means to distinguish between pronouns and anaphora (i.e., linguistic units deriving their interpretation from a previously expressed unit of meaning, viz., an antecedent, such as reflexive pronouns and reciprocal pronouns). Because pronouns and anaphora in BH have identical morphological forms (contrast English pronouns *I, me, my* as

distinct from the reflexive anaphor *myself* and the reciprocal anaphor *ourselves*), one can only distinguish pronouns and anaphora in BH on the basis of the theoretical syntactic principles of generative grammar; contrast the translation of the pronominal suffix on **וְ** with the pronoun ('him') in Neh. 13.5 as opposed to the anaphor ('himself') in 1 Chron. 15.1. The syntax of the two sentences *appears* to be identical unless one appropriates the insights afforded by generative linguistic theory (see Miller-Naudé and Naudé 2019). Identifying whether a Hebrew form is an anaphor as opposed to a pronoun is critical for translating and interpreting these biblical sentences.

3.5. Lexical Categories and the Meaning-Making of Lexical Morphology

Lexical categorisation or word classes (traditionally called 'parts of speech') in generative grammar is part of Universal Grammar.⁵ As indicated above in §2.7, each lexical item in the mental lexicon is identified as a member of a particular category. For lexical categories (as opposed to functional/grammatical categories—see §3.6), generative grammar employs the traditional philological terms N(oun), V(erb), A (adjective/adverb), and P(reposition).

A generative approach to lexical categories provides a heuristic method for lemmatisation within lexica as well as a

⁵ See Miller-Naudé and Naudé (2017a, 276–88) for a description of categorisation in generative grammar and a comparison of categorisation in Functional Grammar, Cognitive Linguistics, and linguistic typology.

framework for differentiating morphosyntactic characteristics of lexical items as a basis for determining their semantic and pragmatic value(s). As an example of a generative approach to lexical categories, an analysis of טֹב demonstrates that it must be categorised as an adjective and not a noun on the basis of morphological as well as internal and external syntactic features (Miller-Naudé and Naudé 2017a, 288–303; see also §3.8).

3.6. Quantification and the Meaning-Making of Quantifiers

Quantifiers are a functional category in generative linguistics. Quantifiers specify the amount or quantity of the referents of a noun. In this section, two kinds of quantification are considered: negation and the quantifier כָּל.

3.6.1. Negation

Generative linguistics has contributed to a nuanced understanding of the semantics of negation in BH through the concept of negative scope, which allows interpreters to distinguish between a negative marker that has scope over the entire predication (sentential negation) as opposed to scope over only a constituent (constituent negation; see Snyman and Naudé 2003; Snyman 2004; Naudé and Rendsburg 2013; Miller-Naudé and Naudé 2015; 2017b).

Sentential negation requires the negative marker to immediately precede the verb (e.g., Jer. 23.21 לֹא־שָׁלַחְתִּי אֶת־ הַנְּבִיאִים ‘I did not send the prophets’). By contrast, constituent negation immediately precedes a non-verbal constituent (e.g.,

Gen. 45.8 *וְעַתָּה לֹא־אֵתָם שְׁלַחְתֶּם אֵתִי הִנֵּה כִי הֵאֲלֵהֶם* ‘And now you did not send me here, but rather God’). For the negative cycle in BH, see §3.9.

3.6.2. Quantifier כל

Generative linguistics allows interpreters to distinguish four syntactic constructions involving the quantifier כל, differentiated by specific features of the noun phrase (NP) modified by כל (see Table 2).⁶ The most important features are definiteness and number, but countability (count nouns, mass nouns, collectives), nominal status, and specificity are also relevant. Each construction conveys various semantic nuances: singular definite (e.g., כָּל־ הַיּוֹם הַזֶּה ‘all that day’ Exod. 10.13), plural definite (e.g., כָּל־יְמֵי חַיֶּיךָ ‘all the days [totality of the specific group] of your life’ Gen. 3.14), singular indefinite (e.g., כָּל־יוֹם ‘every day’ Ps. 140.3), plural indefinite (e.g., כָּל־יְמֵי הַיּוֹת בַּיַּת־הָאֱלֹהִים בְּשִׁלֹּה ‘all [each and every one of] the days the house of God was in Shiloh’ Judg. 18.31). When the noun refers to a unique entity or a collective, the singular definite quantified phrase means ‘the whole’ (e.g., כָּל־ הָאָרֶץ ‘the whole earth’ Gen. 1.29; כָּל־הַקְּהָל ‘the whole assembly’ Ezra 2.64).

⁶ See Naudé (2011a; 2011b) for BH and Naudé and Miller-Naudé (2015; 2022) and Miller-Naudé and Naudé (2020b) for Qumran Hebrew.

Table 2: Syntax and Semantics of כל

		Definite collective, inclusive, specific		Indefinite distributive, implicitly inclu- sive, non-specific
Singular NP	Meaning	<i>Totality of the individual members of the single entity—each individual entity</i>	<i>Totality of the entity—the whole</i>	<i>Each, every</i>
	Individuation	[+individuation]	—	[+individuation]
	Countability	count noun, mass noun	count noun referring to unique entity / collective noun	count noun
	Nominal status	nominal or pronominal	nominal	nominal
Plural NP	Meaning	<i>Totality of the specific group</i>	—	<i>Each and every one of the members of the group</i>
	Individuation	[–individuation]		[–individuation]
	Countability	count noun, mass noun		count noun
	Nominal status	nominal or pronominal		nominal

Grey highlighting indicates a distinctive class of singular definite nouns that are either count nouns referring to a unique entity or mass nouns. The semantics of כל with this class of nouns differs from other singular definite nouns.

Because BH has additional constructions with כֹּל that are not attested in English or in Modern Hebrew, determining the precise nuance of each construction requires careful attention to the constellation of features—morphological, syntactic, and semantic—that differentiate them.

3.7. Relative Clauses and the Meaning-Making of Relative Nominal Modification

The fact that relative clauses in BH may be either restrictive (identifying the precise referent of the head noun) or non-restrictive (qualifying but not identifying the head noun) in their semantics went unnoticed by philologically-orientated Hebrew grammars, but it is an important linguistic distinction with exegetical ramifications.

Holmstedt (2016, 194–215) provides the linguistic analysis of the two types of relative clauses and the linguistic indicators for differentiating them.⁷ For example, in 2 Chron. 15.11 (וַיִּזְבְּחוּ (לַיהוָה בַּיּוֹם הַהוּא מִן־הַשָּׁלָל הַבָּיְאוּ), the relative clause is syntactically marked as restrictive because of the zero marked relative with a definite head (by contrast, zero marked relative clauses with an indefinite head are non-restrictive). The translation must be ‘and they sacrificed to the LORD on that day from the booty that they had brought’ (restrictive), rather than ‘and they sacrificed to the LORD on that day from the booty, which they had brought’ (non-restrictive; see Holmstedt 2016, 210).

⁷ For the restrictions on the resumptive element in Biblical Aramaic clauses, see Naudé (1991b; 1996).

3.8. Empty Categories, Null Constituents, and the Meaning-Making of Invisible Structure

Generative grammar employs a number of null (or, zero) items. Null items are present in the underlying structure of language but not in the surface structure. Nonetheless, null items affect both the surface realisation of language and its semantic interpretation. A few of these null items are mentioned briefly in this section.

In §3.2, null subjects of finite verbs were discussed. These subjects are not expressed in the surface structure, but they can nonetheless serve as an antecedent (see also §3.4).

In §3.3, the edge constructions that involve movement of a constituent to the left (beginning) of the sentence (*viz.* topicalisation) or to the right (end) of the sentence (*viz.* extraposition) contain a null constituent. Moved constructions leave a trace in their original position, which may affect the structure of the sentence.

Relative clauses may optionally have two types of null constituents. Null heads are used frequently in BH (Holmstedt 2016, 113–28) instead of a NP as head (contrast Gen. 27.45 with a null head and Gen. 24.66 with an overt NP as head; see Holmstedt 2016, 114). Interpretation of the semantics of the null head depends upon both “the position of the gap (or trace) or resumptive within the relative clause and the discourse context” (Holmstedt 2016, 115). Zero relatives also occur in BH, alongside a range of overt relative markers (Holmstedt 2016, 81–83). As indicated in §3.7, zero marked relative clauses have a restrictive semantic interpretation when the head of the relative is definite,

whereas overtly marked relative clauses may have a restrictive or non-restrictive semantic interpretation.

Recognising that adjectives in BH may modify a null noun provides a principled way to handle the identification of the ‘adjective’ lexical category. For example, in Gen. 29.16 (וּלְבָן שְׂתֵי) הַגְּדֹלָה (בְּנוֹת שֵׁם הַגְּדֹלָה לְאָה וְשֵׁם הַקְּטָנָה רָחֵל ‘the big’ and הַקְּטָנָה ‘the small’ must be understood as morphologically agreeing with and modifying the null noun בַּת, so that the adjectives refer to ‘the elder [daughter]’ and ‘the younger [daughter]’ (see Miller-Naudé and Naudé 2016). Recognition that an adjective may modify a null noun provides a principled linguistic argument against so-called ‘substantival adjectives’ in BH.

Another advance has been made in recognising that so-called ‘verbless sentences’ should be understood as sentences in which the copular verb *היה* is a null constituent (see, e.g. Naudé 1993a; DeCaen 1999; Sinclair 1999; Cowper and DeCaen 2017; Wilson 2020). Recognition that all predications in Biblical Hebrew have the same underlying structure provides a simplified and unified analysis.

Finally, ellipsis comprises a number of distinct syntactic constructions in which one or more required constituents are present in the underlying representation but are absent in the surface structure (see Miller-Naudé 2005; 2007a; 2007b; 2007c; 2008; 2011; 2013; Holmstedt 2021). Ellipsis therefore requires the hearer/reader to be able to reconstruct appropriate semantic interpretations of sentences with apparently incomplete structures.

3.9. Historical Linguistics and Meaning-Making through Language Change and Variation

Generative linguistics provides a way to identify language change and variation through the change of feature parameters. In examining the change of feature parameter settings between BH and Qumran Hebrew, Naudé (2000; see also 1996a) identifies the following types of changes: change in syntactic category description (viz. grammaticalisation); change in subcategorisation frame of some lexical verbs (e.g., the use of the preposition אֶת to mark the accusative; contrast Jer. 7.26 with 4Q506 131–132.IV.13) and lexical nouns (contrast Isa. 48.17 and 1QIsa^a XL:23); and changes in lexical features of both nouns and verbs.

Another important development in historical linguistics relates to cyclic change, the observation that change often occurs in stages, with later stages of the language resembling earlier stages (Van Gelderen 2011). One important cycle that has been identified in many languages involves the negative existential (see Veselinova 2016), which is also operative in pre-modern Hebrew (see Naudé and Miller-Naudé 2016; Naudé, Miller-Naudé, and Wilson 2019; 2022). One of the most important insights for Biblical Hebrew is the fact that the stages of a cycle are usually overlapping, resulting in synchronic variation alongside diachronic change.

4.0. Prospects for Further Study

The survey of the study of BH in Van der Merwe, Naudé, and Kroeze (2017, 6–12) reveals that comparatively little work has been conducted from the theoretical standpoint of generative

linguistics, in spite of its rich and insightful contributions to the study of language in general and to the study of languages in particular. As a point of comparison, Radford's (1997a; 1997b; 2004; 2009) analyses of the structure of English from a Minimalist perspective demonstrate how generative linguistics can be applied to the study of a specific language to produce comprehensive grammatical analyses. There is, unfortunately, nothing even remotely comparable for BH from a generative perspective. The research described in the previous sections only begins to scratch the surface of some of the numerous important, unsolved problems in the structure of BH, which have direct implications for the meaning-making enterprise of textual interpretation.

To conclude, we return to our initial questions. Is linguistics necessary for the interpretation of the languages of the biblical texts? Is it not better—and easier—just to read the texts without theory? In our view, the reading of the biblical texts in the light of linguistic analysis can be compared to the work of meteorologists. Meteorologists study weather patterns scientifically, employing relevant theories for the observation, description, and prediction of weather patterns. The results of meteorological inquiry feed into weather reports, which are delivered in simple, accessible terms for ordinary people to understand. Although sustained observation of the weather by laypersons (e.g., in farming almanacs) may *sometimes* prove to produce accurate forecasts, it is not theoretically informed and does not rest upon scientifically proven methodology. It is therefore vastly inferior to the analysis of weather produced by meteorologists.

If linguistics is necessary for insightful understanding of the biblical text, then which linguistic theory should be used? We need to break with the tradition of viewing linguistics through the reductive lenses of schools, theories, or interdisciplinary exchanges. Instead of the fragmentation of knowledge, the focus must be on the progress of knowledge by its growth or accumulation (see D'hulst and Gambier 2018). Furthermore, the search for knowledge must be a purposeful, meaning-making activity that is functionalist in orientation (Nord 2018). In other words, the search for knowledge within a discipline must be nuanced and it must be typified by the purpose for which it is intended.

In applying the discipline of linguistics to the study of the biblical text, instead of competition between linguistic theories, the move should be to a search for a complex viewpoint, seeing the study of BH as a complex whole (Miller-Naudé and Naudé 2020a; Naudé and Miller-Naudé 2020). However, within a complex approach, the significant and insightful generative linguistic contributions to understanding BH language structure cannot be minimised or ignored.

5.0. Further Reading

5.1. Handbooks, Companions, Glossaries

1. Den Dikken (2013)
2. England (1978)
3. Everaert and Van Riemsdijk (2006)
4. Sells (1985)
5. Webelhuth (1995)

5.2. General Introductions

1. Bach (1964)
2. Carnie (2007)
3. Haegeman (1994)
4. Hornstein, Nunes, and Grohmann (2005)
5. Radford (2004; 2009)
6. Van Gelderen (2017)
7. Van Riemsdijk and Williams (1986)

5.3. Foundational Texts

1. Borer (1984)
2. Chomsky (1957; 1965; 1969; 1975b; 1980; 1981b; 1986b; 1992; 1995; 1998; 2013)
3. Jackendoff (1972)
4. Katz and Postal (1964)

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