

# Foundations for Syriac Lexicography III



**PERSPECTIVES ON SYRIAC LINGUISTICS**

**VOLUME 4**

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**Foundations for  
Syriac Lexicography III**  
Colloquia of the International  
Syriac Language Project

**EDITED BY  
JANET DYK  
AND  
WIDO VAN PEURSEN**

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## ABBREVIATIONS

abs.; abs. st.	absolute state
Act. Mart.	S.E. Assemani, <i>Acta Martyrum Orientalium et Occidentalium</i>
act. pt.	active participle
Acts of Thomas	Acts of Judas Thomas in Wright, <i>Apocryphal Acts of the Apostles</i>
Addai	Phillips, <i>The Doctrine of Addai, the Apostle</i>
adj.	adjective
adv.	adverb
Akk.	Akkadian
Aphr. Dem.	Parisot, <i>Aphraatis Sapientis Persae demonstrationes</i>
Aphr. Hom.	Wright, <i>The Homilies of Aphraates</i>
App. ad BH Chr.	Bruns, <i>Appendix ad Bar Hebraeus Chr.</i>
B.O.	J.S. Assemani, <i>Bibliotheca Orientalis Clementine-Vaticana recensuit</i>
BADG	Danker et al., <i>A Greek-English Lexicon of the New Testament and Other Early Christian Literature</i> (2 <sup>nd</sup> edition, 1979)
Bar-Bahlul	Bar-Bahlul's Syriac-Arabic lexicon as quoted in <i>Thesaurus Syriacus</i>
BDAG	Danker et al., <i>A Greek-English Lexicon of the New Testament and Other Early Christian Literature</i> (3 <sup>rd</sup> edition, 2000)
BDB	Brown–Driver–Briggs, <i>A Hebrew and English Lexicon of the Old Testament</i>
BGU	Schubart–Kühn, <i>Papyri und Ostraka der Ptolemäerzeit. Papyri und Ostraka der Ptolemäerzeit. Aegyptische Urkunden aus den Königlichen Museen zu Berlin. Griechische Urkunden</i>
BH Chr.	Bruns and Kirsch, <i>The Chronicon Syriacum of Bar Hebraeus</i>
BHS	Elliger–Rudolph, <i>Biblia Hebraica Stuttgartensia</i>
cstr.; cs. st.	construct state
CAD	Gelb et al., <i>The Assyrian Dictionary of the Oriental Institute of the University of Chicago</i>
Chrys.	<i>Chrysostomi Homiliarum Versio Syriaca, e codice Quatremerii</i> (as listed in <i>Thesaurus Syriacus</i> )
comp.n.	compound noun
CPV	<i>The Concordance to the Peshitta Version of the Aramaic New Testament.</i>
CSD	J. Payne Smith, <i>A Compendious Syriac Dictionary</i>
CVP	conventional verbal paradigm
Cyr.	R. Payne Smith, <i>Cyrrilli Commentarius in Lucam</i>
emph.; emph. st.	emphatic state
Ephr. ed. Bick.	Bickell, <i>S. Ephraemi Syri Carmina Nisibena</i>

Ephr. ed. Ov.	Overbeck, <i>S. Ephraemi Syri, Rabulae Episcopi Edesseni, Balaei Aliorumque Opera Selecta</i>
Ephr. Hymn.	Beck, <i>Des Heiligen Ephraem des Syrsers Hymnen de Ecclesia</i>
Ephr. Syr. Op.	J.S. Assemani, <i>S. Ephraemi Syri Opera omnia quae exstant</i>
e.p.p.	enclitic personal pronoun
Eus. Theoph.	Lee, <i>Eusebius, Bishop of Caesarea, on the Theophania</i>
f.; fem.	feminine
fs.; fpl.	feminine singular; feminine plural
Ges <sup>17</sup>	Gesenius, <i>Hebräisches und aramäisches Handwörterbuch über das Alte Testament</i> . 17 <sup>th</sup> edition by F. Buhl et al.
Ges <sup>18</sup>	Gesenius, <i>Hebräisches und aramäisches Handwörterbuch über das Alte Testament</i> . 18 <sup>th</sup> edition by U. Rütterswörden, R. Meyer and H. Donner
HAL	Holladay, <i>Concise Hebrew and Aramaic Lexicon of the Old Testament</i>
HALAT	Koehler et al., <i>Hebräisches und aramäisches Lexikon zum Alten Testament</i> , 3 <sup>rd</sup> edition
HALOT	Koehler et al. <i>The Hebrew and Aramaic Lexicon of the Old Testament</i> . Translated and edited under the supervision of M.E.J. Richardson
imp.	imperative
impf.	imperfect
inf.	infinitive
interrog.	interrogative
Jastrow	Jastrow, <i>A Dictionary of the Targumim, the Talmud Babli and Yerushalmi, and the Miraschic Literature</i>
JBA	Jewish Babylonian Aramaic
John Eph.	Cureton, <i>The Third Part of the Ecclesiastical History of John of Ephesus</i> .
Josh. Styl.	Wright, <i>The Chronicle of Joshua the Stylite</i>
JPA	Jewish Palestinian Aramaic
Jul.	Hoffmann, <i>Julianos der Abtrünnige</i>
KAHAL	Dietrich–Hunziker–Amet, <i>Kurze Ausgabe des Hebräischen und Aramäischen Lexikons zum Alten Testament von Ludwig Koehler und Walter Baumgartner</i>
Kal-w-Dim.	Wright, <i>The Book of Kalilah and Dimnah</i>
KB	The Koehler–Baumgartner “family”: KBL 1 <sup>st</sup> and 2 <sup>nd</sup> edition; HALAT; HALOT.
KBL	Koehler–Baumgartner, <i>Lexicon in Veteris Testamenti Libros</i>
KPG	Falla, <i>A Key to the Peshitta Gospels</i>
LEH	Lust–Eynikel–Hauspie, <i>Greek-English Lexicon of the Septuagint</i>
LSJ	Liddell–Scott–Jones, <i>A Greek–English Lexicon</i>
LXX	Septuagint
m.; masc.	masculine
ms.; mpl.	masculine singular; masculine plural
MT	Masoretic Text
NP	noun phrase

pass.	passive
PBerl, Zill	Zilliacus, <i>Vierzehn Berliner griechische Papyri</i>
perf.	perfect
Pesh. OT	The Peshitta to the Old Testament
POS	Part of speech
PGM	Henrichs–Preisendanz, <i>Papyri Graecae magicae</i>
pl.	plural
pt., ptc.	participle
pred	predicate/predicative
prep.	preposition
pron.	pronoun
PRyl 2	Johnson–Martin–Hung, <i>Catalogue of the Greek and Latin Papyri in the John Rylands Library, Manchester. II: Documents of the Ptolemaic and Roman Periods</i>
repr.	reprinted
rev.	revised
s.; sg.	singular
<i>Sammelbuch</i>	Kiessling, <i>Sammelbuch griechischer Urkunden aus Aegypten</i>
Sim.	The Life of St. Simeon Stylites in vol. 2 of Act. Mart. (see above)
SLT	Source Language Tools (United Bible Societies)
Sokoloff, JBA	Sokoloff, <i>A Dictionary of Jewish Babylonian Aramaic</i>
Sokoloff, JPA	Sokoloff, <i>A Dictionary of Jewish Palestinian Aramaic</i>
Spic.	Cureton, <i>Spicilegium Syriacum</i>
st.	state
StudPal	Wessely, <i>Studien zur Palaeographie und Papyruskunde. 8: Griechische Papyrusurkunden kleineren Formats</i>
subst.	substantive
Syr <sup>c</sup>	Curetonian Version, ed. Burkitt
Syr <sup>h</sup>	Harklean Version, ed. Juckel in Kiraz, <i>Comparative Edition</i>
Syr <sup>p</sup>	Peshitta Version, ed. Pusey–Gwilliam (Gospels) and British and Foreign Bible Society (rest of the New Testament)
Syr <sup>s</sup>	Sinaitic Version, ed. Lewis
Targ.	Targum
<i>Thesaurus Syriacus</i>	R. Payne Smith, <i>Thesaurus Syriacus</i>
UPZ	Wilcken, <i>Urkunden der Ptolemäerzeit (ältere Funde) I. Papyri aus Unterägypten</i>
*	indicates a possible but unattested form
<	derived from



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and applied, are often pertinent to another. The third is the emergence of electronic lexica, which requires attention to advances in computational linguistics. Thus our planning for a Classical Syriac-English lexicon for a new generation is not pursued in isolation, but embraces a multi-disciplinary understanding of what is taking place in the study of other ancient languages and in the wider worlds of lexicography, linguistics and digital technologies.

## AN INTERDISCIPLINARY ADVENTURE

From a personal perspective, to describe the progress of the ISLP as worthwhile would be a wild understatement. It has been no less than a challenging joy. The reasons are easy to locate: the group's cooperative spirit, goodwill, and willingness to share editorial and other responsibilities, the commitment of the volume editors, the enjoyment and benefits we derive from each other's company and critiques, the quiet enthusiasm and professionalism of our publisher, George Kiraz of Gorgias Press, and the clear and attainable yet visionary goals that the group has set itself.

We now also benefit from the participation of Kristian Heal and Robert Owens who joined the ISLP in 2005. In 2006, founding-member Dean Forbes made the difficult decision to leave the group. He and his colleague Francis Andersen are seeking to bring a life's work to completion, and the project has reached that finitude point when they must devote every available moment to it. We record here our gratitude to Dean for the time, wisdom, and pioneering research he has contributed to the ISLP, and for his continuing interest and support.

One of the aims of the ISLP is to be collaborative and interdisciplinary. We have sought to incarnate this goal in the fields of research we represent, but we did not foresee the extent to which this aim would be made a reality by others, too many to name here. We take this opportunity of thanking them for participating in the ISLP sessions at the Annual SBL Meeting in Philadelphia, 2005, and the International SBL Meeting in Edinburgh, 2006, and for their Greek, Hebrew, and Syriac contributions to this volume.

As 2005 drew to its close, further colour and breadth was added to the volume when John Lee, then SBL Chair of Biblical Lexicography, asked whether we might also include peer-reviewed papers on Hebrew lexica from the 2004 session at the SBL Annual Meeting in San Antonio. We are honoured that their authors have chosen to publish in the ISLP series.

In 2007 the collaborative and interdisciplinary aims of the ISLP and The Turgama Project (Leiden University), directed by Wido van Peursen, were enhanced even further when the two projects formed a partnership in which each retains its independence but seeks cooperation with the other in areas of mutual interest.

Our hope is that those from language disciplines other than Classical Syriac will gain as much as the ISLP group has from the conversation and co-operation that has begun. We look forward to its continuance.

Terry Falla, series editor



## INTRODUCTION

# SYRIAC LEXICOGRAPHY BETWEEN GENERAL LINGUISTICS AND SEMITIC PHILOLOGY

This volume is based on the papers presented at the seminars of the International Syriac Language Project (ISLP) at the Annual Meeting of the Society of Biblical Literature (SBL), Philadelphia, 19–22 November 2005, and at the SBL International Meeting, Edinburgh, 2–6 July 2006. These meetings continued the work done in the previous ISLP seminars at the SBL International Meetings in Cambridge (2003) and Groningen (2004). The proceedings of the Cambridge meeting, edited by A. Dean Forbes and David G.K. Taylor, were published in 2005 as volume 1 of the series *Perspectives on Syriac Linguistics*.<sup>1</sup> David Taylor's *Bibliography of Syriac Printed Lexica*, which is an elaborated version of his contribution to this meeting, appeared as volume 2 of this series. Volume 3 contains the proceedings of the Groningen meeting.

At the Philadelphia and Edinburgh meetings a number of Greek and Hebrew lexicographers participated in the ISLP seminars, which resulted in a fruitful exchange. We are grateful that the lexicographers working with different languages and corpora who had presented a paper at one of the ISLP sessions chose to have their papers published in our proceedings. They have been included in the section “Interdisciplinary Perspectives.” This section contains also some papers presented in the Biblical Lexicography sessions at the SBL Annual Meeting, San Antonio, 20–23 November 2004.

The ISLP is a heterogeneous group of Syriacists, biblical scholars, linguists, and computational linguists. As a consequence, the reflections and discussions about a future Syriac lexicon take place at the crossroads of Syriac linguistics and literary studies, Syriac lexicographic practice—both in the Western scholarly tradition and in the Syriac tradition—and corpus analysis and computational linguistics. Because research into the Syriac language and texts is deeply embedded in Semitic philology, we have chosen “Syriac lexicography between general linguistics and Semitic philology” as the theme of the present volume. The five chapters on Biblical Hebrew lexicography as well as the one on Greek lexicography show that in these disciplines, too, the tension or interaction between traditional philology and modern linguistics is one of the main challenges at the beginning of the twenty-first century.

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<sup>1</sup> Forbes–Taylor, *Foundations for Syriac Lexicography I*.

Two members of the ISLP group, Janet W. Dyk and Wido van Peursen, participated in CALAP (Computer-Assisted Linguistic Analysis of the Peshitta), a joint research project of the Peshitta Institute Leiden and the Werkgroep Informatica of the Vrije Universiteit Amsterdam, which started at the end of 1999 and continued till 2005.<sup>2</sup> Van Peursen is also the director of the successor of the CALAP project, “Turgama: Computer-Assisted Analysis of the Peshitta and the Targum: Text, Language and Interpretation,” which began in 2005.<sup>3</sup> The CALAP and Turgama projects have been made possible by generous grants from the Netherlands Organization for Scientific Research (NWO). At the Edinburgh meeting three other members of the Turgama project group presented papers in the ISLP seminars, and these have been included in the present volume.<sup>4</sup>

## PART 1: LEXICOGRAPHY AND MORPHOLOGY

The first four chapters of this volume deal with morphological issues. Each of these is a product of the Turgama project (see above). The computational analysis of Syriac and other Aramaic texts raises questions about lemmatization, grammatical categorization and morphological analysis that have received relatively little attention in traditional Syriac lexicography. The available Syriac dictionaries are more often concerned with the attribution of meaning (semantics) than with a correct treatment of morphology. However, as Dirk Bakker remarks in the first paragraph of chapter 1, “a modern dictionary should not only meet the needs of a translator, but also those of a linguistic scholar.” Each of the chapters dealing with morphology touches upon inconsistencies or inaccuracies in the traditional dictionaries and grammars.

One inaccuracy concerns the lemmatization and presentation of the third-weak verbs. In Syriac dictionaries the distinction between third-Alaph and third-Yodh verbs is often obscured. Though this will not bother users who are mainly interested in the meanings of a certain word, the information is essential to one interested in morphology. In chapter 1 Dirk Bakker argues that a modern dictionary should meet the modern demands of linguistic accuracy and should provide the full information as to the identity of the lexeme.

Syriac dictionaries are often inconsistent in their treatment of feminine nouns. Sometimes they occur under their masculine equivalent, sometimes they do not. Thus in CSD ܠܘܩܝܘܬܐ, “lioness,” appears under ܠܘܩܝܘܬܐ, “lion,” but ܠܘܕܘܬܐ, “goddess,” appears as a separate entry rather than under ܘܕܐܘܬܐ. Percy S.F. van Keulen presents in chapter 2 a design for the

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<sup>2</sup> For the background of the CALAP project and the analytical procedures used see Dyk’s description in her contribution to the present volume and further Van Keulen–Van Peursen, *Corpus Linguistics and Textual History*.

<sup>3</sup> Another Turgama paper presented at the ISLP seminar in Philadelphia, Van Peursen’s “Corresponding Phrase Patterns in the Masoretic Text and the Peshitta and their Significance for Syriac Lexicography,” is not included in the present volume. An elaborated version of this presentation can be found in “Part Three: Phrase Structure” of Van Peursen’s monograph *Language and Interpretation in the Syriac Text of Ben Sira*.

<sup>4</sup> In 2007 a partnership between the ISLP and the Turgama project was established.

morphological analysis of feminine nominal endings and suggests ways to make a more precise distinction between derivation and inflection and to account for this distinction in the lemmatization and description of lexemes in a dictionary.

Inconsistency is also found in relation to lemmatization of verbal stems. In chapter 3 Wido van Peursen discusses verbs beginning with *ša-*. Their grammatical analysis (as quadrilateral verbs or as formations of a distinguished verbal stem, the Shaphel) and the related question of their lemmatization (under the Shin or under the tri-radical roots from which they derive) differs from dictionary to dictionary as well as from lexeme to lexeme within a single dictionary. Van Peursen distinguishes various categories and offers suggestions for the treatment of these forms in Syriac lexica.

Yet another inconsistency concerns the inclusion of clitics in separate entries. It is a remarkably persistent practice in Hebrew and Syriac lexicography that proclitics such as the preposition *š* are included in the dictionaries, whereas enclitics such as the “pronominal suffixes” are not. In chapter 4 Constantijn J. Sikkel argues that in both cases we are dealing with clitics with lexeme status and that treating them differently is linguistically unjustifiable. If the proclitics are to be included in our dictionaries, which is indeed necessary due to their lexeme status, then the enclitics should be included as well.

## **PART 2: LEXICOGRAPHY AND SYNTAX: PART OF SPEECH ATTRIBUTION**

Chapters 5 and 6 deal with an important syntactic issue, namely the assignment of part of speech. Within the realm of syntax the situation is similar to that of morphology mentioned above: the linguist will often not find the linguistically relevant information in the lexicon. A. Dean Forbes quotes in chapter 6 William Labov’s lament in 1973 that “[t]he description of meanings of words has been left to the lexicographers.” In recent years, however, the beginnings of a theoretical framework have emerged, based on the insight that grammar and lexicography are closely related. Terry C. Falla is of the opinion that in Semitic lexicography “a partnership between grammarian and lexicographer” is crucial. One of the areas in which many lexica are poor concerns the grammatical classification of words, often referred to as their part of speech. The part of speech assignment has been one of the main concerns at ISLP meetings from the beginning.<sup>5</sup>

In chapter 5, “Grammatical Classification in Syriac Lexica: A Syntactically Based Alternative,” Terry C. Falla discusses the question as to whether a word’s part of speech is determined by morphology or by syntax, in other words, whether it is an inherent feature of a word or something that is determined by the syntactic context in which it occurs. He shows that in the Syriac and Hebrew lexicographic tradition, part of speech assignment on the basis of morphology and syntax has been the norm, although the application of this

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<sup>5</sup> See Dyk, “Desiderata for the Lexicon from a Syntactic Point of View;” Dyk, “Considerations of Form and Function in the Treatment of the Passive Participle;” Forbes, “Squishes, Clines, and Fuzzy Signs;” Forbes, “Distributionally-Inferred Word and Form Classes in the Hebrew Lexicon.”

norm has often increased complexities and inconsistencies. Following Francis I. Andersen's remarks on Biblical Hebrew lexicography, he pleads for an approach in which function alone determines the part of speech.<sup>6</sup> In chapter 6 Forbes, too, advocates an approach in which part of speech is assigned on the basis of distribution rather than inflection.<sup>7</sup> Falla's and Forbes' contributions nicely complement each other. Falla's argument for part of speech assignment on the basis of function is the outcome of an overview of the various ways in which this problem has been dealt with in the history of scholarship. Forbes shows how future researchers can implement the assignment of part of speech on the basis of distribution in a computational analysis. He also demonstrates the benefits of approaches that allow for mixed and gradient categories.

In the revision of his article appearing in this volume, Falla enters into direct dialogue with Janet W. Dyk in her appeal to maintaining the elegance of the language system in the lexicon entries. Highly honoured by the scholarly attention paid to her position, Dyk looks forward to the ongoing discussion on the topic. At Falla's request, Dyk presented a paper at the Groningen meeting dedicated exclusively to the passive participle. In essence, the difference between the positions of Dyk and Falla lies in how much syntactic theory a lexicon user is expected to know and apply in order to identify correctly when a participle is functioning as a verb, noun, adjective, or even adverb. Dyk attempts to account for all phases of the language within a single, encompassing description. At various phases, the language will make a different selection of the syntactic possibilities contained within the language system, but a composite description will have to encompass the complete set of syntactic possibilities. Only by producing lexica which reflect a limited corpus can this necessity be avoided. While agreeing with the value of reflecting the language system in lexical entries, Falla maintains the necessity of separate lexical entries for the various functions of a participial form in particular contexts, though under the influence of Dyk he now advocates adding an annotation as to its morphological form. He further expands this approach to deal with other forms, such as *nomina agentis*, which are derived from verbal forms, thus enriching the lexicon with more information on the language system.

### PART 3: WORDS, TEXTS, AND CONTEXTS

Dealing with Classical Syriac lexicography means dealing with ancient corpora, among which

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<sup>6</sup> This is also the policy that Terry Falla follows in his *Key to the Peshitta Gospels* from volume 2 onwards. Note that the contributions of Dyk and Forbes mentioned in note 5 also deal with the relationship between a word's part of speech and the syntactic context in which it occurs.

<sup>7</sup> For a different view see Dyk, "Syntactic Desiderata for the Lexicon," 144–46. Dyk argues that "a part of speech is fairly stable in its syntactic functioning, and is perhaps properly a reflection of the distribution of an item." In the syntactic analysis in the CALAP and Turgama projects, a distinction is made between the default part of speech of a lexeme and its phrase-dependent part of speech in a given context. Dyk shows that the transitions from the default part of speech to the phrase-dependent part of speech follow a well-established order, which also shows that a word's part of speech in a certain context is not as arbitrary as it may seem.

the Syriac Bible occupies an important place. The study of the Peshitta, being the product of translation and the object of textual transmission, brings with it the philological and comparative analysis of ancient sources. This has been a matter of concern in previous ISLP meetings, in which several papers have been presented about the Syriac versions of the New Testament.<sup>8</sup> In chapter 7 of the present volume, “A Synopsis-Based Translation Concordance as a Tool for Lexical and Text-Critical Exploration,” Janet W. Dyk focuses on the Syriac Old Testament and its comparison with the Hebrew text. She shows how word-level correspondences based on a synopsis at clause-constituent level can contribute to the comparative linguistic analysis of Hebrew and Syriac and to the text-critical and text-historical analysis of the Peshitta. In the Books of Kings she found numerous examples where the choice for a translation equivalent seems to have been influenced by the phonetic characteristics of a word in the source text, rather than by its meaning. She proposes that this phenomenon should be added to the list of traditionally accepted text-critical explanations for differences between source text and translation.

The problems related to the analysis of ancient corpora concern not only the processes of translation and textual transmission but also the distance that separates the cultures in which these texts originated from our own cultures. In chapter 8 James K. Aitken addresses the role of the socio-historical background in lexicographic work. The need to bridge the gap between ancient and modern cultures and the insights about the human language faculty in cognitive linguistics have led to some changes in lexicographic practices, such as the preference for definitions as opposed to glosses or the inclusion of encyclopaedic information in lexica. Aitken draws upon examples from Hebrew and Greek lexicography. He also addresses the question of how to find a balance between the application of linguistic theory on the one hand and the needs of the users to see clearly the meaning of the words in the texts that they are studying on the other.<sup>9</sup>

The question of how we should deal with the context—both the textual and the cultural—in the linguistic and semantic study of ancient languages is also addressed in chapter 9: “New Tools and Methodologies for Biblical Lexicography,” by Reinier de Blois. De Blois describes how the interaction between “text” and “language” is accounted for in the “textual tools” and “lexical tools” developed for the program Source Language Tools of the United Bible Societies. Special attention is paid to the Semantic Dictionary of Biblical Hebrew. This project, like some of the dictionary projects mentioned in the section “Interdisciplinary Perspectives,” integrates insights from semantic theory in the development of an electronic lexicon.

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<sup>8</sup> See Williams, “On Matching Syriac Words with Their Greek Vorlage;” Williams, “The Semantics of the Epistles of the Peshitta and Its Implications for Syriac Lexicography;” Juckel, “Should the Harklean Version Be Included in a Future Lexicon of the Syriac New Testament?” Juckel, “Towards an Analytical Concordance of the Harklean Version.”

<sup>9</sup> On this questions see also Salvesen, “The User versus the Lexicographer.”

#### PART 4: INTERDISCIPLINARY PERSPECTIVES: HEBREW AND GREEK LEXICOGRAPHY

In the sections described above, some chapters, especially those by Forbes, Aitken and De Blois, draw upon experiences from Hebrew and Greek lexicography. There are long-standing scholarly traditions of Semitic and Greek lexicography, in which biblical lexicography occupies a prominent place. In these disciplines lexicographic practices have been changed and modified over the last decades in response to the challenges of modern semantics and lexicography, the same challenges that Syriac lexicographers have to face today. We have therefore included a separate section in which the experiences from these disciplines are scrutinized a bit further.<sup>10</sup>

The section contains five chapters on the Biblical Hebrew lexicographic tradition and one on Greek lexicography. Here again we see the power of tradition in the creation of new dictionaries. This is especially evident from the genealogical relationship between some of the most influential Hebrew dictionaries, which can be attributed to two “families.” We can also note the interaction between on the one hand the philological tradition, with an emphasis on etymology, comparative Semitics and textual criticism, and on the other hand attempts to incorporate insights from modern linguistics regarding semantic fields, text semantics, syntactic and paradigmatic relations, and cognitive linguistics.

The section starts with four chapters about the two most influential families of Hebrew dictionaries: the Gesenius/BDB family and the Koehler–Baumgartner family. For each family there is a description of the family and its history, followed by a presentation of an ongoing revision project. In chapter 10 Regina Hunziker-Rodewald discusses the history of the Gesenius/BDB family, its genealogy, and its main representatives: the 17th edition of Wilhelm Gesenius’ *Hebräisches und Aramäisches Handwörterbuch über das Alte Testament*, edited by Frants Buhl (1915), the 18th edition, of which the first volume appeared in 1987, and *A Hebrew and English Lexicon of the Old Testament* by Francis Brown, S.R. Driver, and Charles A. Briggs (BDB) of 1907.<sup>11</sup> In the following chapter Jo Ann Hackett and John Huehnergard present their work on a revision of BDB. BDB is still a most valuable and authoritative dictionary, but now, a century later, needs revision in some areas, including that of etymology.<sup>12</sup> Especially the etymological sections in the various dictionaries have changed considerably over the last century. The discoveries of new text collections, such as the material from Ugarit, led to new insights, and the research into texts that were discovered earlier produced useful and reliable sources such as the *Chicago Assyrian Dictionary*.

<sup>10</sup> For the reason behind this decision see also the general series preface by Terry Falla.

<sup>11</sup> According to its title page, BDB is “based on the lexicon of William Gesenius, as translated by Edward Robinson; and edited with constant reference to the thesaurus of Gesenius as completed by E. Rödiger, and with authorized use of the latest German editions of Gesenius’s *Handwörterbuch über das Alte Testament*.”

<sup>12</sup> But the so-called etymological data in Hebrew dictionaries are not truly etymological but rather comparative, providing the cognates from other Semitic languages; cf. Michael O’Connor, quoted by Hunziker-Rodewald in Chapter 10, note 3.

The other influential family is that of Koehler–Baumgartner, discussed by John Kaltner in chapter 12. To this family belong the first edition of KBL (1948–1957), the second edition (1958), the third edition, also known as HALAT (1967–1995), and the English translation and revision known as HALOT (1994–2000).<sup>13</sup> A revision project, called *A Companion to HALOT* is currently under way in Beer-Sheva. In chapter 13 Regina Hunziker-Rodewald discusses another revision project that aims at an abridged, updated, and corrected version of HALAT that will appear under the name KAHAL. In the KAHAL project as well, it is the etymological information that will be thoroughly revised.

In chapter 14 James K. Aitken discusses two other lexica. The first one, by Zorell, was a contemporary of the first edition of KBL. Zorell's use of definitions instead of glosses and his arrangement of the material, so that the etymological information came at the end of the entry, were innovative at that time. Alonso Schoekel's lexicon was completed almost at the same time that the *Dictionary of Classical Hebrew* (DCH) project was launched. Its most striking feature is the arrangement according to semantic fields. Whereas Zorell was in his time innovative in giving the etymological information at the end, rather than at the beginning of the entries, Alonso Schoekel and DCH have removed it altogether. These changes represent a shift in the main interests of biblical lexicographers from etymology and comparative Semitic evidence to context and semantics.

The changes in lexicographic practices that can be observed in Alonso Schoekel's dictionary and DCH compared with earlier dictionaries do not mean, however, that etymology has become outdated in the last decades of the twentieth century. As appears from the progress reports of the BDB revision project and the KAHAL project, other modern lexicographers of Biblical Hebrew still attach a high value to etymological evidence. The debate between those who think that etymological references are unnecessary and should be avoided in a modern dictionary (thus David Clines, the editor of DCH) and those who consider it "a fundamental part of any lexicon of an ancient and incompletely-attested language such as Biblical Hebrew" (Hackett and Huehnergard in the present volume) will continue in the twenty-first century.

The organization of a lexicon according to semantic fields, which in Biblical Hebrew lexicography is represented by Alonso Schoekel's dictionary, is also well-known from New Testament studies. In chapter 15 Reinier de Blois discusses Louw's and Nida's *Greek-English Lexicon of the New Testament Based on Semantic Domains*. Although this dictionary marked an important step forwards in biblical lexicography, the underlying model of componential analysis of meaning has become outdated. De Blois discusses how the work of Louw and Nida can be improved upon from a perspective of cognitive linguistics. He argues that the distinction between cognitive categories (also called semantic fields or domains) and cognitive frames (also called contextual semantic domains) could be helpful in overcoming

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<sup>13</sup> Another member of this family is Holladay's *Concise Hebrew and Aramaic Lexicon*, based on the second edition of KBL.

the lack of coherence in Louw's and Nida's work. A cognitive category is a set of concepts that are somehow related, referring to paradigmatic relationships between words. Cognitive frames concern the way in which concepts are usually linked with other concepts that interrelate with them. The cognitive category of FRUITS, for example, can be related to the categories of HORTICULTURE, COMMERCE, or FOOD. This refers to the syntagmatic relationship between words.

We hope that the present collection shows some directions in which modern Syriac lexicography should proceed, meeting the exigencies of a sound linguistic analysis of morphological features (Part One), using grammatical categories that agree with current insights from general linguistics (Part Two), doing justice to the particularities of the ancient sources that serve as the basis for the linguistic analysis, both regarding the contexts in which they originated and regarding the processes of transmission through which they have come down to us (Part Three), and learning from the experiences of Hebrew and Greek lexicographic projects (Part Four). The goals of the International Syriac Language Project to lay the foundations for Syriac lexicography in the twenty-first century, following an approach that builds upon the valuable achievements of traditional Semitic philology while incorporating insights from general linguistics and computational linguistics, can only be achieved by means of a joint effort of scholars from various disciplines. For this reason we are thankful to each author who has contributed to the present volume.

Janet Dyk & Wido van Peursen, volume editors

**PART ONE**  
**LEXICOGRAPHY AND MORPHOLOGY**



# CHAPTER 1

## LEMMA AND LEXEME: THE CASE OF THIRD-ĀLAPH AND THIRD-YODH VERBS

*Dirk Bakker*  
*Turgama Project, Peshitta Institute Leiden*

Traditional dictionaries of Syriac and other Aramaic dialects do not always provide all the information required to meet modern linguistic needs. Often the entries in these dictionaries are ambiguous as to the morphological structure of words, and a clear distinction between a lexeme and its inflectional affixes is not provided. The lemmas often consist of inflected forms, and the information in the entries is insufficient for determining the identity of the lexeme. A result of these inaccuracies is the possible loss of distinction between separate types of lexemes, a clear example of which is the treatment of third-Ālaph and third-Yodh verbs in Syriac and other Aramaic dialects. While the different grammars recognize a morphological distinction between these two verb types, this is rarely reflected in the dictionaries. A modern dictionary cannot allow such a loss of information to occur, but should meet the needs both of a linguistic scholar and of a translator. The entries should provide full linguistic information on the words they cover, granting a prominent position to the lexeme. The lexeme stands at the basis of word formation, and as such is an indispensable piece of information for the study of the morphological behaviour of grammatical forms.

### 1. INTRODUCTION: THE PROBLEM OF IDENTIFYING LEXEMES

In order to perform a sound and detailed analysis of linguistic entities, the first priority is to identify the elements that form the building blocks of those entities.<sup>1</sup> This is even more so when those building blocks are used as the starting point for an analytical model. One such model is used in the Turgama project at the University of Leiden (the Netherlands), which aims at performing computer-assisted linguistic analyses of Syriac and Aramaic texts at different linguistic levels. The model starts from morphological level; from there, it works its way up to the higher levels, such as phrase and clause syntax and text hierarchy. The analyses of the lower levels are integrated in those of the higher ones, thus enabling an overall view of the linguistic peculiarities of the corpus at hand.

Before an analysis can be performed, the computer program has to know which elements it is dealing with. For each linguistic level, the constituents that form its building

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<sup>1</sup> The research lying behind this contribution has been supported by the Netherlands Organization for Scientific Research (NWO).

blocks need to be marked. At the clause and text-hierarchical levels these constituents are phrases and clauses, respectively; at word level they are morphemes.

Isolating the morphemes entails distinguishing lexical morphemes from inflectional ones by means of indicating the position and type of their boundaries. Simple as this process may seem, it cannot be performed without a clear notion of those boundaries and of the identity of the adjacent morphemes. Although in many cases identification of the morphemes does not cause too much trouble, there are certain instances where it proves difficult to discern where a specific morpheme ends and where the next one begins. One such case will be the subject of the present article, and concerns the marking of lexical morphemes, or lexemes.

The identification of lexemes is important to satisfy the strict rules of a morphological model, but also has to do with questions that are relevant to any linguistic field. The lexeme is not just an arbitrary representational form: it is the entity which underlies all (inflected) forms of the paradigm.<sup>2</sup> As such, it stands at the basis of word formation, and therefore is crucial for understanding the morphological behaviour of grammatical forms.

In many cases, the lexeme is simply the element that remains when all inflectional affixes are removed,<sup>3</sup> and as such it often corresponds to a dictionary lemma.<sup>4</sup> Thus for a great part, the identification of lexemes can be carried out by following the lemmas in existing dictionaries. This was the initial approach of the Turgama project, using traditional lexica such as R. Payne Smith's *Thesaurus Syriacus* and J. Payne Smith's *Compendious Syriac Dictionary*.

In the course of the project it has become clear that the available dictionaries are not always adequate for determining the identity of the lexemes. An important factor in this respect is that many of the lemmas do *not* consist of the form which remains when all inflection is removed, but rather of forms which are inflected. Quite common, for instance, is the convention of listing verbs by their Peal perfect 3ms,<sup>5</sup> or nouns by their emphatic state,<sup>6</sup> and so on. Since these forms are inflected, by definition they are not equivalent to the lexeme (see note 3).

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<sup>2</sup> Crystal, *A Dictionary*, 265–66. See Sikkell, chapter 4 in the present volume, for a more detailed definition of a lexeme.

<sup>3</sup> Distinction should be made between a *lexeme* and a *root*. Although it is true that both entities underly a number of realizations, they do so in different ways. The lexeme underlies paradigmatic “surface” forms (which are the result of *inflection* of the lexeme), whereas the root underlies lexemes (which are the result of *derivation* of the root). This means that where two forms may be related back to the same root, they may not necessarily be related back to the same lexeme.

<sup>4</sup> I use the term “lemma” in its strictest sense, referring solely to the heading, or headings, of a dictionary entry. With the term “entry” I refer to the whole section that is dedicated to a word.

<sup>5</sup> Thus Brockelmann, *Lexicon*; R. Payne Smith, *Thesaurus Syriacus*; J. Payne Smith, *Dictionary*; Brun, *Dictionarium*; Costaz, *Dictionnaire*. Exceptions to this practice are the hollow verbs, which R. Payne Smith and J. Payne Smith list by their root (followed by the perfect). Brockelmann, Costaz, and Brun give the hollow verbs in their perfect, but alphabetize the lemmas as if the second consonant were a Waw.

<sup>6</sup> Thus Brockelmann, *Lexicon*, and Costaz, *Dictionnaire*. R. Payne Smith, J. Payne Smith, and Brun

In such cases, the identification of the lexeme can only be performed in an indirect manner, which involves the comparison of as many paradigmatic forms of the word at hand as possible, compelling the linguist to the lengthy process of scanning as many external sources (texts, grammars, other dictionaries, concordances, and so on) as are available. The fact that the dictionaries often provide a number of such paradigmatic forms in their entries does aid in this process to a certain extent, but since these forms are also inflected, they yield no more explicit information as to the lexeme than the lemma does.

This insufficiency of linguistic information is unsatisfactory, since it can lead to incorrect analyses of words and their inflection. The following section will illustrate a specific case where this problem is at work: the case of third-weak verbs in Syriac and other Aramaic dialects.

## 2. THIRD-WEAK VERBS

Third-weak verbs in the Semitic languages all go back to Proto-Semitic roots ending in *u*, *i*, or *'* (later to become Waw, Yodh, and Alaph,<sup>7</sup> respectively). Over time, complex processes of analogy caused the distinction between these three root types to become less pronounced.<sup>8</sup> For Aramaic, the roots started to merge together already in an early stage of the language. By the Old Aramaic period, the III-*u* verbs had completely merged with the III-*i* verbs, as had the majority of the III-*'* verbs.<sup>9</sup> However, a small portion of the latter did not follow the route of mingling with III-*i* roots and retained their characteristics of genuine III-*'* roots.<sup>10</sup> The process is depicted schematically in figure 1:

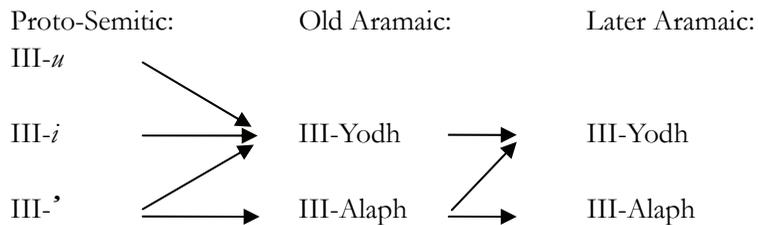


Figure 1: Development of third-weak verbs in Aramaic

This course of events means that in Aramaic two types of third-weak verbs survived: a great majority of third-Yodh verbs (either genuine or originating from III-*u* or III-*'* verbs) and a

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generally list their nouns by the absolute state, followed by the emphatic state, but in some cases this order is reversed.

<sup>7</sup> I am aware of the fact that in Aramaic dialects other than Syriac the name for this consonant is “Aleph,” but since the main focus in this article lies on Syriac, I will use the name “Alaph” throughout.

<sup>8</sup> Brockelmann, *Grammatik*, §182.

<sup>9</sup> The merging of III-*'* with III-*i* verbs probably started about the 9<sup>th</sup> century BCE, as the result of the quiescence of syllable-final *'*, see Beyer, *Texte*, I:104.

<sup>10</sup> Brockelmann, *Grundriss*, I:628, 629.

very small number of genuine third-Alaph verbs. As we will see, the members of the latter category differ from dialect to dialect. This section discusses the situation in Syriac (section 2.1), and proceeds with a brief survey of some other Aramaic dialects (section 2.2).

## 2.1 Third-Weak Verbs in Syriac

### 2.1.1 Grammars

That the number of genuine third-Alaph verbs in Syriac is small indeed can be concluded from the traditional grammars, such as those of Duval, Nöldeke, Brockelmann, Ungnad and Costaz. Of these, Costaz gives the most extensive list of examples, comprising the eight verbs **ܘܫܐ**, “console,” **ܘܫܘܥܐ** “rejoice,” **ܘܫܘܠܐ** “defile,” **ܘܫܘܠܘܥܐ**, “ornate,” **ܘܫܘܠܘܥܐ**, “defile,” **ܘܫܘܠܘܥܐ**, “instruct,” **ܘܫܘܠܘܥܐ**, “hate,” and **ܘܫܘܠܘܥܐ**,<sup>11</sup> “become black.”<sup>12</sup> From Brockelmann we learn that **ܘܫܘܥܐ** and **ܘܫܘܠܘܥܐ** actually behave differently,<sup>13</sup> and Nöldeke informs us that **ܘܫܘܠܘܥܐ** has completely gone over to the third-Yodh paradigm,<sup>14</sup> which leads us to exclude these three verbs from the proper third-Alaph category. Together with Nöldeke,<sup>15</sup> we can assume that about the only proper third-Alaph verbs left in Syriac are **ܘܫܘܥܐ**, **ܘܫܘܠܘܥܐ**, **ܘܫܘܠܘܥܐ**, and **ܘܫܘܠܘܥܐ**.

Small as the number of remaining third-Alaph verbs may be, that they are different from third-Yodh verbs can be clearly seen in their paradigmatic behaviour. In the paradigms of both verb types the original third radical is retained in a considerable number of forms:

For third-Yodh verbs, examples of forms showing the Yodh are:

- Perfect Peal, e-type, all forms, for example, **ܘܫܘܥܐ**
- Perfect Peal, a-type, 2<sup>nd</sup> person, for example, **ܘܫܘܥܐ**
- Perfect of derived stem formations, for example, **ܘܫܘܥܐ**, **ܘܫܘܥܐ**
- Participle feminine, all stem formations, for example, **ܘܫܘܥܐ**, **ܘܫܘܥܐ**
- Infinitive of derived stem formations, for example, **ܘܫܘܥܐ**
- Infinitive Peal with object suffixes. for example, **ܘܫܘܥܐ**

For the third-Alaph verbs, forms where the Alaph appears are:

- Perfect of derived stem formations, for example, **ܘܫܘܥܐ**, **ܘܫܘܥܐ**
- Participle Peal active/passive, for example, **ܘܫܘܥܐ**, **ܘܫܘܥܐ**
- Perfect Peal, for example, **ܘܫܘܥܐ**<sup>16</sup>

<sup>11</sup> Also written **ܘܫܘܥܐ**, derived from Greek *καίνεος*, see Nöldeke, *Grammatik*, §117, n. 2.

<sup>12</sup> Costaz, *Grammaire*, §435.

<sup>13</sup> Brockelmann, *Grammatik*, §178, Anm. 2. These verbs, which originally have an Alaph both as their 2<sup>nd</sup> and 3<sup>rd</sup> radical, form a special category. In the Pael and Ethpaal, they can either follow the third-Alaph or the third-Yodh paradigm, depending on the choice of optional variants, e.g., **ܘܫܘܥܐ** (third-Yodh paradigm), next to **ܘܫܘܥܐ** or **ܘܫܘܥܐ** (third-Alaph paradigm).

<sup>14</sup> Nöldeke, *Grammatik*, §172.

<sup>15</sup> Nöldeke, *Grammatik*, §172.

<sup>16</sup> Examples in the Peal are rare, since most third-Alaph verbs happen only to be used in the derived stem formations, see Nöldeke, *Grammatik*, §172C.

The characteristics of third-Alaph verbs are especially present in the derived stem formations Pael, Ethpaal, and Ettaphal. Here, the Alaph is not only consistently present, but even functions as a full consonant. Although it is no longer pronounced as such, its influence as a guttural is apparent, for in the perfect of the Pael and the Ethpaal the vowel between the two final letters is not *i* (as would be the case in a third-Yodh verb), but *a*, as would be the case in a verb ending in a guttural or Resh. Instead of \***حَد** (like **حَد**) we get **حَدَا** (like **حَدَا**). The same phenomenon occurs in the Aphel and the Ettaphal of some of the third-Alaph verbs: **أَلَعَا**, **أَلَعَا**.<sup>17</sup>

Retention of the original third radical is also visible in deverbalizations: many nouns derived from third-Yodh verbs retain the Yodh while those derived from third-Alaph verbs keep the Alaph, for example, **كَبِشَا** “he-goat,” **كُشَمَا**, “likeness,” and so on, versus **قُتِلَا**, “hatred,” **قُتِلَا**, “zeal.” Furthermore, some adjectives show traces of their third-Alaph origin, such as **كُفَا**, “foul.”<sup>18</sup>

These characteristics justify a separate treatment of third-Yodh and third-Alaph verbs as proposed by Muraoka in his *Basic Grammar*,<sup>19</sup> and encountered in traditional grammars.<sup>20</sup>

### 2.1.2 Dictionaries

Whereas the grammars recognize a clear distinction between third-Yodh and third-Alaph verbs, the picture in traditional dictionaries is less clear. Looking solely at the lemmas, it is difficult to discern whether the dictionaries recognize the same distinction, since those lemmas make it hard to determine exactly which verbs are considered third-Yodh and which third-Alaph. We shall see that the main cause for this unclarity is the representation form chosen for the lemmas.

For the present study, five Syriac dictionaries have been consulted: Brockelmann’s *Lexicon Syriacum*, R. Payne Smith’s *Thesaurus Syriacus*, J. Payne Smith’s *Compendious Syriac Dictionary*, Brun’s *Dictionarium Syriaco-Latinum*, and Costaz’ *Dictionnaire Syriaque-Français/Syriac-*

<sup>17</sup> Nöldeke, *Grammatik*, §172.

<sup>18</sup> Nöldeke, *Grammatik*, §§100–101. Among his examples of nouns derived from third-Alaph verbs, Nöldeke also lists **كُشَمَا**, “Gleichniss.” He thereby implicitly suggests that in addition to the five cases he mentions in §172, also **كُشَا**, “to pick out (lice, etc.),” is a third-Alaph verb. I have found no verbal paradigmatic support for this notion, however.

<sup>19</sup> In the section on third-Yodh verbs (§60), Muraoka adds in a note: “In spite of the fact that the basic form traditionally quoted as representative of this class of verbs, namely Pe. Pf. 3m.sg., is spelled with Alaf as the third radical, it is best to call them Third-Yodh for a number of reasons, one such being that, although the great majority of original and genuine Third-Yodh verbs behave in Syriac exactly like original Third-Alaph verbs, there do still exist a small number of genuine Lamadh-Alaf verbs,” *Basic Grammar*, §64, p. 52, n. 75.

<sup>20</sup> Duval, *Grammaire*, §§213, 214; Nöldeke, *Grammatik*, §§172, 176; Brockelmann, *Grammatik*, §§178, 182; Ungnad, *Grammatik*, §§40, 42; Costaz, *Grammaire*, §§435–53.

*English Dictionary*. All of these dictionaries quite consistently lemmatize verbs, regular or irregular, by means of a vocalized perfect 3ms.<sup>21</sup>

When we look up in these dictionaries the five genuine third-Alaph verbs mentioned in section 2.1.1 above, we can observe that their lemmas show a considerable amount of variety (see table 1, below). This variety is twofold. First, the dictionaries do not entirely agree with each other in the form(s) they give for each of the verbs. As we can see in table 1, only ܘܘܠܐ has been given the same lemma in all five dictionaries: the lemmas of the other four verbs (especially for ܘܘܠܐ and ܘܘܠܐ) differ for each dictionary. Second, there is also variation in appearance of the lemmas within a single dictionary, namely, in the morphological structure of those forms. If we look at CSD, for instance, we see that the five third-Alaph verbs are given no less than four different consonant-vowel patterns: (ܘܘ)ܘܘܠܐ for ܘܘܠܐ and ܘܘܠܐ, ܘܘܘܘܠܐ and ܘܘܘܘܠܐ for ܘܘܠܐ, and ܘܘܘܘܠܐ for ܘܘܠܐ and ܘܘܠܐ. The other four dictionaries show a similar variation, giving the impression that there is little uniformity in the nature of the five verbs.

This variation is a direct result of the choice to use the perfect 3ms. for their lemmas. Any morphological variety that this particular paradigmatic form shows in the corpora is reflected in those lemmas. As such, the dictionaries give an accurate representation of the situation in (part of) the language, but the choice to use the perfect is also problematic. Since the appearance of the perfect happens to differ to such an extent for the five third-Alaph verbs, it is hard for a dictionary user to determine to which class the verbs belong, let alone whether they belong to the *same* class.

Determining to which class the verbs belong is especially difficult in cases where the perfect of a third-Alaph verb is indistinguishable from that of a third-Yodh verb; that is, where it ends in ܘܘܘܠܐ. As we mentioned above, the behaviour of third-Alaph verbs is mostly visible in non-Peal forms, as the Peal paradigm of most third-Alaph verbs has partly or totally gone over to the third-Yodh paradigm. Such happens to be the case for the Peal of ܘܘܠܐ and ܘܘܠܐ, which is appropriately reflected in most of the dictionaries: the perfect gets the ܘܘܘܠܐ-ending. But, appropriate as it may be, choosing the perfect 3ms. as a lemma also gives the suggestion that ܘܘܠܐ and ܘܘܠܐ *completely* follow the third-Yodh paradigm. Forms like the participles ܘܘܘܠܐ, ܘܘܘܠܐ and ܘܘܘܠܐ, as well as the perfect ܘܘܘܠܐ and the Ettaphal ܘܘܘܠܐ,<sup>22</sup> show that this is not the case.

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<sup>21</sup> The only significant exception to this practice is the treatment of the hollow verbs by R. Payne Smith and J. Payne Smith, who give the root with a Waw. As mentioned in note 5, Brockelmann, Costaz, and Brun, although they give the perfect, have their lemmas of hollow verbs at such positions in the dictionaries as though the second consonant were a Waw.

<sup>22</sup> Nöldeke, *Grammatik*, §172C.

	Brockelmann	R. Payne Smith	J. Payne Smith	Brun	Costaz
כַּ	כַּ	כַּ, כַּא	כַּ, כַּא	כַּ, כַּא	-
יַחַ	23_	יַחַ, יַחַא	יַחַ, יַחַא	יַחַ	28 יַחַ, יַחַא
עַ	עַ	עַ	עַ	עַ	עַ
מַ	24_	מַ	מַ	26 מַ	-
לַ	25 לַ, לַא	לַ	לַ	27 לַ, לַא	29 לַ

Table 1: Third-Alaph Lemmas in Syriac Dictionaries

## 2.2 Third-Weak Verbs in Other Dialects of Aramaic

When we look at other dialects of Aramaic, we can observe similar inconsistencies. As in Syriac, the grammars and dictionaries seldom correspond to each other in their treatment of third-Alaph and third-Yodh verbs, and, similarly, the latter tend to obscure the distinction between the two verb types altogether. Furthermore, the dictionaries show a considerable amount of variety among themselves in their conventions of lemmatization. A difference with the dictionaries consulted for Syriac, which all use the vocalized perfect 3ms. as a lemma, is that some of the dictionaries consulted for the other Aramaic dialects use the root. While this representation form has the potential of avoiding the confusion caused by the use of the perfect 3ms., we will see that it is nonetheless an insufficient means for the distinction between third-Alaph and third-Yodh verbs.

In the remainder of this section a brief survey will be given of the treatment of third-Alaph and third-Yodh verbs by grammars and dictionaries of five different types of Aramaic: Biblical Aramaic, Targum Aramaic, Jewish Palestinian Aramaic, Jewish Babylonian Aramaic, and Samaritan Aramaic. The different tables are organized such that the columns contain the dictionaries that have been consulted, whereas the rows contain:

- A. A representative “control group” of third-weak verbs *not* characterized as third-Alaph (and, therefore, implicitly considered as third-Yodh verbs) by the grammar(s) consulted;
- B. The verbs characterized as third-Alaph by the grammar(s) consulted;
- C. (Only for Biblical Aramaic) A selection of third-weak verbs not characterized as third-Alaph by the grammar but apparently treated as such in some of the dictionaries.

<sup>23</sup> Brockelmann does not have a lemma for the verb יַחַ, but only for the adjective יַחַ, “impure.” Under that lemma, however, he does include two subsections on the verbal use, namely, the Pael and the Ethpaal, but no forms are given there, only translations. By not giving a lemma in the Peal, Brockelmann implies that יַחַ does not occur in that stem formation.

<sup>24</sup> Only the orthographic variant עַ.

<sup>25</sup> Under לַ, “teacher.”

<sup>26</sup> Under מַ, “caeruleus, fuscus.”

<sup>27</sup> Under לַ, “teacher.”

<sup>28</sup> Under יַחַ, “impure.”

<sup>29</sup> Under לַ, “teacher.”

### 2.2.1 Biblical Aramaic

Grammar: Rosenthal, *Grammar*.

Dictionaries: Ges<sup>17</sup>; Vogt, *Lexicon*; Beyer, *Wörterbuch*; KBL; HALAT; HALOT.

Rosenthal (section 126) states that remnants of only two real third-Alaph verbs are attested in Biblical Aramaic: **נשא**, “take,” and **שנא**, “hate”.

At first sight (see table 2, below), all of the dictionaries appear to reflect this assertion, since they unanimously give these two verbs with Alaph as the third radical, as opposed to the verbs that Rosenthal does not indicate as third-Alaph (category A). Upon closer examination, however, we see that this does not necessarily indicate a distinction with third-Yodh verbs. Gesenius, for instance, not only lists **נשא** and **שנא** with Alaph, but also some of the verbs in category A, for example, **בנא** and **ענא**. Admittedly, for some other verbs in that category he gives a lemma with a He as the third radical (for example, **הרה**) or an alternative form with He next to the form with Alaph (for example, **הוא**, **הרה**), while **נשא** and **שנא** only get a form with Alaph, but this practice is not consistent and can hardly be interpreted as reflecting a distinction between third-Alaph and third-Yodh verbs.

Vogt seems slightly more outspoken: as can be seen, the majority of his lemmas in category A are given a He as the third radical, rendering the distinction with those in category B more explicit. Still, even here some lemmas in category A end in Alaph (for example, the alternate form **הוא**), which is not what we would expect if Vogt really intended to indicate a distinction between third-Alaph and third-Yodh verbs.

Beyer, on the other hand, clearly distinguishes third-Yodh verbs from third-Alaph verbs, by listing the former with a Yodh and the latter with an Alaph. The same goes for KBL, HALAT, and HALOT, albeit there the third-Yodh lemmas are given a He.

Curiously, however, KBL, HALAT, and HALOT do not only list **נשא** and **שנא** as third-Alaph, but at least five more verbs: **חטא**, “sin;” **מחא**, “strike;” **מטא**, “arrive;” **מלא**, “be full;” **קרא**, “call”. These verbs are given as category C in table 2, below. As we can see, Beyer does not treat these five verbs as third-Alaph, but lists them in the same way as the other third-Yodh verbs. What is interesting, however, is that Gesenius and Vogt quite consistently list these verbs with an Alaph (except the alternate form **מטה** in Vogt). This casts a somewhat different light on the description above, since it gives the impression that they do reflect a difference between both verb types after all. However, that would leave unaltered the question of why both dictionaries also have lemmas with Alaph in category A.

Category	Ges <sup>17</sup>	Vogt, <i>Lexicon</i>	Beyer, <i>Wörterbuch</i>	KBL, HALAT and HALOT
A.	בנא הוא, הוה חזה ענא	בְּנָה הָרָא, הָרָה חָזָה עָנָה	בני הוי חזי עני	בנה הוה חזה ענה
B.	נשא שנא	נָשָׂא שָׁנָא <sup>30</sup>	נשא שנא	נשא שנא
C.	חטא מחא מטא מלא קרא	חָטָא מָחָא מָטָה, מָטָא מָלָא קָרָא	חטי מטי מלי קרי מחי	חטא מחא מטא מלא קרא

Table 2: Treatment of Third-Yodh and Third-Alaph Verbs in Biblical Aramaic

We may conclude that only Beyer and KBL, HALAT, and HALOT make a clear distinction between third-Alaph and third-Yodh verbs (but do so in different ways), and of these, only the former is consistent with Rosenthal.

### 2.2.2 Targum Aramaic

Grammars: Dalman, *Grammatik*; Stevenson, *Grammar*.

Dictionaries: Levy, *Wörterbuch*; Jastrow, *Dictionary*; Dalman, *Handwörterbuch*.

Dalman, *Grammatik*, informs us that almost no difference between original third-Yodh and third-Alaph roots is discernable any longer, except for certain participial forms, as well as an occasional imperfect (section 72.1). The examples he gives comprise the verbs מלא, סנא, and קרא. Stevenson (section 30.4) mentions that in Targum Onkelos and Jonathan the Alaph of סנא is always retained when the verb is suffixed, but does not give any examples of other verbs that behave the in the same way.

For their third-weak verb lemmas, Levy and Jastrow consistently use the Peal perfect 3ms. This means that if Dalman, *Grammatik*, and Stevenson are correct in their information that the Alaph of third-Alaph verbs is only retained in a number of non-perfect forms, we would not expect the dictionaries to reflect any difference between third-Alaph and third-Yodh verbs. This seems indeed not to be the case. As can be seen in table 3, below, both Levy and Jastrow show a certain variety in the perfect forms used for their lemmas, presumably reflecting the frequencies in which the forms have been encountered in the corpora consulted. Within the verbs of categories A and B, four different consonant-vowel patterns can be observed: a. יִּׁׁׁ; b. יִׁׁׁ; c. אִׁׁׁ; d. הִׁׁׁ. The lemmas typically consist of two

<sup>30</sup> *Sic*; unvocalized.

out of these four patterns, with a number of possible combinations: ac; acd; ad; bc; bd; c; ca. There does not seem to be any indication that the distribution of these patterns reflects a distinction in verb type. Even if Levy uses combination ca for two out of the three verbs in category B (קרא and סנא) without employing it for any of the verbs in category A, it seems unlikely that this fact indicates a difference in verb type, but rather reflects the frequencies of the forms in the corpora.

Finally, Dalman, *Handwörterbuch*, does not show any difference between third-Yodh and third-Alaph verbs: he lemmatizes all of these as Peal perfect 3ms. ending in an Alaph.

Category	Levy, <i>Wörterbuch</i>	Jastrow, <i>Dictionary</i>	Dalman, <i>Handwörterbuch</i>
A.	בְּנָא, בְּנִי	בְּנָא, בְּנִי	בְּנָא
	דְּכָא, דְּכִי	דְּכָא, דְּכִי	דְּכָא
	הָוָא, הָוִי	הָוָא, הָוִי	הָוָא
	הָוָא,	חָזִי, חָזָא	חָזָא
	נָסָא, נָסִי, נָשָׂא	נָסָא, נָסִי	נָסָא
	עָנָא, עָנִי	עָנָא, עָנִי	עָנָא
B.	מָלָא, מָלִי	מָלָא, מָלִי	מָלָא
	סָנָא, סָנִי	סָנָא, סָנִי	סָנָא
	קָרָא, קָרִי	קָרָא, קָרִי	קָרָא

Table 3: Treatment of Third-Yodh and Third-Alaph Verbs in Targum Aramaic

### 2.2.3 Jewish Palestinian Aramaic

Grammars: Dalman, *Grammatik*; Stevenson, *Grammar*.

Dictionaries: Levy, *Wörterbuch*; Jastrow, *Dictionary*; Dalman, *Handwörterbuch*; Sokoloff, *Jewish Palestinian Aramaic*.

The grammars by Dalman and Stevenson and the dictionaries of Levy, Jastrow, and Dalman cover both Targum Aramaic (see section 2.2.2) and Jewish Palestinian Aramaic. Another source for the latter is Sokoloff's dictionary. As the treatment of the former dictionaries has already been shown in table 3 above, table 4, below, only shows the treatment of third-Yodh and third-Alaph verbs by Sokoloff.

As can be seen, Sokoloff's lemmas give the verb root, in which he does not indicate a distinction between third-Alaph and third-Yodh verbs: the lemmas for both categories end in a Yodh.

Category	Levy, <i>Wörterbuch</i>	Jastrow, <i>Dictionary</i>	Dalman, <i>Handwörterbuch</i>	Sokoloff, <i>JPA</i>
A.	(see table 3)	(see table 3)	(see table 3)	בני דכי הוי חזי עני
B.	(see table 3)	(see table 3)	(see table 3)	מלי סני קרי

Table 4: Treatment of Third-Yodh and Third-Alaph Verbs in Jewish Palestinian Aramaic

### 2.2.4 Jewish Babylonian Aramaic

Grammar: Levias, *Grammar*.

Dictionary: Jastrow, *Dictionary*; Dalman, *Handwörterbuch*; Sokoloff, *Jewish Babylonian Aramaic*.

Jastrow's and Dalman's dictionaries also comprise Jewish Babylonian Aramaic; hence, they have been used for the survey of this dialect as well.

Levias (sections 531–90) informs us that third-Alaph verbs keep their Alaph in a few cases. The examples he gives include the verbs חטא, “sin,” טמא, “be impure,” and מלא, “be full,” which show retention of the Alaph in forms such as the Peal perfect 3mpl., the Peal participle active fpl., the Pael participle active mpl., and the Pael participle active ms. with a suffix pronoun.

Jastrow does not treat the verbs in category B differently from those in category A, as would be expected for the reasons discussed in section 2.2.2 above. Nor does Dalman deviate from his equal treatment of both verb types: he lists all three verbs given by Levias in the same form as the verbs in category A.

Sokoloff, who, as in *JPA*, gives the root, does not make any distinction between third-Alaph and third-Yodh verbs: all are lemmatized in the form ending in a Yodh.

Category	Jastrow, <i>Dictionary</i>	Dalman, <i>Handwörterbuch</i>	Sokoloff, <i>JBA</i>
A.	(see table 3)	(see table 3)	בני דכי הוי חזי עני
B.	חַטִּי, חַטָּא טְמִי, טְמָא מְלִי, מְלָא		חטִּי טמִי מלי

Table 5: Treatment of Third-Yodh and Third-Alaph Verbs in Jewish Babylonian Aramaic

### 2.2.5 Samaritan Aramaic

Grammar: Macuch, *Grammatik*.

Dictionary: Tal, *Dictionary*.

Macuch (section 64) states that as in other Aramaic dialects, the original third-Alaph and third-Yodh verbs in Samaritan Aramaic have merged for the greater part, but under the influence of Hebrew, at least the verbs **ברא**, **חטא**, **מלא**, **סנא**, and **קרא** have retained the Alaph in the orthography of the basic form of the stem, as well as in a number of other forms. As in the other dialects, some of these verbs partially coincide with the third-Yodh paradigm, for example, in the Peal infinitive of **קרא**, which can be either **מקרא** or **מקרי**.<sup>31</sup>

There might be a slight indication that Tal recognizes a difference between third-Alaph and third-Yodh verbs. As we can see in table 6, below, he gives two out of the five verbs in category B an alternate form with Alaph (**שנא**), while the verbs in category A always get a Yodh. It remains uncertain if this treatment really indicates a distinction in verb type, and, even if this were the case, the verbs considered as third-Alaph by Tal would not fully concur with those given by Macuch.

Category	Tal
A.	<b>בני</b>
	<b>דכי</b>
	<b>הוי</b>
	<b>חזי</b>
	<b>עני</b>
B.	<b>ברי</b>
	<b>חטי</b>
	<b>מלי</b>
	<b>שנא, סני</b>
	<b>קרי</b>

**Table 6: Treatment of Third-Yodh and Third-Alaph Verbs in Samaritan Aramaic**

## 3. DISCUSSION

### 3.1 Insufficient Linguistic Accuracy in Traditional Approaches

We can observe that the dictionaries of Syriac and other Aramaic dialects show a considerable amount of variety in their practice of lemmatizing third-weak verbs. Some dictionaries give the root (Ges<sup>17</sup>, Beyer, KBL, HALAT, HALOT, Sokoloff, Tal), while others

<sup>31</sup> Macuch, *Grammatik*, §64.

give a vocalized perfect 3ms. (Brockelmann, R. Payne Smith, J. Payne Smith, Brun, Costaz, Vogt, Levy, Jastrow, Dalman). Both types of lemmas involve representation forms ending in Yodh, Alaph, or He, in a variety of combinations.

Not all of this variation originates from the dictionaries themselves: as has already been pointed out (see section 2.2.2), some of the dictionaries that use the Peal perfect 3ms. simply reflect the variety of forms in which they have been attested in the corpora (Vogt, Levy, Jastrow). This, however, only explains the lemma variation in some of the dictionaries that give the perfect; it does not explain why other dictionaries that use the perfect have chosen to give only one form per lemma (Dalman), or why some of the dictionaries that use the root sometimes give several forms per lemma (Ges<sup>17</sup>, Tal).

Whatever the reasons behind the variety of lemmatization choices may be, the most important observation is that none of those choices sufficiently indicates the distinction between third-Alaph and third-Yodh verbs. The information in the grammars is accurately reflected in the dictionaries for almost none of the Aramaic dialects treated in section 2. In most of the dictionaries consulted—the only exceptions being Beyer and KBL, HALAT and HALOT for Biblical Aramaic (section 2.2.1)—the verbs identified by the grammars as originally third-Alaph are treated more or less as if they were “ordinary” third-Yodh verbs. The fact that for some real third-Alaph verbs the Alaph is not retained in all forms of the paradigm does not justify this generalizing treatment. The many paradigmatic forms that do show retention of the Alaph indicate that third-Alaph verbs behave differently from third-Yodh verbs and that both have a clearly distinct lexeme, a fact rarely reflected in the dictionary entries.

### 3.2 Linguistic Accuracy as a Requirement for a Modern Dictionary

The survey in section 2 shows how most dictionaries impede an accurate analysis of third-weak verbs. The distinction is obscured in at least two ways: by not using clearly distinct lemmas for third-Alaph and third-Yodh verbs, and by not providing conclusive linguistic information in the entries. Those omissions imply that the two verb types are in fact morphologically identical, which they are not.

We cannot really blame the older dictionaries for this linguistic inaccuracy, for they were composed in a time when linguistics was merely at its beginnings and the demands made upon a dictionary were different from what they are now. The main purpose of a dictionary was to be an adequate aid for translation work, enabling the user to quickly look up the meanings of the words that she or he encountered. The linguistic peculiarities of the words themselves were of less importance than their meanings. This meaning-driven approach of such traditional dictionaries is reflected in the organization and content of their entries, which only provide the most accurate possible information relevant to a translation. Any linguistic information (such as gender, number, state, stem formation, and so on) that those entries give is merely intended as a means to achieve that goal.

A modern dictionary user, however, need no longer accept that linguistics performs only an auxiliary function. As the field of linguistics has evolved over time, the demands

made upon a dictionary have expanded as well. A dictionary should always in the first place be an aid to translation work. Linguistics, however, is no longer only an instrument to help us understand the meaning of words: it is a discipline on its own. A modern user still wants to look up the meaning of words as efficiently as possible, but along with that, she or he expects to find full information on the linguistic behaviour of those words.<sup>32</sup>

### 3.3 Determining the Lexeme

Such demands obviously affect more than just the treatment of third-Alaph and third-Yodh verbs: they ask for an integrated approach to organizing dictionary entries and their lemmas as such. Whatever methods are chosen, it is clear that they must be consistent and exhaustive. The distinction between different lexemes (including those of third-Alaph and third-Yodh verbs) should be made unambiguously clear, preferably in the lemmas, but at least elsewhere in the entries. Either way, there should be explicit mention of the lexeme.

How can one determine what the lexeme of a form actually is? The fact that the lexeme is an entity that underlies realizations means that it is hard to identify it, for it is a mere abstraction. It has no existence of its own, and its identity can only be deduced from its realizations in the paradigm. But this is exactly the method that should be followed: for each dictionary entry, all attested paradigmatic forms of the word must be meticulously investigated in order to determine which parts of those forms belong to the inflectional morphemes, and which to the lexical morpheme, or lexeme itself. A dictionary that relieves the user of this cumbersome task would be an enormous improvement in “scientificness” as well as “user-friendliness.”

If we apply this method to the third-Alaph and third-Yodh verbs, the behaviour of all their paradigmatic forms reveals that the lexeme of the former ends in an Alaph and that of the latter in a Yodh.

## 4. CONCLUSION

By means of the case of third-Alaph and third-Yodh verbs, the account given here aims to illustrate the need for a dictionary that is not only an adequate aid in translation work, but that also meets the modern demands of linguistic accuracy. A clear and consistent organization of entries and their lemmas is needed, together with full information as to the identity of the lexeme, enabling the user to determine unambiguously the morphological structure of the words that she or he encounters.

One might object that providing full linguistic information is the task of a grammar, not of a dictionary. A grammar, however, can only give a description of a language as a whole: it cannot go into the detail of describing the behaviour of every separate word in that

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<sup>32</sup> “The lexicon should be fully scientific while remaining as ‘user-friendly’ as possible,” Salvesen, “The User versus the Lexicographer,” 81.

language. A dictionary, being by definition a list of the separate words of a language, is a far more suitable candidate for such a task.

By making these proposals, the present paper does not aim to abandon existing conventions of traditional dictionaries (such as using the perfect or the root for verb lemmas), but wishes to indicate the necessity of thoroughly investigating the concrete linguistic data, in order to be able to make well-founded decisions in composing a dictionary. Only in those cases where the conventions clearly hamper linguistic investigation, such as in the case of Syriac and Aramaic third-Alaph and third-Yodh verbs, do they need to be reconsidered.



## CHAPTER 2 FEMININE NOMINAL ENDINGS IN HEBREW, ARAMAIC AND SYRIAC: DERIVATION OR INFLECTION?

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Basic to the present contribution is the idea that the linguist would be served greatly if lexemes of feminine substantives be included in Hebrew, Aramaic, and Syriac dictionaries. In order to determine the forms of these lexemes, we need to know the precise extent to which feminine substantives are subjected to derivation and inflection. In particular the nature of the feminine ending in the absolute state singular is of importance. The present contribution makes suggestions as to how one may distinguish between feminine derivational and inflectional endings in order to determine the form of the lexeme.

### 1. INTRODUCTION

Classical Hebrew, Syriac, and Aramaic dictionaries frequently differ among themselves concerning the lexical treatment of nouns with a feminine ending.<sup>1</sup> Several lexica even show a measure of inconsistency regarding the lemmatization of these nouns.<sup>2</sup> A few examples:

Inconsistency in CSD

לִיֹּסָה, “lioness,” is given under לִיֹּס, “lion,” but לִיֹּסָה, “goddess,” is a separate entry beside אֱלֹהִים, “god” (abs. st.).

בְּעֵד “a well, cistern,” and בְּעֵדָה “pit, hole, cavern,” are separate entries, but under בְּעֵד we also find the note that the feminine form means “beam, joist, plank.”

Inconsistency in Jastrow

נְבִיאָה, “prophetess,” appears in the entry for נְבִיא, “prophet,” but מַלְכָּה, “queen,” is a separate entry alongside מֶלֶךְ, “king.”

כְּבִשָּׂה, “sheep,” appears in the entry for כֶּבֶשׂ, “sheep,” but כְּלָבָה, “she-dog,” is a separate entry alongside כֹּלֵב, “dog.”

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<sup>1</sup> The research lying behind this contribution has been supported by the Netherlands Organization for Scientific Research (NWO).

<sup>2</sup> Beside lexica that exhibit many instances of inconsistency, such as CSD and Jastrow, there are others that are remarkably consistent, such as KBL and Brockelmann’s *Lexicon Syriacum*.

Difference between Jastrow and KBL

נַעֲרָה, “young girl, maid,” is ranged among נַעַר, “tender young, lad,” in Jastrow, whereas it appears as a separate entry in KBL.

Comparable cases of inconsistency may be observed in the grammatical treatment of nouns with a feminine ending by classical grammars.<sup>3</sup> Apparently, among lexicographers and grammarians there is some uncertainty about the morphological status of feminine nominal endings. The purpose of this contribution is to set out an approach for dealing with nouns with feminine endings in a more consistent way.

When it comes to the morphological analysis of nouns with feminine endings, the distinction between derivational and inflectional endings is crucial. A derivational ending or affix is added to a root to modify its meaning or change its part of speech.<sup>4</sup> The derivational affix, therefore, belongs to the lexeme: a nucleus of lexical morphemes consisting of at least one stem, which determines the meaning and part of speech of a word.<sup>5</sup> Unlike the derivational affix, the inflectional affix is not part of the lexeme. Inflection involves the addition of an affix to a lexeme to determine the grammatical functions number, state, and, in the case of adjectives, gender.<sup>6</sup> It does not affect meaning and part of speech. This means that the shape of the lexeme is dependent on the morphological status that is assigned to the ending. If an ending is believed to be derivational in nature, it belongs to the lexeme. If, on the other hand, an ending is considered entirely inflectional, it is not part of the lexeme.

A consistent treatment of nouns can be achieved if the lexeme is taken as the basis of the lemma. As the lexeme determines the meaning and part of speech of a word, it is well suited for that task. If each lemma is to depend on a separate lexeme, however, it is quintessential to determine the shape of a lexeme. Here we are at the heart of the problem: if we want to know the lexeme of nouns, we need to have insight into the morphological

<sup>3</sup> Two examples: Gesenius–Kautzsch, *Hebrew Grammar*, §84<sup>a</sup>. *Nouns derived from the Simple Stem* apparently deals with derivation. In §84<sup>b</sup>, however, the absolute state form מַלְכָּה is given as an example of feminine nouns with one, originally short, vowel (directly from the basic form *malak*, king). Apart from the absolute state ending H, no separate derivational ending is distinguished. The two seem to converge. The same impression may arise from the following phrases in §94. *Formation of Feminine Nouns*: “1. The feminine ending הַיָּ, when appended to the masculine forms treated in §93, ...”, “*b* Paradigm I: segholate forms, with the feminine ending always added to the ground-form, (a) מַלְכָּה *queen*...”

In Bauer–Leander’s *Historische Grammatik*, §66. *Übersicht der Flexionsklassen* distinguishes four classes of feminina with a feminine ending. One class (VIII), *Feminina auf הַיָּ, von maskulinen Nicht-Segolaten gebildet* (§74), comprises examples of derivation alongside inflection. Thus in §74d מִנּוּחָה, “rest” (from מִנּוּחַ), is mentioned alongside גְּדוּלָה, “great” (from גְּדוּלַת), and in §74v חֲכָמָה, “wise” (from חָכְמָה), alongside גְּדֻרָה, “wall” (from גְּדֻרָה). Bauer–Leander’s division into classes is based on patterns of vowel change and does not take morphology into account.

<sup>4</sup> To give one example: in “brotherhood” the ending “hood” is a derivational affix.

<sup>5</sup> This definition focuses on the morphological aspect of the lexeme. A semantic definition of “lexeme” may be slightly different. See Sikkal, chapter 4 in the present volume.

<sup>6</sup> One example: in “brothers” the final s is inflectional.

status of their endings.<sup>7</sup> In order to obtain maximum information in this regard, kindred languages as Hebrew, Aramaic, and Syriac may be taken together.<sup>8</sup>

For many nouns information on the lexeme can be easily acquired. Often the lemma given in a lexicon is identical to the lexeme. With regard to nouns, this is the case when the form cited as the lemma is a masculine adjective, the absolute state form of a masculine substantive, or a feminine noun with a masculine inflection, like the so-called natural words.<sup>9</sup> In Syriac and Aramaic lexica, the lemma given is the emphatic state form when the absolute state is rarely attested if at all. In that case the lexeme can be established by omitting the nominal ending **𐤀/𐤁**.<sup>10</sup>

Real difficulties emerge with regard to nouns with a feminine ending. The lexeme of these nouns cannot be determined on the basis of their lemma as can be done with nouns with a masculine ending. The paradigmatic feminine noun displays an ending in all three states: in the absolute state, the construct state, and, in the instance of Aramaic and Syriac, also in the emphatic state. The absolute state form of a noun with a feminine ending is the most important key to determining its lexeme, just as is the case with nouns with a masculine ending. Here one runs into the problem of how the absolute state ending should be understood: as the realization of inflection, of derivation, or of both?

What complicates this problem even more is that several groups of words with feminine endings do not exhibit an inflectional ending in the absolute state.<sup>11</sup> Unfortunately, these groups cannot be strictly delineated on the basis of affixes that are unique to them. Thus in Syriac it may be impossible to identify the form of the absolute state on the basis of the emphatic state alone, because a certain derivational affix, say Yodh, appears both in groups that exhibit an absolute ending and groups that do not. What may help us out here is to examine a cognate word in a kindred language: thus the lexical information of a Syriac word may shed light on the morphological structure of an Aramaic word and *vice versa*.

In summary, once the morphological status of feminine endings is known, the lexeme of the noun to which they are attached can be determined. Now the inevitable question arises: how are we to know the morphological nature of feminine endings? The answer is, by studying their morphological behaviour in relation to their grammatical function. To show what the results of this approach may look like, a design for the morphological analysis of feminine endings is presented here.

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<sup>7</sup> On the problem of identifying lexemes, see also Bakker, chapter 1 in the present volume, especially section 1.

<sup>8</sup> The forms of Hebrew, Aramaic, and Syriac from which examples are taken are Classical Hebrew, the form of Aramaic found in Targum Onqelos and Targum Jonathan, and Classical Syriac, respectively. Though Aramaic and Syriac are not separate languages to the degree that Hebrew and Aramaic are, for the sake of convenience Syriac is treated as a language on a par with (Targum) Aramaic and Hebrew.

<sup>9</sup> For instance **𐤁𐤀**, “mother,” see Joüon–Muraoka, *Grammar of Biblical Hebrew*, §89c.

<sup>10</sup> Changes in phonology, as indicated by vowel signs, are left out of consideration here.

<sup>11</sup> See section 2.3 of this contribution.

## 2. DESIGN FOR THE MORPHOLOGICAL ANALYSIS OF FEMININE NOMINAL ENDINGS

Analysis of feminine endings suggests that the feminine affix in the singular absolute state may be:

- I. Inflectional. In this group, the inflectional ending is paradigmatic in the absolute state singular.<sup>12</sup>
- II. The realisation of both inflection and derivation.
- III. Derivational.

The graphic presentation of these options is as follows:<sup>13</sup>

- I. MLK/> The lexeme is MLK
- II. MLK| (>/> The lexeme is MLK>
- III. MLK| >/ The lexeme is MLK>

Here the root MLK stands for any noun, and the affix > for the feminine affix >, H, or T. The slash / marks the preceding segment as a noun, whereas the vertical stroke | separates the stem from the derivational affix. The lexeme is made up by the stem and the derivational affix (if there is any). The parenthetic ( indicates that the following morpheme does not become apparent in the surface form of the word.

The three groups distinguished above are discussed in the paragraphs 2.1–2.3. Where a group falls into categories, these are indicated by capitals. Subcategories are indicated by Arabic numerals.

### 2.1 The Feminine Ending is Inflectional

A. In all adjectives feminine endings are inflectional:

Hebrew גדול GDWL, “great”:

- |                    |       |
|--------------------|-------|
| masc. sg. abs. st. | GDWL/ |
| fem. sg. abs. st.  | GDL/H |

Hebrew תחתִי TXTJ, “lower”:<sup>14</sup>

- |                    |        |
|--------------------|--------|
| masc. sg. abs. st. | TXTJ/  |
| fem. sg. abs. st.  | TXTJ/T |

Syriac ܪܒܐ RB, “great”:

- |                    |      |
|--------------------|------|
| masc. sg. abs. st. | RB/  |
| fem. sg. abs. st.  | RB/> |

<sup>12</sup> See Muraoka, *Classical Syriac*, §17; Stevenson, *Grammar*, §8.

<sup>13</sup> Transliterations are according to the following transliteration alphabet: > B G D H W Z X V  
J K L M N S < P Y Q R F C T.

<sup>14</sup> Joüon–Muraoka, *Grammar of Biblical Hebrew*, §88Mg.

The lexeme is neither masculine nor feminine, but generic. Gender is assigned to the lexeme by means of the inflectional ending, which is zero (“empty”) for the masculine and > H T for the feminine. This also holds true of adjectives that are substantivised, for instance מלי, “tender, young man,” מליא, “girl,” and עולים, “strong, young man,” עולימא “young woman,” in Aramaic.

B. In Hebrew, Aramaic and Syriac there are many examples of substantives that, like adjectives, exhibit endings which vary as to gender. Like adjectives, masculine and feminine forms share one stem within the same semantic field. This applies to nouns with masculine and feminine forms designating male and female members of the same group, such as חסם, “unmarried man,” חסל, “maiden,” in Syriac; professions and offices such as מלך, “king,” מלכה, “queen,” in Hebrew, נביא, “prophet,” נביא, “prophetess,” in Aramaic; animal species such as כבש, “sheep,” in Hebrew.<sup>15</sup>

The following nouns may also be reckoned to this category: בן, “son,” בת, “daughter,” in Hebrew; בר, “son,” ברת, “daughter,” in Aramaic and Syriac, respectively; אח, “brother,” אחות, “sister,” חם, “father-in-law,” חמות, “mother-in-law,” and Syriac and Aramaic cognates:<sup>16</sup>

	Hebrew	Aramaic/Syriac
בן BN and בר BR	Hebrew	Aramaic/Syriac
masc. sg. abs. st.	BN/	BR/
masc. sg. cs. st.	BN/	BR/
masc. sg. emph. st.	-	BR/~> <sup>17</sup>
masc. pl. abs. st.	BN/JM	BN/JN
masc. pl. cs. st.	BN/J	BN/J
masc. pl. emph. st.	-	BN/J~>
fem. sg. abs. st.	B (N/T)	BR/T
fem. sg. cs. st.	B (N/T)	BR/T
fem. sg. emph. st.	-	BR/T~>
fem. pl. abs. st.	BN/WT	BN/N
fem. pl. cs. st.	BN/WT	BN/T= <sup>18</sup>
fem. pl. emph. st.	-	BN/T=~>

<sup>15</sup> Thus also Schwarzwald, “Lexical Weight,” 1410–11.

<sup>16</sup> בן/בת, אח, אחות/חם, and חמות/חם are considered suppletive by Schwarzwald (“Lexical Weight,” 1411). Suppletion is the replacement of one stem or lexeme with another, resulting in an allomorph. Schwarzwald’s judgement may be questioned. In view of the plural form חמות it is difficult to resist the conclusion that the same lexeme BN underlies both בן and בת. Likewise, in light of the Syriac cognate a good case can be made for considering אח and אחות as the masculine and feminine form of the same lexeme.

<sup>17</sup> The tilde ~ serves to mark the subsequent emphatic state ending.

<sup>18</sup> The equal sign = indicates that T marks the plural ending instead of the singular ending T.

אֶס >X	Hebrew	Aramaic	Syriac
masc. sg. abs. st.	>X/	>X/	? <sup>19</sup>
masc. sg. cs. st.	>X/J	>X/	?
masc. sg. emph. st.	-	>X/~>	>X/~>
masc. pl. abs. st.	>X/JM	>X/JN	>X/JN
masc. pl. cs. st.	>X/J	>X/J	?
masc. pl. emph. st.	-	?	>X/ (J~>
fem. sg. abs. st.	>X/&WT	>X/T	?
fem. sg. cs. st.	>X/&WT	>X/T	?
fem. sg. emph. st.	-	>X/T~>	(>X/T~>
fem. pl. abs. st.	?	?	?
fem. pl. cs. st.	? <sup>20</sup>	?	?
fem. pl. emph. st.	-	?	(>X/&WT=~> <sup>21</sup>

In this group of animate nouns, the analogy to adjectives is strong because inflectional endings denote gender difference within the same semantic domain.

There are also nouns that exhibit variation regarding the gender of their endings but do not meet all three of the following conditions: 1. nouns are animate; 2. gender difference of animate entities is expressed by the gender of nominal endings; 3. masculine and feminine forms share the same semantic domain and part of speech. It may be questioned whether the masculine and feminine forms of these nouns are created by inflectional endings that are attached to one generic lexeme. The alternative possibility is that the feminine form of these nouns actually represents a different lexeme in which the feminine ending is (partly) derivational (see section II below).

The nouns involved fall into the following subcategories:

1. Nouns without a noticeable difference in meaning between masculine and feminine forms, for instance in Hebrew דַע, דַעָה, “knowledge,” לַהֲבָה, לַהֲבָה, “flame,” מִשְׁמֶרֶת, מִשְׁמֶרֶת, “guard,” in Aramaic בִּיזָא, בִּיזָא, “spoil,” סוּכְתָא, סוּכְתָא, “branch,” עֲלִילָא, עֲלִילָא, “harvest,” שְׂיֻזְבָּא, שְׂיֻזְבָּא, “escape” (all forms in emphatic state).
2. Nouns in which the gender difference of endings does not express a difference regarding the natural gender of animate entities, but a semantic shift. In this group are found:
  - a. The so-called *nomina unitatis* in Hebrew like אֲנִי, “fleet,” אֲנִיָּה, “ship,” שַׁעַר, “hair,”

<sup>19</sup> The question mark indicates that the form is not mentioned in lexica and grammars and therefore may not be attested.

<sup>20</sup> Forms with suffixes (which are always attached to the construct state) like אֲחֻוּתֵי “my sisters,” suggest the plural ending -WT. A secondary development is represented by the alternative form אֲחֻוּתֵי.

<sup>21</sup> The ampersand & indicates that in the ending that is paradigmatically expected, W is an additional letter.

- שערה, “the single hair,” and דג, “a fish,” דגה, “fish,” where דגה represents the collective.<sup>22</sup>
- b. Feminine abstract and collective nouns that are formed by attaching the feminine ending to an adjective, such as Hebrew טובה, “good things” (טוב, “good”), רעה, “evil” (רע, “bad”), רלה, “poor people” (רל, “poor”).<sup>23</sup> Abstract nouns of the *qatal* and *qattal* pattern include צדקה, “righteousness” (צדק, “right”), גבחת, “baldness” (גבח, “bald”), עורת, “blindness” (עור, “blind”).<sup>24</sup>
3. Nouns with endings of which gender varies according to number:<sup>25</sup>
    - a. Nouns with feminine endings in the singular and masculine endings in the plural, as in Syriac אמה, “cubit,” אמה, “word,” plural ماحه;<sup>26</sup> in Aramaic מילא, plural מילין;<sup>27</sup> from תאנה, “fig,” masculine plurals are formed in Hebrew, Aramaic and Syriac.
    - b. Nouns with feminine endings in the plural and masculine endings in the singular, for instance in Syriac ܡܚܘܠܐ (st. emph.), “days,” singular ܡܫܘܟܘܠܐ (emphatic state), “ways,”<sup>28</sup> singular ܡܫܘܟܘܠܐ; in Aramaic נפשן, “souls,” singular נפש.<sup>29</sup>
  4. Nouns with both feminine and masculine endings in the plural but only feminine endings in the singular, for instance in Hebrew שנה, “year,” plural שנים and שנות,<sup>30</sup> אשרה, “Ashera,” plural אשרים and אשרות, חנית, “spear,” plural חניתים, with suffix 3mpl. חניתיהם;<sup>31</sup> in Syriac ܐܘܢܐ (emphatic state), “ear,” plural ܐܘܢܐ and ܐܘܢܐ, ܘܢܐ, “wing,” plural ܘܢܐ and ܘܢܐ.<sup>32</sup>

All four subcategories include inanimate nouns. Animate nouns are sparse. Inanimate feminine nouns as mentioned in subcategory 2 bear no direct semantic relation to their masculine counterparts.<sup>33</sup> The same applies to the animate nouns, such as דגה, “fish,” in which the feminine form designates a semantic/syntactic shift (collective). Consequently, according to the criteria mentioned above, the feminine endings of these nouns are not to be seen as (purely) inflectional.

<sup>22</sup> Joüon–Muraoka, *Grammar of Biblical Hebrew*, §134*op.*

<sup>23</sup> Joüon–Muraoka, *Grammar of Biblical Hebrew*, §134*no.*

<sup>24</sup> Joüon–Muraoka, *Grammar of Biblical Hebrew*, §§97B*b*, 88Ha.

<sup>25</sup> This class does not include instances of suppletion, because in that case singular and plural forms are based on different lexemes.

<sup>26</sup> For a list of Syriac nouns belonging to this subcategory, see Nöldeke, *Grammatik*, §81.

<sup>27</sup> For a list of Aramaic nouns belonging to this subcategory, see Dalman, *Grammatik*, §40*c.*

<sup>28</sup> For a list of Syriac nouns belonging to this subcategory, see Nöldeke, *Grammatik*, §82 and, in particular, §84.

<sup>29</sup> For a list of Aramaic nouns belonging to this subcategory, see Dalman, *Grammatik*, §40*c.*

<sup>30</sup> Aramaic שנה and Syriac ܫܢܐ rank in subcategory 3 since of these cognate forms only masculine plurals are attested.

<sup>31</sup> On these nouns see Tubul, “Nouns with Double Plural Forms.”

<sup>32</sup> Other instances in Syriac are included in the list to be found in Nöldeke, *Grammatik*, §84.

<sup>33</sup> Thus Schwarzwald, “Lexical Weight,” 1410.

If, however, a strictly morphological viewpoint is adopted, a case can be made for viewing the feminine forms of subcategory 2b as inflectional, because these are created merely by attaching feminine endings to adjectives.<sup>34</sup> The ambiguity presented by these forms is also acknowledged in lexica.<sup>35</sup> On the other hand, the feminine forms in this group involve not only a semantic, but also a grammatical departure from their masculine counterparts, since their part of speech is different (substantive versus adjective).

As regards subcategories 3 and 4, the following question emerges: were there in the past corresponding masculine singular forms for the masculine plural forms, or do the latter represent a secondary development? Though the issue lies beyond the scope of this article, both subcategories seem to be similar to subcategory 1, since semantic differentiation between masculine and feminine plural forms can be established only for a few nouns with double plural forms.<sup>36</sup>

Surveying the whole, the feminine nouns in subcategories 1–4 lack the distinctive features which allow them to be analyzed as inflectional, that is, analogous to adjectives. They are best seen as derivational (see section II below), though some doubts remain regarding subcategory 2b. The masculine plural forms of subcategories 3 and 4 are to be analyzed either as masculine nouns with masculine inflectional endings (ܐܘܢܝܢ \*>M/JN), or as feminine nouns with masculine inflectional endings attached to the underlying derivational affix (ܐܘܢܝܢ >M (H/JN)). In the former instance the existence of a corresponding masculine singular form in the past is presupposed; in the latter instance the masculine plural form is considered a secondary development.

C. The feminine ending T in the absolute state singular is inflectional when a noun appears to lose that ending in the plural. Thus the circumstance that the plural of the Hebrew word חזית, “front,” is חזיות rather than חזיותות indicates that the final T of the absolute state singular is an inflectional ending. Other examples in Hebrew are חטאת, “sin,” plural חטאות; טבעת, “signet ring,” plural טבעות; in Syriac ܘܒܝܢܐ, “thumb,” plural (emphatic state) ܘܒܝܢܐܐ; ܡܚܝܢܐ, “portion,” plural (absolute state) ܡܚܝܢܐܐ.

## 2.2 The Feminine Ending is both Inflection and Derivation

In substantives occurring with feminine endings only, the absolute state ending contains a derivational feminine affix. The existence of this affix is implied by the occurrence of חכמה, “wisdom,” alongside חכם, “wise.” However, there is good reason to suppose that the absolute state endings > or H are not only the derivational affix. Since the inflectional feminine absolute state ending is paradigmatic for adjectives, it may also be considered

<sup>34</sup> Joüon–Muraoka, *Grammar of Biblical Hebrew*, §134no, §88Ha.

<sup>35</sup> See for instance the entries on טובה and רעה in KBL.

<sup>36</sup> Thus Tubul, “Nouns with Double Plural Forms,” 193–98, 209. Tubul mentions only one case of semantic differentiation where the singular form is a noun with feminine ending, namely, מְחַנֵּה, “encampment.”

paradigmatic for substantives. Therefore, the affix > or H is believed to do “double duty”: it is both the derivational and the inflectional affix. The encoding system used in computer-assisted analysis, such as that conducted in the frame of the Turgama project, however, does not allow for ambivalence in the analysis of separate morphemes. One is therefore required to treat one element as overt and the other as covert. As inflectional affixes in verbs and nouns are virtually always realized, the ending H in מלכה, “queen,” is analyzed as MLK| (H/H<sup>37</sup> rather than as MLK|H/ (H. See also the following examples of singular absolute state forms:

Hebrew	תורה, “law”	TWR  (H/H
Aramaic	גבורא, “strength”	GBWR  (>/>
Syriac	ܥܝܬܐ, “city”	MDJN  (>/>

### 2.3 The Feminine Ending is Derivational Only

In Hebrew, Syriac, and Aramaic there occur various substantives without the paradigmatic inflectional ending in the absolute state singular. The lexeme of these substantives is identical to their absolute state form. The feminine affix that is attached to the root is derivational and forms part of the lexeme. The following groups can be distinguished:

#### A. Feminine abstract nouns ending in J or W.

1. Nouns formed of third-Yodh or -Waw stems, for instance in Syriac ܥܘܡܐ, “form,” ܥܘܡܐ, “matter,” ܥܘܡܐ, “narration,”<sup>38</sup> in Aramaic ܥܘܡܐ, “exile,” ܥܘܡܐ, “greatness,” ܥܘܡܐ, “acquittal.”<sup>39</sup>
2. As a secondary development, the affix J or W came to denote the abstract in other stems as well,<sup>40</sup> for instance in Syriac ܥܘܡܐ, “reign,”<sup>41</sup> ܥܘܡܐ, “goodness;” in Aramaic ܥܘܡܐ, “reign,” ܥܘܡܐ, “goodness,” ܥܘܡܐ, “family.”<sup>42</sup>

Originally, these nouns possessed the feminine ending T.<sup>43</sup> In Syriac and Aramaic T disappeared in the absolute state,<sup>44</sup> but in Hebrew it was maintained, as in ראשית, “beginning,” דמות, “form,” ילדות, “youth,” מלכות, “royal power.”<sup>45</sup> In this contribution, the ending in T is considered inflectional (see Discussion, below).

<sup>37</sup> The vertical stroke indicating a derivational affix is used here only for the sake of clarity. In the encoding system used in the Turgama project derivational affixes are left unmarked.

<sup>38</sup> Muraoka, *Classical Syriac*, §24; Nöldeke, *Grammatik*, §§26C, 75–76.

<sup>39</sup> Dalman, *Grammatik*, §36.3; Stevenson, *Grammar*, §11.6; Bauer–Leander, *Grammatik des biblisch-Aramäischen*, §51 f-g.

<sup>40</sup> Joüon–Muraoka, *Grammar of Biblical Hebrew*, §88Mj. *Pace* Joüon–Muraoka, the derivational affix is considered here to be not JT and WT, but J and W.

<sup>41</sup> This noun is not formed of a third-Yodh stem; *pace* Muraoka, *Classical Syriac*, §24.

<sup>42</sup> Dalman, *Grammatik*, §36.2,3; Stevenson, *Grammar*, §11.6,8, cf. §9 (“E Nouns”); Bauer–Leander, *Grammatik des biblisch-Aramäischen*, §51 f-g.

<sup>43</sup> Bauer–Leander, *Grammatik des biblisch-Aramäischen*, §51 f-g; cf. Muraoka, *Classical Syriac*, §38i.

<sup>44</sup> Nöldeke, *Grammatik*, §26C.

<sup>45</sup> Gesenius–Kautzsch, *Hebrew Grammar*, §95t.

B. In Hebrew and Syriac, nouns of third-Yodh stems attesting to the archaic (derivational) feminine morpheme *-ay*.<sup>46</sup> These words “are no longer capable of inflection and always stand in the absolute state of the singular.”<sup>47</sup> Examples are **ܥܘܩܐ**, “a quail,” **ܥܘܩܐ**, “a kind of bird,” **ܥܘܩܐ**, “ten” (from **ܥܘܩܐ**).

C. In Syriac and Aramaic, feminine nouns which have been formed by adding ܓ as (derivational) affix, for instance, Syriac **ܕܥܘܩܐ**, (emphatic state), “bee,” **ܕܥܘܩܐ** (emphatic state), “swallow.”<sup>48</sup> Of the Syriac words of this group mentioned in Nöldeke, section 71.1, no examples of absolute state forms are listed in *Thesaurus Syriacus*. Among the Aramaic cognates of these words, however, four attestations of the absolute state are recorded in Sokoloff’s *Dictionary of Palestinian Aramaic*: **ܕܥܘܩܐ**,<sup>49</sup> “bee,” **ܕܥܘܩܐ**, “scab, lichen,” **ܕܥܘܩܐ**, “flute,” **ܕܥܘܩܐ**, “flame.”

D. In Syriac, words with a radical T that were attracted to the feminine gender by phonetic analogy.<sup>50</sup> Of the words mentioned in Nöldeke, an absolute state form (without ending) is attested only for **ܕܥܘܩܐ**, “bottom” (absolute state **ܕܥܘܩܐ**), **ܕܥܘܩܐ**, “that which grows of itself” (absolute state **ܕܥܘܩܐ**), and **ܕܥܘܩܐ**, “being, essence” (absolute state **ܕܥܘܩܐ**).<sup>51</sup>

E. Nouns ending in T which preserve that ending in the plural, for instance Hebrew **דלת**, “door,” **חנית**, “spear,” **שבת**, “sabbath.”

### 3. DISCUSSION

Plural forms are an important key to determining the nature of feminine nominal endings on the basis of their morphological behaviour. Inflectional endings vary according to number; derivational endings, on the other hand, maintain themselves in the plural throughout all states. Yet this basic distinction can be used only in a limited number of cases as a criterion for telling whether the feminine absolute state ending is inflectional or derivational in case the plural of the same noun is known. The reason for this is that often derivational endings do not appear in the forms of nouns. This applies to the large group of nouns with absolute state singular endings in > and H.

The criterion, however, stands for nouns that end in T in the absolute state singular. Some of these nouns retain this element (morph) in the plural when it is followed by the paradigmatic inflectional ending, for instance **דלת**, “door,” plural **דלתות**; **חנית**, “spear,” plural

<sup>46</sup> Gesenius–Kautzsch, *Hebrew Grammar*, §80; Muraoka, *Classical Syriac*, §28.

<sup>47</sup> Nöldeke, *Grammatik*, §83. See also Brockelmann, *Grammatik*, §105.

<sup>48</sup> Muraoka, *Classical Syriac*, §38g.

<sup>49</sup> Also in Dalman, *Grammatik*, §36.2ε.

<sup>50</sup> Nöldeke, *Grammatik*, §86; Brockelmann, *Grammatik*, §105.

<sup>51</sup> **ܕܥܘܩܐ**, “sabbath,” mentioned by Brockelmann, *Grammatik*, §105, has as the absolute state form **ܕܥܘܩܐ**. Apparently, -T> was counted as the inflectional feminine emphatic state ending, which in accordance with the paradigm gives way to -> in the absolute state.

שבתות, with 3mpl. suffix חניתיהם; קשת, “bow,” plural קשתות; שבת, “sabbath,” plural שבתות; but also זנות, “prostitution,” plural with 2mpl. suffix זנותיכם (see also section III E).<sup>52</sup> Yet other nouns lose the T in the plural, for instance in Hebrew זווית, “corner,” plural זוויות; מלכות, “reign,” plural מלכיות (from מלכו, מלכות); קצת, “end,” plural קצות; חמאת, “מבעה,<sup>53</sup> in Syriac ܘܢܝܬܐ and ܘܢܝܬܐ (see also section I C).<sup>54</sup>

Whether the feminine ending T in the plural form survives seems to depend on its morphological status. Where the absolute state singular ending T maintains itself in the plural it may be considered part of the lexeme as its appearance does not seem to depend on number and state:

fem. sg. abs. st.	DLT/	XNJT/
fem. pl. abs. st.	DLT/WT	XNJT/WT

Where T does not maintain itself in the plural, this might be because the morpheme is productive as an inflectional ending in the singular and not in the plural. See the following examples:

fem. sg. abs. st.	ZWJ/T		
fem. pl. abs. st.	ZWJ/WT		
מנת MNT <sup>55</sup>	Hebrew	Aramaic	Syriac
fem. sg. abs. st.	MN (J/T)	MN (J/T)	MN (J/T)
fem. sg. cs. st.	MN (J/T)	MN (J/T)	?
fem. sg. emph. st.	-	MN (J/T~>	MN (J/T~>
fem. pl. abs. st.	MNJ/WT	?	MN (J/&WN
fem. pl. cs. st.	?	?	?
fem. pl. emph. st.	-	MN (J/&WT=~>	MN (J/&WT=~>

<sup>52</sup> Joüon–Muraoka, *Grammar of Biblical Hebrew*, §§88Mi, 97Ga; Lettinga, *Grammatica*, §§37e, 38a.

<sup>53</sup> Cf. section IC.

<sup>54</sup> Joüon–Muraoka, *Grammar of Biblical Hebrew*, §97Gc; Lettinga, *Grammatica*, §37f; Barth, *Nominalbildung*, §61c; Gesenius–Kautzsch, *Hebrew Grammar*, §75n.

<sup>55</sup> According to Barth (*Nominalbildung*, §61c; cf. Stevenson, *Grammar*, §11) מנת derives from stems Tertiae Waw and Yodh. “Die Plurale setzen in alle Sprachen voraus, das *ât* aus *âwât*, *âyât* contrahirt sei” (Barth, 91 n. 1). In the diagram Yodh has been chosen as the third radical because it appears in the Hebrew fpl. abs. st. מניות. From a historical viewpoint, the curious ending *-ât* in מנת, קצת, ܘܢܝܬܐ etc., is likely to reflect the ancient ending *-at* that in most feminine nouns is retained in the construct state only, but occasionally survived in the absolute state (see Bauer–Leander, *Historische Grammatik*, §74b', §62v). Morphological analysis as conducted in the Turgama project aims at describing the morphological structure of words on a synchronic level. It is not concerned with recording historical morphological developments. Yet, if the morphology is hard to decipher on the basis of synchronic data alone, “diachronic” information on the nature of morphemes is required to arrive at a viable morphological analysis. In the case of מנת, the genetic identity of the absolute and construct state endings *-at* justifies analyzing both in an identical way, that is, as inflectional endings.

It is the difference in behaviour in the plural that allows for distinguishing the absolute state forms with derivational T from those with inflectional T.

As was stated above, no similar distinction can be made for nouns ending in >/H in the absolute state singular. None of these maintains that morpheme before the inflectional ending in the plural. Yet it would be wrong to conclude from this that the >/H-ending in the absolute state singular represents inflection alone. The difference in vocalization between  $\text{מְהַרְרָה}$ , “purification,”  $\text{מְהוֹרָה}$ , “pure,” and between  $\text{חֲכִימָה}$ , “wisdom,” and  $\text{חֲכִימָה}$ , “wise,” shows that the Hebrew Masoretes took the adjective and the substantive of each pair to be different words—in our terminology, different “lexemes.” The different vocalization of the substantives may be related to the presence of a derivational affix in the lexemes. Analogous to the distinction between the inflectional and derivational affix in T, it seems reasonable to posit the existence of a derivational affix ending in >/H alongside an inflectional affix in >/H, even though that derivational affix is not covertly present.

#### 4. CONCLUSIONS

In the introduction it was noted that lexica do not always treat nouns with feminine endings in a consistent way. One way to arrive at a more consistent treatment of lemmata is to take the lexeme as the basis of the lemma. In that instance, each lexeme is represented by one lemma only. For such an approach to work, it is required that the lexemes of nouns with feminine endings be known. As the nature of the ending determines the shape of the lexeme, derivational and inflectional endings should be clearly distinguished from each other. The morphological design presented above aims at defining the boundary between derivation and inflection. Our conviction is that inflection belongs to the area of grammar and derivation to the area of lexicography. This has lexicographic implications that may be outlined as follows:

- Nouns with feminine endings that are inflectional (group I) are best subsumed under their masculine form, since the same lexeme is valid for masculine and feminine forms alike.
- Nouns with feminine endings that are (partly) derivational (groups II and III) should be included as separate lemmas, since derivational affixes invariably belong to the lexeme.

Thus, the point of this contribution is to stress the importance of morphological analysis for lexicography. As we have seen, it is essential to examine the morphological behaviour of cognates in kindred languages.

One may ask if it would not be preferable to take the lexeme itself as the lemma rather than an absolute or—in case of Aramaic and Syriac—emphatic state form that is provided with an inflectional ending. The answer should be negative, I think. The lexeme is an abstraction, which for purposes of lexicography should not prevail over the concrete, attested forms of a word. However, this does not alter the fact that it is desirable that the lexeme be explicitly stated in lexical entries, as it is an important key to understanding the morphological structure of words.

## 5. DEFINITIONS

*Derivation:* The addition of an affix to a root to modify its meaning or change its part of speech. The process of derivation leads to the formation of new lexemes.

*Derivational affix:* An affix inside and part of a lexeme. It is usually added to a root to modify its meaning or change its part of speech.

*Inflection:* The addition of an affix to a lexeme to determine the grammatical functions of the word. Both verbs and nouns are subject to inflection.

*Inflectional affix:* An affix added to—but not part of—a lexeme as a determinant of grammatical functions of the word.

*Lemma:* The form of a word used to introduce the lexical entry of that particular word.

*Lexeme:* An unbroken nucleus of lexical morphemes to which the inflectional affixes are added. Such a nucleus consists of at least one stem, and possibly derivational affixes. The lexeme determines the meaning and part of speech of a word.

*Word:* A lexeme together with all its inflectional affixes and the base element of the syntactic text analysis as the smallest unit that conveys both grammatical function, meaning, and part of speech.



# CHAPTER 3

## INFLECTIONAL MORPHEME OR PART OF THE LEXEME? SOME REFLECTIONS ON VERBS BEGINNING WITH ŠA- IN CLASSICAL SYRIAC

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In Classical Syriac and other forms of Aramaic some verbs contain a causative prefix *ša-*. The existing grammars treat them in different ways: some discuss them in their section on the *binyan* system as belonging to the Shaphel, an equivalent of the Aphel; others mention them in their description of quadri-radical verbs. Similarly, some dictionaries list these verbs under the lemma of the tri-radical root, others consider *ša-* to be part of the lexemes and list them under the Shin. These treatments reflect different views on the status of the alleged Shaphel- forms in Classical Syriac. Various questions arise: Was the *ša-* prefix taken to be a causative morpheme? Are there any signs that it has been productive in some stage of the history of Syriac or another form of Aramaic? What would be a proper treatment of these verbs in the Syriac lexicon within the framework of the International Syriac Language Project?

### 1. INTRODUCTION<sup>1</sup>

#### 1.1 Root-Based versus Alphabetical Arrangement

In his contribution to the first meeting of the International Syriac Language Project, Terry Falla raised the question as to whether the arrangement of the entries in a dictionary should be root-based or alphabetical.<sup>2</sup> Falla gave four arguments for a root-based approach, analogous to the arguments put forward both by James Barr and Takamitsu Muraoka for Biblical Hebrew lexicography,<sup>3</sup> as follows:

- An understanding of the importance of the roots is vital for the appreciation of the typology of Semitic languages.
- The identification of roots is an essential element in morphological analysis.
- Organization by root makes it easier to see at a glance the spread of the root through the variety of lexemes in which it appears.

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<sup>1</sup> The research lying behind this contribution has been supported by the Netherlands Organization for Scientific Research (NWO).

<sup>2</sup> Falla, “Conceptual Framework,” 22–29; see also Salvesen, “The User Versus the Lexicographer,” 90–91.

<sup>3</sup> Barr, “Three Interrelated Factors,” 33–36; Muraoka, “Response to J. Barr,” 44–46.

- A root-based approach “occasionally makes for transparency of lexicographical description.”

In the present paper we will not repeat the pros and cons of a root-based approach,<sup>4</sup> but rather take a look at the consequences to verbs beginning with *šā*-. These verbs are sometimes treated as belonging to their own verbal stem, the Shaphel, and sometimes as quadri-literal verbs, with or without acknowledgement of their being built up of a prefix *šā*- and a tri-radical root.

In Syriac dictionaries, even in those that follow an alphabetical arrangement, the “regular” verbal stems are lemmatized according to their root. The verb ܫܘܠܐ, “make known,” for example, will not be found under the ܠ, but under ܫܘܠܐ, of which it is an Aphel.<sup>5</sup> The moot question is whether verbs with the *šā*- element, such as ܫܘܠܐ, require the same treatment. If we decide that this is not the case, we still have to answer the question as to whether the *šā*- element can be analyzed as a distinct derivational morpheme added to a tri-radical root or not. In that case a root-based arrangement still would require the placement of these verbs under the tri-radical root rather than under the Shin.

## 1.2 Verbs with *šā*- in Syriac Grammars and Dictionaries

Dictionaries and grammars differ considerably in their treatment of the verbs with the *šā*-element. Some grammars mention them in their description of the stem formation system, alongside the Aphel forms, others discuss them under the quadri-literal verbs. Likewise, some dictionaries list them under the Shin, while others list them under the root to which the *šā*-element has been added.<sup>6</sup>

The Syriac grammars of Duval, Muraoka, Frey, and Thackston treat the category of verbs that contain the *šā*-element as one of the stem formations, the Shaphel.<sup>7</sup> A similar treatment of these verbs is found in Segert’s grammar of Ancient Aramaic, the grammar of Egyptian Aramaic by Muraoka and Porten,<sup>8</sup> and in the comparative Semitic grammars of

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<sup>4</sup> Even within the International Syriac Language Project different positions are supported; Thus Michael Sokoloff advocates the alphabetical arrangement, see his “New Dictionary of Samaritan Aramaic,” 71.

<sup>5</sup> The same holds true for dictionaries of Biblical Hebrew, where this practice has hardly ever been challenged; compare, however, Andersen’s remark in his review of the *Dictionary of Classical Hebrew* (p. 57): “While other words are ordered simply by their conventional spelling, and all derivations of the same root are treated as lexical items in their own right, the treatment of the verb is still controlled by the supposed common root of the several stem formations even when modern descriptive method would require the recognition of the lexicalization of the *binyanim*.” For a discussion on Modern Hebrew see Schwarzwald, “Root-Pattern Relations.” Some Modern Hebrew dictionaries do indeed arrange the “derived stems” in alphabetical order.

<sup>6</sup> Cf. Schwarzwald, “Hebrew *šaf‘el*,” 145–46, for the ways in which the Shaphel forms have been treated in Hebrew grammars and dictionaries.

<sup>7</sup> Duval, *Traité*, 183–84; Muraoka, *Classical Syriac for Hebraists*, §34; Muraoka, *Basic Grammar*, §49; Frey, *Petite grammaire syriaque*, 48; Thackston, *Introduction*, 122.

<sup>8</sup> Segert, *Altaramäische Grammatik*, 258 (§5.6.8.4.2); Muraoka–Porten, *Grammar of Egyptian Aramaic*,

Brockelmann and Moscati in the section on Aramaic.<sup>9</sup> Nöldeke discusses the “causatives formed with *ša*” in his paragraph on quadri-literal roots, as one of the categories that can “readily be traced back to shorter stems.”<sup>10</sup> This is also done by Macuch in his grammar of Samaritan Aramaic.<sup>11</sup> J.F. Coakley takes an intermediate position in that he discusses the so-called Shaphel under “other conjugations,” but gives a description that considers them quadri-radical verbs (see table 1).<sup>12</sup>

	<i>Shaphel</i> = verbal stem, alongside <i>Aphel</i>	verbs with <i>ša-</i> = quadri-literal verbs
Syriac	Duval, Muraoka ( <i>bis</i> ), Frey, Thackston, Ferrer–Nogueras, Costaz, Coakley (but remark: quadri-radical) Brockelmann (§167)	Nöldeke, Brockelmann (§185)
Other forms of Aramaic	Segert, Muraoka–Porten, Moscati, Brockelmann	Macuch

**Table 1. Different Treatments of Verbs with the *ša-* Prefix in Syriac Grammars**

Although the choices made in the grammars as to whether the verbs beginning with *ša-* are treated as belonging to their own *binyan*, the Shaphel, or as a quadri-radical pattern reflect a fundamental decision concerning the nature of this prefix, we should not exaggerate the differences between the two treatments, especially if we realize that most grammars are mainly interested in describing the verbal paradigms.<sup>13</sup> Even if one would agree with Muraoka, Duval, and others that there is a *binyan* called Shaphel, there is some justification for mentioning this *binyan* under the quadri-literal verbs, because morphologically it follows the same paradigm as the quadri-literal roots. Brockelmann’s remark in his section on the causative stem that there are “Reste eines anderen Kausativ mit *ša* und *sa*” (§167 Anm. 2) is perfectly compatible with his reference to examples with the *ša* prefix following his remark

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116. The arguments for treating the verbs with *ša-* as quadri-literal verbs are stronger for older forms of Aramaic than for Syriac; see below, section 3; cf. Muraoka–Porten, *ibid.*: “It is obvious that the pattern forms no integral productive part of the *binyan* system of our idiom.”

<sup>9</sup> Brockelmann, *Grundriss*, 1.525; Moscati, *Comparative Grammar*, 125–26.

<sup>10</sup> Nöldeke, *Grammatik*, §180 (“die mit *ša* gebildeten Causativa;” “...deren Zurückführung auf kürzere Stämme auf der Hand liegt?”); quotation in the main text from the English translation of Crichton.

<sup>11</sup> Macuch, *Grammatik des Samaritanischen Aramäisch*, 166.

<sup>12</sup> Coakley, *Robinson’s Paradigms and Exercises in Syriac Grammar*, 81–82: “A number of verbs of four letters are, etymologically, a three-letter root plus a prefix or infix. For example **ܫܘܢܝܢ** ‘subjugate’ derives from the root **ܫܘܢ** and is accordingly called a shaph‘el.” Note, however, that this example is complicated because **ܫܘܢܝܢ** seems to be related to the noun **ܫܘܢܝܢܐ** rather than to the verb **ܫܘܢܝܢ** (see below, section 2.3).

<sup>13</sup> Many grammars are not precise in distinguishing inflection and derivation; see Van Keulen, chapter 2 in the present volume.

that “Vierlautige Verben, gleichviel welcher Herkunft, werden wie das Pa“el des starken Verbuns flektiert” (§185). Other quadri-literal roots of which the original tri-radical base is still recognizable follow the same paradigm.<sup>14</sup>

Syriac dictionaries are not exempt from this display of a rich variety of ways in which the verbs beginning with *ša-* are treated. In most cases these forms are treated under their tri-radical base, for example, **ܫܚܒ** under **ܫܚܒ**, **ܫܚܒܐ** under **ܫܚܒ**, but some of them are placed under Shin or under Semkath, for example, **ܫܚܒܐ**, **ܫܚܒܐ**, **ܫܚܒܐ**. Sometimes the dictionaries differ among themselves, for example, Brockelmann puts **ܫܚܒܐ**, “be overwhelmed,” under the Shin, but in the *Thesaurus*, CSD, and Costaz it appears under **ܫܚܒܐ** (see table 2).

	<i>Under Shin/Semkath</i>	<i>Under tri-radical base</i>
<b>ܫܚܒܐ</b> <i>exalt</i> & others		<i>Lex, Thes, CSD, Costaz, Ferrer–Nogueras</i>
<b>ܫܚܒܐ</b> <i>remove</i> & others	<i>Lex, Thes, CSD, Costaz, Ferrer–Nogueras</i>	
<b>ܫܚܒܐ</b> <i>heal</i>	<i>Lex, Thes, CSD, Ferrer–Nogueras</i> <sup>15</sup>	<i>Costaz</i>
<b>ܫܚܒܐ</b> <i>be overwhelmed</i>	<i>Lex</i> <sup>16</sup>	<i>Thes, CSD, Costaz</i>
<b>ܫܚܒܐ</b> <i>inflame</i>	<i>Lex</i> <sup>16</sup>	<i>Thes, CSD, Costaz, Ferrer–Nogueras</i>
<b>ܫܚܒܐ</b> <i>dragged, shabby</i>	<i>Lex,</i> <sup>17</sup> <i>Costaz</i>	<i>Thes, CSD</i>

**Table 2: Differences in Lemmatization of Verbs with *ša-* in Syriac Dictionaries**

In other cases the opinions about the analysis of certain forms differ. Whereas the *Thesaurus* and CSD analyze **ܫܚܒܐ**, “enrage, excite,” as a Paiel of **ܫܚܒܐ**, “grow warm, feel warm,” Chaim Rabin prefers to analyze it as a Shaphel of \***ܫܚܒܐ**. Brockelmann and Costaz are less explicit

<sup>14</sup> Cf. Goldenberg, “Principle of Semitic Word Structure,” 37: “Both the ‘derived stems’ and the multiradical verbs may be characterized as involving enlarged (augmented), or etymologically larger, roots, that are pressed, as far as possible, to fit in a three-place pattern. It is only natural that quadri-consonantal roots, whether they are systematically derived from triradicals (as in the causative stem, by prefixing an augment) or have any other origin, should often be found corresponding to ‘intensive’ forms of triradicals, the quadri-consonantal being simply arranged in three units, ■-■■-■ (1-23-4), parallel to the geminated triradical 1-22-3.” See also Schwarzwald, “Hebrew *šaf‘el*,” 144, for a similar argument concerning the Shaphel in (Modern) Hebrew.

<sup>15</sup> Giving this verb under the Semkath agrees with the Syriac lexicographic tradition. Cf. *Thesaurus Syriacus*, 2:2573: “ܫܚܒܐ verbum quadrilat. forte ex **ܫܚܒܐ**, Pa **ܫܚܒܐ** formatum, sed cum Ar. **ܫܚܒܐ** *rexit* connectunt lexx.”

<sup>16</sup> Note that in these two cases it is Brockelmann’s root-based *Lexicon* that has these forms under the Shin! Cf. below, section 6.

<sup>17</sup> Apparently Brockelmann (*Lex* 806) considers this word a borrowing from Persian *šalvār*; cf. Biblical Aramaic *sarbal* < Pers *salavāra*, cf. Modern Persian *šalvār* (see, e.g., Vogt, *Lexicon*, 120; but cf. HALOT, 1940).

about their analysis, but their classification of this verb under the root  $\text{ܘܫܦܗܠ}$ / $\text{ܘܫܦܗܠܘܢ}$  indicates yet another possibility. Perhaps they interpreted  $\text{ܘܫܦܗܠܘܢ}$  as a denominative of the adjective  $\text{ܘܫܦܗܠܘܢ}$ , “shameless,” which is also given under  $\text{ܘܫܦܗܠ}$ / $\text{ܘܫܦܗܠܘܢ}$ . Whereas it is now generally acknowledged that  $\text{ܘܫܦܗܠܘܢ}$  is a borrowing from the Akkadian Shaphel  $\text{šūzūbu}$ , Ferrer–Nogueras take it as a Paue of  $\text{ܘܫܦܗܠܘܢ}$ , but call its reflexive form  $\text{ܘܫܦܗܠܘܢܘܢ}$  an Eshtaphal (see table 3).

$\text{ܘܫܦܗܠܘܢ}$ <i>enrage, excite</i>	<i>Theo</i> , CSD: Paiel: $\text{ܘܫܦܗܠܘܢ}$ Rabin: <sup>18</sup> Shaphel $\text{yħm}$ (cf. Hebrew) / $\text{wħm}$ (cf. Arabic) <i>Lex</i> , Costaz: from $\text{ܘܫܦܗܠܘܢ}$ , $\text{ܘܫܦܗܠܘܢ}$
$\text{ܘܫܦܗܠܘܢܘܢ}$ <i>be arrogant</i>	<i>Theo</i> : Ethpali $\text{ܘܫܦܗܠܘܢܘܢ}$ CSD: “from a root $\text{ܘܫܦܗܠܘܢ}$ not found in Syriac” <i>Lex</i> : Shaphel $\text{ܘܫܦܗܠܘܢ}$ Rabin: <sup>19</sup> compare Mandaic $\text{šwry}$ ’ from the root $\text{r}^{\text{h}}$
$\text{ܘܫܦܗܠܘܢܘܢ}$ <i>deliver</i>	Ferrer–Nogueras: Paue (sed $\text{ܘܫܦܗܠܘܢܘܢ}$ = “Eshta”!)

Table 3: Differences in the Analysis of Verbs with  $\text{ša-}$  in Syriac Dictionaries

### 1.3 Statement of the Problem

To be able to make a choice between these two alternative treatments of the verbs beginning with  $\text{ša-}$ , we have to address the question as to its very nature. If we define a lexeme as the entity which underlies all inflected forms of the paradigm, and which may appear in different grammatical forms,<sup>20</sup> the question is whether the  $\text{ša-}$  element is part of the lexeme—whether or not recognizable as a derivational morpheme<sup>21</sup>—or an inflectional morpheme, which produces a new word-form of a lexeme. If we consider it an inflectional morpheme, the verbs should appear under the base that remains if the  $\text{ša-}$  prefix is removed. If it is a derivational morpheme, it should appear under the Shin in an alphabetical arrangement, but under the base without the  $\text{ša-}$  prefix in a root-based dictionary. If it is neither an inflectional nor a derivational morpheme, these forms should appear under the Shin in both alphabetical and root-based arrangement of the lexicon.<sup>22</sup> In this context it should be remembered that also for the ‘regular’ *binyanim* it is a matter of debate whether they should be described in terms of derivation<sup>23</sup> or inflection.<sup>24</sup>

<sup>18</sup> Rabin, “Nature and Origin,” 149.

<sup>19</sup> Rabin, “Nature and Origin,” 149.

<sup>20</sup> Cf. Lyons, *Theoretical Linguistics*, 197–98; Crystal, *Dictionary of Linguistics and Phonetics*, 255–56; Bussmann, *Routledge Dictionary of Language and Linguistics*, 273; Bosman–Sikkel, “Reading Authors and Reading Documents,” 115–16.

<sup>21</sup> On the distinction between inflection and derivation see, e.g., Lyons, *Theoretical Linguistics*, 195–96; Aronoff, *Morphology By Itself*, 126–27.

<sup>22</sup> For further details see section 6.

<sup>23</sup> Cf. Verheij, *Bits, Bytes, and Binyanim*, 14: “On all accounts it is safe to say, however, that Hebrew Binyan belongs to the domain of derivation;” *ibid.*, 16: “Thus if a root is found to combine with two patterns (such as, e.g., Qal and Hif’il), the result will be analyzed as two isoradical but different lexical

## 2. DISTRIBUTION AND FUNCTIONS OF THE VERBS BEGINNING WITH *šā-* IN CLASSICAL SYRIAC

The verbs beginning with *šā-* in Classical Syriac show a wide variety as to their origin, form, and relation to the other verbal stems.

### 2.1 Origin

The origin of the *šā-* element will be discussed in section 3. For the moment let it suffice to observe that some forms are obviously loanwords from Akkadian, whereas others are not. For those not borrowed from Akkadian it is debatable whether they were created in Aramaic/Syriac or whether they should be ascribed to influence from other Semitic languages.

### 2.2 Form

The formal differences relate to the sibilant and the radical following the *šā-* prefix. In Syriac, as in other forms of Aramaic, we find alongside verbs beginning with *šā-* also verbs beginning with *šā-*, such as ܫܘܢܝܢܐ, ܫܘܢܝܢܐ, ܫܘܢܝܢܐ, ܫܘܢܝܢܐ, and ܫܘܢܝܢܐ (compare ܫܘܢܝܢܐ).<sup>25</sup> If the first radical following the the *šā-* prefix is a guttural, it is preserved in, for example, ܫܘܢܝܢܐ and ܫܘܢܝܢܐ, but disappears in, for example, ܫܘܢܝܢܐ (rt. 'zb)<sup>26</sup> and ܫܘܢܝܢܐ (rt. 'hr).

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items, rather than as two inflectionally different *forms* of the same lexical stem;” *ibid.*, 130: “Binyan belongs to the domain of lexeme formation or derivation, not to that of inflection.”

<sup>24</sup> Thus, e.g., Aronoff, *Morphology By Itself*, 123–64 (= “Chapter 5: Binyanim as Inflectional Classes”) on Hebrew; cf. esp. p. 123: “From a purely morphological point of view, a binyan is an inflectional class, a conjugation.” The term “conjugation” is also used for the Hebrew *binyanim* in Joüon–Muraoka, *Grammar*, §40a, and Gesenius–Kautzsch–Cowley, §39; and for Syriac in Muraoka, *Basic Grammar*, §48 (Muraoka includes both the tenses and the verbal stems in his description of the “conjugation” of the Syriac verb); Muraoka, *Classical Syriac for Hebraists*, §33 (in this paragraph “verb patterns, conjugations, or *binyanim*” belong to “the inflection of the Syriac verb”); Coakley, *Robinsons’s Paradigms and Exercises in Syriac Grammar*, 73, 79, *et passim*; Nestle, *Syrische Grammatik*, §35 (“Konjugationen oder Stämme”); Ferrer–Nogueras, *Manual* (“En siríaco hay seis formas verbales o conjugaciones fundamentales”). Nöldeke’s *Grammatik* (§159) speaks of “Verbalstämme,” which Crichton renders with “Verbal Stems [or Forms, sometimes called *Conjugations*].” This discussion, however, seems not to have affected the practice of Hebrew and Aramaic lexicography. In an alphabetical arrangement, the words are stripped only of their inflectional elements, not of the derivational ones. The custom, even in these dictionaries, of listing verbs of the various stem formations under the verbal root to which they belong implies strictly speaking that the *binyan* system is regarded as inflection rather than derivation, but this is hardly ever made explicit; cf. above, section 1.1 (end).

<sup>25</sup> Cf. Brockelmann, *Grundriss*, 1.526, Anm. 2: “Dem Aram. eigentümlich sind einige Kausative mit dem Präfix *ša*. Diese stammen wohl aus einem Dialekt, in dem *št* > *st* wurde (...); zu den Refl. wären dann die Akt. rückgebildet;” Duval, *Traité*, 183–84.

<sup>26</sup> Similarly Samaritan Aramaic, Christian Palestinian Aramaic, and Mandaic; cf. Biblical Aramaic, Egyptian Aramaic, Nabatean, and Jewish Aramaic ܫܘܢܝܢܐ.

Another phenomenon that should be mentioned here is the formation of the reflexive stem, to so-called Eshtaphal. It is derived regularly from the active forms with the *ša-* prefix, the so-called Shaphel,<sup>27</sup> but there are also some secondary Eshtaphal forms. These are built by the addition of a second *l* to Eshtaphal forms that had acquired an active meaning, for example, *šāpāl*, “know, recognize,” *šāpāl*, “made known, public” (see table 4).<sup>28</sup>

<i>šāpāl</i> know, recognize	<i>šāpāl</i> be made known, public
<i>šāpāl</i> be delivered	<i>šāpāl</i> be kept alive
<i>šāpāl</i> be glowing, inflamed	<i>šāpāl</i> be inflamed by love
<i>šāpāl</i> make haste, hasten	<i>šāpāl</i> be activated

Table 4: Second Eshtaphal Forms

### 2.3 Distribution and Relation to Other Verbal Stems

There are some verbs of which only the so-called Shaphel and Eshtaphal are attested, for example, *šāpāl*, *šāpāl*, *šāpāl*. Sometimes only the Eshtaphal is attested, for example, *šāpāl*, “be overwhelmed,” *šāpāl*, “be humiliated,” *šāpāl*, “be arrogant.” The interpretation of these verbs as Shaphel forms is based on the recognition of the *ša-* prefix and a tri-radical root that can be discovered in other Semitic languages. Regarding this group Kaufman remarks:

As pointed out by Rabin, many of the Shaphel forms in Aramaic and Hebrew lack a corresponding non-prefixed form of the root; that is to say they are not used as functioning causative stems in the language and that accordingly one must not think in terms of two inherited causative formations in Aramaic.<sup>29</sup>

In a number of cases, however, we find forms with the *ša-* prefix side by side with tri-radical verbs without it. In these cases the relationship between the alleged Shaphel and the Aphel varies. In some cases the Shaphel occurs alongside the Aphel, in other cases only the Shaphel is attested, for example, *šāpāl*, “accomplish.”<sup>30</sup> If both the Aphel and the Shaphel are attested, they are sometimes functionally equivalent, for example, *šāpāl*, *šāpāl*, “exalt, lift up.”<sup>31</sup> In other cases there is a functional difference. Compare *šāpāl*, “enslave,” versus *šāpāl*,

<sup>27</sup> Duval, *Traité*, 184, but “*šāpāl* être de reste a été simplifié de *šāpāl* demeurer.”

<sup>28</sup> Cf. Duval, *Traité*, 184: “Quand èstaph’al et èstaph’al avaient un sens actif, on en tirait un nouveau passif au moyen d’un second *šā-*,” cf. Bar Hebraeus, *Livre des Splendeurs* (ed. Moberg) 141–42 (text), and *Buch der Strahlen* I, 290–91 (translation).

<sup>29</sup> Cf. Kaufman, *Akkadian Influences on Aramaic*, 123–24.

<sup>30</sup> For the latter category see Duval, *Traité*, 183–84.

<sup>31</sup> In some cases where we find both the Aphel and the Shaphel/Eshtaphal, the use of the Shaphel is not widespread and the smaller dictionaries give only the Aphel and the Eshtaphal (cf. Ferrer–Noguera *Diccionari* s.v. *šāpāl* [p. 6], *šāpāl* [p. 112], *šāpāl* [p. 219]). This gives the suggestion that in some cases the Aphel and Eshtaphal are complementary verbal stems, but for the moment our research does not support this suggestion. Note also the overlap in meaning between the *šāpāl* (Aphel) and *šāpāl* (Eshtaphal) “confess,” but *šāpāl*: “be confessed, declared.”

“put to work, cause to work;” ܘܥܘܘܐ, “make clear, explain,” versus ܘܕܘܘܐ, “inform, make known” (see further table 5).<sup>32</sup>

ܘܥܘܘܐ <i>make clear, explain</i>	ܘܕܘܘܐ <i>make known</i>
ܘܥܘܘܢܐ <i>linger, delay, hinder</i>	ܘܕܘܘܢܐ <i>tarry, delay</i>
ܘܥܘܘܠܐ <i>make spring forth, cause to advance</i>	ܘܕܘܘܠܐ <i>stretch out the hand</i>
ܘܥܘܘܟܐ <i>change</i>	ܘܕܘܘܟܐ <i>sprout up again</i>
ܘܥܘܘܚܐ <i>enslave, subdue, make</i> ܘܥܘܘܚܐܐ <i>submit</i>	ܘܕܘܘܚܐ <i>set to work, impel</i>
ܘܥܘܘܠܠܐ <i>impede, ensnare</i>	ܘܕܘܘܠܠܐ <i>go on foot</i>
ܘܥܘܘܚܘܐ <i>conceal wickedness</i>	ܘܕܘܘܚܘܐ <i>speak, act impiously</i>
ܘܥܘܘܠܘܐ <i>make to abound</i>	ܘܕܘܘܠܘܐ <i>set to boil, inflame</i>
ܘܥܘܘܠܘܟܐ <i>go towards</i>	ܘܕܘܘܠܘܟܐ <i>be opposite, face</i>
ܘܥܘܘܠܘܚܐ <i>hasten, impel</i>	ܘܕܘܘܠܘܚܐ <i>trouble, disquiet</i>

**Table 5: Shaphel/Saphel and Aphel Forms with Different Meanings**

Whereas in most cases the verb beginning with *šā-* functions as a causative, it has a privative function in ܘܥܘܘܢܐ, “conceal wickedness,”<sup>33</sup> and a denominative function in ܘܥܘܘܠܠܐ, “impede, ensnare” (compare also ܘܥܘܘܚܐ, “enslave, make an ܘܥܘܘܚܐܐ”<sup>34</sup>).

The verbs beginning with *šā-* serve as the basis for noun formations such as ܘܥܘܘܚܐܐ, “submission.” In addition, there are nouns with the *šā-* prefix without a corresponding verb, for example, ܘܥܘܘܠܘܟܐ, “barley meal.”<sup>35</sup>

<sup>32</sup> Thackston, *Introduction*, 122; Duval, *Traité*, 183–84.

<sup>33</sup> Cf. Rabin, “Nature and Origin,” 151. The dictionaries do not give indications of a widespread use of this word. Brockelmann, *Lexicon*, 746, gives only the Aphel of ܘܥܘܘܢܐ; R. Payne Smith, *Thesaurus Syriacus*, 2:4341, has a very short description of ܘܥܘܘܢܐ: “*malitiam celavit* (...) BB,” which seems to imply that it occurs only in Bar Bahlul’s lexicon.

<sup>34</sup> The reason for considering ܘܥܘܘܚܐܐ a denominative formation, rather than a causative to the Peal, is that the Peal of ܘܥܘܘܚܐ means “do” rather than “serve.” If we consider this verb denominative, it is no longer needed to explain it as a borrowing from another Semitic language; *pace* Rabin, “Nature and Origin,” 151; Bauer, *Ras Shamra*, 66. For the denominative use of the *šā-*stem in Akkadian, see Von Soden, *Grundriss der akkadischen Grammatik*, §89e (“nur vereinzelt”). Note that in ܘܥܘܘܚܐ the interpretation as a denominative does not exclude the causative interpretation, although it would be more precise to call ܘܥܘܘܚܐ in the meaning of “enslave” factitive (i.e., causing a state) rather than causative (i.e., causing an action).

<sup>35</sup> Brockelmann, *Lexicon*, 772; cf. Nyberg, “Worbildung mit Präfixen,” 198; Brockelmann places this and other forms under the ܘܥ, even though he acknowledges the derivation from a tri-radical base without Shin. Also R. Payne Smith gives these nouns under the Shin. For nouns with the *šā-* prefix in Hebrew see Nyberg, “Wortbildung mit Präfixen,” 197–98. On nouns with the prefix *š-*, Moscati, *Comparative Grammar*, 81, remarks: “These themes are used in Akkadian for verbal nouns of the stem with prefix *š* and causative value and also, though less frequently, as adjectives with intensive meaning. To this group also belong the nominal forms of the verbal stem with *š* and *t*. Outside Akkadian there are only a few traces in North-West Semitic.”

## 2.4 Pe-Shin Verbs

In addition to the quadri-literal verbs that can be analyzed as Shaphel forms from tri-radical bases, there are tri-radical Pe-Shin/Sin verbs that have been interpreted as Shaphel/Saphel verbs,<sup>36</sup> most often from bi-radical roots, for example,  $\text{קָדַח}$ , “kindle,”<sup>37</sup>  $\text{נָחַם}$ , “soothe, allure,”<sup>38</sup>  $\text{שָׁחַת}$ , “harm, violate,”<sup>39</sup>  $\text{שָׁחַת}$ , “defame, dishonour,”<sup>40</sup>  $\text{שָׁחַת}$ , “comb; bring to naught.”<sup>41</sup>

At first sight the Pe-Shin verbs constitute a category that is completely different from the quadri-literal verbs: their interpretation as a Shaphel form is most often less certain, and their place in the *binyan* system differs. Whereas the quadri-literal verbs do not construct forms with a doubled second radical, the Pe-Shin verbs do, for example,  $\text{שָׁחַח}$ ,  $\text{שָׁחַח}$ . However, this may be due to a morphological principle, rather than to a functional difference. The quadri-literal verbs beginning with *ša-* cannot be combined with other root extensions (doubling of the second consonant, addition of the *'a-* prefix and so on), because the four “slots” in the paradigm are already occupied.<sup>42</sup> This morphological restriction does not apply to the trilateral Pe-Shin/Sin verbs, which renders the construction of Pael forms possible. In some cases it may be suggested that the Pael vocalization is a reinterpretation of a Shaphel pattern, for example,  $\text{ša} + \text{nkār} > \text{šakkar}$ .

Interestingly, whereas the Pe-Shin/Sin verbs under discussion frequently occur in the Pael, we do not find Aphel forms (for example, \* $\text{אִשְׁחַח}$  “cause to do harm,” or something similar), which suggests that the etymological Shaphel and the Aphel are mutually exclusive. There is, however, also an important difference between the quadri-literal verbs with the *ša-* prefix and the Pe-Shin verbs: whereas a number of the quadri-literal verbs alternate with Aphel forms with the same meaning (for example,  $\text{הִשְׁחַח}$ ,  $\text{הִשְׁחַח}$ , “exalt, lift up”) or with different meanings (for example,  $\text{הִשְׁחַח}$ , “make clear, explain,”  $\text{הִשְׁחַח}$ , “inform, make known”), such alternation does not occur with the Pe-Shin verbs (for example, we do not find \* $\text{אִשְׁחַח}$  alongside  $\text{שָׁחַח}$ ).

<sup>36</sup> Cf. Rabin, “Origin and Nature,” 154; Brockelmann, *Grundriss*, 1.526, Anm. 1; Duval, *Traité*, 183–84. Much has been written about the alleged traces of the Shaphel in Biblical Hebrew see, e.g., Albright, “Canaanite Language and Literature;” Haupt, “Die semitischen Wurzeln QR, KR, XR;” Soggin, “Tracce di antichi causative in š-;” Wächter, “Reste von Šaf’el-Bildungen im Hebräischen.”

<sup>37</sup> Cf. Brockelmann, *Lexicon*, 756, with reference to Schulthess, *Homonyme Wurzeln im Syrischen*, 75. Brockelmann, following Schulthess, distinguishes the root  $\text{קָדַח}$  I, “pour forth (tears),” from  $\text{קָדַח}$  II, “kindle,” and considers the latter as a Shaphel from the root  $\text{קָדַח}$ .

<sup>38</sup> Cf. Duval, *Traité*, 184.

<sup>39</sup> Cf. Brockelmann, *Grundriss*, 1.526, Anm. 1.

<sup>40</sup> Cf. Brockelmann, *Grundriss*, 1.526, Anm. 1; Nöldeke, *Grammatik*, 127 n. 1.

<sup>41</sup> Cf. Brockelmann, *Lexicon*, 501; Duval, *Traité*, 184.

<sup>42</sup> For the significance of this observation see Goldenberg, “Principles of Semitic Word Structure,” 43; see also above, the quotation in note 14.

### 3. ORIGIN OF THE ŠA- PREFIX IN ARAMAIC

The appearance of quadri-literal verbs beginning with ša- in Classical Syriac has been ascribed to Akkadian influence for the following reasons:

- In some cases there can be no doubt that the verb is a loanword, and its phonology strongly suggests that it is borrowed from Akkadian, for example, ܫܘܙܒܘ (< Akk. *šuzubu*).
- In older forms of Aramaic most verbs with the ša- element have counterparts in Akkadian. This suggests that the starting point for this formation in Aramaic/Syriac is its use in Akkadian loanwords.<sup>43</sup>
- The situation of language contact between Akkadian and Aramaic in the Ancient Near East<sup>44</sup> renders it likely that these forms entered Aramaic due to Akkadian influence. The indebtedness of Syriac to older forms of Aramaic<sup>45</sup> makes it plausible that Syriac inherited them from older forms of Aramaic.

These observations can partly explain the appearance of verbs beginning with ša- in Classical Syriac, but the impact of Akkadian should not be overestimated. In Syriac, as well as in other forms of Aramaic, there are also quite a number of verbs with the ša- prefix that defy Akkadian influence.<sup>46</sup> In some cases the corresponding verb does not occur in Akkadian, in other cases the phonological shape of the Syriac verb precludes Akkadian influence. The Ayin in ܫܘܠܐ, for example, shows that this word cannot be a loan of Akkadian *šūlā*.

Three models have been employed to account for the Syriac verbs beginning with ša- that are not borrowed from Akkadian. The first model assumes that on the analogy of the Shaphel forms borrowed from Akkadian Shaphels of Aramaic origin were created. This model has been advocated by Zellig Harris.<sup>47</sup> This also seems to be the background of

<sup>43</sup> Cf. Segert, *Altaramäische Grammatik*, 258 (§5.6.8.4.2): “Im Aram. erscheint vereinzelt das Kausativpräfix ša- immer in aus dem Akkad. übernommenen Verben” [italics mine]; Muraoka, *Classical Syriac for Hebraists*, §34.

<sup>44</sup> Cf. Kaufman, *Akkadian Influences on Aramaic*, 1–4, 15–19.

<sup>45</sup> On the relation of early Syriac to other forms of Aramaic, see Beyer, “Reichsaramäische Einschlag” (but note the modification of Beyer’s view in Gzella, “Das Aramäische in den Römischen Ostprovinzen,” 32–33). On the language of the Peshitta in relation to other varieties of Syriac, especially the earlier ones, to earlier Aramaic dialects, especially Imperial Aramaic, and to Western Aramaic, see Joosten, “Materials for a Linguistic Approach to the Old Testament Peshitta.” On the place of Syriac within the Aramaic dialects and its rise as a “standardized” language see Van Rompay, “Preliminary Remarks;” see further Van Peursen, “Language Variation, Language Development and Textual History.”

<sup>46</sup> Cf. Kaufman, *Akkadian Influences on Aramaic*, 123: “In spite of the discovery of Ugaritic, a North West Semitic language which uses the Shaphel as the common causative conjugation, and the fact that only a small number of the verbs with Shaphel forms in Aramaic could possibly be related to Akkadian, claims that the use of the shaphel in Aramaic results from Akkadian influence and even such statements as ‘Most Aramaic causatives with š-prefix seem to be loan-words from Akkadian...’ are still to be found in the literature.” The reference is to Dahood–Deller–Köbert, “Comparative Semitics,” 41.

<sup>47</sup> Cf. Harris, “Causative in Ugaritic,” 110: “In Aramaic there are a number of verbs in the šafel,

Muraoka's remark that Syriac makes a more productive use of the pattern than Biblical Aramaic.<sup>48</sup>

The second model claims that there has never been a productive Shaphel *binyan* in Aramaic. Forms that are not due to Akkadian influence are borrowed from other North-West Semitic dialects. The likelihood that Akkadian is not the only source of the Shaphel in Aramaic is supported by attestations of the *ša-* prefix in Ugaritic, and, in combination with the *t*-infix, in Amorite.<sup>49</sup> Chaim Rabin and Stephen Kaufman have advocated this second model.<sup>50</sup> This also is probably the background of Hans Bauer's argument for the existence of a Shaphel in Old Canaanite, which he infers from the non-original Shaphel forms in Aramaic.<sup>51</sup> However, the alleged traces of the Shaphel in Classical Hebrew are scarce and sometimes disputed.<sup>52</sup>

In the third model, the Aramaic dialects preserved some traces of an ancient Semitic *ša-*causative. This model seems to be reflected in Brockelmann's discussion of "traces of the Shaphel" in Aramaic<sup>53</sup> and Frey's designation of verbs beginning with *ša-* as quadri-literal verbs that are "vestiges d'une ancienne voix causative."<sup>54</sup> Duval's observation that in some cases the distinction between the Aphel and the Shaphel has been retained, also implies that

borrowed from Akkadian. (...) In addition there are several *šafels* which must have been formed in Aramaic (...). These *šafels* of Aramaic origin could have been patterned upon the borrowed Akkadian causatives: the large group of *šafel* loan-words had established that form in Aramaic as a recognized causative construction, and then a few Aramaic verbs came to be expressed in the causative on the same pattern."

<sup>48</sup> Muraoka, *Classical Syriac for Hebraists*, §34.

<sup>49</sup> The *ša-* prefix is further attested in South Arabian dialects (with the exception of Sabaeen); and in combination with the *t*-morpheme also in Arabic and Ethiopic; see, e.g., Moscati, *Comparative Grammar*, 125–26.

<sup>50</sup> Rabin, "Nature and Origin," 157–58; Kaufman, *Akkadian Influences on Aramaic*, 123–24; cf. Dahood–Deller–Köbert, "Comparative Semitics," 41.

<sup>51</sup> Cf. Bauer, *Das Alphabet von Ras Shamra*, 66: "Daß es im Altkanaanäischen, wie im Akkadischen, ein Kausativ mit *š* gegeben hat, konnte man schon aus den zahlreichen im Aramäischen vorhandenen *šafelformen* schließen, die daselbst nicht wohl ursprünglich sein können." On the situation in Hebrew, Phoenician, and Ugaritic, see also Albright, "Canaanite Language and Literature," 17: "In Ugaritic *šin* prevails as the causative preformative against Hebrew *he* and Phoenician *yodh* (probably for older *he*, as in Amarna Canaanite). But there are many clear cases in Ugaritic where we have causatives without *šin*, while we have several undebatable instances of *šin*-causatives in biblical Hebrew."

<sup>52</sup> Bauer–Leander, *Historische Grammatik*, 486: "Zwei Wörter, שלהלת 'Flamme' (v. להב) und שקערורת 'Vertiefungen' (v. קער) scheinen im Hebräischen die einzigen Überreste von Bildungen mit dem Kausativpräfix *ša* zu sein, das im Akkadischen und Aramäischen (hier aber nicht mehr produktiv) vorliegt." This analysis of Hebrew שלהלת has been challenged by Jakob Barth in his *Etymologische Studien*, 50.

<sup>53</sup> Brockelmann, *Grundriss*, 1.525; similarly Brockelmann, *Grammatik*, §167, Anm. 2.

<sup>54</sup> Frey, *Petite grammaire syriaque*, 48.

both stem formations go back to an earlier phase of Semitic in which they existed side by side, probably expressing different shades of meaning.<sup>55</sup>

The question as to the origin of the the *šā-* element in Syriac and other forms of Aramaic is not just a matter of historical reconstruction: it concerns its very nature. If all Shaphels are loanwords from other languages (cf. the second model), this would be a strong argument to treat them as quadri-literal lexemes, rather than considering *šā-* as a morpheme; if, however, there are at least some Shaphels that are not borrowed from other Semitic languages, this suggests some productivity of the *šā-*morpheme.

## 4. PRODUCTIVITY

### 4.1 The Notion of Productivity in Various Interpretations of the Syriac Verbs Beginning with *šā-*

The main difference between the views of Muraoka and Harris on the one hand, and those of Rabin and Kaufman on the other, concerns the productivity of the *šā-* prefix. According to Muraoka, “in Biblical Aramaic *šāfel* appears to be extraneous to the system of verb conjugation patterns, being virtually confined to those verbs which happen to have *šāfel* counterparts in Akkadian. Syriac, however, makes a more productive use of the pattern.”<sup>56</sup> Conversely, Kaufman and Rabin argue that the Shaphel has never been productive in Aramaic.

### 4.2 Productivity and Lexicalization

At first sight the productivity of the *šā-* prefix is hard to maintain. Its restricted use seems to demonstrate that a language user could not coin a new causative with *šā-* of any verb he or she wished. If productivity is defined as “that property of the language system which enables native speakers to construct and understand an indefinitely large number of words, including words that they have never previously encountered,”<sup>57</sup> the *šā-* prefix is not a productive morpheme, and the so-called Shaphel forms are lexicalized items. L. Bauer’s description of lexicalization as the converse of productivity seems to apply well to the verbs beginning with *šā-*:

Lexicalisation is the converse of productivity: Words which are not formed by the addition of productive affixes or by other productive processes, must be listed in the lexicon. Such unproductive affixes give rise to closed lists of words. The lists are thus finite—the items can be counted—while productive affixes give rise to

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<sup>55</sup> Duval, *Traité*, 183: “Les nuances qui les distinguent d’aph’el et de èttaph’al sont légères; elles sont encore sensible dans...” cf. Brockelmann, *Grundriss*, 1.521: “Da sich die drei Präfixe [i.e., š, h, ’] nicht auf eine Grundform zurückführen lassen, so ist anzunehmen, daß sie schon im Ursemit. neben einander bestanden (...) indem sich vielleicht die verschiedenen Wendungen des Kausativbegriffs auf die verschiedenen Formen verteilen.”

<sup>56</sup> Muraoka, *Classical Syriac for Hebraists*, §34.

<sup>57</sup> Cf. Bauer, “Productivity,” 3355; Lyons, *Semantics*, 76.

potentially infinite numbers of words.<sup>58</sup>

### 4.3 Restrictions on Productivity

It would be too hasty, however, to conclude on the basis of what we have said in section 4.2 that in Syriac the *šā-* prefix is non-productive and that all Syriac verbs beginning with *šā-* are the product of lexicalization. Productivity is a complex phenomenon and there are many productive morphemes that do not allow the construction of an “indefinitely large number” of words. The possibility of new coinages is limited by all kinds of restrictions. These restrictions may be phonological, morphological, syntactic, semantic, pragmatic, aesthetic, or lexical.<sup>59</sup>

### 4.4 Productivity and Diachrony

There is also a diachronic restriction in that morphemes that are productive in a certain period can become non-productive.<sup>60</sup> The English suffix *-th* to create abstract nouns, as in “breadth” or “warmth” is now non-productive. It is not possible to coin a new word such as “newth.” However, the suffixation of *-th* to form abstract nouns was clearly available at some stage in the history of English.<sup>61</sup> Another example is the plural of nouns ending in *-al* in French. Alongside the regular, productive plural ending *-als* (for example, *festival, festivals*) we find relics of the sort *-aux* (for example, *animal, animaux*).

### 4.5 Productivity in an Ancient Corpus

Due to the lack of a native speaker to comment on the probability of new coinages and generate new words, in the analysis of ancient corpora it is extremely difficult to judge the productivity of a morpheme. A statistic approach is inadequate to provide a basis for conclusive decision.<sup>62</sup> If the only source of information about the French language we had was a corpus of written texts, it would be hazardous to label one of the two plural endings as productive. If we had only texts from the time that *-aux* lost its productivity and *-als* came to be used, we would find a high frequency of the non-productive *-aux* as against a low

<sup>58</sup> See also Schwarzwald, “Hebrew *šaf‘el*,” 147–48.

<sup>59</sup> For examples of each type of restriction see Bauer, “Productivity,” 3356; Mayerthaler, *Morphological Naturalness*, 98–99. The restrictions have given rise to the notion of “semi-productivity;” cf. Matthews, *Morphology*, 52. However, according to Bauer, “Productivity,” 3357, “What was once seen as variation in degree of productivity, is being seen instead as variation in restrictions on bases” (Bauer, “Productivity,” 3357); see also the criticism of the notion of semi-productivity in Bauer, *Introducing Linguistic Morphology*, 85–86.

<sup>60</sup> Cf. Bauer, *Introducing Linguistic Morphology*, 74: “We cannot sensibly talk about the productivity of a morphological process without implicitly talking about the time at which this process is productive.”

<sup>61</sup> Cf. Bauer, *Introducing Linguistic Morphology*, 73–74; Matthews, *Morphology*, 55.

<sup>62</sup> Cf. Costaz, *Grammaire*, §342 (about the Shaphel and other “rare” verb stems): “Les formes rares doivent leur nom au petit nombre de verbes qui en sont pourvus. Mais la forme rare d’un verbe donné peut-être très employée.”

frequency of the productive *-als*, and we would probably be tempted to consider the first productive and the second non-productive.<sup>63</sup>

#### 4.6 Productivity and the *ša-* Element in Syriac

It seems that the possibility of coining new verbs with the prefix *ša-* was restricted, but that does not deny its productivity completely. We should accept that at least a number of verbs reflect a productive *ša-* prefix, without needing to claim that the morpheme was productive during the whole period in which Aramaic or Classical Syriac was used, and without denying the obvious restrictions on the productivity. The only alternative view, namely, that the *ša-* element has never been a productive morpheme in Aramaic, implies that all Aramaic verbs containing this element are borrowings from other Semitic languages. This does no justice to its distribution in Syriac described in section 2.

These considerations apply not only to the *ša-* prefix, but also to the other stem formations. Their productivity, too, appears to have been subjugated to lexical, morphological, and semantic restrictions. How should we explain, for example, those Syriac verbs where a Shaphel is attested but an Aphel is not? The formation of the stem formations is a complex phenomenon in which morphological, lexical, and semantic factors interact in a complex way.<sup>64</sup>

### 5. COMPETITION BETWEEN NATIVE AND FOREIGN MORPHEMES

The models of Harris and Muraoka as well as those of Rabin and Kaufman assume that the *ša-* prefix entered Aramaic through loanwords and that this foreign element existed side by side with the native *'a/ha*. The phenomenon of competition between native and foreign morphemes is well known. Thus in English we find both the native prefix *un-* and the foreign prefix *in-*. The latter prefix came into the language “ready made” through borrowings from Neo-Latin and French. It is used only with adjectives and substantives of Latin and French origin and its stronger rival is the native *un*.<sup>65</sup>

In the case of the causative formations in Syriac there is also a situation in which a foreign element—the *ša-* prefix—existed side by side with a native morpheme—the *'a/ha* prefix. Most causatives are built with the native morpheme, but some with the foreign

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<sup>63</sup> Cf. Mayerthaler, *Morphological Naturalness*, 93; on the inadequacy of a definition of productivity in terms of frequency see also Bauer, “Productivity,” 3354; Aronoff, *Word Formation*, 36. For a different view see Verheij, *Bits, Bytes, and Binyanim*, 43–49.

<sup>64</sup> Compare the phonological and morphological factors that seem to have influenced the use of the Ettaphal in Syriac or the preference for certain stem formations of hollow roots in Biblical Hebrew. Such phenomena demonstrate the serious limitations of a description of the verbal stems purely in terms of functions and semantics; see Dyk, “Data Preparation,” 140, n. 9; Hoftijzer, *Een kwestie van vraagstelling*, 7–8.

<sup>65</sup> Cf. Marchand, *English Word Formation*, 129–37, 168–70.

morpheme. Some verbs take both the *ša* and the *'a/ha* prefixes, with or without difference in meaning.

Elsewhere we have argued that if we approach language as a system, it is important to use the notion of an open and changing system as has been developed in system theory.<sup>66</sup> The language system, just as any open system in the natural sciences, is exposed to factors that may disturb the balance of the system. These factors may be internal or external. One of the most important external factors is contact with other languages. In response to the disruptive factors, the system develops mechanisms to restore the balance or to create a new balance, by incorporating these factors.

This seems to have happened with the introduction of the Shaphel in Syriac. An external factor, namely, the foreign prefix *ša-*, has been incorporated into the system, be it on a limited scale. Although the result is more complex than the original system,<sup>67</sup> we can say that a new balance has been created in which the *ša-* prefix functions side by side, and sometimes alternating with, the *'a-* prefix.

## 6. CONSEQUENCES FOR THE LEXICON

Do verbs beginning with *ša-* belong to a verbal stem, the Shaphel, or should they be treated as quadri-radical roots? Is the addition of the *ša-* prefix a grammatical phenomenon (inflection) or a lexical phenomenon (derivation)? Our investigations supply a mixed answer to these questions, because the forms discussed display a rich variety of usages. We can distinguish the following categories:

1. Nouns with the *ša-* prefix without a corresponding verb, for example, ܫܫܘܢܐ.
2. Pe-Shin verbs for which the comparative Semitic evidence suggests an original bi-radical base, to which *ša-* has been prefixed, for example, ܫܫܘܢܐ.
3. Quadri-literal roots with Shin as the first consonant but without a corresponding tri-radical base, for example, ܫܫܘܢܐ. To this category belong quadri-literal roots that appear as “ready-made” borrowings of Shaphel forms from other languages, for example, ܫܫܘܢܐ.
4. Quadri-literal forms with the prefix *ša-* that occur alongside their tri-radical bases.
  - a. Without Aphel forms from the same base, for example, ܫܫܘܢܐ.
  - b. With Aphel forms with the same meaning, for example, ܫܫܘܢܐ.
  - c. With a functional distribution of the Aphel and the Shaphel, for example, ܫܫܘܢܐ.

On the one hand there are cases where the element that remains when the *ša-* prefix is removed does not function as an independent entity, and where the recognition of the *ša-*

<sup>66</sup> Jenner–Van Peursen–Talstra, “Interdisciplinary Debate,” 20.

<sup>67</sup> Schwarzwald considers the increased complexity that we have to assume if we interpret the Shaphel as a *binyan* an argument against the *binyan* interpretation in (Modern) Hebrew: it disagrees with the general tendency to reduce the number of conjugations (“Hebrew *šaf‘el*,” 149–50) and it assumes an inflectional morpheme ܫ, which does not belong to the elements that are used for word formation (ܫܫܘܢܐ) (*ibid.* 148).

prefix is the result of etymological and comparative Semitic analysis, rather than a synchronic analysis of the language system. In these cases (categories 1–3) the *šā-* prefix is preferably considered to be part of the lexeme. Even verbs that are clearly Shaphel forms, but that appear as “ready-made” borrowings from other languages, such as **ܫܘܪܬ** (compare category 3) do not warrant viewing the *šā-* prefix as a productive, inflectional morpheme in Classical Syriac.

Admittedly, in the root-based approach (section 1), the observation that in these cases the *šā-* prefix is part of the lexeme rather than an inflectional affix is not sufficient reason for the lemmatization of these words under the Shin. This observation leaves open the possibility that the lexeme beginning with a Shin is the product of derivation. It is precisely in the field of derivation that the root-based approach differs from an alphabetical arrangement of the lexemes. All lexicographers will agree that word forms that are the result of *inflection* should not appear as a separate entry in the lexicon. A verb form such as **ܫܘܪܬ** will not receive a separate entry under the Nun. However, the root-based approach also implies that lexemes that are the result of *derivation* appear under the root to which derivational affixes have been added. The lexeme **ܫܘܪܬ**, for example, with the derivational morpheme **ܫ** will appear under the **ܫ** in an alphabetical arrangement, but under the **ܫ** in a root-based approach. One could argue that for the same reason the **ܫ** in, for example, **ܫܘܪܬ** is a derivational morpheme and that this verb should appear under the root **ܫܘܪ** in a root-based dictionary. However, whereas **ܫܘܪܬ** is derived from a root that is well-established in Syriac, **ܫܘܪܬ** is derived from a root that is not attested in Syriac. We, therefore, cannot decide whether this word is the result of internal Syriac derivation or rather a “ready-made” borrowing. For this reason, even in a root-based approach this verb is preferably given under the Shin, as in fact Brockelmann does (compare table 2, above).

On the other hand, the examples of category 5 are difficult to treat as quadri-literal verbs. It would be illogical to place **ܫܘܪܬ** under **ܫܘܪ** but **ܫܘܪܬ** under the Shin and thus to treat the Shaphel differently from the Aphel and the other verbal stems.

Making a choice for either the lexeme approach or the verbal stem interpretation and then applying that choice to all forms with the *šā-* element attested in Classical Syriac, would not do justice to the rich diversity of the phenomenon under discussion. It would be unsound to decide that **ܫܘܪܬ** should appear under **\*ܫܘܪ** or **\*ܫܘܪ** just because this would be consistent with giving **ܫܘܪܬ** under **ܫܘܪ**. On the other hand, to create a separate entry for **ܫܘܪܬ** would be unfortunate because it would hamper the lexicographic and morphological analysis and do injustice to the parallel between **ܫܘܪܬ** and **ܫܘܪܬ**.

This brings us to a solution in which some forms with the *šā-* prefix are given under the Shin, others under the tri-radical base. This solution is not as odd as it seems, and stands rather close to common lexicographic practice (compare table 2). There are in fact no modern Syriac dictionaries that list the forms with the *šā-* prefix either all under the Shin or all under the alleged tri- or bi-radical base. There is room for improvement, however, in the area of defining and making explicit the criteria by which the lemmatization is done. In the current practice in many existing dictionaries it is sometimes difficult to figure out where a

certain verb beginning with *ša-* should be sought. Moreover, any inconvenience that might arise from the decision that some forms with the *ša-* prefix appear under the **▲** and others under the element that remains when the *ša-* prefix is omitted, can be overcome by the use of cross-references.



## CHAPTER 4 LEXEME STATUS OF PRONOMINAL SUFFIXES

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Over the years, researchers at the Vrije Universiteit, Amsterdam and Leiden University have been using the standard dictionaries as reference works in their computer-assisted morphological analysis of Biblical languages. This type of linguistic work makes somewhat different demands of a lexicon than traditional philology does. There are a number of recurring problems when a classic lexicon is used for morphological analysis. One of these problems is that traditional dictionaries do not express themselves on the morphological status of the pronominal suffix. There are a number of good reasons to regard the suffixes as lexemes rather than affixes: they have their own part of speech and their own grammatical functions of person, number, and gender. The enclitic personal pronouns<sup>1</sup> would therefore deserve a place in the lexicon like the proclitic prepositions do. For computer-assisted textual analysis, it is desirable that a new standard dictionary be developed as an authority for the morphology.

### 1. USE OF THE LEXICON

In 1977 the Werkgroep Informatica of the Faculty of Theology of the Vrije Universiteit Amsterdam began the morphological analysis of Biblical Hebrew and Aramaic.<sup>2</sup> For this type of work it needed an authoritative<sup>3</sup> list of lexemes, by which we mean a list that serves as an established point of reference. The Werkgroep did not want to do their own lexicography, not only because it would mean an immense project in its own right, but also because they wanted their results to be easily verifiable. They chose the *Lexicon in Veteris Testamenti libros* by Koehler and Baumgartner as their lexicon of reference, because it was the most recent

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<sup>1</sup> In this article, “enclitic personal pronoun” refers to personal pronouns that are directly attached to the preceding word, without white space or punctuation marks between them (see the definition of “enclitic” in the appendix to the present chapter). Accordingly, it refers to what in traditional Syriac grammars is usually called the “pronominal suffix.” We do *not* refer to the independent personal pronouns in which an initial ܐ, ܘܢ, or ܝ is elided in the pronunciation (ܐܘܟܝܢ, ܘܢܘܟܝܢ, and so on). Also in this latter category, the words are sometimes connected in writing (for instance, ܘܢܘܟܝܢ instead of ܝܢܘܟܝܢ) but since their lexeme status is generally acknowledged in grammars and dictionaries, they will not concern us here.

<sup>2</sup> Talstra–Postma, “On Texts and Tools.”

<sup>3</sup> We do not mean that the “authority” cannot be questioned, but that any deviations from the list need to be accounted for in order for the results to remain verifiable.

authoritative dictionary available at the time. The use of it as a standard was not without problems. Sometimes the lexicon remained silent, or was inconsistent, in morphological matters.<sup>4</sup> Sometimes it went its own way, as in its idiosyncratic treatment of the ā-ē verbs, such as ܐܘܪܝܢܐ.<sup>5</sup>

In 1999 the Werkgroep Informatica joined forces with the Peshitta Institute Leiden for the CALAP project, Computer-Assisted Linguistic Analysis of the Peshitta.<sup>6</sup> The authoritative lexicon for this project was R. Payne Smith's *Thesaurus Syriacus*, although in practice J. Payne Smith's *Compendious Syriac Dictionary* was consulted first. Here, too, it proved difficult to uphold the lexicon as a standard for morphological work.

In July 2005 the Peshitta Institute Leiden launched the Turgama project. In Turgama, as in CALAP, *Thesaurus Syriacus* is the authoritative lexicon for Syriac. For Aramaic we use Dalman's dictionary,<sup>7</sup> for the same reason<sup>8</sup> for which it had been chosen as the basis of the *Bilingual Concordance to the Targum of the Prophets* prepared by the Targum research group in Kampen,<sup>9</sup> namely, Rosenthal's positive judgement of Dalman's etymology and use of the Jemenite vocalization.<sup>10</sup>

The authority of these dictionaries, however, is limited by their fitness for morphological analysis: we are sometimes forced to deviate from the lexicon in order to maintain a consistent morphology. In the *Thesaurus Syriacus*, for instance, the cardinals eleven to nineteen are sometimes lemmatized under the units, such as ܐܘܢܐ, ܐܘܢܐ, and ܐܘܢܐ, and sometimes under a lemma of their own, as with ܐܘܢܐ, ܐܘܢܐ, and ܐܘܢܐ. It is not clear whether these forms are regarded as realizations of one or of two lexemes. The tens, too, exhibit variation in such a way that it is not clear whether they are regarded as inflections or as having a lexeme of their own. The other contributions of the Turgama project to this volume also deal with this problem and present other examples.

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<sup>4</sup> If we look at adjectives of which only feminine forms are attested in the Hebrew Bible, we see, for instance, that ܐܘܪܝܢܐ is lemmatized under ܐܘܪܝܢܐ, but ܐܘܪܝܢܐ and ܐܘܪܝܢܐ under ܐܘܪܝܢܐ and ܐܘܪܝܢܐ, respectively. Likewise ܐܘܪܝܢܐ has its own lemma, but ܐܘܪܝܢܐ is lemmatized under ܐܘܪܝܢܐ. Although understandable from a semantic point of view, this yields inconsistency in the morphological analysis.

<sup>5</sup> They radically relegate all Qal participles of ܐܘܪܝܢܐ to an entry for an adjective. Cases like Gen 22:12; 32:12; 42:18; Ex 9:20, however, are listed both under the verb and the adjective. Other dictionaries are more careful. DCH, 4:280, for example, does not recognize a separate adjective, but lists the cases in which the participle is used as adjective, adding “some cases may be” verbal.

<sup>6</sup> Jenner–Van Peursen–Talstra, “Interdisciplinary Debate.”

<sup>7</sup> Dalman, *Aramäisch-Neuhebräisches Handwörterbuch*.

<sup>8</sup> According to J.C. de Moor in an e-mail to P.S.F. van Keulen on February 28, 2006.

<sup>9</sup> De Moor, *Bilingual Concordance*, 1:vii.

<sup>10</sup> Rosenthal, *Die aramaische Forschung*, 117: “Einen kurzen, in seinen etymologischen Vermutungen recht zurückhaltenden Auszug aus Levy's Lexikon, der sich darauf beschränkte, nur den Onkolos-Wortschatz durch Stellenangabe kenntlich zu machen, der aber vor allem auch die jemenitische Vokalisation berücksichtigte.”

## 1.1 Approaches

The morphological analyses carried out in these projects involve a use of the lexicon which is slightly different from what a philologist would do.

In the process of morphological analysis, the lexicon is consulted with questions such as: “What is the paradigmatic form of this lexeme?” “Does this lexeme exist?” “Are these two forms from one and the same lexeme?” “Which grammatical functions are lexically determined with this lexeme?” “Does this lexeme belong to a certain lexical set?”<sup>11</sup> In a broad sense, the aim is to understand the text in linguistic terms<sup>12</sup> in order to perform morphological analysis.

A philologist, on the other hand, would consult the lexicon with slightly different questions, such as: “Under which lemma can I find this word?” “Does this word exist?” “What does this word mean?” “What is the gender of this word?” “Could this word have other meanings as well?” The aim is to understand the text in philological terms in order to translate it.

## 1.2 Terminology

The subtle distinction does not limit itself to the approach to the lexicon, but also involves terminology. The meaning of the term “lexeme” varies slightly with the context in which it is used. We currently have the following working definition of “lexeme”:

An unbroken<sup>13</sup> nucleus of lexical morphemes to which the inflectional affixes are added. Such a nucleus consists of at least one root, and possibly derivational affixes.<sup>14</sup> The lexeme determines the primary meaning and part of speech of a word.

This is a morphological definition, but in the field of lexicography or semantics somewhat divergent definitions<sup>15</sup> are used.

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<sup>11</sup> A lexical set is a subset of the comprehensive set of lexemes with a common part of speech. The members of the lexical set exhibit under certain conditions a syntactically deviant behaviour from the lexemes in the comprehensive set. Examples are the set of copulas, ordinals, or gentilics.

<sup>12</sup> The working definitions of the linguistic terms used in this article are given in the appendix to this chapter.

<sup>13</sup> Not interrupted by inflectional prefixes or suffixes. The realization of a lexeme can contain infixes or non-concatenative affixes.

<sup>14</sup> Just like inflectional affixes, derivational affixes can be classified as prefixes, infixes, suffixes, or non-concatenative morphemes, depending on their position relative to the root they belong to.

<sup>15</sup> The concept *lexeme* is more commonly defined in terms of lexicography or semantics. Cf. “*l’unité de base du lexique*” (Dubois et al., *Dictionnaire*, 285), and “the minimal distinctive unit in the semantic system of a language” (Crystal, *Dictionary of Linguistics and Phonetics*, 199). The term lexeme was coined in order to have a term with which one could refer to the abstract form common to the different grammatical instances belonging to one and the same lexicon entry. In our definition it is the abstract base to which inflectional affixes are added.

We should note that a lexeme is an *abstractum*, which means that *in concreto* we only encounter realizations. In order to be able to list the lexeme and to refer to it, one realization is designated as the paradigmatic form.

### 1.3 Problems

The traditional dictionaries serve the purpose of the philologist reasonably well. For the linguist, however, there are a few recurring problems when he or she consults the lexicon for the morphological analysis. We shall give a few examples before we turn to the problem of the lexical status of the pronominal suffix.

As a first example, the lemma or dictionary entry is not always the paradigmatic form of the lexeme, but is sometimes an inflected form such as an emphatic state or a plural. How do we know, for instance, whether the paradigmatic form of the lexeme of ܐܠܗܝܬܐ, “goddess,” ends in ܐ, ܝ, or ܐ, when the absolute state is not attested in the lexicon?<sup>16</sup> Or, what is the lexeme of the third-weak verbs such as ܠܡܢܢ, which are often lemmatized under the forms with an Alaph as the third letter?<sup>17</sup>

Another recurring problem is that there is no strict one-to-one relationship between lexemes and lemmas or dictionary entries. This makes it hard to tell whether the lexicographer regarded two forms as realizations of one and the same lexeme. As an example, in the dictionaries of Brockelmann, Costaz, Ferrer-Nogueras, and in CSD, the personal pronoun of the second person plural ܚܘܢܝܢ is listed under the lemma of the singular ܚܘܢܝܢ. These two forms represent, however, two different lexemes.<sup>18</sup>

## 2. PRONOMINAL SUFFIX

Pronominal suffixes are treated in grammars, but are usually not found in dictionaries. This suggests that the pronominal suffix is viewed as an inflectional affix and not as a lexeme. In keeping with tradition, the user interfaces of modern Bible software, like Accordance,<sup>19</sup> Bible Works,<sup>20</sup> Biblio,<sup>21</sup> or the Stuttgart Electronic Study Bible,<sup>22</sup> also suggest that it is some kind of affix, because they classify the pronominal suffix under word features. Although the standard grammars treat the pronominal suffixes like the affixes, they do not explicitly call them inflectional affixes, but neither do they call them lexemes. If the pronominal suffix is not the realization of a lexeme, then it is the realization of an inflectional affix. The grammars simply do not express themselves on the morphological status of the pronominal suffix.

<sup>16</sup> See Van Keulen, chapter 2 in the present volume.

<sup>17</sup> See Bakker, chapter 1 in the present volume.

<sup>18</sup> That is, unless one argues that ܚܘܢܝܢ is an inflectional affix signalling a plural.

<sup>19</sup> According to a demonstration of Accordance 6.9.

<sup>20</sup> According to BibleWorks for Windows, Windows 95/NT Release, Version 3.5.050p.

<sup>21</sup> According to a demonstration of Biblio 8.00 2/3/2004.

<sup>22</sup> According to SESB in Libronix Digital Library System 2.1a.

When we consider the difference between a lexeme and an affix, we notice that an affix is a *sign* for grammatical functions, whereas a lexeme is the *owner* of grammatical functions. The following metaphor may illustrate the difference between a sign for something and the thing itself. The royal standard is flown as a sign that the palace accommodates the queen. It is a sign that tells us something about the palace. It is not the flag itself that accommodates the queen. Inflectional affixes modify the values of the grammatical functions of the word; they do not have grammatical functions themselves. Lexemes, on the other hand, do have grammatical functions, and they have a value for part of speech, have an independent meaning, and can be a constituent in a clause.

If we look at what the grammars do with pronominal suffixes, then we see that they attribute to them properties that we associate with a lexeme. They seem to acknowledge that pronominal suffixes have a part of speech by calling them personal pronouns.

In his Latin grammar of Syriac, Nestle distinguishes two types of personal pronouns, *separated* and *attached*, which differ in their grammatical function “case.”<sup>23</sup> Like Nestle, Duval distinguishes between *separated* and *attached* personal pronouns.<sup>24</sup> The grammars of Nöldeke,<sup>25</sup> Costaz,<sup>26</sup> Brockelmann,<sup>27</sup> and Muraoka<sup>28</sup> follow this distinction. This suggests that we are dealing with words—pronouns that may or may not be attached to the preceding word—but not with inflectional affixes.

In Nestle’s English grammar of Syriac, we might get the impression that the author regards the suffixed personal pronouns as affixes when he defers their treatment<sup>29</sup> to the declension of the noun and the conjugation of the verb.<sup>30</sup> He does, however, refer to a list of pronouns when he discusses the appending of the suffixes to the noun.<sup>31</sup>

<sup>23</sup> Nestle, *Brevis linguae Syriacae grammatica*, 22: “Pronomina personalia (وَفْتَرُفَا) duplicis generis sunt 1) *absoluta* s. *separata* (وَصَفْتَرَا), quae pro Nominativo adhibentur, et 2) *affixa* s. *suffixa* (وَصَفْتَرَا) quae Casibus obliquis exprimendis inserviunt.”

<sup>24</sup> “Les pronoms مَفْتَرَا سَوَفْ, sont *demonstratifs* مَفْتَرَا ou *personnels* مَفْتَرَا; ceux-ci se distinguent en *pronoms isolés* مَفْتَرَا et en pronoms suffixes مَفْتَرَا.” (Duval, *Traité*, 167).

<sup>25</sup> Nöldeke, *Grammatik*, 44, treats them under “Personalpronomina,” which he subdivides in “Subjectsformen” (independent and enclitic §§63–64) and “Suffigierte Personalpronomina” (possessive §65 and object §66).

<sup>26</sup> *Grammaire Syriaque*, 64: “Les pronoms personnels sont séparés ou affixes.”

<sup>27</sup> Brockelmann, *Grammatik*, 48, treats them under “Personalpronomina,” which he subdivides into “Subjektsformen” (independent and enclitic §81) and “Suffixa” (§§82–83).

<sup>28</sup> Muraoka, *Classical Syriac*, 18, treats them under Pronouns, the personal pronouns of which he subdivides into Independent personal pronouns (§§9–10) and Suffixed personal pronouns (§11) or Personal pronouns attached to verbs (§12).

<sup>29</sup> Nestle, *Syriac Grammar*, 23: “For the suffixes of the noun (مَفْتَرَا مَفْتَرَا affixa relationis) v. §31, for those of the verb (مَفْتَرَا مَفْتَرَا) v. §39.”

<sup>30</sup> I am indebted to M. Farina for this observation.

<sup>31</sup> Nestle, *Syriac Grammar*, 34: “The singular forms given in §23 (with مَفْتَرَا) when joined to the plural of nouns become....”

When we look at another Semitic language such as Biblical Hebrew, similar observations can be made. Waltke and O'Connor call pronouns words<sup>32</sup> and distinguish two classes of personal pronouns: independent personal pronouns and pronominal suffixes. They attribute part of speech and case to the pronominal suffix<sup>33</sup> and call it a suffixed personal pronoun.<sup>34</sup>

In his Hebrew grammar, Richter appears to regard the pronominal suffixes as words and not as morphemes, because he treats them in chapter 3 (*Wortarten*) and not in chapter 2 (*Morpheme*). He calls them enclitic personal pronouns.<sup>35</sup>

From the table of Family 20, "Personal Pronoun," in the *Linguistic Concordance* by Francis I. Andersen and A. Dean Forbes,<sup>36</sup> it can be deduced that they regard pronominal suffixes as personal pronouns.

If it were an affix, the pronominal suffix should function as a sign for the grammatical functions of the word to which it is attached, but should not influence the word functions. A pronominal suffix, however, has its own grammatical functions of person, number, and gender,<sup>37</sup> which are distinct from the grammatical functions of the word to which it is attached. This presents another reason to regard it as a word in itself. It is systematically inadvisable to have two instances of the same word function with different values, for one and the same word. In 2 Kings 9:33 we read **וְהִשְׁלַחְתָּ**, "throw her down," which is a combination of a second person masculine plural and a third person feminine singular. It is awkward to say that this word is both a second and third person, masculine and feminine, singular and plural. Furthermore, the pronominal suffix does have features that are characteristic of a lexeme, such as its own grammatical functions, part of speech, meaning, and its possibility of being a clause constituent.<sup>38</sup>

It is noteworthy that though classic lexica do not list the pronominal suffixes, they do list proclitics such as the prefixed prepositions **בְּ**, **לְ**, and **מִן**. Note that they explicitly mention their part of speech as well: preposition.

### 3. CONCLUSION

Although the standard lexica are useful aids for the computer-assisted morphological analysis of texts, they cannot be used as an authoritative resource without difficulties in this field. As there are no authoritative alternatives, it is desirable that future dictionaries contain the

<sup>32</sup> Waltke–O'Connor, *Biblical Hebrew Syntax*, §16.1a.

<sup>33</sup> Waltke–O'Connor, *Biblical Hebrew Syntax*, §16.2a: "in function genitive ... or accusative."

<sup>34</sup> Waltke–O'Connor, *Biblical Hebrew Syntax*, §16.4a.

<sup>35</sup> Richter, *Grundlagen*, 177: "Nach der Verbindungsart ergeben sich zwei Klassen, die selbständigen und die enklitischen PPron."

<sup>36</sup> Andersen–Forbes, *The Computer Bible* vol. 10: *Eight Minor Prophets: A Linguistic Concordance*, 181–238.

<sup>37</sup> See the tables in Muraoka, *Classical Syriac*, §§11–12.

<sup>38</sup> Cf. Muraoka, *Classical Syriac*, §97b: "A pronominal direct object is as a rule synthetically attached to the verb."

information needed by the morphologist, so that they can be used as works of reference in this respect as well. It seems logical that such works have entries for the pronominal suffixes as they have entries for the proclitic prepositions, since no authoritative list of lexemes should be without the pronominal suffixes.

#### 4. DEFINITIONS

*Affix*: A morpheme that is not a root and can occur only in conjunction with a root.<sup>39</sup> We distinguish between derivational and inflectional affixes.

*Allomorph*: Each of the different realizations of one and the same morpheme.

*Clitic*: A word that is immediately connected to another word on which it depends for its realization. We restrict the term to graphic clitics, not allowing white space or punctuation marks between a clitic and the word to which it is connected. Clitics can either be proclitics or enclitics, depending on their position.

*Concatenative*: Of an affix: having an unbroken realization of its own, not shared with another morpheme and distinguishable from the realization of its neighbouring morphemes. An affix with a zero realization is concatenative by definition.

*Derivational affix*: An affix inside a lexeme and being part of it. It is usually added to a root to modify its meaning or change its part of speech.

*Dictionary entry*: The part of a dictionary dedicated to a lemma. In terms of key-value pairs, the lemma is the key, and the dictionary entry is the key and its value.

*Enclitic*: A word that is closely connected to the preceding word on which it depends for its realization. We restrict the term to graphic enclitics, not allowing white space or punctuation marks between an enclitic and the word preceding it.

*Grammatical function*: A reference to a syntactic category through a morphological operation on a lexeme.

*Grammatical morpheme*: A synonym for *inflectional affix*.

*Graph*: The smallest discrete segment in a stretch of writing. The present line of type is composed of such graphs as *e*, *b*, *t*, *T*, punctuation marks, and so on.<sup>40</sup>

*Grapheme*: The minimal contrastive unit in the writing system of a language. The grapheme *a*, for example, is realized as several allographs *A*, *a*, **A**, **a**, and so on.<sup>41</sup>

*Infix*: An affix that is found within a root.

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<sup>39</sup> Cf. Akmajian, *et al.*, *Linguistics*, 545; Dubois *et al.*, *Dictionnaire*, 17.

<sup>40</sup> Crystal, *Dictionary of Linguistics and Phonetics*, 160.

<sup>41</sup> Crystal, *Dictionary of Linguistics and Phonetics*, 160.

*Inflectional affix*: An affix added to—but not part of—a lexeme as a determinant of the grammatical functions of the word. An inflectional affix cannot change the part of speech of a word.

*Lemma*: Word form used as key in a dictionary.

*Lexeme*: An unbroken nucleus of lexical morphemes to which the inflectional affixes are added. Such a nucleus consists of at least one root, and possibly derivational affixes. The lexeme determines the primary meaning and part of speech of a word.<sup>42</sup>

*Lexical morpheme*: Each of the morphemes into which a lexeme is subdivided. Thus, either a root or a derivational affix.

*Lexicon*: The exhaustive list of the lexemes thus far encountered in a language, in which the lexically determined functions are listed.

*Morph*: The discrete unit by which a morpheme is realized. A morpheme is not necessarily always realized by one and the same morph. Different morphs of one morpheme are called *allomorphs*.

*Morpheme*: The base unit in the composition of words having its own grammatical or lexical relevance. Morphemes are subdivided into *roots* and *affixes*.<sup>43</sup>

*Morpheme type*: A group of morphemes that occupy collectively certain positions in the paradigm. For example, the preformative of the imperfect in Hebrew and Syriac.

*Non-concatenative*: Of an affix: sharing its realization with a root, from which it cannot be separated in a natural way.

*Paradigmatic form*: The combination of a grapheme string and a homograph number used as a convenient alternative to identify a morpheme within a morpheme type.

*Prefix*: An affix that immediately precedes a root or an other prefix.

*Proclitic*: A word that is closely connected to the following word, on which it depends for its realization. We restrict the term to graphic proclitics, not allowing white space or punctuation marks between a proclitic and the word following it.

*Root*: A single morpheme at the base of a word which cannot be analyzed further without total loss of identity, that is, the part left when all the affixes are removed. It is the roots that are the rudiments of the semantic content of a lexeme. A word can have more than one root.<sup>44</sup>

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<sup>42</sup> See also above, note 15.

<sup>43</sup> Cf. Crystal, *Dictionary of Linguistics and Phonetics*, 223.

<sup>44</sup> Cf. Crystal, *Dictionary of Linguistics and Phonetics*, 303.

*Stem*: A realization of a lexeme. It is the base to which the realizations of the inflectional affixes are attached. Non-concatenative affixes are realized as part of the stem, inflectional infixes are not.<sup>45</sup>

*Suffix*: An affix that immediately follows a root or an other suffix.

*Word*: A lexeme together with all its inflectional affixes and the base element of the syntactic text analysis as the smallest unit that conveys both grammatical function, meaning, and part of speech.

*Word function*: A feature of a word that plays a role in its grammatical connections. The word is the lowest functional unit to which this feature can be assigned.

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<sup>45</sup> Cf. Crystal, *Dictionary of Linguistics and Phonetics*, 326, and O'Grady–Dobrovolsky–Katamba, *Contemporary Linguistics*, 730.



**PART TWO**  
**LEXICOGRAPHY AND SYNTAX:**  
**PART OF SPEECH ATTRIBUTION**



## CHAPTER 5 GRAMMATICAL CLASSIFICATION IN SYRIAC LEXICA: A SYNTACTICALLY BASED ALTERNATIVE

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*To Frank Andersen, Janet Dyk, Dean Forbes, Jan Joosten, David Lane,  
Takamitsu Muraoka and Wido van Peursen, with gratitude*

Grammatical classification (taxonomy and parts of speech) and the methodology by which it is provided are the foundation stones of every entry in a lexicon. Even the initial act of citing a lexeme requires a classificatory judgement, irrespective of whether or not the lexeme is qualified by a part of speech notation. In Semitic lexicography the lack of a reliable methodology for taxonomy and parts of speech has perpetuated the classificatory lexical confusion. The system we have inherited has proven to be unworkable, and it must be replaced by a consistent and verifiable alternative, which is applicable to every occurrence of each word in a lexicalized corpus.

This essay examines the problem and proposes a solution for future Syriac lexicography; in so doing it tells the story of how the new methodology evolved.

Historically, the problem is inseparable from the issue of how lexicographers and grammarians have perceived Classical Syriac words with a passive-participial form. The essay analyzes the treatment of the passive-participial form in Syriac lexica and grammars, from the nineteenth century to the present, with particular attention to the specialized research of Gideon Goldenberg and Jan Joosten. It explores the implications of that treatment for Syriac lexicography, past and present.

The proposed solution is a methodology that allows for a coherent and systematic analysis of complex morphological, syntactic, and semantic data, and is designed to accommodate future lexico-syntactic and semantic revisions and improvements. Of equal importance is its quest for concinnity. It incorporates a feature based on a relatively recent recommendation by Janet Dyk. An appendix provides a comprehensive referenced definition of the syntactic functions of the Classical Syriac adjective.

### 1. INTRODUCTION

*When we are presented with a great number of things we feel compelled to impose some order on potential chaos. Such is the goal of classification. It allows us to describe a complex array of objects with simple words or concepts, even at the cost of oversimplification. (...) If variation were not important and complex, it would not be necessary to categorize at all.*

*One could simply recognize the level of difference relevant to one's needs.*

Luigi Luca Cavalli-Sforza<sup>1</sup>

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<sup>1</sup> Cavalli-Sforza, *Genes, Peoples and Languages*, 27–28.

Many disciplines meet in the making of a modern lexicon. For languages such as Classical Hebrew, Aramaic, Classical Syriac, Septuagint Greek, and New Testament Greek, these disciplines range from a philosophical basis<sup>2</sup> to a lexicographic methodology.<sup>3</sup> An integration of these disciplines is not easy to achieve: it involves synthesizing etymological, morphological, semantic, and syntactic information. The first part of this essay (section 2) identifies the nature and extent of the problem of grammatically classifying words in a Classical Syriac lexicon and how that problem has affected virtually every Syriac lexical work from 1879 to 2008,<sup>4</sup> including the first volume of the author's own lexicon, *A Key to the Peshitta Gospels* (hereafter KPG). The second part (section 3) examines causes of the problem by seeking to identify the common practices and anomalies that underlie "the taxonomic confusion inherited from long-established traditions in Semitic lexicography."<sup>5</sup> The third part (sections 4–10) proposes a resolution.

This essay is based on a comparatively brief article by the author<sup>6</sup> and utilizes six pages of material from a subsequent one.<sup>7</sup> A major focus of the latter article that is not addressed in this essay is the need for a new methodology for grammatical classification for Hebrew as well as for Syriac.<sup>8</sup>

This new version complements the initial research in nine ways. First, it tells the story of the birth and development of the methodology it proposes. Second, it covers many more Syriac lexical resources. Third, it provides more illustrative examples, which allow issues to be explored in greater depth. Fourth, while greater detail can complicate rather than simplify a proposal, the examples are subjected to a more thorough scrutiny leading to a better diagnosis of the problems explored, and to a greater refinement of corroborating evidence. Fifth, it analyzes not only words with the form of a passive participle in Syriac lexica, but also the treatment of these forms in Syriac grammars. Sixth, it extends its examination of the passive-participial form to the active-participial form, and to the *nomen agentis* (agent noun) and its passive counterpart. Seventh, it offers an improved and simplified paradigm of the functions of these forms for the purpose of grammatical classification. Eighth, the methodology the essay proposes for grammatical classification in future lexicography incorporates morphological information based on a recommendation by Janet Dyk; information that is relegated to an index in previous accounts of my methodology.<sup>9</sup> Lexical

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<sup>2</sup> Cf. Chadwick, *Lexicographica Graeca*.

<sup>3</sup> Cf. Falla, "A Conceptual Framework."

<sup>4</sup> In this essay "lexical work" and "lexical resource" refer to lexicon, glossary, concordance, and parsing guide (Whish, *Clavis Syriaca*) that include lemmatization and/or notations of parts of speech.

<sup>5</sup> Andersen–Forbes, "What Kind of Taxonomy?"

<sup>6</sup> Falla, "Problems in Syriac Taxonomy." Portions that are reproduced from the earlier article are used with the kind permission of the editors of JECS.

<sup>7</sup> Falla, "A New Methodology for Grammatical Classification," §4, 180–81, §5, 182–85, §6, 185–86, §7, 186–87. This essay was written after but published before the one in note 6.

<sup>8</sup> Falla, "A New Methodology," 165–66, 175–82, 185–87.

<sup>9</sup> Falla, "The Lexicon for Which We Long?"; Falla, "A New Methodology."

entries in the volumes of KPG still in preparation will include this new information, though altering neither the arrangement nor the usability of the work. Dyk's advocacy for the inclusion of this data is discussed in detail. Finally, an extensive revision and expansion of the Classical Syriac adjective published in one of the previous articles<sup>10</sup> and in the second volume of KPG is presented.

This essay is confined to examining “modern” Classical Syriac lexical resources, that is, lexica from the monumental *Thesaurus Syriacus*, edited by R. Payne Smith, to the present. The first fascicle of *Thesaurus Syriacus* appeared in 1879 and the completed work in 1901. While it was still in progress, C. Brockelmann and J. Brun published in the same year (1895) the first editions of their respective Syriac-Latin lexica. T. Audo's Syriac-Syriac dictionary (ܘܚܘܡܐ ܘܚܘܡܐ) appeared in 1897, and A. Manna's Syriac-Arabic lexicon in 1900.<sup>11</sup> In 1903, these lexica were followed by J. Payne Smith's Syriac-English dictionary, (CSD) founded on the Syriac-Latin lexicon of her father.<sup>12</sup> 1911 saw the publication of Brun's second edition, 1927 J.P. Margoliouth's (J. Payne Smith) *Supplement to the Thesaurus Syriacus*, and 1928 Brockelmann's second edition. It would be 35 years—1963—before L. Costaz published the first edition of his Syriac-French-English-Arabic lexicon based on Brockelmann's second edition. Another 36 years would pass before the advent of E. Thelley's Syriac-English-Malayalam lexicon. To these major lexica one must add the six volume concordance to the New Testament of G. Kiraz (1993), which provides grammatical classification, and KPG (1991, 2000), which experiments with a new approach to Syriac lexicography.

The problem in question is not limited to the 129 years covered by the lexica discussed, but can be traced back to the earliest known Syriac grammars and lexical works, which, by consciously employing Greek grammatical categories, subsumed Syriac into a system alien to a Semitic language. Excluding J. Payne Smith's 1928 *Supplement*, our study covers twenty-two lexical resources. If one puts aside first editions (Brockelmann, Brun, Costaz), the number is reduced to nineteen.

All illustrative examples in this essay are from actual Syriac texts; none are contrived for the purpose of illustration.

## 2. THE PROBLEM

*Grammatical classification demands our engagement in an exact sensitivity to syntax, and the goodwill that prods us to negotiate the best solution for each element in a text, for it is via syntax, in the deepest sense, that meaning enters, that it steps into the light of accountable presence.*

Based on lines from George Steiner & Umberto Eco<sup>13</sup>

Let me illustrate the problem with a brief sketch of how I encountered it, for it is one that

<sup>10</sup> Falla, “A New Methodology.”

<sup>11</sup> Manna, ܘܚܘܡܐ ܘܚܘܡܐ ܘܚܘܡܐ. My copy of Manna arrived after I had finished this article.

<sup>12</sup> For a discussion of CSD in relation to other lexica see Brock, “Syriac Lexicography: Reflections on Resources and Sources;” Falla, “A Conceptual Framework,” 24, 28–29, 66; Falla, KPG, 2:xxv–xxvi.

<sup>13</sup> Steiner, *Real Presences*, 158; Eco, *Mouse or Rat: Translation as Negotiation*, 192.

haunted and hounded me for the first twenty-five years of my preparation of KPG,<sup>14</sup> and that finally forced me to look for a resolution in my preparation of the remaining volumes.

## 2.1 Classifying ܡܫܝܡܢ, ܡܫܝܡܢܐ

In composing a new entry for a comprehensive Syriac-English lexicon, we encounter the Syriac word ܡܫܝܡܢ (abs. ms.), ܡܫܝܡܢܐ (emph. ms.). First, we must decide where and how in the lexicon we will list it and what we will call it. One feature is immediately clear: ܡܫܝܡܢ, ܡܫܝܡܢܐ has the form of a Peal passive participle in a conventional Classical Syriac verbal paradigm.

When consulting the lexical resources from *Thesaurus Syriacus* (1879–1891) to Massimo Pazzini’s *Lessico Siriaco* (2004),<sup>15</sup> we find that the basic meaning is not an issue: it is “lame, crippled, disabled,” especially, but not necessarily, pertaining to a disability affecting the function of the lower limbs. Classification, however, is another matter. ܡܫܝܡܢ, ܡܫܝܡܢܐ is:

- (a) Lemmatized as Peal verb:
  - (i) participle *as* adjective (Jennings)<sup>16</sup>
  - (ii) absolute state (lemmatized separately from emphatic) assigned passive participle as its part of speech under Peal verb (Kiraz)<sup>17</sup>
  - (iii) participle *and* participial adjective (CSD)<sup>18</sup>
  - (iv) passive participle *and* adjective (Brun)<sup>19</sup>
- (b) Lemmatized separately under the rubric “Pعال,” called a passive participle and glossed as an adjective (CPV)<sup>20</sup>
- (c) Lemmatized separately without part of speech, but cross-referenced under Peal verb where it is cited as *pro adj. passim usurp* [emphasis added] (*Thesaurus Syriacus*)
- (d) Emphatic state lemmatized as nominal form (whereas absolute lemmatized as Peal verb); assigned passive participle as its part of speech; glossed as adjective (Kiraz)<sup>21</sup>
- (e) Lemmatized separately; adjective *and* passive participle (Ferrer–Nogueras)
- (f) Emphatic state glossed as noun at Mt 11:9, and absolute state parsed as adjective at Heb 12:13. Both qualified as “form of part[iciple] Peil” [Peil = ܡܫܝܡܢ/ܡܫܝܡܢܐ] (Whish)<sup>22</sup>
- (g) Lemmatized separately as adjective:

<sup>14</sup> The first volume was published in 1991, but inevitably the preparation of one volume requires simultaneous work on entries in a subsequent volume.

<sup>15</sup> Pazzini, *Lessico Concordanziale del Nuovo Testamento Siriaco*.

<sup>16</sup> Jennings, *Lexicon to the Syriac New Testament*.

<sup>17</sup> For participles, Kiraz lists only absolute forms under the verb. All emphatic forms “are listed under a separate nominal lexical entry,” Kiraz, *A Computer-Generated Concordance to the Syriac New Testament*.

<sup>18</sup> J. Payne Smith, *A Compendious Syriac Dictionary*.

<sup>19</sup> Brun, *Dictionarium Syriaco-Latinum*.

<sup>20</sup> [Anon.] *Concordance to the Peshitta Version of the Aramaic New Testament*.

<sup>21</sup> See note 17 above.

<sup>22</sup> Whish, *Clavis Syriaca*.

- (i) called adjective (Goshen-Gottstein)<sup>23</sup>
- (ii) absolute state listed separately from emphatic; no part of speech; glossed as adjective (Dogan)<sup>24</sup>
- (iii) listed separately; no part of speech; glossed as adjective (Brockelmann,<sup>25</sup> Costaz,<sup>26</sup> Köbert<sup>27</sup>)
- (h) Lemmatized separately; recognized as adjective *and* substantive in the Peshitta New Testament:
  - (i) qualified in parentheses as passive participle (Pazzini)
  - (ii) classified only as noun according to its function in the Peshitta Gospels (KPG, 2), but included here because the methodology of KPG, 2, would classify ܡܫܝܚܐ as adjective as well as substantive if it covered the rest of the New Testament, which includes instances that function adjectivally
- (i) Lemmatized separately as noun:
  - (i) emphatic state lemmatized as separate entry; no part of speech; glossed as noun (Hanna–Bulut)<sup>28</sup>
  - (ii) emphatic state listed separately from absolute; no part of speech; glossed as a noun (Dogan)
- (j) Neither part of speech nor gloss (Audo);<sup>29</sup> Audo obviously considered the meaning of ܡܫܝܚܐ to be self-evident to a Syriac-speaking reader as can be seen in the entry for ܡܫܝܚܐ, which he glosses as ܡܫܝܚܐ
- (k) Klein assigns ܡܫܝܚܐ a separate entry; in accordance with his methodology, he provides neither part of speech nor identifying gloss<sup>30</sup>

### 2.1.1 Summary of Classifications of ܡܫܝܚܐ, ܡܫܝܚܐ

To summarize: of our nineteen lexical resources, ܡܫܝܚܐ is lemmatized, and/or assigned a part of speech, and/or glossed by:

Nine as *Peal verb*:

—Passive participle only:

- (i) passive participle under the rubric “Peal” and glossed as adjective (CPV)
- (ii) passive participle in absolute state under Peal verb (Kiraz)

—Passive participle *and* adjective:

- (i) passive participle *and* adjective lemmatized under verb (Brun)

<sup>23</sup> Goshen-Gottstein, *A Syriac-English Glossary*.

<sup>24</sup> Dogan, *Wörterbuch: Syrisch (Aramäisch)-Deutsch, Deutsch-Syrisch (Aramäisch)*.

<sup>25</sup> Brockelmann, *Lexicon Syriacum*.

<sup>26</sup> Costaz, *Dictionnaire syriaque-français*.

<sup>27</sup> Köbert, *Vocabularium Syriacum*.

<sup>28</sup> Hanna–Bulut, *Wörterbuch: Deutsch-Aramäisch, Aramäisch-Deutsch*.

<sup>29</sup> Audo, ܡܫܝܚܐ ܡܫܝܚܐ.

<sup>30</sup> Klein, *Syrisch-Griechisches Wörterbuch zu den Vier Kanonischen Evangelien*.

(ii) passive participle *and* adjective lemmatized as adjective (Ferrer–Nogueras)

—Mixed classification:

- (i) passive participle but in emphatic state lemmatized as nominal form and glossed as adjective (Kiraz)
- (ii) participle/participial adjective (CSD)
- (iii) participle *as* adjective (Jennings)
- (iv) adjective *and* substantive qualified in parentheses as passive participle (Pazzini)
- (v) cross-referenced under Peal verb where it is cited as *pro adj. passim usurp* (*Thesaurus Syriacus*)

Five as *Noun*:

—Two: noun only:

- (i) lemmatized as separate entry without part of speech, but glossed as noun (Hanna–Bulut)
- (ii) emphatic state, listed separately from absolute, without part of speech, but glossed as noun (Dogan)

—Three: noun *and* adjective:

- (i) noun/substantive *and* adjective (KPG, 2, see section h ii, above)
- (ii) emphatic state glossed as noun and absolute parsed as adjective, with qualification “form of part[iciple] Peil” (Whish)
- (iii) substantive *and* adjective qualified in parentheses as passive participle (Pazzini)

Fifteen as *Adjective of some kind*:

—Three: adjective only:

- (i) called adjective (Goshen-Gottstein)
- (ii) glossed as adjective but called passive participle under the rubric “Peal” (CPV)
- (iii) absolute state, listed separately from emphatic, without part of speech, but glossed as adjective (Dogan)
- (iv) listed separately without part of speech, but glossed as adjective (Brockelmann, Costaz, Köbert)

—Two: adjective *and* noun:

- (i) adjective *and* noun/substantive (KPG)
- (ii) absolute state parsed as adjective and emphatic glossed as noun, with qualification “form of?” Peil participle (Whish)

—One: adjective *and* noun identified with passive participle:

- (i) adjective *and* substantive qualified in parentheses as passive participle (Pazzini)

—Six: mixed classification:

- (i) adjective *and* passive participle lemmatized under verb (Brun)
- (ii) adjective *and* passive participle lemmatized as adjective (Ferrer–Nogueras)
- (iii) participle *as* adjective (Jennings)
- (iv) lemmatized separately without part of speech, but cross-referenced under Peal verb where it is cited as *pro adj. passim usurp* [emphasis added] (*Thesaurus Syriacus*)





(d) These lexical resources not only differ from one another, but often exhibit internal inconsistencies as in the case of their treatment of *ܡܫܝܚܐ*, *ܡܫܝܚܐ* and *ܡܫܝܚܐ*.

### 2.3 Classifying *ܡܫܝܚܐ*, *ܡܫܝܚܐ* and *ܡܫܝܚܐ*

Other examples that could be cited include the forms *ܡܫܝܚܐ*, *ܡܫܝܚܐ* and *ܡܫܝܚܐ*. *ܡܫܝܚܐ* is listed only by Audo, *Thesaurus Syriacus*, CSD, and Brun—as it does not occur in the Peshitta New Testament it does not appear in KPG. In his Syriac-Syriac lexicon, Audo lemmatizes it as a separate entry and glosses it as an adjective. The Syriac meanings he assigns to it are *ܡܫܝܚܐ*, *ܡܫܝܚܐ*. *Thesaurus Syriacus* also lemmatizes it as a separate entry, immediately following the Peal *ܡܫܝܚܐ*, but classifies it as a passive participle and glosses it as *victus*. As an example of its use, *Thesaurus Syriacus* quotes *ܡܫܝܚܐ ܡܫܝܚܐ* (Cyr. 135.18). The entry ends with a cross-reference to *ܡܫܝܚܐ*, *ܡܫܝܚܐ*. CSD lists both *ܡܫܝܚܐ*, *ܡܫܝܚܐ* and *ܡܫܝܚܐ*, along with other paradigmatic information, at the beginning of the entry on the Peal verb *ܡܫܝܚܐ*. Both forms are introduced as passive participles, but *ܡܫܝܚܐ*, *ܡܫܝܚܐ* is not mentioned again. Brun, perhaps on the authority of *Thesaurus Syriacus*, cites *ܡܫܝܚܐ*, *ܡܫܝܚܐ* as the last item in his entry on Peal *ܡܫܝܚܐ*, where, like *Thesaurus Syriacus*, he glosses it as *victus*.

In Classical Syriac literature the other form, *ܡܫܝܚܐ*, *ܡܫܝܚܐ*, functions as both an adjective and a noun. An example of its function as an adjective is “the one who comes after me is *more powerful* than I [*ܡܫܝܚܐ ܡܫܝܚܐ*]” (Mt 3:11). As a substantive it means “a strong man,”<sup>41</sup> or “the Almighty.”<sup>42</sup>

Fifteen of our nineteen lexical resources, having listed the form as a distinctive entry, treat it only as an adjective.<sup>43</sup> Of these fifteen reference works, ten do not provide a part of speech (Audo, Brockelmann, Brun, Costaz, Dogan, Goshen-Gottstein, Hanna–Bulut, Jennings, Kiraz, Köbert). Three of them qualify their adjectival entry with a part of speech (Ferrer and Noguerras, Pazzini, Whish). Klein, in accordance with the principles of his glossary, has neither part of speech nor gloss.

In four instances only is the form acknowledged as both an adjective and a noun (KPG, CSD, Thelly, *Thesaurus Syriacus*), but again these differ from each other in various ways. KPG, 2, and Thelly alone provide full grammatical classification, though the meaning of Thelly’s noun is restricted to the Old Testament name “Almighty,” and does not cover the meaning “a strong man.” *Thesaurus Syriacus* lacks parts of speech, but has separate lemmatization, glosses and referenced examples for both functions. While CSD also acknowledges both functions, it obfuscates the classification it attempts to clarify by:

<sup>41</sup> Mt 3:11 Syr<sup>CP</sup>; 12:29 Syr<sup>CP</sup>, 29 Syr<sup>CP</sup>; Mk 3:27 Syr<sup>SP</sup>, 27 Syr<sup>CP</sup>; Lk 11:21 Syr<sup>SCP</sup>.

<sup>42</sup> Job 5:17; 6:4; 8:3, 5, et al.

<sup>43</sup> Probably following the convention that, because of its vocalization, *ܡܫܝܚܐ*, *ܡܫܝܚܐ* belongs to a class regarded as an adjective (see Nöldeke, *Compendious Syriac Grammar*, §118), that its function as a substantive is therefore secondary, and thus does not require citation. If this is the case, it is a convention that Syriac lexical works do not adhere to with any kind of consistency.

- (a) Listing and glossing **ܡܦܥܘܢܐ**, **ܡܦܥܘܢܐ**, **ܡܦܥܘܢܐ** in alphabetical sequence as an adjective with the instruction to “see under **ܡܦܥܘܢܐ**” (that is, Peal verb)
- (b) Lemmatizing the form as verb under Peal **ܡܦܥܘܢܐ**, where (as we have seen) it introduces both **ܡܦܥܘܢܐ**, **ܡܦܥܘܢܐ**<sup>44</sup> and **ܡܦܥܘܢܐ**, **ܡܦܥܘܢܐ** as passive participles
- (c) Specifying a few lines later **ܡܦܥܘܢܐ**, **ܡܦܥܘܢܐ**, not as passive participle as in the paradigmatic information at the beginning of the entry, but as participial adjective,<sup>45</sup> and then immediately glossing it and illustrating it in contextual phrases as an adjective *and* a substantive.

A fourth example, again representative of numerous other instances, is the form **ܡܦܥܘܢܐ** *perfect, mature, whole*. In our nineteen lexica it is:

- (a) Lemmatized as verb under the Peal
  - (i) called a passive participle; no gloss (Ferrer–Nogueras)
  - (ii) called a passive participle; glossed as an adjective (Brun, Kiraz)
  - (iii) called Peal only participle; glossed as an adjective (CSD)
  - (iv) cited as sub-section under the rubric passive participle (*Thesaurus Syriacus*).
- (b) Parsed as Peil participle (Whish)
- (c) Lemmatized as nominal form under its emphatic state; called a passive participle (Kiraz)
- (d) Lemmatized separately, called a passive participle and glossed as an adjective
- (e) Lemmatized separately as an adjective:
  - (i) called an adjective, but qualified in parentheses as passive participle (Pazzini)
  - (ii) listed separately, without part of speech, but glossed as an adjective (Costaz, Goshen-Gottstein, Hanna–Bulut, Köbert)
  - (iii) listed separately, without an initial part of speech, but glossed as an adjective and at the end of the entry identified in absolute state also as an adverb (Brockelmann)
- (f) Lemmatized separately and called a passive participle *and* an adjective (Jennings), and a Peal passive participle *and* an adjective (KPG, 1)<sup>46</sup>
- (g) Lemmatized separately without a part of speech or gloss (Audo, Klein)
- (h) Not cited (Dogan).

When we compare the above analysis with the actual syntactic function of **ܡܦܥܘܢܐ**, **ܡܦܥܘܢܐ** in Classical Syriac literature, one of the first features to come to our attention is the fact that not *one* of our nineteen lexical resources identifies or glosses the term as a noun, yet in the Peshitta New Testament alone it functions as a substantive (1 Cor 2:6) as well as an adjective. Furthermore, although the present author, along with Brun, CSD, Ferrer–Nogueras, Jennings, Kiraz, Pazzini, and *Thesaurus Syriacus* (compare Part. Peil in Whish, page 192) cite

<sup>44</sup> This vocalization does not occur in the Peshitta New Testament.

<sup>45</sup> For the use of this term in CSD, see section 2.4.2.

<sup>46</sup> In KPG, 1, before the introduction of this author’s new methodology in KPG, 2.



substantival as well as adjectival, but not in a consistent manner. The forms *ܡܚܘܢܐ*, *ܡܚܘܢܐ*; *ܚܘܢܐ*; *ܚܘܢܐ*; *ܡܚܘܢܐ*, *ܚܘܢܐ*, *ܚܘܢܐ*, each deserving a brief comment, are examples.

The term *ܡܚܘܢܐ*, *ܡܚܘܢܐ* illustrates a demarcation between the adjectival and the substantival. The latter is not only distinguished under the verb and its sub-section “Part. adj.” with the cross-reference “subst., see below,” but lemmatized in a separate entry, where it is distinguished with the abbreviation “m.”—as if it were a standard masculine noun—and glossed as “*a taskmaster, a ruler, leader, governor, prefect, prince.*”

The term *ܚܘܢܐ*, *ܚܘܢܐ* (under Peal *ܚܘܢܐ*) is again identified as having an adjectival and a substantival function, but this time both functions are kept together under the verb. The adjectival function is identified by the glosses *watchful, vigilant*, and the substantival introduced as “subst. *a watcher, guardian angel, angel.*” In addition, *both* functions are cited together in a brief separate entry where the user is referred to the Peal *ܚܘܢܐ*.

The term *ܡܚܘܢܐ*, *ܡܚܘܢܐ* is provided with two semantic categories. The second category is glossed as “*violent, hard, difficult, severe, serious, solemn, weighty.*” The examples following the glosses demonstrate that they correspond to an actual adjectival function, but this is not the case for the first category. The glosses are adjectives, but the examples make evident that they function only as substantives: “*strong, powerful, mighty*” = Heb. El Shaddai, the *Almighty*; (...) *the strong man.*”

In contrast to the three preceding terms, *ܚܘܢܐ*, *ܚܘܢܐ*, which is introduced as a “(p)eal only part. adj.,” is lexicalized only as an adjective. The only hint that this term also often functions as a substantive<sup>52</sup> is one of the illustrative examples, the compound noun “*ܚܘܢܐ ܚܘܢܐ a hospital, infirmary,*” which is tucked without comment between unambiguous examples of the term’s function as an adjective.

To compound this admixture further, there are numerous entries in which J. Payne Smith does not employ the term participial adjective to which she refers in her preface, even though it is applicable, but uses simply passive participle, which either includes or excludes adjectival and substantival functions. For example, *ܚܘܢܐ* and *ܚܘܢܐ*; are subsumed under the Peal verb, called a passive participle, and glossed as an adjective, as in “*ܚܘܢܐ ܚܘܢܐ in a secret place,*” and “*ܚܘܢܐ ܚܘܢܐ pounded salt.*” Similarly, *ܚܘܢܐ* is listed as a Peal only passive participle, and includes the substantival gloss *a mourner*, and *ܚܘܢܐ* is listed as a passive participle under the Peal verb and glossed as “*anointed, the Anointed One, the Messiah, the Christ.*”

Alternatively, substantival uses may be listed separately as a noun, but designated as a passive participle used as a substantive. For instance, *ܚܘܢܐ*, *ܚܘܢܐ* *writing, inscription*, is cross-referenced under the Peal *ܚܘܢܐ* as “(f)em. emph. = subst. see below” and given a separate nominal entry. Unlike *ܡܚܘܢܐ*, *ܡܚܘܢܐ*, it is not called a noun, but is introduced as “Peal pass. part. f. = subst. usually pl.” Likewise, *ܚܘܢܐ*, a morphological equivalent, is identified as a passive participle and is listed separately as a substantive, but this time the entry is reduced to a headword followed by the instruction “see *ܚܘܢܐ* fem. pass. part. *a creature, the Creation.*” Under

<sup>52</sup> For example, Mt 10:8 Syr<sup>sp</sup>; Mk 6:56 Syr<sup>sp</sup>; Lk 9:2; Acts 19:11.

the Peal verb it is cited alongside the active participle: “act. pt. **حَالٍ**, **حَالٌ** subst. *the Creator*; pass. pt. **حَالٌ**, **حَالٌ**, fem. **حَالَةٌ**, pl. m. and f. **حَالُونَ**, emph. f. **حَالَةٌ** oftener **حَالَةٌ** *a creator, the Creation*, hence *the world, the earth*; **حَالٌ**, **حَالٌ** *the Book of Genesis*.” This verbal entry is also an example of the fact that words with the form of the active participle that function as substantives faced J. Payne Smith with the same problems as words with the form of a passive participle. In this instance, the substantivized active participle is also assigned a cross-referencing entry: “**حَالٌ**; see **حَالٌ** part. act. *creator*.”

To this diverse approach to what J. Payne Smith calls the participial adjective in her preface we should add four further variations. One is to cross-reference substantival and adjectival functions under the verb as participial adjectives or passive participles, but to lemmatize them separately as normal adjectives or substantive nouns without any corresponding qualification. An example is the adjective and (according to J. Payne Smith) substantive **وَسْفٌ**, **وَسْفٌ**; *remote, far off; a space, interval*.<sup>53</sup> In place of the usual Peal, which J. Payne Smith often lists even where it is attested only in a passive form, we have the cross-reference “**وَسْفٌ** for part. adj. **وَسْفٌ** &c. see above.” The rest of the entry deals with the four verbal patterns, Pael, Ethpaal, Aphel and Ettaphal. The nominal entry itself lists both an adjectival and substantival use, and is devoid of any connection with a verbal form. A second example is **مَجْسٌ**, **مَجْسٌ**. In this instance the verbal entry does not mention a participial adjective, but only the passive participle as a classificatory term for the adjectival function, and “**مَجْسٌ** subst., see below.” When we turn to the “subst.” **مَجْسٌ** *messenger, apostle*, we find that, unlike **مَجْسٌ**, **مَجْسٌ**, but like **مَجْسٌ**, **مَجْسٌ**, it is lemmatized as an ordinary masculine noun.

A second variation is that a form such as **فَيْسٌ**, **فَيْسٌ** can have its adjectival usage listed under the Peal verb as that of a participial adjective (“separated, separate, apart, different, diverse”), but have its substantival function excluded from the participial adjective category. At the very end of the Peal verb section we are asked to “Cf. subst. **فَيْسٌ**.” In that separate entry the form is lemmatized as a normal masculine noun (“a Pharisee; a noble”), again without reference to a link to a passive participle or participial adjective.

A third variation is the brief entry “**مَدْرَعٌ** pass. pt. of **مَدْرَعٌ** *appointed, invited, bidden; a guest*.” Glossed as an adjective and a noun, it is referred to only as a passive participle, but under the Pael verb itself there is no paradigmatic information or reference to the fact that there is a participial form.

Perhaps the most extreme variation is the nominal entry that is not linked to a participial form in any way. An example is **هَنْبٌ**, **هَنْبٌ**. It is glossed as “*a fugitive, survivor, a remnant, remainder*.” The semantic relationship of this passive-participial form to the Peal **هَنْبٌ** is obvious, but neither the nominal nor the verbal entry mentions it. Another example is **كَنْبٌ** lemmatized as a normal feminine noun and glossed as “*a decree, sentence, ordinance; a space parted off or separated; a partition wall (sic); split wood, a pile of wood; وَأَنْبٌ, وَأَنْبٌ the door-knocker*.” This

<sup>53</sup> Only in the masculine absolute according to CSD.

entry is not mentioned under the Peal ܦܝܠ, though the lexicon lists under the heading of passive participle not only adjectival functions, but another substantival use, “pl. f. *hewn stones*,” which is clearly semantically linked to the nominal entry.

### 2.4.3 “Participial” in the Grammatical Vocabulary of Goldenberg

More than a century after Brun and eighty years after the publication of CSD, Gideon Goldenberg found the term “participial” (minus “adjective”) an appropriate grammatical appellation to describe the “verbalization” of a predicative adjective in the absolute state that contained the expression of the third person pronominal subject, but lacked an enclitic personal pronoun. As we will discuss later in this essay (sections 4.3.5; 5), it is a very specific and defined usage that has no relationship to the way in which “participial” is employed in Syriac lexica, but like the term “verbal adjectives” in Takamitsu Muraoka’s *Classical Syriac grammar*,<sup>54</sup> it alerts the lexicographer to the linguistic minefield to be traversed when classifying words with the form of a passive participle.

### 2.5 Summary of Seeking to Classify ܦܝܠܘܢܐ, ܦܝܠܘܢܐ, and ܦܝܠܘܢܐ

Thus, our search to classify the lexemes ܦܝܠܘܢܐ, ܦܝܠܘܢܐ, and words such as ܦܝܠܘܢܐ, ܦܝܠܘܢܐ and ܦܝܠܘܢܐ, leaves us without a reliable precedent, without a methodology that will enable us to classify consistently the entries in the lexicon. It leaves us, as I became painfully aware in the preparation of the first volume of my own lexical work, with glaring but seemingly unavoidable inconsistencies in grammatical classification.

### 2.6 Francis Andersen’s Question (Review of DCH)

While well under way with the preparation of volume two of KPG, I read Francis Andersen’s review of Vol. 1 of *The Dictionary of Classical Hebrew* (DCH).<sup>55</sup> One of Andersen’s criticisms, I realized, applied equally to my own work and to Syriac lexicography in general. It concerns this very issue of grammatical classification.

Andersen sets the scene by insisting that a modern dictionary such as DCH that claims to be based on modern linguistics should at all times classify words in accordance with their function in the language. “If the dictum ‘the meaning of a word is its use in the language’ is true,” says Andersen, quoting DCH, “then it should drive the whole treatment,”<sup>56</sup> for, to quote Andersen again, “use determines not only meaning, but also functional class (‘part of

<sup>54</sup> “*Qattil* is highly productive,” says Muraoka, in his chapter on morphology, “with adjectives including *verbal adjectives* (emphasis added) indicating states.” As examples he cites ܐܘܢܝܢ *long*, ܦܝܠܘܢܐ *wise*, ܦܝܠܘܢܐ *many*, ܦܝܠܘܢܐ *deep*, ܦܝܠܘܢܐ *soft*, ܦܝܠܘܢܐ *mighty*, ܦܝܠܘܢܐ *beautiful*, ܦܝܠܘܢܐ *gone out*, ܦܝܠܘܢܐ *gone*, ܦܝܠܘܢܐ *lost*, ܦܝܠܘܢܐ *seated*; Muraoka, *Classical Syriac: A Basic Grammar with a Chrestomathy*, §36 (both editions). He also describes adjectives with the form of the actor noun (*nomen agentis*) as verbal adjectives in his *Classical Syriac for Hebraists*, §38.

<sup>55</sup> Andersen, Review Article, 50–71, 72–75.

<sup>56</sup> Andersen, Review Article, 64.

speech’).<sup>57</sup> As Andersen demonstrates, DCH does not extend the principle it cites to grammatical classification. If it had, the classification of a word would correspond to its syntactic use in the language. Instead, it uses “various combinations of morphological, syntactic, and semantic criteria”<sup>58</sup> with the result that the user is confronted with a confusing array of inconsistencies. Had Andersen reviewed the first volume of my KPG he would have said the same. Indeed, in a more recent paper Andersen and his colleague A. Dean Forbes show that the problem evident in Syriac lexicography is present on a comparable scale in Hebrew dictionaries generally, and that “dozens of case studies ... could be made on the inventory of just one phonomorphological word class.”<sup>59</sup>

In one section in his review of DCH, Andersen, by way of example, cites several words that are called adjective, though they are never used as an adjective. One of these words is **ܐܘܩܘܒܐ**, which is used only as a noun. The entry reads, “adj. **deceptive**, alw. as noun.”<sup>60</sup> If, says Andersen, “use determines functional class, then, in that instantiation the word is a noun. ... Why not simply call it a noun, and be done with it?”<sup>61</sup>

In like manner, why do Syriac lexica list a word under the verb as a passive participle when that word functions only as an adjective, or cite it as a passive participle used as an adjective when its functions as an adjective and/or a noun? Why not list a word simply according to how it is actually used in the text?

While Andersen does not go on to answer this question, he succeeded in stopping me in my tracks in search of an answer. Soon, however, I found my question directed towards the past: Why *haven't* I, and other lexicographers before me, adopted this seemingly straightforward approach to grammatical classification?

### 3. CAUSES OF THE PROBLEM

*“A part of speech is a form-class of stems which show similar behavior in inflection, in syntax, or both. The part of speech system of a language is the classification of all its stems on the basis of similarities and differences of inflection and syntactical behavior (C.F. Hockett, 1958).” This traditional linguistic view of the nature of parts of speech has carried on to the present.*

A. Dean Forbes<sup>62</sup>

#### 3.1 The Lexicographer

This brings us to the causes of the problem.

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<sup>57</sup> Andersen, Review Article, 66.

<sup>58</sup> Andersen, Review Article, 67.

<sup>59</sup> Andersen–Forbes, “What Kind of Taxonomy?,” 27. Andersen and Forbes employ the term “phonomorphology” and its derivatives to refer to the phonology (sound system) and morphology (the structure of forms of words) of word classes and a vocabulary item that belongs to a particular word class. In this article the term “phonomorphology” is adopted as used by Andersen and Forbes.

<sup>60</sup> Clines, DCH, 1:239.

<sup>61</sup> Andersen, Review Article, 66.

<sup>62</sup> Forbes, “Squishes, Clines, and Fuzzy Signs,” 105.



- (f) *ܘܦܝܠܐ, ܘܦܝܠܐ* *Peal pt. adj.* easy<sup>68</sup>  
 (g) *ܘܦܝܠܐ, ܘܦܝܠܐ* *pass. pt. as adj.* narrow, constricted<sup>69</sup>  
 (h) *ܘܦܝܠܐ, ܘܦܝܠܐ* *pass. pt. used as adj.* fearful, terrified<sup>70</sup>  
 (i) *ܘܦܝܠܐ* *verbal adj.* asleep, according to CSD, cf. *Thesaurus Syriacus*, 1:919; *Peal pass. pt.* according to Jennings, Whish<sup>71</sup>  
 (j) *ܘܦܝܠܐ* *Peal m. pass. pt. as subst.* a hired worker, hired servant<sup>72</sup>

Our now familiar *ܘܦܝܠܐ, ܘܦܝܠܐ* and *ܘܦܝܠܐ, ܘܦܝܠܐ* are examples of terms with a phonomorphological evolution to which I may have assigned, hypothetically at least, an internal-passive meaning. The derivation of the first of these terms is clear. It has the form of the internal-passive participle of the Peal: *ܘܦܝܠܐ*, which is attested in Classical Syriac literature, and, incidentally, is one of five *binyanim* (patterns, conjugations, stems, or verbal stems),<sup>73</sup> the other four being the Ethpeel, Pael, Ethpaal, and Aphel. We can verify syntactically that *ܘܦܝܠܐ, ܘܦܝܠܐ* functions only as an adjective and a substantive.

The treatment of the second term, *ܘܦܝܠܐ, ܘܦܝܠܐ*, a synonym of *ܘܦܝܠܐ, ܘܦܝܠܐ*, is interesting in the major Classical Syriac lexica most used in the West (*Thesaurus Syriacus*, Brockelmann, Brun, and CSD). These lexica do not cite evidence of a Peal verb for the root *ܘܦܝܠܐ*, but only the Pael (*Thesaurus Syriacus*, col. 1192), which functions as an adjective in its passive-participial form. Two lexicographers—Audo and Thelly—do, however, record a Peal form. Audo's Peal entry consists of two words, *ܘܦܝܠܐ: ܘܦܝܠܐ*, the Peal perfect 3ms. and imperfect 3ms. Thelly adds the intransitive meaning "to be/become lame." Neither cites a source. Moreover, we know from Thelly that in such instances he relies on and accepts the judgement of Audo.<sup>74</sup> This leaves us in an uncertain position. Audo "was one of the finest Syriac scholars of his time" and records "many words which are entirely absent from other standard dictionaries of Syriac,"<sup>75</sup> but we must at least question the existence of a Peal *ܘܦܝܠܐ* and the meaning assigned to it by Thelly. This is not a matter of trust, but of methodology. Audo does not inform us in his preface whether he resorted to a putative form in an instance such as the Peal *ܘܦܝܠܐ*. Though in contemporary lexicography, "descriptivism"—

<sup>68</sup> KPG, 1:132.

<sup>69</sup> KPG, 1:32.

<sup>70</sup> KPG, 1:124, at end of the first section of the entry.

<sup>71</sup> KPG, 1:134.

<sup>72</sup> KPG, 1:4.

<sup>73</sup> All five terms are employed by Syriac grammarians; for example, "patterns, conjugations, or *binyanim*" by Muraoka, *Classical Syriac for Hebraists*, 26; "pattern" (or "*binyan*," s., "*binyanim*," pl.) by Muraoka, *Classical Syriac: A Basic Grammar* (both editions), §48; "patterns or stems" by Healey, *Lesbono Suryoyo: First Studies in Syriac*, 28; "conjugations or stems" by Nestle, *Syriac Grammar*, 40; "verbal stems (or forms, sometimes called conjugations)" by Nöldeke, *Compendious Syriac Grammar*, 105; "conjugations" by Coakley–Robinson, *Robinson's Paradigms and Exercises in Syriac Grammar*, 34; and Thackston, *Introduction to Syriac*, 106.

<sup>74</sup> Falla, "A Conceptual Framework," 21–22, n. 49.

<sup>75</sup> Brock, in Thelly, *Syriac-English-Malayalam Lexicon*, v.

the practice of describing and reporting only what can be confirmed in the lexicalized text—is now commonly accepted, that hasn't always been the case. Without such confirmation one must proceed cautiously.

Although *ܡܘܨܘܦܐ*, *ܡܘܨܘܦܐ* is indisputably derived from the Peal verb and has a passive form, and Audo claims (without reference to a source) *ܡܘܨܘܦܐ*, *ܡܘܨܘܦܐ* is derived from a Peal, the fact is that we do not know whether the form of either of these terms is semantically matched by passive meanings. J. Payne Smith intimates in the preface to her dictionary that in the lexicographic task it is easy to cross over from form to function and function to form and thereby to make a semantic assumption. Thus, while we have no evidence to do so, we might wrongly assume that these forms are passive in meaning as well as in the evolution of their phonomorphology. Accordingly, we might assign to the function of *ܡܘܨܘܦܐ*, *ܡܘܨܘܦܐ* as an adjective<sup>76</sup> the meaning *lamed*. Likewise, we might also assign its function as a substantive<sup>77</sup> the passive meaning *a lamed one*, or *the lamed one*, (s.), *the lamed* (pl.).

These passive meanings would be inappropriate in a Syriac-English dictionary. For the adjective it would be sufficient to cite the simple gloss *lame, disabled*, and for the substantive *lame person, disabled person*, pl. *lame*. However, if we allowed ourselves to be influenced by a mix of form and syntactic function we might want to include the term “passive” in our classification, as I may have been tempted to do prior to my change of methodology.<sup>78</sup> I would have failed to differentiate the passive form of *ܡܘܨܘܦܐ*, *ܡܘܨܘܦܐ*, from their syntactically verifiable functions as adjectives and/or substantives, which must be diagnosed on an instance-by-instance basis.

These kinds of confusion result in the sentiment expressed in the preface to CSD that it is difficult to distinguish “participial adjectives” and “passive participles” from each other, and that “verbal, adjectival, and substantival uses of these forms slide into each other.”<sup>79</sup> Inevitably, these comments by J. Payne Smith leave the user with the impression that the form and function of at least some phonomorphological classes are so inextricably intertwined that they cannot be distinguished properly from each other. This perspective reinforces the judgement that the lexicographer cannot successfully grammatically classify and lemmatize them.

*Hierarchy Attributed to Syntactic Functions.* Another possible cause of my own confusion is the hierarchy that Semitic grammarians attribute to the syntactic functions of particular forms. Nöldeke, for instance, says that “[p]articiples are employed both as substantives and adjectives,” a statement that gives priority to the term “participle.”<sup>80</sup> It was through

<sup>76</sup> Lev 21:18; Acts 3:2; Heb 12:13.

<sup>77</sup> 2 Sam 5:6; Isa 35:6; Mal 1:8; Mt 11:5 Syr<sup>scph</sup>; 15:30 Syr<sup>scph</sup>, 31 Syr<sup>scph</sup>; Lk 7:22 Syr<sup>sp</sup>; Acts 4:14.

<sup>78</sup> In KPG, the adjective is glossed “lame, disabled, *of a person*,” and the substantive “*pl. the lame, disabled*.”

<sup>79</sup> See section 3.4.3.

<sup>80</sup> Nöldeke, *Compendious Syriac Grammar*, §284.





### 3.2 Syriac Lexical Grammatical Classification as Practiced in the Past

As important as they are, not one of these reasons by itself goes to the core of the problem. We need to turn from secondary and idiosyncratic causes to a detailed and comprehensive critical analysis of grammatical classification in Classical Syriac (and Hebrew and Aramaic) lexical works in recent decades. Only in this way can we identify the common practices and anomalies that underlie “the taxonomic confusion inherited from long-established traditions in Semitic lexicography.”<sup>93</sup> Two major features emerge.

#### 3.2.1 Two Core Problems

*Form versus function:* Lexicographers have sought to satisfy two conflicting demands: to classify a word according to its apparent form, and to do so according to its syntactic function in its textual context. A. Dean Forbes comments on the history of this approach in an assessment of it in a recent essay:

The traditional view of the nature of *parts of speech* was stated by Hockett in his classic introduction to linguistics:

A *part of speech* is a form-class of stems which show similar behavior in inflection, in syntax, or both. The *part of speech system* of a language is the classification of all its stems on the basis of similarities and differences of inflection and syntactical behavior.<sup>94</sup>

This tradition has carried on to the present. As but one example, consider Radford’s quite similar views advocated in his recent introduction to minimalist syntax:

Given that different categories have different *morphological* and *syntactic* properties, it follows that we can use the morphological and syntactic properties of a word to determine its categorization (that is, what class it belongs to).<sup>95</sup>

In this still dominant traditional view, class membership is mutually exclusive and exhaustive. Every word belongs fully to one, and only one, class. Class membership is determined on morphological and syntactic grounds, based on the values assigned to sets of binary features.<sup>96</sup>

It would be difficult to estimate how directly this theory may have had some impact on Syriac lexicographers, but their attempts to encompass both morphology and syntax in the classification of words are transparent. We return to our earlier Syriac example of ܣܘܦܪܐ, which in the text functions either as an adjective or substantive. J. Payne Smith lists ܣܘܦܪܐ under the verb even though it does not function as a verb.<sup>97</sup> She does so because it has the form of a passive participle, which is traditionally considered to be part of the verbal

<sup>93</sup> Andersen–Forbes, “What Kind of Taxonomy?” 23.

<sup>94</sup> Hockett, *A Course in Modern Linguistics*, 221.

<sup>95</sup> Radford, *Syntax: A Minimalist Introduction*, 35.

<sup>96</sup> Forbes, “Squishes, Clines, and Fuzzy Signs,” 105–106.

<sup>97</sup> Cf. also Brun’s treatment of ܣܘܦܪܐ.

paradigm, and, as she reveals in her preface, she allowed her grammatical classification and lemmatization to be influenced by morphology as much as by function “because the verbal, adjectival, and substantival *uses* of these forms slide into each other” (preface, v; emphasis added).

By way of contrast, H.F. Whish in his *Clavis Syriaca* tilts his entry of **ܡܫܝܦܐ** toward function by citing it as an adjective, but retains a reference to form by qualifying his entry, saying that the word has the form of a passive participle. Neither lexicographer refers to **ܡܫܝܦܐ** as a substantive.<sup>98</sup>

Inevitably, these difficulties regarding the lexical conflict between a word’s form and how it is used in the language will affect the usability of a lexical work: it may be impossible to determine from a lexical entry how a word actually *functions syntactically* in the language. The grammatical tag may actually lead the user away from a word’s syntactic function, or it may indeed refer to that word’s function.

Often, it is only from its use in an actual text that the user can properly ascertain a word’s syntactic function, and therefore the part of speech, that should be assigned to a particular lexical entry or instantiation represented by that entry.

*Syntactic function:* Function itself has been the cause of considerable confusion. This is evident in the lexical treatment of parts of speech such as the adjective, words with the form of the passive participle, and particles<sup>99</sup> in Classical Syriac. Part of the problem was probably due to “the difficulty of subsuming Syriac into grammatical categories familiar to those analyzing Greek and Latin,” to quote a comment from correspondence with David Lane. The undefined lexical use of terms such as *participium passivum*, *participe passif*, *passive participle* and *participial adjective* in Syriac lexica is an example. Our comparison of the use of parts of speech in a wide range of reference works reveals how problematic they are. There has been no satisfactory guide for the lexicographer that explains how many syntactic functions can be assigned to each, what these functions are, how they differ from one another, and how they may be distinguished from one another in a dictionary, glossary, concordance, or parsing guide. Nor have there been basic definitions of the various parts of speech designed to help the lexicographer diagnose the syntactic function or functions of a particular lexeme.

The outcome has been syntactic uncertainty, confusion, and lexical inconsistency, usually unacknowledged. As a result, it is often unclear what is meant when a lexical resource employs a part of speech.<sup>100</sup>

<sup>98</sup> For further examples and discussion see Falla, KPG, 2:xxiii–xxvii.

<sup>99</sup> Cf. Andersen, “Lo and Behold!” Van Peursen–Falla, “The Particles **ܘܢܝܢܐ** and **ܘܢܝܢܐ** in Classical Syriac: Semantic and Syntactic Aspects.”

<sup>100</sup> Andersen, Review Article, 64–67.

### 3.2.2 Doubly Flawed Methodology

From an historical perspective, the inconsistencies cannot be attributed simply to the lexicographer's ignoring the issue of consistent classification. Rather, the methodology itself is flawed, and doubly so. On the one hand, it often seeks to incorporate both form *and* function, or emphasize form at the expense of function. On the other hand, it relies for its citation of a word's syntactic function on criteria that are not only questionable, but often differ from entry to entry.

### 3.3 Summary: Inadequate Methodology without an Alternative

Inconsistent and often confusing grammatical classifications in Syriac and Hebrew lexical works are not arbitrary, isolated, or random, but systemic. Inconsistencies are largely traceable to methodological procedures that are inappropriate to their subject matter. As much as we may want one, no alternative methodology is available to us.<sup>101</sup>

## 4. A RESOLUTION

*If a word functions as a noun, "why not call it a noun, and be done with it?"*

Francis I. Andersen<sup>102</sup>

### 4.1 Let Function alone Determine Part of Speech

While it was not Andersen's intention to suggest a resolution, he does, I think, provide us with a potential way forward when he challenges Hebrew lexicography, and by implication all other Semitic lexicography, to put into practice the modern linguistic principle that use determines not only meaning but also functional class (part of speech). The challenge is summed up in his stark question above: if a word functions as a noun, "why not call it a noun?"

### 4.2 The New Methodology

Andersen's question bothered and intrigued me if for no other reason than that I was confronted and frustrated on a daily basis by the realities and consequences that gave rise to it. For this reason, I set aside my usual preparation of the second volume of KPG in search of an answer. It began with a detailed comparative analysis of grammatical classification in previous Syriac lexica, which revealed that I had not been alone in my perplexity. Even the lexicographers I most admired have been caught in the same web of classificatory confusion and inconsistency. Months later I emerged with a methodology for Syriac grammatical

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<sup>101</sup> Brockelmann, Köbert, and Costaz achieve the greatest consistency in grammatical classification by giving words with the form of a passive participle that are used as adjectives and substantives the status of a separate entry. As a rule, however, they do not provide a notation of the part of speech. Where they do, it soon becomes apparent that they are subject to the same inconsistencies as lexical works that provide full or fuller notations of parts of speech.

<sup>102</sup> Andersen, Review Article, 66.

classification based solely on syntactic function. To that point I had known Andersen only through his work in Semitic languages. Previously we had met only once or twice, but I knew that he had recently moved to a suburb not far from my own. With his penetrating review of DCH in mind, I made contact only after I had completed my search. We discussed the results, which I subsequently tested out in the second and subsequent volumes of KPG. I found it to be credible, practical and workable, making the lexicon more accurate, useful and usable. Later, Andersen and Forbes were able to say:

The recent publication of Terry Falla's (2000) *A Key to the Peshitta Gospels* (KPG) represents a radical change in the methodology of dictionary making. The taxonomic confusion inherited from long-established traditions in Semitic lexicography, still evident in Volume 1 (Falla 1991), has been replaced by policies and practices in the classification of vocabulary items and their lemmatization in lexical entries that have been disciplined by recent advances in linguistics, especially in exploring and mapping the interface between grammatical and lexico-semantic categorization. So far as we know, this is the only lexicon of a Semitic language that has taken notice of these advances. The others are still floundering around in the procedures inherited from grammarians and philologists of the nineteenth century.<sup>103</sup>

### 4.3 Lack of Precedent

The feasibility of this new methodology does not, however, mean that its implementation is free from challenges. Perhaps the first and most obvious is that this approach does not, as far as I know, have a precedent in Semitic lexicography which could provide guidelines. This challenge, however, is small compared to the inherently irresolvable inconsistencies of the approach we have inherited.

There is also a challenge of a different order. A grammatical classification based on syntactic function has at least two prerequisites: parts of speech based on syntactic diagnosis and definitions of parts of speech. To these we now turn.

#### 4.3.1 Syntactic Diagnosis

To meet the requirements of the proposed methodology each notation of part of speech cited in the lexicon needs to be syntax-based. Because the part of speech of an entity resides in its syntactic function, the lexicographer must be able to ascertain the various syntactic functions of a particular vocabulary item in its textual context within the prescribed corpus. Only by proceeding on the basis of actual occurrences can the lexicographer determine whether a particular vocabulary item such as *ܡܫܘܠܐ* or *ܡܫܘܠܐ* has one or more functions, what part of speech should be assigned to the item in question, and how it should be lemmatized.

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<sup>103</sup> Andersen–Forbes, “What Kind of Taxonomy?” 23–24.

### 4.3.2 Diagnostic Definitions

From the opposite direction, the lexicographer must define the various parts of speech that are employed in the lexicon.<sup>104</sup> The definitions need to acknowledge instances of ambiguity and unresolved issues, and admit to solutions that remain provisional. From the perspective of lexical preparation, these two prerequisites—instance-by-instance diagnosis, and definitions of the parts of speech—are interrelated. Thus, with a detailed definition the lexicographer is in a good position to diagnose a particular occurrence of a particular vocabulary item in its textual context, lemmatize it, and assign to it a lexical part-of-speech label that is consistent with its syntactic function. Without a definition to which to refer, the lexicographer would find it virtually impossible to achieve consistent grammatical classification and lemmatization.

For Classical Syriac this involves, for example, having a working definition of the adjective and of the functions of words with the form of the passive participle. From this task I could not escape in my preparation of the final four volumes of KPG. For Hebrew as well, the adjective, which has been aptly called “the banana peel of the parts of speech,”<sup>105</sup> is an obvious example.

In summary, from the perspective of lexical preparation, syntactic diagnosis and diagnostic definitions are prerequisites that inform one another. Without the first, the second cannot be achieved. Without the second, the first would be difficult to implement on a day-to-day basis.

### 4.3.3 Grammatical Classification as an Achievable Task

For future lexicography the task of grammatical classification need not be as daunting and formidable as it might at first appear. It is the recommendation of the International Syriac Language Project (ISLP) that future Syriac lexicography proceed on a corpus-by-corpus basis, so that a new comprehensive Syriac-English lexicon consist of a series in which each volume is limited to a defined corpus of Syriac literature, rather than one mammoth magnum opus.<sup>106</sup> In this way, each new volume can build on the findings of its predecessor.

This task has already begun. Every occurrence of a vocabulary item in KPG is examined prior to its citation to establish its syntactic function(s), part(s) of speech, and lemmatization. This analysis extends to items such as the demonstrative adjectives and pronouns, the multi-purpose verb “to be” (ܐܘܢ) in both its non-enclitic and enclitic forms,

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<sup>104</sup> Some passages in the following three sections, revised only slightly, are taken from Falla, “A New Methodology,” with the permission of Peeters Publishers, consent of the volume’s editors, Baasten and Van Peursen, and blessing of Muraoka in whose honour the article was published. These passages are included to make this presentation as complete and up-to-date as possible.

<sup>105</sup> Quoted from Fadiman, *Reader’s Digest*, September 1956, by Forbes, “Mutagens in the Syntactic Forest,” read at the SBL Congress, 1998.

<sup>106</sup> For the discussion leading to this decision made at the Edinburgh SBL International Meeting, 2006, see Falla, “A Conceptual Framework,” 13.

and the particles ܕܘܢ and inseparable ܘܢ (Lamadh).<sup>107</sup> Some particles in volume one will need further research, but this process has begun so that the frequently occurring particles ܘܢܘܢ and ܘܢܘܢܘܢ as they are employed in the Peshitta New Testament have already been investigated.<sup>108</sup>

As a foundation for future lexicalization, the research on ܘܢܘܢ has in itself given a cautious cause for optimism. Although it is restricted to the Peshitta Gospel corpus, KPG's 20-column analysis attests to every function of ܘܢܘܢ identified by Lucas van Rompay,<sup>109</sup> though he thinks he has since identified one or two other functions.<sup>110</sup> The significance of this research for Syriac grammar and lexicography lies in its revealing that post-predicative ܘܢܘܢ is most at home with verbal forms and adjectives (where ܘܢܘܢ serves as pure past-tense marker), whereas when it follows substantives it seems to carry more verbal functions. While new vocabulary items and new syntactic functions will inevitably emerge in the lexicalizing of a corpus such as Ephrem—and as Sebastian Brock says, “lexically, virtually all Ephrem is unexploited, and he is the major author who needs a major lexicon”<sup>111</sup>—the fact remains that the lexicographer will at least be proceeding from an established base. Some items will require further research in days to come. Already, I would like to re-visit and revise the particle ܘܢܘܢ, the first entry in KPG, 2, because of what I have since learnt about the syntactic functions of its Hebrew cognate.<sup>112</sup> Thus the completion of one corpus facilitates the preparation of a subsequent one.

#### 4.3.4 Divergent Viewpoints

Anyone familiar with the fluid state of contemporary linguistic debate regarding grammatical classification might argue that in the present scholarly climate a consensus regarding parts of speech and their definitions is unachievable. However, to desist from the framing of lexical diagnostic definitions and the detailed task of instance-by-instance diagnosis for fear of censure would be to overlook at least five issues at the core of the present dilemma and proposal.

First, in the making of lexica for ancient Semitic languages, grammatical classification and the methodology by which it is provided are not optional, for they are the foundations

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<sup>107</sup> Beryl Turner is devoting her doctorate to particles as part of the Syriac Language Project at the Syriac Language Research Centre, Whitley College, University of Melbourne.

<sup>108</sup> See Van Peursen–Falla, “The Particles ܘܢܘܢ and ܘܢܘܢܘܢ” (forthcoming). For a study of these particles and of the conjunctive Waw (ו) in the context of the Peshitta's heightened poetic rendering of 2 Tim 2:11–13 see Falla, “Translation, Genre, and Lexicography,” 10–38, especially 11–19 and 27.

<sup>109</sup> Van Rompay, “Some Reflections on the Use of Post-Predicative *hwa* in Classical Syriac.” See also Van Peursen's syntactic analyses of ܘܢܘܢ in the Syriac text of Ben Sira in *Language and Interpretation*, 353–71.

<sup>110</sup> Cited with permission from a conversation with Van Rompay at Duke University.

<sup>111</sup> From a conversation with Brock at the Oriental Institute, Oxford (27 November 2001) quoted in Falla, “A Conceptual Framework,” 14.

<sup>112</sup> See Andersen, Review Article; Andersen, “Lo and Behold!”

of lexical entries. Even the initial act of citing a lexeme requires a classificatory judgement based on a methodological procedure.

Second, it has been the lack of a reliable methodology for taxonomy and parts of speech that has perpetuated the tolerated classificatory lexical confusion. The continuance of past practices does not therefore avoid the problem of possible reproof, but justifiably invites even greater criticism. It is imperative that the unworkable system we have inherited be replaced by a credible, consistent, and testable alternative.

Third, it may well be that no methodology will satisfy all schools of thought. Grammatical classification, like all other aspects of lexicography, can do no other than subject itself to future research, re-investigation, revision, and refinement.

Fourth, the problem of grammatical classification is not mitigated by the fact that most entries in Syriac lexica remain unaffected by the issue under discussion. It is the minority percentage of entries that, from the perspective of syntactic function, can be shown to be erroneous, that are crucial. They are like the cracks in a bridge resulting from the original engineering, which require that the bridge be rebuilt and not just repaired. This problematic minority of entries demonstrates the need for an approach that can be applied consistently.

Fifth, the proposed methodology is designed to accommodate future revisions and improvements while allowing for a coherent and systematic analysis of complex morphological, syntactic, and semantic data.

#### 4.3.5 Solving Problems through Creative Partnership

Lexicography is already a demanding and time-consuming discipline and the new grammatical information required by this methodology constitutes a significant undertaking in its own right. It would therefore be reasonable to assume that the lexicographer would require assistance from grammarians to provide the required diagnostic definitions in order to be in a position to undertake instance-by-instance syntactic diagnoses.

*Lexicographer and Grammarian:* Realizing that lexicography as a discipline has in the past been undertaken in relative isolation,<sup>113</sup> I would like to suggest that a new kind of partnership between lexicographer and grammarian be initiated. The goal would be to produce a grammatically credible system of classification that could be utilized with consistency for every entry of a dictionary, and articulated and illustrated for the benefit of all in the dictionary's introduction.

The proposed partnership would transcend both disciplines. The demands and needs of the modern grammarian and lexicographer will sometimes differ. Grammarians, for instance, may say, justifiably, that the jury is still out regarding a significant syntactic problem

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<sup>113</sup> The separation of these disciplines is inadvertently perpetuated at a major congress such as the SBL Annual Meeting, where sessions on grammatical research and developments in lexicography often run concurrently. As a result, the practitioners of these respective fields are hindered from participating in each other's newest research.

and that here must be further research. The lexicographer, on the other hand, cannot afford the luxury of waiting for a decade of debate. Decisions determining the content of an entry have to be made and applied.

The task of such a partnership would be to confront the difficult questions and map out solutions that are functional, credible, and theoretically clear. The goal would be twofold: for grammarians and lexicographers to collaborate in producing a taxonomy oriented towards the practical needs of lexicography; and for lexicographers to adapt the taxonomy to the needs of the lexicon and its users. Ideally, the result would be a classification, articulated and illustrated in the lexicon's introduction or appendix, that can be utilized consistently for every entry. Such a lexicon would be a boon to grammarians.

In my endeavour to implement a grammatical classification based on syntactic function for the most problematic parts of speech—the adjective; words with the form of a passive participle; and the related complexities of the verb “to be”—I was surprised to discover that the information I needed did not seem to exist. To create the necessary grammatical framework, I drew in particular on the syntactic research of Jan Joosten and Takamitsu Muraoka.<sup>114</sup> I also valued the judgements of David Lane gained through meetings and correspondence. As already mentioned, I also approached Francis Andersen to discuss with him my conclusions, both methodological and syntactic, because my adopting a new approach to grammatical classification found its origin in his aforementioned review. Since that time I have gained a great deal from other syntacticians and computational linguists, especially Janet Dyk, Dean Forbes, and Wido van Peursen. It is the results of this collaboration that have inspired my confidence in an interdisciplinary approach to lexicography.

*Defining the Classical Syriac Adjective.* The work of a number of scholars was brought together in order to construct a definition that could be utilized for the grammatical classification of the adjective in a lexicon. This definition has since been expanded and is presented for the first time in its more detailed form in the appendix to this essay.

When this definition<sup>115</sup> is applied to a word such as ܡܫܘܒܐ, ܡܫܘܒܐ as it is used in the Peshitta New Testament and in the illustrative examples provided by *Thesaurus Syriacus*, it reveals that, despite its passive participial form, ܡܫܘܒܐ, ܡܫܘܒܐ never functions as a passive participle, but only as an adjective and a noun. Accordingly, one is able to cite it under the lemma ܡܫܘܒܐ, ܡܫܘܒܐ as an adjective and a noun. This exclusive twofold function is not apparent in previous lexica. None refer to this vocabulary item as both a noun and an adjective, except Pazzini, who has been sufficiently influenced by the lexeme's morphology

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<sup>114</sup> Cf. Joosten, *The Syriac Language*; Muraoka, *Classical Syriac for Hebraists*; Muraoka, *Classical Syriac: A Basic Grammar*. Cf. also Goldenberg, “On Syriac Sentence Structure,” 97–140. For my indebtedness to Van Rompay's research on Peal ܡܫܘܒܐ, see KPG, 2:20–23.

<sup>115</sup> See KPG, 2:xxvii–xxx, for this definition, and the appendix to this essay for an updated and expanded form of it.

to find it necessary to qualify his part-of-speech notation, not with a comment such as “with the form of a passive participle,” but in parentheses with the alternative part of speech “passive participle.”

Without a diagnostic definition it would be difficult to provide a satisfactory lexical classification for *ܡܫܝܚܐ*. An apt illustration is the phrase *ܡܫܝܚܐ ܕܥܝܢܐ*, *the limb that is lame* in Heb 12:13 Syr<sup>p</sup>. The question as to lemmatization arises from the fact that *ܡܫܝܚܐ*, while it functions as a predicative adjective, is in the absolute state without an enclitic personal pronoun. This is a common phenomenon. The predicative adjective in the absolute state that has a third person subject *often* (though not always)<sup>116</sup> *dispenses with the enclitic personal pronoun*, in contrast to the adjective with a first or second person subject which “is almost invariably followed by an enclitic pronoun;”<sup>117</sup> for example, *ܐܢܐ ܡܫܝܚܐ* *I need* Mt 3:14 Syr<sup>ph</sup>; *ܐܢܐ ܡܫܝܚܐ* *you are full* Rom 15:14 Syr<sup>p</sup>.<sup>118</sup>

*Predicative Adjective in Absolute State without Enclitic Personal Pronoun*: According to Goldenberg and Joosten, the predicative adjective of this type, that is, in the absolute state without an enclitic personal pronoun, is verbalized. They argue that it has two verbal characteristics: its predicative function is marked by the absolute state, and by the presence of the expression of the third person pronominal subject. For this reason, Goldenberg terms this type of adjective a *participial*. Joosten accepts the term *participial* because of the important grammatical distinction it makes, but subsumes it under the wider classification *adjective*.<sup>119</sup> From this item of grammar alone, it is possible to see how quickly confusion and inconsistency might arise. Should it be lemmatized as a verb or as an adjective? In KPG, I have simply called it an adjective, because (a) its verbalization does not make it cease to function as a predicative adjective; (b) its lemmatization under the verb would recognize its verbalization, but would isolate it from the other forms and functions of the adjective; (c) its *participial* function, to use Goldenberg’s term, would require as much explanation if it were

<sup>116</sup> Examples of a predicate adjective in the absolute state *with* an enclitic personal pronoun: *ܐܢܐ ܡܫܝܚܐ* *is acceptable to (with) him*, or *is accepted by him* (Acts 10:35 Syr<sup>p</sup>); *ܐܢܐ ܡܫܝܚܐ* *for the husband is made holy* (1 Cor 7:14 Syr<sup>p</sup>); *ܐܢܐ ܡܫܝܚܐ* *and those that we think dishonourable (despised) in the body* (1 Cor 12:23 Syr<sup>p</sup>).

<sup>117</sup> Joosten, *The Syriac Language*, 81.

<sup>118</sup> To this observation we may add Joosten’s question (*The Syriac Language*, 82, though 77–82 are pertinent to the question) as to whether adjective + zero (that is, the predicative adjective in the absolute state that has a third person subject but lacks an enclitic pronoun) and adjective with an enclitic personal pronoun have the same function, or point to some kind of opposition (morphological, lexical, syntactic, stylistic). He concludes that until further research has been done, we may suppose that the structure adjective + zero and adjective with an enclitic personal pronoun are functionally equivalent. “An additional argument for this point may perhaps be found in the cases where a clause with adjective-e.p.p. (that is, adjective plus enclitic personal pronoun) is juxtaposed with a clause with adjective + zero” (Joosten, *The Syriac Language*, 83). Joosten cites the example *ܐܢܐ ܡܫܝܚܐ* *for the called are many, but the chosen are few* (Mt 20:16 Syr<sup>ph</sup>).

<sup>119</sup> See Appendix, section III 1.2.5, especially n. 308.

lemmatized as a verb rather than as an adjective; and (d) the term *adjective* has the advantage of being more readily distinguishable from the undefined, generalized, and inconsistent use of the term *participial adjective* in the widely-used CSD, and its Latinized form in Brun.

*Summary:* In summary, the only form that KPG calls an adjective that Joosten and Goldenberg consider as verbalized is the predicative adjective in the absolute state with a third person subject but without an enclitic personal pronoun. This illustrates why it is necessary for the lexicon to define its terms for the user and why the contemporary ancient language lexicon would be enhanced by the inclusion of definitions of syntactic terms that could otherwise cause difficulties for the lexicon user.

## 5. SYNTACTIC DEFINITIONS AND THE LEXICON USER

For our task of grammatically classifying ܡܫܝܒܐ, ܡܫܝܒܐ, it would be useful to have a checklist of the ways in which words with the form of a passive participle can function syntactically. Such a list would allow us to compare the functions it identifies with the classifications in the lexica we had already examined, as well as provide a guide to the functions of the occurrences of ܡܫܝܒܐ, ܡܫܝܒܐ in the text being lexicalized. According to this checklist in KPG,<sup>120</sup> words with the form of a passive participle fall into three principal categories: verb, noun (substantive), and adjective. Because the verb consists of two types, it calls for further comment. For ease of identification I will call this checklist the “two-verb paradigm.”

### 5.1 KPG’s Two-verb Paradigm for Words with Form of Passive Participle

The two types of verb in the two-verb paradigm are the passive participle in the ܡܫܝܒܐ ܡܫܝܒܐ (= ܡܫܝܒܐ ܡܫܝܒܐ) syntagm,<sup>121</sup> and the passive form with an active meaning (compare ܡܫܝܒܐ, ܡܫܝܒܐ, ܡܫܝܒܐ). This two-verb paradigm may be represented as follows:

Functions of the Passive-participial Form:

1. *Verb* (a) ܡܫܝܒܐ ܡܫܝܒܐ (= ܡܫܝܒܐ ܡܫܝܒܐ) *syntagm*  
(b) *Passive form active meaning*
2. *Adjective*
3. *Substantive*

The passive form with an active meaning is straightforward: it functions in the same way as an active verb.<sup>122</sup> Examples are: ܡܫܝܒܐ ܡܫܝܒܐ ܡܫܝܒܐ *a man who is carrying a water container* (Mk 14:13 Syr<sup>p</sup>);<sup>123</sup> ܡܫܝܒܐ ܡܫܝܒܐ ܡܫܝܒܐ *now when Jesus saw the great crowd that was surrounding him* (Mt 8:18 Syr<sup>p</sup>); ܡܫܝܒܐ ܡܫܝܒܐ ܡܫܝܒܐ *for astonishment and*

<sup>120</sup> KPG, 2:xxi–xxii.

<sup>121</sup> See Joosten *The Syriac Language*, 109; Muraoka, *Classical Syriac for Hebraists*, §60; Muraoka, *Classical Syriac: A Basic Grammar* (both editions), §84; Nöldeke, *Compendious Syriac Grammar*, §279.

<sup>122</sup> KPG, 2:xxii; Nöldeke, *Compendious Syriac Grammar*, §280; Muraoka, *Classical Syriac: A Basic Grammar* (both editions), §84.

<sup>123</sup> Cited from Muraoka, *Classical Syriac* (both editions), §84.

*trembling had seized them* (Mk 16:8 Syr<sup>p</sup>).

The other type of verb is the one with the passive function in the **ܕܗ ܡܠܝܕ** syntagm. This syntagm is the *only* kind of passive participle recognized by KPG's two-verb paradigm.<sup>124</sup> It is formed by the passive participle followed by Lamadh attached to the subject of the passive participle (that is, the agent of the action, and not the recipient of the action): **ܕܗ ܡܠܝܕ** *written by him = he has written*. Examples: **ܕܗ ܡܠܝܕ ܕܗ ܡܠܝܕ** *known by me* in **ܕܗ ܡܠܝܕ ܕܗ ܡܠܝܕ** *since a man has not been known by me = since I have not known (had sexual intercourse) with a man* (Lk 1:34 Syr<sup>p</sup>);<sup>125</sup> **ܕܗ ܡܠܝܕ ܕܗ ܡܠܝܕ** *evil done by him* in **ܕܗ ܡܠܝܕ ܕܗ ܡܠܝܕ** *for what evil has been done by him? = for what evil has he done?* (Mt 27:23 Syr<sup>s</sup>; by contrast Syr<sup>p</sup> employs the active verb: **ܕܗ ܡܠܝܕ ܕܗ ܡܠܝܕ** *for what evil has he done*); (with **ܕܗ ܡܠܝܕ**) **ܕܗ ܡܠܝܕ ܕܗ ܡܠܝܕ** *it had been put by Satan in the heart of Judas = Satan had put it in the heart of Judas* (Jn 13:2 Syr<sup>p</sup>);<sup>126</sup> also with **ܕܗ ܡܠܝܕ** **ܕܗ ܡܠܝܕ** *but because she (Herodias) was instructed by her mother = but because her mother had instructed her* (Mt 14:8 Syr<sup>p</sup>). In the latter example, the subject is Herodias' mother. The noun "mother" plus its pronominal suffix (**ܕܗ ܡܠܝܕ** *her mother*) is the subject to which Lamadh is prefixed.

The appellation "**ܕܗ ܡܠܝܕ** syntagm" can be misleading in that it covers the Pael and Aphel passive participle as well as the Peal **ܡܠܝܕ**:<sup>127</sup> Pael **ܡܠܝܕ** *received* in **ܡܠܝܕ ܡܠܝܕ** *in accordance with the commandment and instruction which had been received by them (which they had received) from Addai* (Addai, 49:19);<sup>128</sup> Aphel **ܡܠܝܕ** *established (set in place, constituted)* in **ܡܠܝܕ ܡܠܝܕ** *the peace treaty which was established by me (which I have established) with our Lord the Emperor* (Addai, 6.22).<sup>129</sup>

## 5.2 Three-verb Paradigm for Words with Form of Passive Participle

In spite of its striving for clarity, KPG's checklist fails to inform the user that there is another way of viewing the verb—a view which has probably influenced Syriac lexicography since the late nineteenth century. Although the grammars of Duval and Brockelmann give us an intimation of this view,<sup>130</sup> it is best represented by the currently widely-used grammars of Nöldeke and Muraoka. These grammars recognize a verb type with a passive-participial form in addition to the **ܕܗ ܡܠܝܕ** syntagm and the passive-participial form with an active meaning.

<sup>124</sup> I am grateful to Steven Shaw, doctoral student with the Syriac Language Research Centre, Whitley College, University of Melbourne, for the following definition of the **ܕܗ ܡܠܝܕ** syntagm, which broadens the one I have given in KPG, 2:xxi–xxii.

<sup>125</sup> Neither of the Old Syriac versions is extant for this verse, so we cannot ascertain whether this instance of the **ܕܗ ܡܠܝܕ** syntagm is an Old Syriac reading retained by a Peshitta translator.

<sup>126</sup> Syr<sup>sh</sup> have **ܕܗ ܡܠܝܕ ܕܗ ܡܠܝܕ** [ܕܗ ܡܠܝܕ; Syr<sup>h</sup>]. Syr<sup>c</sup> is not extant.

<sup>127</sup> For examples see Muraoka, *Classical Syriac for Hebraists*, §69.

<sup>128</sup> Muraoka, *Classical Syriac for Hebraists*, §69.

<sup>129</sup> Muraoka, *Classical Syriac for Hebraists*, §69.

<sup>130</sup> See above, section 3.1.2.

Were they to speak in terms of a paradigm for words with a passive-participial form, it could be called the “three-verb paradigm,”<sup>131</sup> represented as follows:

Functions of the Passive-participial Form:

1. *Verb* (a) *Passive participle indicating result of past action*  
     (b) *صَلَمْتُ دَه (= مَلَمْتُ دَه) syntagm*  
     (c) *Passive form active meaning*
2. *Adjective*
3. *Substantive*

The difference between the two paradigms is significant. Unexplained, it could lead to bewilderment, as was brought to my attention in my Beginners’ Classical Syriac courses in which we use KPG and Muraoka’s *Classical Syriac: A Basic Grammar*. We now turn to the nature of that difference.

### 5.2.1 Passive Participle Indicating Result of Past Action

According to Muraoka, and Nöldeke before him, what I call the “third type” of verb with a passive-participial form “indicates the result of a past action.”<sup>132</sup> Muraoka cites two examples: *صَلَمْتُ* in the clause *صَلَمْتُ دَه* *your sins are forgiven* (Mk 2:5 Syr<sup>ph</sup>),<sup>133</sup> and *صَلَمْتُ* in *صَلَمْتُ دَه* *for it is written*, “He will command his angels concerning you” (Mt 4:6 Syr<sup>cp</sup>).<sup>134</sup> Other examples are: *صَلَمْتُ* *something is hidden* (Mk 4:22 Syr<sup>p</sup>); *صَلَمْتُ* *to those who were invited* (Lk 14:17 Syr<sup>p</sup>); *صَلَمْتُ* *the word that is sown in their hearts* (Mk 4:15 Syr<sup>sp</sup>); *صَلَمْتُ* *to you it is given* (Mk 4:11 Syr<sup>ph</sup>); *صَلَمْتُ* *in that liberty which is given them by God* (Spic. 13, 17);<sup>135</sup> *صَلَمْتُ* *but now, through the coming of the son of the blessed Mary, the thorns are uprooted, the sweat is removed, the fig-tree cursed* (Aphr. Hom. 113, 19).<sup>136</sup> All these examples exhibit transitivity, that is, they have three elements: an agent/actor who performs an action, the action performed, and a patient upon whom the action is performed.

<sup>131</sup> Most Syriac grammars, especially those of pedagogical intent, do not enter into sufficient detail to discuss this aspect of syntax: Phillips, *The Elements of Syriac Grammar*; Nestle, *Brevis linguae Syriacae grammatica*; Nestle, *Syriac Grammar*; Mingana, *Clef de la langue araméenne*; and the more recent works of Robinson, *Paradigms and Exercises in Syriac Grammar*; Coakley–Robinson, *Robinson’s Paradigms*; Frey, *Petite grammaire syriaque*; Healey, *Lesbono Suryoyo*; Palacios, *Grammatica Syriaca*; Thackston, *Introduction to Syriac*. Arayathinal, *Aramaic Grammar* and Costaz, *Grammaire Syriaque* have helpful material on the adjective, but do not cover the syntactic functions of the passive-participial form.

<sup>132</sup> Muraoka, *Classical Syriac for Hebraists*, §69; Muraoka, *Classical Syriac: A Basic Grammar* (both editions), §84; Nöldeke, *Compendious Syriac Grammar*, §278.

<sup>133</sup> Muraoka, *Classical Syriac* (both editions), §84. Cf. Mt 9:2

<sup>134</sup> Also cited by Nöldeke, *Compendious Syriac Grammar*, §278, whom Muraoka follows.

<sup>135</sup> Nöldeke, *Compendious Syriac Grammar*, §278. The English translation is mine.

<sup>136</sup> Nöldeke, *Compendious Syriac Grammar*, §278. The English translation is mine.

### 5.2.2 Passive Participle Indicating Result and State

From Muraoka we may deduce a second category: “The passive participle of Peal also underlines a result *or* state (emphasis added); this is particularly true of intransitive verbs.”<sup>137</sup> As an example he cites “*lying, crouching*” (Gen 29:2): *وَأَمَّا الْخِزَانَةُ فَكَانَتْ تَسْتَوِي فِيهَا* and *three flocks of sheep were lying there beside it*.<sup>138</sup> Because Muraoka’s observation applies to one example only, we can understand him to mean that *كَم* expresses both result *and* state, depending on how we view it. It is an intransitivity that would seem also to imply reflexivity in that the “lying” was the act of the sheep; the sheep lay themselves down. To this example we may add: *وَيَا أَيُّهَا الْقَوِيُّ صَدَّقْ نَفْسَكَ وَمَتَّعْنَا بِكَ صَدَقَةً* when a strong man, *armed*, guards his courtyard (Lk 11:21 Syr<sup>p</sup>); *أَنْتَ تَتَوَلَّى* you are wrong/you err (Mk 12:24 Syr<sup>sp</sup>); *أَنْتَ تَتَوَلَّى* Martha, Martha, you worry and you are troubled about many things (Lk 10:41 Syr<sup>p</sup>). This category of “passive participles” quivers between verb and adjective, verb to the extent that the forms express the result of an action, and adjective to the extent that they exhibit state.

### 5.2.3 Passive Participle Indicating State only

To these two categories in the three-verb paradigm we must add a third and a fourth. The third is the passive-participle (Peal, Pael and Aphel) that is clearly not the result of an action, but exhibits state only: *أَمِنٌ* he is confident (Mt 27:43 Syr<sup>ph</sup>); *وَكَمْ سَلِمَ أَمِنٌ* because he has him back *safe and sound* (Lk 15:27 Syr<sup>p</sup>); *مَتَّعٌ* (with the form of a Pael passive participle) in *أَنَا مَتَّعٌ* I am innocent (Mt 27:24 Syr<sup>ph</sup>); *أَنَا مَتَّعٌ* what do I lack? (Mt 19:20 Syr<sup>p</sup>); *أَنَا مَتَّعٌ* I need (Mt 3:14 Syr<sup>ph</sup>); *أَنَا مَتَّعٌ* are you free from a wife (unmarried)? (1 Cor 7:27 Syr<sup>p</sup>); *أَنَا مَتَّعٌ* for this I am born (Jn 18:37 Syr<sup>ph</sup>); and *مَتَّعٌ* in the sequence *مَتَّعٌ. مَتَّعٌ. مَتَّعٌ. مَتَّعٌ* we are hungry, and we are thirsty, and we are poorly clothed, and we are beaten (1 Cor 4:11 Syr<sup>p</sup>).

### 5.2.4 Ambiguous Instances

The fourth category consists of ambiguous instances for which it is difficult to ascertain whether they exhibit a state *and* the result of an action in the past, or just a state. An example is *مَتَّعٌ* *مَتَّعٌ* *مَتَّعٌ* who was crippled in his feet (Acts 14:8 Syr<sup>p</sup>). The Peal *مَتَّعٌ* means “injure, maim.” This meaning leaves open the possibility that the derivative *مَتَّعٌ* may have the connotation “who had been maimed in his feet” (*injured*, as a result of a past action), rather than simply “crippled, disabled” as state without the implication of result.

Because of their context, the terms *مَتَّعٌ* and *مَتَّعٌ* in Mt 18:8 Syr<sup>p</sup> are good examples of instances that make us pause and ask whether they, like *مَتَّعٌ* in Acts 14:8 Syr<sup>p</sup>, might be ambiguous. The text reads: *مَتَّعٌ* *مَتَّعٌ* *مَتَّعٌ* *مَتَّعٌ* *مَتَّعٌ* (if your hand or your foot causes you to stumble, cut it off and cast it from you); it is better for you to enter life *lame or maimed/deformed* (than to have two hands or two feet). At first sight, the context of

<sup>137</sup> Muraoka, *Classical Syriac for Hebraists*, §35.

<sup>138</sup> Variant reading: *مَتَّعٌ* *مَتَّعٌ* 7a1 11/9b1\*.

ܦܩܝܘܢܐ and ܦܩܝܘܢܐ, which calls for self-inflicted injury, makes us ask whether the terms themselves express the result of an action in the past as well as a state. To interpret either term as expressing result on the basis of the preceding imperatives, ܦܩܝܘܢܐ ܕܗܒܝܢܐ ܕܗܒܝܢܐ *cut it off and cast it from you*, would be to impose an unjustified connotation upon them. We would need to show that these terms, like ܦܩܝܘܢܐ, have transitive force, for which there is no evidence thus far. Audo and Thelly are the only Syriac lexica from *Thesaurus Syriacus* to the present to register Peal verbs from which ܦܩܝܘܢܐ and ܦܩܝܘܢܐ could be derived; neither suggests that either verb has a transitive meaning. In making our assessment, we should however note that Audo does not cite a source for either item. As we have seen, for the Peal ܦܩܝܘܢܐ he lists no more than the forms of the perfect and imperfect 3ms.<sup>139</sup> His semantic comments on the Peal ܦܩܝܘܢܐ do give us some confidence that they at least are based on a source familiar to him. Thelly, reliant on Audo regarding the existence of lexemes, goes further than his source by assigning intransitive meanings to *both* Peal verbs: Peal ܦܩܝܘܢܐ “to be/become lame;” Peal ܦܩܝܘܢܐ “to be crippled in hand/foot.”<sup>140</sup> If Thelly is correct then neither ܦܩܝܘܢܐ nor ܦܩܝܘܢܐ are transitively parallel to ܦܩܝܘܢܐ. According to Nöldeke and Muraoka some passive-participial forms express the result of an action, but neither ܦܩܝܘܢܐ nor ܦܩܝܘܢܐ are to be counted among them, for they exhibit state only.

### 5.2.5 Implications of the Three-verb Paradigm for the Lexicographer

The preceding four categories are grammatical judgements that have direct implications for the lexicographer. The first two categories (§§5.2.1, 5.2.2) indicate result and are verbal. The second (§5.2.2) and third (§5.2.3) express state and are adjectival. All three are defined by the rubric “passive participle.” How does one lemmatize and name this passive participle that in one context is said to function as a verb, in another as a verb and an adjective, and in another as an adjective only? In a grammar, each can be appreciated in its context, but to translate them for a lexicon into a consistent grammatical classification is another matter.

For the lexicographer the dilemma is intensified further by another aspect of the categories expressing result. By definition, an adjective can function both attributively and predicatively: it modifies a noun or its equivalent in a phrase, or predicates a state or quality of a noun in a clause: “the good man” or “the man is good.” An outcome of restricting a passive-participial form to the function of passive participle expressing result is that it recognizes only one of these two adjectival functions: the adjective as attribute. The corresponding function of the form as a predicative adjective is viewed as a verbal rather than an adjectival function. Were this grammatical differentiation to be followed, it would

<sup>139</sup> See pages 87–88 above.

<sup>140</sup> From correspondence with Emmanuel Thelly (May 2008, cited with permission), it is helpful to know that if memory serves him rightly he gives the same meanings for these verbs as Kalappura’s *Syriac-Malayalam Dictionary*. Thelly says that his use of Kalappura’s glosses was unusual and done in the absence of a rendering in other lexica. He preferred to check his English and Malayalam renderings against those of Audo’s Syriac to Syriac, and the English renderings in Costaz’s lexicon and CSD.

result in two opposing classifications: it would introduce a dichotomy between functions that syntactically belong together, and would leave the adjective as attribute lacking a corresponding adjective as predicate.

Let me illustrate. Irrespective of what it is called in a lexicon, no one would question that the emphatic feminine form  $\text{ܡܪܝܫܐ}$  in  $\text{ܡܪܝܫܐ ܚܢܐ}$  *a marked sheep* (CSD 230a)<sup>141</sup> functions as an attributive adjective. Yet in the three-verb paradigm its predicative counterpart in the absolute state is called a passive participle expressing result. The same is true of the attributive and predicative functions of the emphatic and absolute states in the following examples. No one would hesitate to assign the appellative “attributive adjective” to the emphatic passive-participial forms in the following examples, yet the three-verb paradigm calls the predicative counterparts with which they are matched passive participles expressing result: (a) attributive emphatic<sup>142</sup>  $\text{ܡܪܝܫܐ}$  in  $\text{ܡܪܝܫܐ ܡܪܝܫܐ}$  *die gepanzerte Ferse, an armoured heel, a protectively-covered heel* (Ephr. Hymn 18:10)<sup>143</sup> and predicative absolute  $\text{ܡܪܝܫܐ}$  *armed* (Lk 11:21 Syr<sup>p</sup>);<sup>144</sup> (b) attributive emphatic  $\text{ܡܪܝܫܐ}$  in  $\text{ܡܪܝܫܐ ܡܪܝܫܐ}$  *the uprooted people of Persia* (John Eph. 416:16)<sup>145</sup> and predicative absolute  $\text{ܡܪܝܫܐ}$  in  $\text{ܡܪܝܫܐ ܡܪܝܫܐ}$  *the altar of Baal was broken down* (Jud 6:28). The function of adjectival predicate is seemingly eliminated by being viewed as a verb.

The complexity of grammatically classifying the participial form as presented in the three-verb paradigm and in standard Syriac grammars helps us to understand and empathize with the lexicographer who has created conflicting entries in an attempt to meet various syntactic, classificatory and semantic demands.

### 5.2.6 Summary: Advantages of Two-verb Paradigm

These complexities have led me to prefer the two-verb paradigm over the paradigm that advocates three verbs. My reasons are fourfold.

*Syntactically Justifiable.* The two-verb paradigm is no less syntactically defensible than the three-verb paradigm. As this essay has demonstrated, it too is supported by credible published research.

*Resolves Problem of What is a Verb and What is an Adjective.* The two-verb paradigm dissolves a dichotomy that presents a constant dilemma for Syriac lexicographers. In the two-verb paradigm, all three categories discussed above are classified as adjectives in accordance with

<sup>141</sup> This example in CSD, which does not cite sources, is not in R. Payne Smith’s *Thesaurus Syriacus*. I cannot locate it in any other lexicon. It seems that it is one of the quotations for which J. Payne Smith is personally responsible and that there is no good reason to doubt its authenticity.

<sup>142</sup> Form of Pael feminine passive participle from the root  $\text{ܡܪܝܫ}$ .

<sup>143</sup> The German translation is by Beck, who sees a possible reference to Gen 3:15: Beck, ed., *Des Heiligen Ephaem des Syrerers Hymnen de Ecclesia* ad loc.

<sup>144</sup> Cited in context in section 5.2.2, above.

<sup>145</sup> *Thesaurus Syriacus*, 2:2969.

Joosten's syntactic analysis and complementary appendix.<sup>146</sup> Furthermore, we have seen above<sup>147</sup> that (a) Goldenberg, followed by Joosten, considers only *one* aspect of the adjective (whether or not it has a passive form)<sup>148</sup> to be verbalized: the adjective in the absolute state *without* the enclitic personal pronoun, which contains the expression of the third person pronominal suffix, and (b) this isolated instance is best classified in the lexicon as an adjective along with both the predicative adjective with an enclitic personal pronoun and the attributive adjective.

*Syntactic Equivalence between Attribute and Predicate.* From a strictly functional perspective, all three categories of the passive participle in the third type of verb in the three-verb paradigm can be seen to have a syntactic equivalence: (a) *ܡܚܘܦܝܢ* are forgiven, *ܡܘܠܬܐ* it is written, *ܠܗܘܐ* he (or it) is hidden, *ܠܘܥܘܠܐ* he is confident, *ܘܚܘܦܝܢ* were lying, and *ܝܘܬܐ* was crippled are all predicates in the absolute state with a third person subject; (b) *ܡܢܐ* in *ܐܢܐ ܡܢܐ ܐܢܐ* (or *ܡܢܐ ܐܢܐ*) I am invited, *ܡܢܘܦܐ* in *ܐܢܐ ܡܢܘܦܐ* (or *ܡܢܘܦܐ ܐܢܐ*) I am innocent, *ܠܘܦܐ* *ܝܘܬܐ* you are wrong, and *ܠܘܦܐ* *ܝܘܬܐ* you are lame are predicates in the absolute state with an enclitic personal pronoun. To these we may add instances with a third person subject *with* an enclitic personal pronoun cited in note 116, for example, *ܝܘܬܐ ܡܚܘܦܝܢ ܝܘܬܐ* for the husband *is made holy*.

*Semantic Equivalence between Attribute and Predicate.* Given the linguistic insight that syntax and semantics are inseparable, the three aforementioned categories can also be expected to have a semantic equivalence. Thus, from a functionally based perspective, passive-participial forms in the first *as well as* second and third categories in the third type of verb in the three-verb paradigm<sup>149</sup> can be understood to exhibit state. If syntactically and semantically we yoke the attributive function of the adjective to the predicative function then, from an adjectival perspective, we can expect both functions to express state. This being the case, we can refrain from assigning a passive intent to the predicative absolute, as in Nöldeke and Muraoka, and instead look for a syntactic-semantic solution that helps us to see a “state” intent in words with the form of a passive participle that function predicatively. It is in the end a question of doing no more than viewing the passive participle that functions predicatively as exhibiting the state of an adjective rather than having a passive intent. Syntactically and semantically, *ܡܚܘܦܝܢ* in the clause *ܡܚܘܦܝܢ ܗܘܢ ܫܘܠܬܐܢ* does not need to be rendered passively as *your sins are forgiven*. Approached as an adjective, *ܡܚܘܦܝܢ* can be understood, syntactically and semantically, as an expression of “state”: *your sins are in a state of forgiven-ness*. Likewise, as an adjective *ܠܘܥܘܠܐ* in *ܠܘܥܘܠܐ ܗܘܐ* does need to be syntactically and semantically restricted to the passive sense that *something is hidden*, but as expressing the state of an adjective, *something is in a state of hidden-ness*. Again, *ܡܢܐ* in *ܡܢܐ ܐܢܐ* can be seen to express *a state of invited-ness*, *ܠܘܦܐ* in *ܠܘܦܐ ܝܘܬܐ* *a state of sown-ness*, and *ܠܘܦܐ* in *ܠܘܦܐ ܝܘܬܐ*

<sup>146</sup> Joosten, *The Syriac Language*, 78–96, 182–213.

<sup>147</sup> See above, pages 99–100.

<sup>148</sup> Joosten, *The Syriac Language*, 80–81.

<sup>149</sup> Sections 5.2.1, 5.2.2, and 5.2.3.



can be readily adapted, and avoids confusion with comparable entries devoted to homonyms.

To sum up, words with multiple functions are not particularly difficult to lemmatize. Nevertheless, they do demonstrate that a new arrangement of lexical material is necessary, and that the form employed for their lexical presentation will need to be consistent, user-friendly, and in accordance with the requirements of the methodology it seeks to implement.

## 7. WHERE LEXICON AND SYNTAX MEET<sup>150</sup>

Judicious and succinct syntactic information has an indispensable role in a contemporary comprehensive lexicon and is integral to the methodology proposed by this essay. The value of its place in a lexicon was made apparent by S.R. Driver more than a century ago in his treatment of particles in BDB, and by Walter Bauer in his Greek-German lexicon to the New Testament and other early Christian literature. The application in BDB as a whole, however, is neither universal nor systematic, and it requires methodological revision and separation from encyclopedic information in BDAG, the most recent revision of Bauer's original work. Syntactic information has never had a philosophically or methodologically recognized place in Syriac lexicography. This is beginning to change. The collaboration between the Turgama Project at Leiden University and the International Syriac Language Project (ISLP), and the work of Andersen and Forbes, Danker, Dyk and Van Peursen (director of the Turgama Project), to name but five ancient-language grammarians who have stressed the link between syntax and lexicon, or employed it in a lexicon in the case of Danker,<sup>151</sup> is demonstrating that syntax cannot be excluded from a primary role in the laying of foundations for a future comprehensive Syriac-English lexicon. Discrete categories of syntactic data based on the examination of Syriac words in their syntactic environment add a new dimension to elucidating the function(s) and meaning(s) of numerous lexemes. They also provide a point of entry into other related areas of exploration such as exegesis, literary analysis in its various forms, translation, and translation technique. Van Peursen argues that:

Although the rediscovery of literary structures and devices in biblical literature is to be welcomed, caution is needed as well. For if one gives priority to these stylistic and thematic structures of a text over its syntactic structure, or even worse, ignores the syntactic structure of a text completely, one runs the risk of overruling linguistic information.<sup>152</sup>

Van Peursen's perspective is applicable to Semitic lexicography. Syntax is an integral part of preparing core elements of an average lexical entry. For some features it remains the invisible presence, but its absence from the preliminary background research becomes quickly

<sup>150</sup> The title of a book by Schönefeld.

<sup>151</sup> For Danker, see sections 7.6.1, 7.6.3, below. See further, Andersen-Forbes, "What kind of Taxonomy?"; Danker, ed., BDAG; Dyk, "Desiderata for the Lexicon;" Van Peursen-Falla, "The Particles ܐܘܢܐ and ܐܘܢܐ in Classical Syriac."

<sup>152</sup> Van Peursen, "Clause Hierarchy and Discourse Structure," 143-44.



#### 7.4 Verbal Valence

Verbal valence is a form of lexical information that Dyk identifies as an area of profound significance for Semitic lexicography. Demanding intensive research, verbal valence remains largely unexplored in Syriac lexicography. The most that has been achieved is the virtual random inclusion of prepositions that occur with a particular verb as we find in entries in CSD, Jennings, and KPG. An aim of this research would be to uncover verbal valence patterns in Syriac. From research undertaken by Dyk on Old Testament Hebrew, “it seems that a verb is restricted in its meaning by the elements with which it occurs.”<sup>158</sup> As Dyk explains,

Often a verb occurs with various meanings which are dependent on the elements co-occurring with it in the syntactic context. The patterns of elements with which a verb can occur can be seen as an idiosyncratic property of the verb itself (...) A verb can be said to have a certain “argument structure, that is, it is specified for the number of arguments it requires” (Haegeman, *Introduction*, 36). It can have more than one argument structure, which results in various meanings of the verb involved. Lexica frequently make a list of different meanings a verb can have, but it is not always clear whether the possibilities are continually present or valid only in a particular instance.<sup>159</sup>

For instance, one of the features that one of my students, Steven Shaw, is discerning in his doctoral research is “a pattern in the use of prepositions that focus the meanings of verbs.”<sup>160</sup> It is precisely the pattern of elements that we need to expose, says Dyk, and that constitutes the syntactic “information which rightly belongs in the lexicon.”<sup>161</sup>

#### 7.5 Extent of Lexical Syntactic Information

The extent of syntactic information (analysis and exemplification) provided by the lexicon is a separate issue, probably best evaluated in relation to the nature and purpose of the lexical work concerned.

#### 7.6 Value of Greek Syntactic Lexical Data for Syriac Lexicography

The way in which Biblical Greek lexicography is able to serve the interests of the lexicography of the Ancient Versions well illustrates the point, albeit from a slightly unusual perspective. The point is valid only for Syriac versions that can be studied as the target texts of underlying extant Greek source texts.

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<sup>158</sup> Dyk, “Desiderata for the Lexicon,” 153.

<sup>159</sup> Dyk, “Desiderata for the Lexicon,” 153.

<sup>160</sup> Quoted with permission. Due to the influence of Dyk, Shaw is undertaking a doctoral thesis on valence as it applies to the citation of prepositions in typical lexical entries for Syriac verbs.

<sup>161</sup> Dyk, “Desiderata for the Lexicon,” 153.

### 7.6.1 BADG and BDAG

Referenced syntactic information in BADG and BDAG contributes significantly to making this lexicon especially useful for the textual study of the early versions of the New Testament and other early Christian literature translated from the Greek. This information is often an important element in evaluating the relationship between a particular rendering in a target text and its Greek correspondence in the source text. It is often also helpful for the study of some aspect of a translator's technique. I have come across many instances in the Peshitta Syriac New Testament where a nuance recorded by BAGD/BDAG helps to disclose the judiciousness of a Peshitta rendering or the manner in which a translator has dealt with an unusual construction in the underlying Greek.<sup>162</sup> Because Greek lexicography has long been in the vanguard of ancient language lexicography, developments in philosophical, methodological, and syntactic insights are available from the research of contemporary Greek lexicographers.

### 7.6.2 Louw and Nida's Minimization of Syntactic Data

By way of conclusion to this sub-section, we may note that the provision of syntactic data in a Greek lexicon has been challenged in recent times. In Louw and Nida's *Greek-English Lexicon* syntactic information has been minimized to the point where it has almost no place at all. In his review article of Louw–Nida, John Lee comments that “much of the syntactical material included in a dictionary such as BAGD is not essential and may be omitted without serious consequences.”<sup>163</sup> Lee does express concern at its lack in Louw–Nida when it is an essential element in determining a word's meaning. Prepositions, which “are treated as much as possible without reference to case,”<sup>164</sup> are an example. To Lee, “it seems clear that it is very difficult to analyze the semantics of prepositions and present them in a useful way without taking the accompanying case into account.”<sup>165</sup>

Lee's perspective raises the question as to whether both mentioned lexica might be modified to advantage, one by the exclusion and the other by the inclusion of certain syntactic information depending on whether or not it is essential in determining a word's meaning. The debate has merit for Semitic lexicography. It is a salutary reminder that every aspect of the discipline, including the provision of syntactic data and the relationship between syntax and semantics, deserves the most critical evaluation. The respective inclusion and exclusion of syntactic material in these two lexica are in accord with the principles set by

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<sup>162</sup> While other resources (for example, Blass–Debrunner, *A Greek Grammar of the New Testament and Other Early Christian Literature*; Robertson, *A Grammar of the Greek New Testament in the Light of Historical Research*; Moulton–Turner, *Syntax* [vol. 3 of *A Grammar of New Testament Greek*]) can serve a similar purpose, they cannot replace the perspective provided by a lexicon.

<sup>163</sup> Lee, “The United Bible Societies' Lexicon,” 185.

<sup>164</sup> Lee, “The United Bible Societies' Lexicon,” 172.

<sup>165</sup> Lee, “The United Bible Societies' Lexicon,” 186.

the authors themselves, and with Louw's assertion that lexicography now "requires a new attitude towards dictionaries involving the recognition of different kinds of dictionaries."<sup>166</sup>

### 7.6.3 Respective Benefits of BDAG and Louw–Nida for Syriac Lexicography

It is not the aim of a Greek lexicon to serve the needs of an early version of the New Testament or other non-Greek early writings, but as one who constantly uses both BDAG and Louw–Nida for the preparation of a lexicon for a Syriac version, I would plead Louw's principle of diversity. Because Louw and Nida's pioneering work is based on semantic domains and focuses on the related meanings of different Greek words, it provides a unique resource for tracing and ascertaining words of similar meaning in an early New Testament version, and diminishes significantly the possibility of overlooking a word of similar meaning.<sup>167</sup> Equally, scholarship related to the Ancient Versions needs the syntactic data in BDAG that is helpful in determining the meanings of words in the translations. It would be seriously disadvantaged if BAGD/BDAG had not included it.

## 8. TERMINOLOGY

The profound difficulties associated with part-of-speech assignment have significant implications for our proposed methodology. On the one hand, it is important to recognize that *parts of speech* are not definitive and totally self-contained categories.<sup>168</sup> Indeterminacy in parts of speech is a factor in any natural language. As a result, some linguistic schools of thought have brought traditional terminology into question to the extent that they consider terms such as *adjective* or *participle* to be problematic if not unacceptable. On the other hand, replacing one label with another "does not necessarily represent progress, since the work of finding criteria or diagnostics for delimiting classes and recognizing class membership (that is, taxonomy) remains just as arduous as it ever was."<sup>169</sup>

A lexicon that employs a syntax-based classification cannot avoid part-of-speech labels. The various functions it diagnoses have to be called something. In some instances it may be appropriate to use a new appellation. *Presentative* would seem to be such a term. Takamitsu Muraoka and Bezalel Porten apply it to the particles אַרְרֵה, אֵה, and הִלּוּ in their grammar of Egyptian Aramaic.<sup>170</sup> Andersen demonstrates by detailed syntactic analysis that it is far more

<sup>166</sup> Louw, "The Analysis of Meaning in Lexicography," 140.

<sup>167</sup> Syriac words of similar meaning are a feature of KPG. For details of my methodology for ascertaining these words of similar meaning, and the place of Louw–Nida in that methodology, see KPG, 2:xxxiv–xxxv. Syriac words of similar meaning have also been proposed for a new comprehensive Syriac-English lexicon that adopts a translation of one language into another as its corpus; see Falla, "A Conceptual Framework," section 7.1.4.

<sup>168</sup> Cf. Malouf, *Mixed Categories in the Hierarchical Lexicon*; Schütze, *Ambiguity Resolution in Language Learning*.

<sup>169</sup> Andersen–Forbes, "What Kind of Taxonomy?"

<sup>170</sup> Muraoka–Porten, *A Grammar of Egyptian Aramaic*, 329 (§86e); see also 94 (§22e); 285 (§77bb). As Muraoka–Porten defines it (392), a "presentative" is "a word positioned at the beginning of a

applicable to the Hebrew **הִנֵּה** than previous part-of-speech terminology.<sup>171</sup> It would also seem to be far more appropriate for the Syriac **ܐܘܢܐ** than *demonstrative particle*, which I used in the second volume of KPG.

In the foreword to BDAG, Danker comments that

any lexicographic endeavor worth its name must evolve in a context of new discoveries and constantly changing theoretical structures. Yet the claims of tradition are strong, and some balance must be maintained between contemporary demand and vision of what the future must inevitably require.<sup>172</sup>

One way of achieving “some balance” with regard to part-of-speech allocations would be to retain traditional terminology where possible, introduce new terminology only where it can be shown to be a distinct advantage, and ensure that problematic terms are well defined as in the *diagnostic definitions* discussed earlier (section 4.3.2). In this way the user will know what the lexicographer has in mind.

## 9. LINK BETWEEN LEXICAL ELEGANCE AND LANGUAGE SYSTEM

*The lexicon we should strive for “should never lose the link to the elegance of the language system itself.”*

Janet Dyk<sup>173</sup>

The conviction that future Semitic lexicography should be interdisciplinary (section 4.3.5) is exemplified in two essays published in this series by Janet Dyk.<sup>174</sup> Both essays address the issue of “whether syntactic information should be included in the Syriac lexicon, and, if so, what type of syntactic information this should be, and how it should be presented.”<sup>175</sup> Semitic lexicography has much to gain from Dyk’s insights as a linguist and syntactician and it is my hope that we will hear more from her on how Hebrew, Aramaic, and Syriac lexicography can take the relationship between syntax and lexicalization more seriously. This section was written in close consultation with Dyk to ensure that our respective approaches are accurately represented.

### 9.1 Put Every Participial Form under Verb

The subject of the second essay, which I invited Dyk to address, develops a section in the first entitled “The Puzzle of the Participle.”<sup>176</sup> The two articles focus on a central concern of this author’s essay, namely, how to lemmatize and classify the various functions of the Syriac participle. Initially, our respective approaches to this particular issue appeared to be in

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discourse or utterance to introduce it and draw the hearer’s or reader’s attention to it, e.g. ‘Look here,’ ‘Listen!’, ‘Behold!’ in English.”

<sup>171</sup> Andersen, “Lo and Behold!”

<sup>172</sup> BDAG, vii.

<sup>173</sup> Dyk, “Desiderata for the Lexicon,” 156.

<sup>174</sup> Dyk, “Desiderata for the Lexicon” and “Form and Function.”

<sup>175</sup> Dyk, “Desiderata for the Lexicon,” 141.

<sup>176</sup> Dyk, “Desiderata for the Lexicon,” 149–53.

conflict. My concern was that Dyk did not perhaps fully appreciate the extent of the lexical confusions I had uncovered and from which I was seeking to extricate myself, and that what she was proposing might return us to a sophisticated variation of the state of affairs for which I believed I had finally found a credible and testable alternative. For her part, Dyk argues that in composing a lexicon “[u]sability and systematic elegance are both worthy goals,”<sup>177</sup> and that the lexicon we should strive for “should never lose the link to the elegance of the language system itself.”<sup>178</sup> This innate elegance is due to:

[t]he fact that an element may function as different parts of speech in a specific environment is the systematic product of the interaction of the basic qualities of the element itself with the context in which it occurs.<sup>179</sup>

“Traced within an extensive text corpus”, this element, says Dyk,

manifests a limited number of shifts in part of speech and the possible shifts within the language can be represented in a single unidirectional chain of parts of speech.<sup>180</sup>

Dyk’s disquiet is that a lexicon that omits “a consistent treatment of the form within the language system as a whole”<sup>181</sup> forfeits the nexus that may obtain between a word’s grammatical classification in an entry, its syntactic-semantic function in the lexicalized corpus, and its morphological identity in its natural language. My methodology loses this link: it lemmatizes and classifies lexical items purely according to syntactic function. Except in an index intended for the last volume of the completed work, it does not, for instance, deliberately draw attention to the morphology of the now familiar words with a passive-participial form that function as adjectives and/or substantives. It solves a problem, but as Dyk sees it only by sacrificing what should be an essential feature of a future Semitic lexicon. As a corrective, Dyk therefore recommends that:

Though the various functions which an element may have could be entered into the lexicon as separate items, *references should be made to the basic form from which the other functions are derivable* on the basis of consistently applied syntactic rules (emphasis and underlining added).<sup>182</sup>

From volume two onwards in KPG “the various functions which an element may have” in the lexicalized text have been “entered into the lexicon as separate items”<sup>183</sup> in the form of entries lemmatized and classified according to syntactic function. Thus, if a word with a passive-participial form in the Peshitta Gospel text functions as a noun it is lemmatized and classified as a noun. Likewise, infinitives, active participles, passive participles in the ܐܘܪܝܢܐ

<sup>177</sup> Dyk, “Form and Function,” abstract.

<sup>178</sup> Dyk, “Desiderata for the Lexicon,” 156.

<sup>179</sup> Dyk, “Desiderata for the Lexicon,” 141.

<sup>180</sup> Dyk, “Desiderata for the Lexicon,” 141.

<sup>181</sup> Dyk, “Desiderata for the Lexicon,” 152.

<sup>182</sup> Dyk, “Desiderata for the Lexicon,” 141.

<sup>183</sup> Dyk, “Desiderata for the Lexicon,” 141.



a single set of syntactic rules applicable in all cases.<sup>188</sup>

## 9.2 Where We Stand Determines What We See

Robert McAfee Brown shows that “where we stand determines what we see.”<sup>189</sup> His insight encapsulates, I think, how Dyk and I arrived at our respective positions, for we have viewed the same problem from different vantage points. In consequence, I would like to suggest that a compromise is perhaps the best way forward if a Syriac lexicon of the future is to implement Dyk’s plea for elegance and my appeal for an alternative to current classificatory chaos.

From her work on the Hebrew participle, Dyk begins with a syntactically structured database that leads to an assignment of function on the basis of syntactic rules applicable in all cases. This defines the forms of the Syriac participle as “a verb,” “whether or not [those forms] are governed by a nominal element”<sup>190</sup> and have a nominal function. Because at its core, “[a]t heart,” the participle is “a verb” and all other syntactic functions derive from its core, it follows that if we are to retain the link “to the elegance of the language system itself”<sup>191</sup> the participial form from which various syntactic functions can be systematically derived need to be listed under the verb in “the one lexical entry.”<sup>192</sup>

As a lexicographer working from a diagnostically driven grammatical classification, my approach differs from Dyk’s in that it begins with the diagnosis of the actual syntactic function(s) of a form occurring in the lexicalized corpus. This diagnosis leads to the grammatical classification of the form: to its lemmatization and the part of speech to be assigned to it. It is this grammatical classification that allows the lexicographer to deliver to the lexicon user how a word (form) functions syntactically in Syriac literature, or in a particular corpus of that literature. It is also a key element in showing the user how the meaning was arrived at. As we have said, syntax and semantics are partners in the lexical delivery of the function(s) and meaning(s) of a form.

## 9.3 Points of Difference

Both Dyk and I realize that, as they stand, our respective approaches have points of difference. In essence, the difference lies in how much syntactic theory a lexicon user is expected to know and to apply in order to identify correctly when a participle in a particular case is functioning as a verb, noun, adjective, or even adverb. Dyk would like to assume that the user can deduce the correct function in a particular occurrence from her or his knowledge of Syriac grammar. I argue that such an assumption is asking too much of the average user, especially the person new to classical Syriac, because (a) lexica frequently and

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<sup>188</sup> Dyk, “Form and Function,” §1.

<sup>189</sup> Brown, *Creative Dislocation—The Movement of Grace*, 107.

<sup>190</sup> Dyk, “Desiderata for the Lexicon,” 153.

<sup>191</sup> Dyk, “Desiderata for the Lexicon,” 156.

<sup>192</sup> Dyk, “Desiderata for the Lexicon,” 152.

confusingly employ different parts of speech to classify a particular syntactic function, or syntactic functions—see section 2, and (b) grammarians disagree as to how certain functions should be understood and classified—see sections 4–5. As a result, I see the need to lemmatize all words according to their syntactic function or functions in the lexical corpus and explain (preferably in the introduction to the lexicon) the diagnostic methodology employed by the lexicographer. An example is the functions of words with the form of a passive participle discussed in section 5. Another, to which we now turn, is the active and passive participle in substantivized collocations.

### 9.3.1 Active Participle in Substantivized Collocations

Like many classical Syriac lexicographers, I consider it useful to the lexicon user to identify collocations in which the construct state of the active participle is employed in compound nouns. Examples with the active participle are *benefactor* (2 Macc 4:2); *miracle-worker* (BH Chr. 82);<sup>193</sup> *evildoers, malefactors, criminals* (Lk 23:32 Syr<sup>scph</sup>, 33 Syr<sup>scph</sup>, 39 Syr<sup>scph</sup>); and *benefactors* (Lk 22:25 Syr<sup>scph</sup>).

Dyk would assume that syntactic rules are sufficient not to have to list these combinations separately, while I diagnose and list as lexical sub-entries each form according to its syntactic function in the designated corpus.

Most lexica list examples of collocations with the active participle under the Peal verb. But the issue was not, it seems, straightforward. The active participle of the Peal *ܥܒ* in collocations such as those cited above is an apt example. Brun, for instance, being comparatively brief, simply lists his collocations and idioms formed from both the active and passive participial forms in the one block under the Peal verb. *Thesaurus Syriacus* does the same, but has a separate sub-entry for the passive participle and idioms of which it is part. CSD does likewise. In addition, both CSD and *Thesaurus Syriacus* follow the Peal *ܥܒ* with a long complementary list of nouns with which this verb is used. CSD seems to have seen a potential overlap between illustrative examples in the initial section of the verbal entry and the system of citing compound nouns, such as *ܥܒܝܢܐܘܬܐ*, and nouns that are the object of the Peal *ܥܒ*, such as *ܐܝܠܐ* *sign* (“to do or work a sign”) in the list following the initial section. Thus CSD differs from *Thesaurus Syriacus* and includes *ܥܒܝܢܐܘܬܐ* and *ܐܝܠܐ* in a complementary list with a cross-reference guiding the user to the specific meaning under which the collocation is cited in the first part of the verbal entry. However, not all compound nouns are treated in this manner. The compounds *ܥܒܝܢܐܘܬܐ* *wily, tricky, fraudulent*, *ܥܒܝܢܐܘܬܐ* *soporific*, and *ܐܝܠܐ* *miracle-worker*, appear in the complementary list only.

In an attempt to be more consistent, the first volume of KPG does not list compound nouns of this kind in the initial verbal entry, but immediately after it as complete, referenced

<sup>193</sup> *Thesaurus Syriacus*, 2:2766. Without reference to context, the ms. form of the participle could be either the main verb in a clause as *ܥܒܝܢܐܘܬܐ* *ܐܝܠܐ* *ܥܒܝܢܐܘܬܐ* and there is none that does good, not one Rom 3:12, or the ms. construct state in a compound noun as in *ܐܝܠܐ* *ܥܒܝܢܐܘܬܐ* *benefactor* 2 Macc 4:2.

sub-entries, which are cross referenced as sub-entries under the noun as the second element of the collocation.

### 9.3.2 Lexemes that Linger outside Hierarchical Elegance

Some words pose greater difficulties. The now familiar **ܡܚܝܦܐ**, **ܡܚܝܦܐ** is one. As we have seen, this term functions as both an adjective and a substantive.<sup>194</sup> We have only the two-word unreferenced citation of Audo, and Thelly who accepts his authority, that extant and examined Syriac literature attests to a Peal verb from the root **ܡܚܦܐ**.<sup>195</sup> This term may therefore be regarded as “purely nominal” in that we have “assessed a comprehensive list of all occurrences (...) and found that in all cases this simple description is sufficient.”<sup>196</sup> To create a potentially non-existent Peal verb under which to cite **ܡܚܦܐ**, **ܡܚܦܐ** would be anathema to grammarian and lexicographer alike.<sup>197</sup> As Dyk said when we were working on this section together, “the fact a form exhibits phonological patterns consistent with a participial form is not sufficient basis for creating non-existent verbal entries in a lexicon.” Clearly, then, in a Syriac lexicon, because we have “assessed a comprehensive list of occurrences,” **ܡܚܦܐ**, **ܡܚܦܐ** should be lemmatized as a nominal form in a separate entry because we lack concrete evidence of a link to a verb, at least until we gain that evidence should it exist.

Even more pertinent examples are provided by nouns that generate verbs, a common phenomenon in both Hebrew and Syriac. Verbs of this kind are called “denominatives.”<sup>198</sup> They are familiar to us in English. Many people hesitate to use the word “action” as an active verb or passive participle, but it has entered the language as can be seen in dictionary examples such as “I will action your request,”<sup>199</sup> and “matters decided at the meeting cannot be actioned.”<sup>200</sup> One of many Classical Syriac examples is **ܡܚܦܐ**, **ܡܚܦܐ**, which functions in Syriac literature as an adjective and a substantive; adjective: **ܡܚܦܐ ܡܚܦܐ** *splendid vestments* (John Eph. 396:23),<sup>201</sup> **ܡܚܦܐ ܡܚܦܐ** *impressive in stature* (App. ad BH Chr. 44:3);<sup>202</sup> substantive: **ܡܚܦܐ ܡܚܦܐ** *glories, glorious deeds* (BH Chr. 38:17).<sup>203</sup> All lexica agree that there is no Peal verb for the root **ܡܚܦܐ**, so there is no verb under which **ܡܚܦܐ**, **ܡܚܦܐ** might be cited. In addition, most lexica that arrange their lexemes according to etymological derivation list **ܡܚܦܐ**, **ܡܚܦܐ** as a derivative of the noun **ܡܚܦܐ** *praise, honour, glory, splendour* (Audo, Brockelmann, Costaz, Goshen-Gottstein, Köbert). Thelly differs only to the extent that he

<sup>194</sup> See note 38.

<sup>195</sup> See fifth paragraph in section 3.1.1 (p. 87) of this essay; see also sections 2.2 and 5.2.4.

<sup>196</sup> Dyk, “Desiderata for the Lexicon,” 150.

<sup>197</sup> See fifth paragraph in section 3.1.1 (p. 87).

<sup>198</sup> See Falla, “A Conceptual Framework,” 30–33.

<sup>199</sup> Atkinson and Moore, *Macquarie Dictionary*.

<sup>200</sup> Treffry, *Collins English Dictionary*.

<sup>201</sup> *Thesaurus Syriacus*, 2:4025.

<sup>202</sup> *Thesaurus Syriacus*, 2:4025.

<sup>203</sup> *Thesaurus Syriacus*, 2:4025.

lists **ܡܚܫܒܐ** as a derivative of **ܡܚܫܒ**, which he presents as a form that has been generated without the prior existence of a verb. It is a consensus that leaves us no alternative other than to create a separate lexical entry for **ܡܚܫܒܐ**, **ܡܚܫܒܐ**.

The last two examples demonstrate that it is not feasible, as Dyk affirms, to cite words with a participial phonomorphology under a verb when such a verb cannot be attested in Syriac literature.

#### 9.4 Cautioning Questions

The derivational arrangement of the lexica of Audo, Brockelmann, Costaz, Goshen-Gottstein, and Köbert is based on the premise that a Classical Syriac noun can also generate a passive-participial form, and that a passive-participial form that lacks a preexisting verb of the same pattern can, it seems, be created on the basis of parallel passive-participial forms in the language. It is pertinent to ask what this derivational phenomenon tells us about the morphological and semantic relationship between passive-participial forms and verbs of the same *binyanim* that do exist. Hypothetically at least, is it not possible that new passive-participial forms were generated for particular roots on the basis of pre-existing adjectives and substantives of other roots with passive-participial forms? This creation of passive-participial forms would have had the specific purpose of creating adjectives and substantives in a way comparable to the generation of verbs by nouns. Another parallel would be the generating of adjectives by the affixing of **ܟܠܐ** to a noun to create an adjective,<sup>204</sup> adverbs by the addition of the affix **ܟܠܐ**, and nouns on the basis of pre-existing morphologically parallel forms. This possibility should caution us. Perhaps the relationship between forms derived from the participle and the verb of the same pattern is not as intimate as we might have supposed. It is at least possible that just as the **ܟܠܐ** element in **ܟܠܐܢܐܘܪܐܝܢܐ**, **ܟܠܐܢܐܘܪܐܝܢܐ** and **ܟܠܐܢܐܘܪܐܝܢܐ** is now no more than a fossil of the verbal link, so also a noun such as **ܟܠܐܢܐܘܪܐܝܢܐ** no longer has the verbal reverberation that classical Syriac lexica (for example, Brun, Costaz, CSD, Ferrer-Nogueras, Jennings, Kiraz, Pazzini, *Thesaurus Syriacus*) seem to assume. If this is the case, then the **ܟܠܐ** form would be the superstructure, the vehicle, for the building of the noun **ܟܠܐܢܐܘܪܐܝܢܐ**, and the latter's link to the verb would be as negligible as the link of its offspring. As Dyk states, “[w]here a form has assumed a vocalization pattern other than that of the participle, we are dealing with an independent nominal or adjectival form.”<sup>205</sup>

These observations lead me to a pragmatic question. On what basis can we be confident that a noun such as the feminine **ܟܠܐܢܐܘܪܐܝܢܐ** *writing; inscription* (Lk 20:24 Syr<sup>scp</sup>; Heb 5:12; Rev 21:12, et al.) has a special verbal link to the Peal verb **ܟܠܐ** as some classical Syriac lexica seem to assume? Contextually, functionally and semantically, there is no hint of **ܟܠܐܢܐܘܪܐܝܢܐ** being other than a pure feminine noun. The answer can only be because (a) it has the form (emphatic feminine) of a Peal passive participle, the form to be found in the

<sup>204</sup> See note 239.

<sup>205</sup> Dyk, “Form and Function,” §6.

conventional verbal paradigm; (b) in this instance Classical Syriac attests to a Peal ܘܠܘܢ verb; and (c) the noun ܘܠܘܢܐ can be claimed as a derivative of the Peal ܘܠܘܢ. In our discussion of this matter, Dyk further raised the question as to whether it is not the case that “the full nominal inflection applicable to the participial forms includes morphology—especially the emphatic state—that automatically excludes a form from a verbal function within the context in which it occurs. In fact, looking at the language system as a whole, is it not the syntactic context itself that requires the emphatic state ending of a form in a particular syntactic construction?”<sup>206</sup> We (Dyk and I) therefore persist with the question of why this feminine substantive should be validated in grammars and lexica as a prodigy of a verb simply because it has a participial form. Is a morphological connection alone sufficient to permit this conclusion? Because of its morphology, namely, the emphatic state ending, are we not able to say that ܘܠܘܢܐ is a noun in a way comparable to other nominal forms and the adverb derived by means of other phonomorphological formations from the same underlying ܘܠܘܢ: ܘܠܘܢܐ n.f. *way of writing, script*; ܘܠܘܢܐ adj. *written, copied; scriptural*,<sup>207</sup> ܘܠܘܢܐ n.f. *libellus*,<sup>208</sup> *little book*, and ܘܠܘܢܐ adv. *by way of writing*?<sup>209</sup>

If the above is valid, then the emphatic state form ܘܠܘܢܐ can no more be cited under the verb than ܘܠܘܢܐ, ܘܠܘܢܐ, ܘܠܘܢܐ and ܘܠܘܢܐ. Beyond question, the expansion of the four forms—by familiar nominal affixes in the first three instances and the ubiquitous adverbial affix ܘܠܘܢܐ in the fourth—de-verbalize the link that they may have been thought to have to the verb of the same root. It would therefore be absurd to suggest that the incontestable morphological link between ܘܠܘܢܐ and these four forms should be retained by placing all of them under the verb.

If, for whatever reason, these four forms were separated from ܘܠܘܢܐ, there is also the separate fact that we would lose an unforced and obvious hierarchical and derivational link of elegance,<sup>210</sup> albeit a localized rather than universal one in that it would apply only to the phonomorphological link between the five forms in question.

### 9.5 Lexical Construct Capable of Accommodating Other Constructs

Both the questions raised and the constructs that have been employed in Syriac grammar and lexicography should alert the contemporary lexicon-maker to the need to find a lexical construct that is flexible enough to accommodate other constructs, and the concerns and needs of both grammarian and lexicographer, so that to the best of our ability we can create a lexicon that is able to steer its way through competing hypotheses and, beginning with the lexicalized text, serve the interests of learner, linguist, philologist, textual scholar, grammarian, and general Syriacist. As my colleague Beryl Turner commented, “in the end, all

<sup>206</sup> From discussion with Dyk in September 2008.

<sup>207</sup> Audo, Brockelmann, Brun, CSD, *Thesaurus Syriacus*, Thelly.

<sup>208</sup> The Latin rendering is that of both Brockelmann and *Thesaurus Syriacus*.

<sup>209</sup> Audo, Brun, Thelly.

<sup>210</sup> See “Order of Lexemes under their Root” in Falla, “A Conceptual Framework,” 60–61.

our attempts at classification are constructs in one manner or another,” constructs aimed at imposing “some order on potential chaos (...) even at the cost of oversimplification.”<sup>211</sup>

## 9.6 Compatible Compromise Construct

Towards this end, I would like to propose a compromise between Dyk’s and my constructs. I have not gone so far as to include words with a participial form that function as adjectives or substantives under the verb, but the proposal does recognize both the morphology and syntactic function of a vocabulary item without the one being mixed or confused with the other. It eliminates the need to cite exceptions, or to complement an entry with a number of satellite models designed to accommodate the peculiarities of the lemma in question. It allows for a continuing diversity of interpretation to be brought to its subject matter. At its centre it seeks to retain Dyk’s plea for elegance, a plea that I find compelling because it systematizes a ubiquitous linguistic feature of Classical Syriac as a natural language. My hope is that this proposal will be compatible with our respective needs and aims, or at least an important step towards them.

### 9.6.1 Lexical Entries Complemented by Morphological Information

The compromise model is simple in design. As in KPG 2, it lemmatizes participial forms that function as adjectives or substantives as separate entries, but in addition it provides detailed information regarding the morphology of the participial form as it appears in the conventional template of the verbal paradigm, which is abbreviated as *CVP* (= *conventional verbal paradigm*). By distinguishing between morphology and syntactic function (the forms that appear in a conventional verbal paradigm and the functions that the forms have in particular syntactic environments), this system overcomes a frequent ambiguity in existing lexical resources in which the user is left to judge whether a citation such as “form of pass. pt.” actually functions as a verb with a passive intent, or as an adjective or substantive. The headword is followed by the notation of the part of speech and then in parentheses by the participial form introduced by the abbreviation *CVP*. A few examples will suffice.

### 9.6.2 Passive-participial Form

Returning to ܥܘܠܘܢܐ, ܥܘܠܘܢܐ, because of a lack of evidence of a Peal verb ܥܘܠܘܢܐ (see section 3.1.1), Dyk and I are convinced that the lexicographer has no valid choice other than to lemmatize this passive-participial form in a separate entry. It may therefore serve as an exemplar for other passive-participial forms that function as adjectives and/or substantives:

ܥܘܠܘܢܐ, ܥܘܠܘܢܐ *adj. and subst. (CVP form of Peal pass. pt.)*(i) *adj.* lame, disabled, *of a person* Mt 18:8; (ii) *subst. pl.* the lame, disabled Jn 5:3.

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<sup>211</sup> Cavalli-Sforza, *Genes, Peoples and Languages*, 27–28.

The next example is of a compound noun with the form of a passive participle in the construct state followed by a preposition prefixed to a noun:<sup>212</sup>

ܕܐܦܗܘܢܐ ܕܡܚܘܒܐ *comp.n.ms.* (ܡܚܘܒܐ *CVP form of Aph pass. pt. cstr. s. fol. by prep. prefixed to n.*) hypocrisy, dissimulation, outward appearance.  
Mt 23:28. Lk 12:1. Jn 7:24.

The phonology of the following substantivized adjective ܡܚܘܒܐ (cstr. fs. of ܡܚܘܒܐ, ܡܚܘܒܐ) makes it unnecessary to align it with verbal morphology:

ܡܚܘܒܐ ܕܡܚܘܒܐ *comp.n./spl.* (cstr. s. fol. by prep. prefixed to n.) O fairest among women. Song 1:7; 5:10, 18.

### 9.6.3 Active-participial Form

The following example represents compound nouns which consist of a Peal active participle in the construct state with a substantivized adjective. The entry would be listed in two places in the lexicon: the primary entry under the root ܡܚܘܒܐ, and an abbreviated cross-reference under the substantive ܡܚܘܒܐ. Because the lexicon is organized according to root, compound nouns of this kind would immediately follow the verb:

ܡܚܘܒܐ ܕܡܚܘܒܐ *(act. pt. cstr. pl.)* evil-doers, malefactors, criminals Lk 23:32, 33, 39

### 9.6.4 *Nomen agentis*

Dyk's advocacy for elegance might also be extended to Classical Syriac *nomen agentis* (actor nouns,<sup>213</sup> agent nouns,<sup>214</sup> or nouns of agent). Syriac lexica do not recognize the *nomen agentis* as a derived form. The *nomen agentis* form is not used as a basis for lemmatization, nor is it employed as a part of speech. Instead, vocabulary items with a *nomen agentis* form appear according to their syntactic function. The *nomen agentis* form does have a place in the morphology and semantics of Syriac grammars and works concerned with Semitic philology.<sup>215</sup> These works explain its morphology as derived from the active participle in the conventional verbal paradigm. Semantically, it represents the agent (actor) of the action denoted by the verb. In English, a parallel would be the agent noun “read-er,” “build-er,” “writ-er.” In Classical Syriac, the phonomorphological pattern of the *nomen agentis* word class extends to nouns such as “jackal” (ܡܚܘܒܐ Job 30:29; Isa 35:7, et al.) and “table” (ܡܚܘܒܐ Mt

<sup>212</sup> See the appendix to this essay, section V, 4.1; see also sections III, 4.2; IV, 4.2.

<sup>213</sup> “Actor noun” is the preferred term of Muraoka, *Classical Syriac for Hebraists*, §38.

<sup>214</sup> “Agent noun” is the term generally used in English linguistics; cf. Matthews, *The Concise Oxford Dictionary of Linguistics*.

<sup>215</sup> Cf. Nöldeke, *Compendious Syriac Grammar*, §107, see also §§115, 166; Muraoka, *Classical Syriac for Hebraists*, §38; Bravmann, *Studies in Semitic Philology*, 171–80.

25:27; *pl.* Mk 7:28 et al.).<sup>216</sup> Like the participial form, the *nomen agentis* frequently functions as an adjective as well as a substantive.

Morphologically, the *nomen agentis* is readily identifiable. In the Peal pattern, it has ܐ after the second radical:

- (a) substantive: ܕܚܘܬܐ *crucifier* (Act. Mart. 2:233),<sup>217</sup> ܕܡܘܬܐ *killer, slayer* (Josh 20:3), fs.: ܡܘܬܐܘܬܐ (Act. Mart. 2:94).<sup>218</sup>  
 (b) adjective: ܐܘܩܘܠܐ *voracious* (Aphr. Dem. I, 156:5), ܕܘܩܘܠܐ *gluttonous man* (Lk 7:34 Syr<sup>scp</sup>), ܘܡܘܬܐ *lover, friend*: ܘܡܘܬܐܘܬܐ (BH Chr. 256 et al.).<sup>219</sup>

In the other patterns, the masculine singular form has the affix ܐ:

- (a) Ethpeel pattern: adjective: ܐܘܩܘܠܐ in ܐܘܩܘܠܐ *invisible, unseen* (B.O. 2:542).<sup>220</sup>  
 (b) Pael pattern (i) substantive: ܕܡܘܬܐ *destroyer* (Ex 12:23); (ii) adjective: ܕܡܘܬܐ *corrupting, corrupt* (Aphr. Dem. I. 101:4); ܕܡܘܬܐ *uplifting, rescuing* (Josh. Styl. 3).

The fact that the *nomen agentis* functions frequently as an adjective as well as a substantive aligns it with the active and passive participial forms. This characteristic stands in contrast to the average noun, which rarely functions as an adjective.<sup>221</sup> It is this feature that, along with its derivation from the participle, most favours its morphological identification in the lexicon. Lexicographically, there is therefore a case to be made for applying to the Syriac *nomen agentis* the principle that it too should not be allowed to lose its link “to the elegance of the language system itself” any more than the participial forms.

Were we to establish that link in future lexica, the lexicalization of this phonomorphological word class would be as straightforward as the provision of the parts of speech for participial forms (see the entries in sections 9.6.2, 9.6.3). I have drawn upon various corpora to produce the following specimen entries:

ܕܡܘܬܐ *adj. and subst. (form of Pael nomen agentis)* (i) *adj.* corrupt (*lit.* corrupting) Aphr. Dem. I. 101,4; (ii) *subst.* ܕܡܘܬܐ *destroyer* Ex 12:23.

The sub-entry “a” in this next example is of a compound noun with a passive participle in the construct state followed by a preposition prefixed to a noun:<sup>222</sup>

ܐܘܩܘܠܐ, ܐܘܩܘܠܐ, *f. subst. and adj. (form of Peal nomen agentis)* (i) *subst.* glutton, ܐܘܩܘܠܐ ܘܘܫܘܐ *a glutton and a drunkard* Deut 21:20; (ii) *adj.* ܐܘܩܘܠܐ *gluttonous son* Chrys. [RPS, col. 293]; *abs. fs.* ܐܘܩܘܠܐ wayward, wanton, deviating, profligate, ܐܘܩܘܠܐ ܘܡܘܬܐ *rebellious and wayward, of behaviour of a woman* Prov 7:11.

<sup>216</sup> See Nöldeke, *Compendious Syriac Grammar*, §107.

<sup>217</sup> *Thesaurus Syriacus*, 2:3404.

<sup>218</sup> *Thesaurus Syriacus*, 2:3577.

<sup>219</sup> *Thesaurus Syriacus*, 2:3404.

<sup>220</sup> *Thesaurus Syriacus*, 1:1237.

<sup>221</sup> See the appendix to this essay, section VII.

<sup>222</sup> See the appendix to this essay, section V, 4.1; see also sections III, 4.2; IV, 4.2.



سَيُصِفُ, سَيُصِفَا *adj. and subst. (CVP form of Peal pass. pt.)*

أَخْبَرُوا, أَخْبَرْتُمْ *comp.n.m.pl. (CVP form of Peal act. pt. cstr. pl.)*

بِأَيْدِيهِمْ, بِأَيْدِيكُمْ *comp.n.m.s. (CVP form of Aph pass. pt. cstr. s. fol. by prep. prefixed to n.)*

بِأَيْدِيَهُمْ, بِأَيْدِيَهُمْ *comp.n.f.pl. (cstr. s. fol. by prep. prefixed to n.)*

### 9.9 Dyk Compared with Brockelmann

Brockelmann would not have heard of the term “elegance” as it is applied in modern linguistics and lexicography. Yet this is precisely what he sought to achieve. Every lexeme in his lexicon is presented under its root in its presumed derivational order. Thus, in Brockelmann, if the words of a particular root derive from a particular noun, then that noun will be cited as the primary headword, and all the derived forms, including verbal conjugations, listed under it according to their assumed place in their derivational hierarchy. This applies to a Peal *binyan* as well as to other *binyanim*.<sup>223</sup> In this way, Brockelmann sought “a consistent treatment of the form within the language system as a whole,”<sup>224</sup> albeit in a different manner from Dyk.

Brockelmann’s achievement is awe-inspiring and discloses the inadequacy of derivational (and comparative etymological) information in other Classical Syriac lexical resources of his time (*Thesaurus Syriacus*, CSD, Brun, and Whish). Negatively and positively, it also reveals that “[u]sability and systematic elegance are (...) worthy goals.”<sup>225</sup>

The major drawback to Brockelmann’s method is that it has proved difficult to use. His lexicon is virtually inaccessible to the beginner, and says Michael Sokoloff, often to the scholar.<sup>226</sup> In this regard, Brockelmann’s lexicon is not linguistically or aesthetically elegant, for by definition elegance, whether in physics, linguistics, or lexicography, seeks graceful simplicity and conciseness. Furthermore, other lexicographers, who use a simpler version of Brockelmann’s approach (Audo, Costaz, Goshen-Gottstein, Köbert, Thelley),<sup>227</sup> often deviate from his and one another’s derivational decisions, showing the speculative nature of some aspects of their approach.

The conjectural nature of much of Brockelmann’s analysis often makes his hierarchal schemata contestable. They show that Classical Syriac, like other languages, does not totally obey the principle of elegance in its structure, and where it seems to, that structure is often dubious and debatable. This means that there are always idiosyncrasies that the lexicon must take into account and that just as in physics, an elegant solution in language is not necessarily

<sup>223</sup> See Falla, “A Conceptual Framework,” 30–33.

<sup>224</sup> Dyk, “Desiderata for the Lexicon,” 152.

<sup>225</sup> Dyk, “Form and Function,” abstract.

<sup>226</sup> From an unpublished paper by Sokoloff presented at the SBL Annual Meeting, Philadelphia, 2005, on his translation and revision of Brockelmann’s *Lexicon Syriacum*.

<sup>227</sup> For examples, see Falla, “A Conceptual Framework,” 60–61.

valid, determinative, or totally self-contained. Brockelmann's vision for a lexicon has been validated in many ways, but not his problematic hierarchically derivational arrangement.

Dyk points us to less troublesome and more promising lexical pathways. Her appeal for elegance is not restricted to the participle,<sup>228</sup> but neither does it seek hierarchical and derivational elegance for every lexeme as in the Brockelmann approach. As a result, Dyk's proposal is far more flexible than Brockelmann's system. In this regard, a basic question for a lexicon that is root-based is what arrangement should be adopted for the listing of lexemes under their root to which they belong. It is an issue that must be resolved for a future comprehensive Syriac-English lexicon. Brockelmann's system represents one of the various primary options.<sup>229</sup> Dyk's approach, on the other hand, can accommodate any one of these options as well as various types of discreet syntactic information as an integral part of an entry. My hope is that this discussion will contribute to the inclusion of her argument in favour of "elegance" in future Syriac lexica.

## 10. CONCLUSION AND SUMMARY

*A method is a tool . . . which must be adequate to its subject matter.  
Whether or not a method is adequate cannot be decided a priori;  
it is continually being decided in the cognitive process itself.*

Paul Tillich<sup>230</sup>

In proposing that a new methodology for grammatical classification in Syriac Semitic lexicography be both feasible and desirable, this essay has discussed the shortcomings of traditional approaches to lexicography and what is involved in adopting a function-based procedure. In conclusion it may be helpful to summarize some of the primary benefits.

Currently, dictionary-makers have no difficulty in accepting that meaning resides in the use of a particular occurrence of a particular vocabulary item in a particular text at a particular stage in the history of the language. In addition, this new methodology implements the analogous principle that the part of speech of an entity resides in the syntactic function that it has in a particular instance. By doing so, it allows for a coherent and systematic analysis of complex morphological, syntactic, and semantic data. For lexicography, it also resolves a longstanding confusion between morphology (form) and syntax (function) without having to disregard the significance of either. Because it is diagnostic it also resolves the issue of how a particular occurrence should be lemmatized (that is, where it should be located in the lexicon), and is able to accommodate the citation of any differences in opinion that may pertain to a particular instantiation.

Furthermore, this new methodology does not ask the user to disregard the different approaches of other lexical reference works to lemmatization and parts of speech. Instead, it offers a framework of reference within which a part of speech assigned to a lexeme in

<sup>228</sup> Dyk, "Desiderata for the Lexicon," 141–48.

<sup>229</sup> These options are evaluated in Falla, "A Conceptual Framework", 60–63.

<sup>230</sup> Tillich, *Systematic Theology*, 1:67.

another lexical work can be examined and interpreted. By employing uniform criteria it overcomes previous inconsistencies and their consequent difficulties for the user.

For the lexicographer, implementation is straightforward, for the method literally revolutionizes day-to-day preparation. It employs uniform criteria for the analysis of grammatical classification and brings simplicity and consistency to the notations of the parts of speech. At the same time it allows for a coherent and systematic analysis of complex morphological, syntactic, and semantic data.

When analyzing a vocabulary item for inclusion in the lexicon one begins with the question: How does this particular item function in the text with which I am dealing? The word is lemmatized and assigned a part of speech accordingly. Furthermore, if that part of speech has the form of a passive participle but functions as a noun and/or adjective, or has the form of a noun of agent but functions as a noun, then an aspect of the elegance of the language system as described by Dyk is preserved by acknowledging that item's morphology in parentheses following the notation of the part of speech.

Another advantage of the disciplined incorporation into the lexicon of syntactic as well as semantic information is that it allows the user access to the lexicographer's system of classification and opens up a path towards exegesis, interpretation, and translation.

Finally, the taxonomy and the notations of parts of speech that this new methodology provides do not need to be fixed or final. They provide lexicographer and user alike with a structure of classification that can accommodate ambiguity, differences in opinion, and the syntactic refinements and researches of tomorrow.

In his book *Real Presences*, George Steiner says that "philological reception demands an exact sensitivity to syntax, to the grammars which are the sinew of articulate forms. ... It is via grammar in the deepest sense, that meaning enters, that it steps into the light of accountable presence."<sup>231</sup> As a final benefit, the implementing of the proposed methodology holds out the prospect of new forms of corroboration between lexicographers and grammarians: of their coming to the same table where with mutual benefit they can break the bread and sip the wine of the narratives, poems, inscriptions, and songs that are the substance of their respective disciplines—the written word that will forever call them to revisit the music sheets of grammar and to the never ending task of re-making dictionaries.

## 11. APPENDIX: DEFINITION AND FUNCTIONS OF CLASSICAL SYRIAC ADJECTIVE

*Linguists and lexicographers accept that meaning is determined by a word's use in its textual contexts. So also a word's grammatical classification should be determined by its syntactic function in the lexicalized text, and not by its morphology. As a method, it is credible, testable, practical and workable, and makes the lexicon more accurate, useful and usable.*<sup>232</sup>

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<sup>231</sup> Steiner, *Real Presences*, 158.

<sup>232</sup> This definition of the adjective in Classical Syriac is self-contained. The full notes make it independent of the preceding essay.

For the purposes of syntactic diagnosis, an adjective is a Syriac word that modifies a noun or its equivalent attributively in a phrase, or predicates a state or quality of a noun in a clause.<sup>233</sup>

## I. MORPHOLOGY

An adjective (and substantive) frequently has the form of a Peal passive participle (ܡܠܝܟܐ)<sup>234</sup> in a conventional verbal paradigm,<sup>235</sup> and its Pael (ܡܡܠܝܟܐ)<sup>236</sup> and Aphel (ܡܡܡܠܝܟܐ)<sup>237</sup> equivalents. The form ܡܠܝܟܐ,<sup>238</sup> distinguished by the vowel ܐ̄ (*peṭāḥā*) on the first consonant, is also common.<sup>239</sup>

## II. AS ATTRIBUTE

### 1. In Emphatic State Following and Modifying Noun in Same State

1.1 This basic pattern is the norm.

1.1.1 *ܘܥܘܕܐ ܠܗܘܐ ܡܡܠܝܟܐ* *good wine*;<sup>240</sup> *ܘܐܬܐ ܡܠܝܟܐ*, *ravenous wolves*;<sup>241</sup> *ܘܥܘܕܐ ܠܗܘܐ ܡܡܠܝܟܐ* *a perfect people*;<sup>242</sup> *ܘܥܘܕܐ ܠܗܘܐ ܡܡܠܝܟܐ* *a notorious prisoner*;<sup>243</sup> *ܘܐܘܠܐ ܡܡܠܝܟܐ* *a corrupt (lit. corrupting) generation*.<sup>244</sup>

1.1.2 With the noun qualified by a possessive suffix: *ܘܥܘܕܐ ܠܗܘܐ ܡܡܠܝܟܐ* *your holy child*;<sup>245</sup> *ܘܥܘܕܐ ܠܗܘܐ ܡܡܠܝܟܐ* *your best young men*;<sup>246</sup> *ܘܥܘܕܐ ܠܗܘܐ ܡܡܠܝܟܐ* *your legitimate partner*;<sup>247</sup> *ܘܥܘܕܐ ܠܗܘܐ ܡܡܠܝܟܐ* in *ܘܥܘܕܐ ܠܗܘܐ ܡܡܠܝܟܐ* *I am confident in your uplifting (rescuing, saving) prayers*.<sup>248</sup>

<sup>233</sup> For a detailed syntactic analysis of the adjective in the Syriac text of Ben Sira see Van Peursen, *Language and Interpretation*, ch. 10–11, 191–235.

<sup>234</sup> See section 5.2 of this essay for an alternative view of the functions of the participial form.

<sup>235</sup> Healey provides a useful paradigm in his *Lesbono Suryoyo: First Studies in Syriac*, 100–39.

<sup>236</sup> For example, *ܡܡܠܝܟܐ* *invited, summoned* Lk 14:8 Syr<sup>sp</sup>; *ܡܡܠܝܟܐ* Mt 22:8 Syr<sup>cp</sup>; Lk 14:7 Syr<sup>scp</sup>; *ܡܡܠܝܟܐ* *innocent, free* Mt 27:24 Syr<sup>ph</sup>; *ܡܡܠܝܟܐ* *acceptable* Acts 10:35; *ܡܡܠܝܟܐ* *made holy* 1 Cor 7:14.

<sup>237</sup> For example, *ܡܡܠܝܟܐ* *hidden* 1 Sam 23:23.

<sup>238</sup> For further information on this form see Nöldeke, *Compendious Syriac Grammar* §118; Muraoka, *Classical Syriac: A Basic Grammar* (both editions), §36.

<sup>239</sup> As in *ܡܠܝܟܐ* *lost*, *ܡܠܝܟܐ* *long*, *ܡܠܝܟܐ* *upright*, *ܡܠܝܟܐ* *wise*, *ܡܠܝܟܐ* *seated*, *ܡܠܝܟܐ* *many*, *ܡܠܝܟܐ* *deep*, *ܡܠܝܟܐ* *soft*, *ܡܠܝܟܐ* *mighty*, *ܡܠܝܟܐ* *beautiful*. See also Palacios, *Grammatica Syriaca*, 55; Arayathinal, *Aramaic Grammar*, vol. 2, §226; Muraoka, *Classical Syriac: A Basic Grammar* (both editions); Phillips, *The Elements of Syriac Grammar*, 36 (§38e), on ܠ as “a highly frequent suffix used to derive an adjective from a noun.” For other formations see Nöldeke, *Compendious Syriac Grammar*, chapter 2, 48–95.

<sup>240</sup> Jn 2:10 Syr<sup>p</sup>.

<sup>241</sup> Mt 7:15.

<sup>242</sup> Jn 2:10 Syr<sup>ph</sup>.

<sup>243</sup> Lk 1:17 Syr<sup>p</sup>.

<sup>244</sup> Mt 27:16 Syr<sup>ph</sup>.

<sup>245</sup> Aphr. Dem. I. 101:4.

<sup>246</sup> Acts 4:30.

<sup>247</sup> 1 Sam 8:16.

<sup>248</sup> Kal-w-Dim. 224:6, see *Thesaurus Syriacus*, 2:4510; CSD, 622.

<sup>249</sup> Josh. Styl. 3 (my translation).

1.1.3 With more than one attributive adjective: *ܘܚܘܠܐ ܘܚܘܠܐ ܘܚܘܠܐ* *an unrighteous insolent man*.<sup>249</sup>

## 2. In Emphatic State Preceding and Modifying Noun in Same State

2.1 This is uncommon for a standard attribute: *ܘܚܘܠܐ ܘܚܘܠܐ ܘܚܘܠܐ* *the first foundation*;<sup>250</sup> *ܘܚܘܠܐ ܘܚܘܠܐ* *greedy death*.<sup>251</sup>

2.2 Often in epithets and common quantifiers:<sup>252</sup>

2.2.1 In epithets: *ܘܚܘܠܐ ܘܚܘܠܐ* *the wicked Julian*;<sup>253</sup> *ܘܚܘܠܐ ܘܚܘܠܐ* *the blessed Mary*;<sup>254</sup> before and after in the same phrase: *ܘܚܘܠܐ ܘܚܘܠܐ ܘܚܘܠܐ* *the blessed Mar Simeon, the holy*.<sup>255</sup>

2.2.2 With the common quantifiers *ܘܚܘܠܐ* and *ܘܚܘܠܐ*:<sup>256</sup> *ܘܚܘܠܐ ܘܚܘܠܐ* *another Paraclete*;<sup>257</sup> *ܘܚܘܠܐ ܘܚܘܠܐ* *two other brothers*;<sup>258</sup> *ܘܚܘܠܐ ܘܚܘܠܐ* *many lepers*;<sup>259</sup> *ܘܚܘܠܐ ܘܚܘܠܐ* *many rich people*;<sup>260</sup> *ܘܚܘܠܐ ܘܚܘܠܐ* *many borrowers*.<sup>261</sup>

2.2.3 The indeclinable quantifier *ܘܚܘܠܐ* also often comes first, but may precede or follow substantives of either gender and number:<sup>262</sup> *ܘܚܘܠܐ ܘܚܘܠܐ* *a few fish which were small*;<sup>263</sup> *ܘܚܘܠܐ ܘܚܘܠܐ* *a few little fish*;<sup>264</sup> *ܘܚܘܠܐ ܘܚܘܠܐ* *from a little tow (linen or cotton waste)*;<sup>265</sup> *ܘܚܘܠܐ ܘܚܘܠܐ* *only a little longer, for a little while yet*;<sup>266</sup> *ܘܚܘܠܐ ܘܚܘܠܐ* *a little while longer*;<sup>267</sup> *ܘܚܘܠܐ ܘܚܘܠܐ* *a little while longer*.<sup>268</sup>

<sup>249</sup> Sir 20:7, see Van Peursen, *Language and Interpretation*, 240. (The Syriac version of Sirach is quoted according to the text that will appear in Vol. IV, 1 of *The Old Testament in Syriac according to the Peshitta Version*; cf. Van Peursen, *Language and Interpretation*, 3–4.)

<sup>250</sup> Rev 21:19; *Spic.* 49,20, see Nöldeke, *Grammatik*, §211.

<sup>251</sup> Ephr. ed. Bick., 57, vs. 67, see Nöldeke, *Grammatik*, §211; see Nöldeke for further examples.

<sup>252</sup> See Duval, *Traité de Grammaire Syriacque*, §363; Nestle, *Syriac Grammar*, 69; Nöldeke, *Compendious Syriac Grammar*, §§203, 211; Arayathinal, *Aramaic Grammar*, vol. 2, §227; Muraoka, *Classical Syriac for Hebraists*, §76; Muraoka, *Classical Syriac: A Basic Grammar* (both editions), §91a.

<sup>253</sup> Ephr. ed. Ov. 160:14, see Nöldeke, *Grammatik*, §211.

<sup>254</sup> Aphr. Hom. 180,2, see Nöldeke, *Grammatik*, §211.

<sup>255</sup> Sim. 2:269, 273–394, see Nöldeke, *Grammatik*, §211.

<sup>256</sup> See Nöldeke, *Grammatik*, §211; see also §215.

<sup>257</sup> Jn 14:16 Syr<sup>scph</sup>, cf. *ܘܚܘܠܐ* Syr<sup>sh</sup>.

<sup>258</sup> Mt 4:21 Syr<sup>p</sup>, but cf. *ܘܚܘܠܐ ܘܚܘܠܐ* *by another way* Mt 2:12. Cf. *ܘܚܘܠܐ ܘܚܘܠܐ* in absolute state Mt 4:21 Syr<sup>sc</sup> (see section 3.2).

<sup>259</sup> Lk 4:27 Syr<sup>p</sup>, but cf. *ܘܚܘܠܐ ܘܚܘܠܐ* *many fish* Lk 5:6; *ܘܚܘܠܐ ܘܚܘܠܐ* *many men* Acts 17:12.

<sup>260</sup> Mk 12:41 Syr<sup>ph</sup>, but cf. *ܘܚܘܠܐ ܘܚܘܠܐ* *many demons* Mk 1:34.

<sup>261</sup> Sir 29:4, see Van Peursen, *Language and Interpretation*, 197. For examples of this quantifier following the noun, see Van Peursen, *Language and Interpretation*, 198.

<sup>262</sup> Arayathinal, *Aramaic Grammar*, vol. 2, §227.

<sup>263</sup> Mt 15:34 Syr<sup>p</sup>, but cf. *ܘܚܘܠܐ ܘܚܘܠܐ* *a few fish* Mk 8:7; *ܘܚܘܠܐ ܘܚܘܠܐ* *a few sick people* Mk 6:5.

<sup>264</sup> Mt 15:34 Syr<sup>h</sup>.

<sup>265</sup> Sir 11:32, see Van Peursen, *Language and Interpretation*, 198.

<sup>266</sup> Jn 12:35 Syr<sup>p</sup>.

<sup>267</sup> Jn 7:32 Syr<sup>p</sup>.

<sup>268</sup> Jn 7:32 Syr<sup>h</sup>.

### 3. In Absolute State Following and Modifying Noun in Same State

3.1 This is less frequent:<sup>269</sup> ܐܘܢ ܕܚܝܬܝܢ ܚܝܬܝܢ *true men*;<sup>270</sup> ܕܚܝܬܝܢ ܚܝܬܝܢ *wicked thoughts*;<sup>271</sup> ܕܚܝܬܝܢ ܚܝܬܝܢ *every evil word*.<sup>272</sup>

3.2 With the common quantifier ܐܘܢ ܕܚܝܬܝܢ ܚܝܬܝܢ: *two other brothers*;<sup>273</sup> (see also §IV 6).

### 4. In Construct State Qualified by Noun<sup>274</sup>

4.1 Construct state qualified by following noun: ܕܚܝܬܝܢ ܚܝܬܝܢ ܐܘܢ ܕܚܝܬܝܢ ܚܝܬܝܢ *a pearl great of price*;<sup>275</sup> ܕܚܝܬܝܢ ܚܝܬܝܢ ܐܘܢ ܕܚܝܬܝܢ ܚܝܬܝܢ *a people stiff of neck*;<sup>276</sup> ܐܘܢ ܕܚܝܬܝܢ ܚܝܬܝܢ *I am a woman distressed of spirit*.<sup>277</sup> The adjective is dependent on the noun immediately following it: what is great is not the pearl but the price. Likewise, it is the neck that is stiff, not the people; it is the spirit that is distressed, not the woman.<sup>278</sup> It is as a unit that the adjective in the construct state and the noun that it qualifies serve as an attribute modifying the preceding noun: *the high-priced pearl, a deeply-distressed woman, the stiff-necked people*.

4.2 Construct state followed by a preposition prefixed to or preceding the qualifying noun:<sup>279</sup> ܐܘܢ ܕܚܝܬܝܢ ܚܝܬܝܢ ܐܘܢ ܕܚܝܬܝܢ ܚܝܬܝܢ *Look, I know that you are a woman beautiful in appearance*;<sup>280</sup> ܐܘܢ ܕܚܝܬܝܢ ܚܝܬܝܢ ܐܘܢ ܕܚܝܬܝܢ ܚܝܬܝܢ *the time determined by the prophets*;<sup>281</sup> ܐܘܢ ܕܚܝܬܝܢ ܚܝܬܝܢ ܐܘܢ ܕܚܝܬܝܢ ܚܝܬܝܢ *their divine nature concealed from all*.<sup>282</sup> The preposition “more explicitly specifies the logical relation between the adjective and the noun”:<sup>283</sup> *beautiful in appearance; determined by the prophets; concealed from all*.

<sup>269</sup> See Nöldeke, *Compendious Syriac Grammar*, §§202 I(7), 203.

<sup>270</sup> Ex 18:21.

<sup>271</sup> Aphr. Hom. 296, 13, see Nöldeke, *Compendious Syriac Grammar*, §203.

<sup>272</sup> Mt 5:11 Syr<sup>p</sup>. Syr<sup>b</sup> has the emphatic: ܕܚܝܬܝܢ ܚܝܬܝܢ.

<sup>273</sup> Mt 4:21 Syr<sup>cs</sup> §IV, 6(a), p. 137. Cf. ܐܘܢ ܕܚܝܬܝܢ ܚܝܬܝܢ in emphatic state Mt 4:21 Syr<sup>p</sup> (see §2.2.3).

<sup>274</sup> See Muraoka, *Classical Syriac: A Basic Grammar* (both editions), §§73c, 96b; see also Nöldeke, *Compendious Syriac Grammar*, §205. Cf. §III 3.

<sup>275</sup> Mt 13:46 Syr<sup>p</sup>. Cf. ܐܘܢ ܕܚܝܬܝܢ ܚܝܬܝܢ ܐܘܢ ܕܚܝܬܝܢ ܚܝܬܝܢ Syr<sup>s</sup>; ܐܘܢ ܕܚܝܬܝܢ ܚܝܬܝܢ ܐܘܢ ܕܚܝܬܝܢ ܚܝܬܝܢ Syr<sup>c</sup>; ܐܘܢ ܕܚܝܬܝܢ ܚܝܬܝܢ Syr<sup>b</sup>.

<sup>276</sup> Ex 32:9.

<sup>277</sup> 1 Sam 1:15.

<sup>278</sup> Muraoka, *Classical Syriac: A Basic Grammar* (both editions), §73c.

<sup>279</sup> Nöldeke, *Compendious Syriac Grammar*, §206.

<sup>280</sup> Gen 12:11. Cf. the substantivized use of this construction in ܐܘܢ ܕܚܝܬܝܢ ܚܝܬܝܢ *O fairest among women* Song 1:7; 5:10, 18.

<sup>281</sup> Act. Mart. 1:11,2, Nöldeke, *Compendious Syriac Grammar*, §206.

<sup>282</sup> Jul. 41:10, Nöldeke, *Compendious Syriac Grammar*, §206.

<sup>283</sup> Muraoka, *Classical Syriac: A Basic Grammar* (both editions), §96b.



1.2.2 Without enclitic personal pronoun: *أَصْلًا* in *أَكْدُلْ نَا أَكْدُلْ* *he is confident in God*,<sup>296</sup> *صَلَد* in *بَقْمِبْ حَكْمِبْ وَحَلَاقَتَيْدْ* *for it is written, he will command his angels concerning you*,<sup>297</sup> *صَلَب* in *إَوْنَا* *how narrow is the entrance*,<sup>298</sup> *حَصْم* in *حَصْمًا حَصْم* *the old is delicious*.<sup>299</sup>

1.2.3 Without enclitic personal pronoun modifying noun with attributive adjective: *حَصْم* in *حَصْمًا حَصْمًا* *hidden bread is pleasant*,<sup>300</sup> *سِجْم* in *سِجْمًا سِجْمًا* *stolen waters are sweet*.<sup>301</sup>

1.2.4 To this category of nominal/non-verbal clause without an enclitic personal pronoun belongs, as a subsection, the adnominal clause<sup>302</sup> introduced by *سَب*,<sup>303</sup> *سَب* *who (was) mute* in *سَب* *a demoniac who (was) mute*,<sup>304</sup> *صَلَب* in *صَلَبًا وَصَلَبًا* *by the difficult gate and the way which is narrow*.<sup>305</sup>

1.2.5 Goldenberg,<sup>306</sup> and Joosten who adopts his position,<sup>307</sup> argue that predicative adjectives of this type (that is, in the absolute state without an enclitic personal pronoun) are verbalized. These adjectives show two verbal characteristics: (a) their predicative function is marked by the status absolutus; and (b) their unmarkedness contains the expression of the 3rd person pronominal subject.<sup>308</sup>

<sup>296</sup> Mt 27:43 Syr<sup>ph</sup>.

<sup>297</sup> Mt 4:6 Syr<sup>cp</sup>.

<sup>298</sup> Mt 7:14 Syr<sup>p</sup>.

<sup>299</sup> Lk 5:39 Syr<sup>p</sup>.

<sup>300</sup> Prov 9:17.

<sup>301</sup> Prov 9:17.

<sup>302</sup> *Adnominal* refers to the elements in the clause that modify the noun.

<sup>303</sup> Joosten, *Syriac Language*, 77, n. 1, excludes this type of clause, and the clause introduced by *سَب* section 2(c), from his study of the syntax of the non-verbal clause as “it is sometimes doubtful whether they could function as independent clauses.”

<sup>304</sup> Cf. *سَب* [سَب] *سَب* *a demoniac who (was) mute* Mt 12:22 Syr<sup>p</sup>.

<sup>305</sup> Aphr. Hom. 447:2.

<sup>306</sup> Goldenberg, “On Syriac Sentence Structure,” 115–16.

<sup>307</sup> Joosten, *Syriac Language*, 80–81.

<sup>308</sup> As an example, Joosten (*Syriac Language*, 81) cites the clause *إَوْنَا* (Mt 7:14 Syr<sup>p</sup>) in which “the adjective does not need to be followed by an enclitic personal pronoun because it contains the expression of a 3<sup>rd</sup> p. pronominal subject (i.e. *صَلَب* by itself means ‘he/it is small’).” Joosten (81) says that the correctness of this explanation “is shown by the paradigm of these adjectives. With a 1<sup>st</sup> or 2<sup>nd</sup> p. subject the adjective is almost invariably followed by an enclitic personal pronoun, even if the subject is already expressed before the adjective,” but with a 3<sup>rd</sup> person subject “the enclitic personal pronoun is often dispensed with.” Joosten (81) cites six examples: 1<sup>st</sup> per. *أَنَا صَب* Mt 3:14 Syr<sup>p</sup>; *أَنَا* Mt 20:15 Syr<sup>scp</sup>; 2<sup>nd</sup> per. *حَكْمِبْ أَيْدِي* Rom 15:14; *أَيْدِي* 1 Cor 5:2; 3<sup>rd</sup> p. *أَيْدِي* Jn 13:10 Syr<sup>p</sup>; *حَكْمِبْ سَلَهَفْنَا* Mt 23:25 Syr<sup>p</sup>. He concludes (81), “In view of this paradigm we may legitimately claim that adj. + zero is the form for the 3<sup>rd</sup> p. In this aspect these adjectives function like the active participle (*قاتل* by itself means ‘he kills’). An additional argument is provided by the clauses where no explicit subject (pronominal or other) is expressed at all: *أَصْلًا* [Mt 27:43 Syr<sup>ph</sup>] means ‘He is confident in God’, the 3<sup>rd</sup> p. subject is hidden in the



2.2.2. In an adnominal clause introduced by the relative **ܘܚܛܢܐ** in **ܘܛܛܢܐ ܘܛܛܢܐ ܘܛܛܢܐ**. **ܛܛܢܐ ܘܛܛܢܐ**. **ܛܛܢܐ ܘܛܛܢܐ**. **ܛܛܢܐ ܘܛܛܢܐ**. *Brood of vipers! How can you, who are evil, speak good things?*<sup>322</sup>

2.3 Where predicate is definitely determined: **ܘܛܛܢܐ ܘܛܛܢܐ** *Jacob is the persecuted and Esau the persecutor.*<sup>323</sup>

2.4 Ambiguity with regard to adjectival or substantival function: **ܘܛܛܢܐ ܘܛܛܢܐ** *all your body will be dark, or all your body will be darkness.*<sup>324</sup>

### 3. In Construct State Qualified by Following Noun<sup>325</sup>

**ܘܛܛܢܐ ܘܛܛܢܐ** *and he saw David and disdained him, because he was a youth, and was ruddy and fair of appearance.*<sup>326</sup>

## IV. EXPANSION OF ADJECTIVE

The adjective may be expanded in several ways.

### 1. Construct State Qualified by Following Noun

See sections II, 4.1, 4.2; III, 1.1 (last example), 3.

### 2. Addition of **ܘܛܛܢܐ** or **ܘܛܛܢܐ**

The degree or intensity of an adjective may be heightened by **ܘܛܛܢܐ**, or **ܘܛܛܢܐ**, which may precede or follow the adjective:<sup>327</sup> **ܘܛܛܢܐ ܘܛܛܢܐ** *your thoughts are very deep;*<sup>328</sup> **ܘܛܛܢܐ ܘܛܛܢܐ** *the man was very important;*<sup>329</sup> **ܘܛܛܢܐ ܘܛܛܢܐ** *... there were very many ... and they were very dry;*<sup>330</sup> **ܘܛܛܢܐ ܘܛܛܢܐ** *and exceedingly evil (or ferocious);*<sup>331</sup> **ܘܛܛܢܐ ܘܛܛܢܐ** *a very great quantity of spices;*<sup>332</sup> **ܘܛܛܢܐ ܘܛܛܢܐ** *but their hearts (heart) are very far from me;*<sup>333</sup> **ܘܛܛܢܐ ܘܛܛܢܐ** *I am greatly constrained.*<sup>334</sup>

<sup>321</sup> Mk 5:9 Syr<sup>p</sup>. Joosten, *Syriac Language*, 77, n.1, comments that the syntax of clauses introduced by **ܘܛܛܢܐ** seems to be identical with that of independent non-verbal clauses.

<sup>322</sup> Mt 12:34 Syr<sup>p</sup>.

<sup>323</sup> Aphr. Hom. 403,14, see Nöldeke, *Grammatik*, §204F.

<sup>324</sup> Mt 6:23 Syr<sup>p</sup>. Joosten, *Syriac Language*, 67, cites this instance of **ܘܛܛܢܐ**, which seems to be in the emphatic state, as an adjective in a **ܘܛܛܢܐ** clause, but cautions that it may be better taken as a substantive.

<sup>325</sup> Cf. section II, 4.1.

<sup>326</sup> 1 Sam 17:42.

<sup>327</sup> Muraoka, *Classical Syriac: A Basic Grammar* (both editions), §96.

<sup>328</sup> Ps 92:5.

<sup>329</sup> 1 Sam 25:2.

<sup>330</sup> Ezek 37:1–2.

<sup>331</sup> Mt 8:28 Syr<sup>p</sup>.

<sup>332</sup> 2 Chr 9:9.

<sup>333</sup> Mt 15:8 Syr<sup>p</sup> and Syr<sup>h</sup>, respectively.

<sup>334</sup> Lk 12:50 Syr<sup>p</sup>.

### 3. Comparative Expressed by **ܡܥ**

The adjective is not altered in form (that is, by an inflectional modification) to express the comparative. It is expressed by the preposition **ܡܥ**, which is used before the noun which is the basis of comparison: **ܡܥ ܩܘܦܐ ܕܗܘܢܐ ܡܥ ܩܘܦܐ ܕܗܘܢܐ ܡܥ ܩܘܦܐ ܕܗܘܢܐ** *they are desired more than gold and more than precious stones, and they are sweeter than honey and the honeycomb*;<sup>335</sup> **ܡܥ ܩܘܦܐ ܕܗܘܢܐ ܡܥ ܩܘܦܐ ܕܗܘܢܐ ܡܥ ܩܘܦܐ ܕܗܘܢܐ** *is not life more important than food and the body [more important] than clothes?*;<sup>336</sup> **ܡܥ ܩܘܦܐ ܕܗܘܢܐ ܡܥ ܩܘܦܐ ܕܗܘܢܐ ܡܥ ܩܘܦܐ ܕܗܘܢܐ** *he was more renowned than the thirty*;<sup>337</sup> **ܡܥ ܩܘܦܐ ܕܗܘܢܐ ܡܥ ܩܘܦܐ ܕܗܘܢܐ ܡܥ ܩܘܦܐ ܕܗܘܢܐ** *there was no better man among the Israelites than he*;<sup>338</sup> **ܡܥ ܩܘܦܐ ܕܗܘܢܐ ܡܥ ܩܘܦܐ ܕܗܘܢܐ ܡܥ ܩܘܦܐ ܕܗܘܢܐ** *someone more distinguished than you*.<sup>339</sup>

### 4. Superlative Expressed by **ܕ**, **ܡܥ**, and Nouns in Genitive Relation

Classical Syriac does not have a superlative form, but in their grammars Phillips uses the term superlative,<sup>340</sup> and Costaz and Mingana employ the titles “Le superlative”<sup>341</sup> and “Adjectif superlatif,”<sup>342</sup> respectively. The term and titles are discerning to the extent that Syriac has at least three primary ways of expressing a superlative connotation.

4.1 Adjective followed by preposition **ܕ**: **ܕܗܘܢܐ ܕܗܘܢܐ ܕܗܘܢܐ ܕܗܘܢܐ** *least among the rulers in Judah*;<sup>343</sup> **ܕܗܘܢܐ ܕܗܘܢܐ ܕܗܘܢܐ ܕܗܘܢܐ** *you are not least among the rulers of Judah*;<sup>343</sup> which may be compared to the substantivized adjective in the construct state followed by the preposition **ܕ** in **ܕܗܘܢܐ ܕܗܘܢܐ ܕܗܘܢܐ ܕܗܘܢܐ** *O fairest among women*<sup>344</sup> (see section II 4.2, and note 280).

4.2 By preposition **ܡܥ**: **ܡܥ ܩܘܦܐ ܕܗܘܢܐ ܡܥ ܩܘܦܐ ܕܗܘܢܐ ܡܥ ܩܘܦܐ ܕܗܘܢܐ** *the most handsome of men/the most handsome in appearance of men*;<sup>345</sup> **ܡܥ ܩܘܦܐ ܕܗܘܢܐ ܡܥ ܩܘܦܐ ܕܗܘܢܐ ܡܥ ܩܘܦܐ ܕܗܘܢܐ** *you are richer than the rich, or you are the richest of the rich*;<sup>346</sup> **ܡܥ ܩܘܦܐ ܕܗܘܢܐ ܡܥ ܩܘܦܐ ܕܗܘܢܐ ܡܥ ܩܘܦܐ ܕܗܘܢܐ** *but the greatest of these (μείζων δὲ τούτων) is love/but love is the greatest of these*;<sup>347</sup> in the word play **ܡܥ ܩܘܦܐ ܕܗܘܢܐ ܡܥ ܩܘܦܐ ܕܗܘܢܐ ܡܥ ܩܘܦܐ ܕܗܘܢܐ** *now it is the smallest of all the seeds*.<sup>348</sup>

4.3 By nouns such as **ܕܗܘܢܐ**, **ܕܗܘܢܐ**, and **ܕܗܘܢܐ** in genitive relation.

<sup>335</sup> Ps 19:11.

<sup>336</sup> Mt 6:25 Syr<sup>p</sup>.

<sup>337</sup> 1 Chr 11:21.

<sup>338</sup> 1 Sam 9:2.

<sup>339</sup> Lk 14:8 Syr<sup>p</sup>.

<sup>340</sup> Phillips, *The Elements of Syriac Grammar*, 35.

<sup>341</sup> Costaz, *Grammaire Syriacque*, 159.

<sup>342</sup> Mingana, *Clef de la langue araméenne*.

<sup>343</sup> Mt 2:6 Syr<sup>p</sup>.

<sup>344</sup> Song 1:7; 5:10, 18.

<sup>345</sup> Ps 45:2.

<sup>346</sup> Costaz, *Grammaire Syriacque*, 159 (source not cited).

<sup>347</sup> 1 Cor 13:13.

<sup>348</sup> Mt 13:32 Syr<sup>p</sup>.

4.3.1 Genitive expressed by construct state: **وَأَوْحِبُّ** **وَمِن تَكْلَلِكُنْ** **وَأَوْحِبُّ** *the best of the produce of your field*.<sup>349</sup>

4.3.2 Genitive expressed by emphatic state with **و**: **وَأَوْحِبُّ** **وَأَوْحِبُّ** **وَأَوْحِبُّ** *the best of his vineyard*;<sup>350</sup> **وَأَوْحِبُّ** **وَأَوْحِبُّ** **وَأَوْحِبُّ** *all the best of the oil and all the best of the grain and the wine*;<sup>351</sup> **وَأَوْحِبُّ** **وَأَوْحِبُّ** **وَأَوْحِبُّ** *the best of the sheep and cattle*.<sup>352</sup>

## 5. Demonstrative Pronoun as Adjective

As adjectives, and as indicators of definiteness, the demonstratives may either precede or follow the noun they modify: **وَأَوْحِبُّ** **وَأَوْحِبُّ** *this man*;<sup>353</sup> **وَأَوْحِبُّ** **وَأَوْحِبُّ** *this cup*;<sup>354</sup> **وَأَوْحِبُّ** **وَأَوْحِبُّ** *that imposter*;<sup>355</sup> **وَأَوْحِبُّ** **وَأَوْحِبُّ** *that city*.<sup>356</sup>

Where the nucleus noun or noun phrase is expanded by both a demonstrative and a numeral, the demonstrative comes first: **وَأَوْحِبُّ** **وَأَوْحِبُّ** **وَأَوْحِبُّ** *these six brothers*.<sup>357</sup> This applies to the demonstrative's function as indicator of definiteness as well as to its function as adjective.<sup>358</sup>

## 6. Noun Expanded by both Adjective and Numeral

Where an adjective (including **وَأَوْحِبُّ** and demonstratives) and a numeral (**وَأَوْحِبُّ** in its function as indefinite article and numeral<sup>359</sup> and other numerals<sup>360</sup>) expand a noun, the numeral either immediately precedes or follows the noun:<sup>361</sup> **وَأَوْحِبُّ** **وَأَوْحِبُّ** **وَأَوْحِبُّ** *one beloved son*;<sup>362</sup> **وَأَوْحِبُّ** **وَأَوْحِبُّ** **وَأَوْحِبُّ** *a new wagon*;<sup>363</sup> **وَأَوْحِبُّ** **وَأَوْحِبُّ** **وَأَوْحِبُّ** *a single strand of hair*;<sup>364</sup> **وَأَوْحِبُّ** **وَأَوْحِبُّ** **وَأَوْحِبُّ** *seven other spirits*;<sup>365</sup> **وَأَوْحِبُّ** **وَأَوْحِبُّ** **وَأَوْحِبُّ** *these twelve disciples of his*.<sup>366</sup>

The following example is of three different renditions of the noun **وَأَوْحِبُّ** **وَأَوْحِبُّ** *brothers* in Mt 4:21 expanded by both the common adjectival quantifier **وَأَوْحِبُّ** and a numeral: (a) with the noun immediately preceded by the numeral and followed by **وَأَوْحِبُّ** in the absolute state

<sup>349</sup> Ex 34:26.

<sup>350</sup> Ex 22:4.

<sup>351</sup> Num 18:12.

<sup>352</sup> 1 Sam 15:9.

<sup>353</sup> Mk 15:39 Syr<sup>p</sup>.

<sup>354</sup> Mk 14:36 Syr<sup>sph</sup>.

<sup>355</sup> Mt 27:63 Syr<sup>sph</sup>.

<sup>356</sup> Lk 9:5 Syr<sup>scph</sup>.

<sup>357</sup> Acts 11:12.

<sup>358</sup> KPG, 2:4–7, 10–14, 28–36.

<sup>359</sup> See KPG, 2:68–70.

<sup>360</sup> This observation is based on Muraoka's investigation of the numerals 1 to 100 in the entire Peshitta New Testament; *Classical Syriac for Hebraists*, §81.

<sup>361</sup> Muraoka, *Classical Syriac for Hebraists*, §§79, 81; Muraoka, *Classical Syriac: A Basic Grammar*, §91 c.

<sup>362</sup> Mk 12:6 Syr<sup>p</sup>.

<sup>363</sup> 1 Sam 6:7, see Muraoka, *Classical Syriac for Hebraists*, §79.

<sup>364</sup> Mt 5:36 Syr<sup>scph</sup>.

<sup>365</sup> Mt 12:45 Syr<sup>cp</sup>.

<sup>366</sup> Mt 10:5 Syr<sup>s</sup>.

(see section II, 3.2): **اَوْبَعِ اَمْتَعِ اِسْمَعِ** *two other brothers* (Syr<sup>sc</sup>); (b) with the noun preceded by **اِسْمَعِ** in the emphatic state and immediately followed by the numeral: **اَوْبَعِ اِسْمَعِ اَمْتَعِ** *two other brothers* (Syr<sup>p</sup>); (c) with **اِسْمَعِ** in the emphatic state in the first position and the noun immediately preceded by the numeral: **اَمْتَعِ اِسْمَعِ اَوْبَعِ** (Syr<sup>h</sup>).

## V. NOMINA AGENTIS SERVING AS ADJECTIVES

*Nomina agentis* (actor nouns, agent nouns, or nouns of agent),<sup>367</sup> formed from the Syriac active participle,<sup>368</sup> serve as adjectives (and substantives).

1. Peal Form **اَوْبَعِ اَمْتَعِ اِسْمَعِ** / **اَمْتَعِ اِسْمَعِ** *voracious*.<sup>369</sup>
2. Other patterns formed by affixing **اِسْمَعِ** to the masculine singular form: Ethpeel **اِسْمَعِ اَمْتَعِ** in **اِسْمَعِ اَمْتَعِ** *invisible, unseen*;<sup>370</sup> Pael **اِسْمَعِ اَمْتَعِ** *corrupt (lit. corrupting)*;<sup>371</sup> **اِسْمَعِ اَمْتَعِ** *uplifting, rescuing*.<sup>372</sup>

## VI. SUBSTANTIVES SERVING AS ADJECTIVES

Infrequent but not unattested. As attribute: **اِسْمَعِ اَمْتَعِ** *desert, wilderness* in **اِسْمَعِ اَمْتَعِ اَمْتَعِ** *desert place, desert-like place, solitary place*;<sup>373</sup> **اِسْمَعِ اَمْتَعِ** *wilderness, desert* in **اِسْمَعِ اَمْتَعِ اَمْتَعِ** *desert place, desert-like place, solitary place*;<sup>374</sup> pl. **اِسْمَعِ اَمْتَعِ**;<sup>375</sup> **اِسْمَعِ اَمْتَعِ** *evil-doers* in **اِسْمَعِ اَمْتَعِ اَمْتَعِ** *evil-making stars, sinister stars, malicious stars*.<sup>376</sup>

## VII. ADJECTIVAL SUBSTITUTES

There are constructions which are *not* adjectives, but which are frequently rendered as adjectives in translations. It can be argued that these constructions should not be seen simply as alternative means of expressing the adjective. This is because they constitute authentic classical Syriac syntax, and each serves an analyzable purpose. The purpose may range from the possibly idiomatic, as in the case of **اِسْمَعِ اَمْتَعِ** (section VII, 3), to the semantic need for a precision that an adjective may not be able to deliver as in the case of the genitive of the noun in the emphatic state with **اِسْمَعِ** to form an epithet (see following section).

<sup>367</sup> See §9.6.4 of this essay for a discussion of this phonomorphological word class.

<sup>368</sup> Nöldeke, *Compendious Syriac Grammar*, §107; see also §§115, 166; Muraoka, *Classical Syriac for Hebraists*, §38; Bravmann, *Studies in Semitic Philology*, 171–80.

<sup>369</sup> Aphr. Dem. I. 156:5.

<sup>370</sup> B.O. 2, 542, see *Thesaurus Syriacus*, 1:1237.

<sup>371</sup> Aphr. Dem. I. 101:4.

<sup>372</sup> Josh. Styl. 4:2.

<sup>373</sup> Mk 1:35 Syr<sup>sp</sup>; 6:32 Syr<sup>sp</sup>; Lk 4:42 Syr<sup>sp</sup>; 9:10 Syr<sup>cp</sup>, 12 Syr<sup>cp</sup>; Isa 35:7, et al.

<sup>374</sup> Mk 1:35; 6:32; Lk 4:42; 9:10, 12 Syr<sup>h</sup> in all instances.

<sup>375</sup> Mk 1:45 Syr<sup>h</sup>.

<sup>376</sup> Bar-Bahlul, under **اِسْمَعِ اَمْتَعِ**, see *Thesaurus Syriacus*, 1:2766.

### 1. Genitive of Noun in Emphatic State with *ܘ* to Form Epithet

ܘܚܘܨܘܬܐ, in ܘܚܘܨܘܬܐ ܘܚܘܨܘܬܐ *aromatic ointment*,<sup>377</sup> ܘܚܘܨܘܬܐ, in ܘܚܘܨܘܬܐ ܘܚܘܨܘܬܐ *unjust wealth*,<sup>378</sup> ܘܚܘܨܘܬܐ, in ܘܚܘܨܘܬܐ ܘܚܘܨܘܬܐ *the gracious words*,<sup>379</sup> ܘܚܘܨܘܬܐ, in ܘܚܘܨܘܬܐ ܘܚܘܨܘܬܐ *the holy spirit*<sup>380</sup> (compare ܘܚܘܨܘܬܐ, in ܘܚܘܨܘܬܐ ܘܚܘܨܘܬܐ *the holy place*,<sup>381</sup> ܘܚܘܨܘܬܐ, in ܘܚܘܨܘܬܐ ܘܚܘܨܘܬܐ *unjust wealth* (*lit. the wealth of injustice*), it would have been possible to have used the adjective ܘܚܘܨܘܬܐ *unjust, unrighteous*, as in ܘܚܘܨܘܬܐ ܘܚܘܨܘܬܐ *an unrighteous insolent man*,<sup>382</sup> instead of the masculine noun ܘܚܘܨܘܬܐ, though it may not have had the same connotative impact. But in ܘܚܘܨܘܬܐ ܘܚܘܨܘܬܐ *aromatic ointment*, the use of the adjective ܘܚܘܨܘܬܐ *sweet, pleasant, fragrant*, instead of the masculine noun ܘܚܘܨܘܬܐ *sweet spices, ointment, perfume*, would lack an obvious semantic component. In the Peshitta New Testament, ܘܚܘܨܘܬܐ *the Holy Spirit* employs this construction except in Eph 4:30 which has ܘܚܘܨܘܬܐ, in ܘܚܘܨܘܬܐ ܘܚܘܨܘܬܐ. Elsewhere the adjective is used as in ܘܚܘܨܘܬܐ *Holy Father*,<sup>383</sup> ܘܚܘܨܘܬܐ *the holy place*,<sup>384</sup> ܘܚܘܨܘܬܐ *his holy prophets*,<sup>385</sup> ܘܚܘܨܘܬܐ *the holy city*,<sup>386</sup> or the construct state as in ܘܚܘܨܘܬܐ *the holy city*.<sup>387</sup>

### 2. Genitive of Noun in Construct State<sup>388</sup>

ܘܚܘܨܘܬܐ *the city of holiness, the holy city* (see last line of preceding section).

### 3. Adverb Prefixed by *ܘ*<sup>389</sup>

ܘܚܘܨܘܬܐ, *everlasting, perpetual* as in ܘܚܘܨܘܬܐ ܘܚܘܨܘܬܐ *into the everlasting fire*,<sup>390</sup> ܘܚܘܨܘܬܐ, *for a perpetual inheritance*,<sup>391</sup> ܘܚܘܨܘܬܐ, *external* as in ܘܚܘܨܘܬܐ ܘܚܘܨܘܬܐ *the external body of the angels*.<sup>392</sup>

### 4. *ܘܠܐ* Introducing Negative Expressions<sup>393</sup>

As in ܘܠܐ ܘܠܐ *with unquenchable fire*.<sup>394</sup>

<sup>377</sup> Lk 7:46 Syr<sup>scp</sup>.

<sup>378</sup> Lk 16:11 Syr<sup>scp</sup>.

<sup>379</sup> Lk 4:22 Syr<sup>ph</sup>.

<sup>380</sup> Mt 1:18 Syr<sup>scph</sup>.

<sup>381</sup> Eph 4:30.

<sup>382</sup> Aphr. Dem. I. 101:4.

<sup>383</sup> Jn 17:11 Syr<sup>p</sup>.

<sup>384</sup> Mt 14:16 Syr<sup>p</sup>.

<sup>385</sup> Lk 1:70 Syr<sup>p</sup>. Cf. Lk 1:72 Syr<sup>p</sup>, and Mt 25:31 Syr<sup>p</sup> // Mk 8:38. Syr<sup>p</sup> // Lk 9:26.

<sup>386</sup> Mt 27:53 Syr<sup>p</sup>.

<sup>387</sup> Mt 4:5 Syr<sup>p</sup>.

<sup>388</sup> See Phillips, *The Elements of Syriac Grammar*, 34, and Arayathinal, *Aramaic Grammar*, 2:141.

<sup>389</sup> See Costaz, *Grammaire Syriaque*, 157.

<sup>390</sup> Mt 18:8 Syr<sup>ph</sup>.

<sup>391</sup> Gen 17:8.

<sup>392</sup> Eus. Theoph. 1, 72:3.

<sup>393</sup> See Phillips, *The Elements of Syriac Grammar*, 34.

<sup>394</sup> Lk 3:17 Syr<sup>scph</sup>.

## CHAPTER 6

# HOW SYNTACTIC FORMALISMS CAN ADVANCE THE LEXICOGRAPHER’S ART

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Following a discussion of the changing role of linguistic theory in lexicography, I examine how lexicography can be advanced by: (i) introducing carefully nuanced syntactic categories, (ii) taking the idea underlying the hierarchical lexicon seriously, and (iii) customizing the presentation of syntactic information. All of this is very much in keeping with the observation that in current syntactic theories “lexical entries have evolved from simple pairings of phonological forms with grammatical categories into elaborate information structures.”<sup>1</sup>

### 1. THE PRIMARY FOCUS OF THIS ESSAY

In his prospectus for a 21<sup>st</sup>-century Syriac-English lexicon, Terry Falla addressed and clarified five fundamental lexicographic topics: *audience*, *scope*, *content*, *methodology*, and *presentation*.<sup>2</sup> In this essay, my primary focus will be on just one kind of *content*: part-of-speech (POS) information. Along the way, fleeting references to some of Falla’s other topics will appear.

Falla placed “Notation of Part-of-Speech” (his section 5.1.2) within his compendium of “Non-contentious Issues” (his section 5.1). While I agree that inclusion of POS information in any future lexicon should be a non-contentious issue, I will show that the following aspects of POS inclusion are actually, to echo Falla, “Features Requiring Debate” (his section 6.1):

- which POS information should be included (a content issue)
- to what extent and how the POS information should be systematized (a methodology issue)
- how the POS information should be displayed (a presentation issue).

I will address these issues from the perspective(s) of present-day syntactic theory.

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<sup>1</sup> Sag et al., *Syntactic Theory*, 2<sup>nd</sup> edition, 227.

<sup>2</sup> Falla, “A Conceptual Framework.”

## 2. THE CHANGING ROLE OF LINGUISTIC THEORY IN LEXICOGRAPHY

### 2.1 Linguistics and Lexicography, Then

In an influential 1973 paper, Labov lamented that...

[t]he description of the meanings of words has been left to the lexicographers, for better or for worse; and linguists have long contented themselves with glosses which are labels but not descriptions.<sup>3</sup>

As recently as 1990, Wierzbicka noted that...

lexicographers have grappled with their “practical” tasks without any theoretical framework.... Given this lack of help from semantic theory, it is the lexicographers’ achievements, not their failures, which are truly remarkable.<sup>4</sup>

### 2.2 Linguistics and Lexicography, Now

In recent years, however, the beginnings of a theoretical framework have emerged. In examining the relation between linguistics and lexicon, analysts have realized that grammar and lexicography are not disjoint but rather are closely related. Already in the early nineties, Halliday asserted that...

grammar and vocabulary are not two different things; they are the same thing seen by different observers. There is only one phenomenon here, not two.<sup>5</sup>

MacDonald et al. argued that...

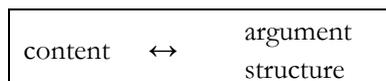
the lexicon and syntax are very tightly linked. To the extent that information required by the syntactic component is stored with individual items, it will be difficult to find a neat boundary between the two systems.<sup>6</sup>

But Malouf suggested a location for the boundary between lexicon and syntax:

[I conjecture that] lexical representations (lexemes) include argument structure but not valence, and syntactic representations (words and phrases) include valence but not argument structure.<sup>7</sup>

He provided this diagram illustrating the conjectured division:

Lexicon



<sup>3</sup> Labov, “The Boundaries of Words and their Meanings,” 340–73.

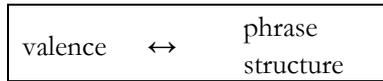
<sup>4</sup> Wierzbicka, “‘Prototypes Save’: On the Uses and Abuses of the Notion of ‘Prototype’ in Linguistics and Related Fields,” 347–67.

<sup>5</sup> Halliday, “Language as System and Language as Instance,” 63, as quoted by Landau, *Dictionaries: The Art and Craft of Lexicography*, 282.

<sup>6</sup> MacDonald et al., “Syntactic Ambiguity Resolution as Lexical Ambiguity Resolution,” 130.

<sup>7</sup> Malouf, *Mixed Categories*, 154.

## Syntax



This is a provocative partitioning. It merits assessing if we investigate precisely what information is appropriate for the hierarchical lexicon. More recently, Schönefeld examined the relation between lexicon and syntax and judged that...

syntax seems to be dependent on, and to a large extent to be predicted by, the lexical items used and cannot be considered a totally autonomous component of the language system.<sup>8</sup>

Over a decade ago MacDonald et al. summarized the situation in linguistics regarding the lexicon, a summary that still holds true:

Linguistic theory... has become increasingly focused on issues concerning the structure of the lexicon and the relationships between different types of information (e.g., syntactic and semantic) within it.<sup>9</sup>

### 2.3 The 'Freeing-Up' of Linguistics

To better understand the rapprochement of grammar and lexicon indicated above and to provide background information for the candidates for enhancing the lexicon that I propose below, it will be useful briefly to note some recent areas of linguistic theory where concepts have been "freed up." Creation of expanded perspectives has typically required an overcoming of the "single vision" that too frequently was a component of transformationalism.

One can get the flavour of the relevant linguistic history by reading Sidney Landau's chapter on "The corpus in lexicography" in his updated classic monograph.<sup>10</sup> There, in part, he sketches the history of:

- the Chomskyan hostility to quantitative analysis
- the countervailing maintenance of the Firthian demand (made by, among others, Halliday and Sinclair) that linguistic analysis be based upon real data rather than upon the made-up sentences so popular with the transformationalists
- the eclipse of the structuralists by the transformationalists and the formers' eventual re-emergence as computational linguists
- the eventual rehabilitation of corpus linguistics as a worthwhile branch of linguistics.

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<sup>8</sup> Schönefeld, *Where Lexicon and Syntax Meet*, 131. In this she directly contradicts the assertions of the Chomskyans and aligns herself with the cognitive linguists.

<sup>9</sup> MacDonald et al., "Lexical Nature of Syntactic Ambiguity Resolution," 682.

<sup>10</sup> Landau, *Dictionaries: The Art and Craft of Lexicography*, chapter 6: "The corpus in lexicography," 273–342.

Landau also includes Leech's list of the foci of corpus linguistics, each of which is at odds with transformationalism:<sup>11</sup>

- focus on performance rather than competence
- focus on description rather than universals (and, I add, derivation)
- focus on quantitative and qualitative models rather than just the latter
- focus on empiricist inquiry rather than rationalist inquiry.

For each focus, my stance is much closer to that of the corpus linguists than that of the transformationalists.

In the final three sections of this essay, with an eye on enhancing the value of the lexicon, I will introduce this trio of syntactic concepts:

- nuanced syntactic categories
- the hierarchical lexicon
- customized presentation of syntactic categories.

At the end of each section I will give my present best estimate of the potential for lexicography of work in the given area.

### 3. NUANCED SYNTACTIC CATEGORIES<sup>12</sup>

#### 3.1 Traditional Approaches to Category Definition

In traditional works involving syntactic categories, the categories are almost always treated in an off-handed manner, as “givens.” The categories are invariably assumed without discussion to be homogeneous, “either-or” (mutually exclusive),<sup>13</sup> and exhaustive. In the discussions below, we will see instances where the first two assumptions are clearly invalid. The third characteristic—exhaustive coverage—is typically vacuously present, being achieved through the artifice of invoking a “ragbag” category called “particle” which holds everything not part of some other category.

*Taxonomy Consumers.* Novice users of lexica, grammars, and the like have little choice but to take the syntactic categories that authors adopt as settled, uncontroversial, and in need of no explanation (explanations being absent).<sup>14</sup>

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<sup>11</sup> Leech, “Corpora and Theories of Linguistic Performance,” 107, as quoted by Landau, *Dictionaries: The Art and Craft of Lexicography*, 282.

<sup>12</sup> Many of the concepts in this section are covered at greater length in two papers in previous volumes of this series: Forbes, “Squishes, Clines, and Fuzzy Signs;” Forbes, “Distributionally-Inferred Word and Form Classes.”

<sup>13</sup> The parade example of the “either-or” stance is found in Chomsky's early work wherein he invoked four parts of speech specified in terms of two binary features, N and V: (+N, -V) = noun, (-N, +V) = verb, (+N, +V) = adjective, and (-N, -V) = preposition.

<sup>14</sup> In lexica, the near-universal practice is simply to scatter abbreviations for the parts of speech within a consolidated list of abbreviations, making it very difficult to recover any clear idea of the system, if any, of categories adopted.

When beginners, or even old hands, examine the classifications adopted by authors, their perplexity is substantial. Consider, for example, the disparate classifications provided for הִנֵּה:

- According to BDB, this word is a *demonstrative particle* (pages 243–44).
- According to KBL, it is a deictic and interrupting interjection (page 252).
- Joüon–Muraoka<sup>15</sup> call it a *presentative adverb* (page 351).
- Waltke–O’Connor<sup>16</sup> refer to it as:
  - a “so-called” *demonstrative adverb* (page 307)
  - a *macrosyntactic sign* (page 634)
  - a *presentative particle* (page 675).
- Van der Merwe, *et al.*,<sup>17</sup> classify it as a *discourse marker* (page 328).
- Andersen<sup>18</sup> calls it a *positive perspectival presentative predicator* (page 56).
- In the Andersen–Forbes database for L,<sup>19</sup> the precise form הִנֵּה is taken to be polysemous and is classified as a spatial adverb (“here”) 284 times and as a quasiverbal (“behold!”) 524 times.

This is quite an array of confusing categories. Users of lexica and grammars are typically unaware of the patchwork of categories such as the above that lies behind their favourite reference works—and which puts them at odds with each other.

*Taxonomy Producers.* A few researchers have focused on devising coherent taxonomic systems. Trask has discussed four approaches to making part-of-speech assignments: *meaning*, *derivation*, *inflection*, and *distribution*.<sup>20</sup> The first is ill-advised in general “since it is hopelessly misleading,”<sup>21</sup> and the second is of little help for Semitic languages.<sup>22</sup> The third approach, based on *inflection*, is the stalwart of Semitic grammars. For example, Joüon–Muraoka<sup>23</sup> devote a great deal of space to discussing the inflectional phenomena associated with particular parts of speech.

Category assignment based on *distribution* is “the most important [approach] of all today”<sup>24</sup> and is the approach used in my taxonomic investigations of the Hebrew Bible. In

<sup>15</sup> Joüon–Muraoka, *A Grammar of Biblical Hebrew*.

<sup>16</sup> Waltke–O’Connor, *An Introduction to Biblical Hebrew Syntax*.

<sup>17</sup> Van der Merwe *et al.*, *A Biblical Hebrew Reference Grammar*. The treatment of הִנֵּה here is thorough.

<sup>18</sup> Andersen, “Lo and Behold! Taxonomy and Translation of Biblical Hebrew הִנֵּה,” 25–56. This is an exhaustive survey.

<sup>19</sup> For an introduction to this database, see Andersen–Forbes, “Hebrew Grammar Visualised: I. Syntax,” 43–61.

<sup>20</sup> Trask, “Parts of Speech,” 278–84.

<sup>21</sup> Trask, “Parts of Speech,” 280.

<sup>22</sup> Forbes, “Distributionally-Inferred Word and Form Classes.”

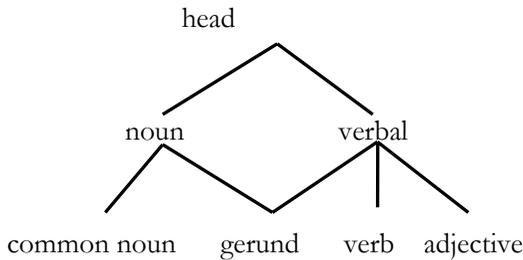
<sup>23</sup> Joüon–Muraoka, *A Grammar of Biblical Hebrew*, 124–328.

<sup>24</sup> Trask, “Parts of Speech,” 281.

section 3.3 below I will explain how I have used, and plan to use, distributional analyses to identify which word groupings require special handling. To assist this later explanation, I will first describe the two behaviours that trigger special handling, illustrating each using data from the Hebrew Bible.

### 3.2 Word Groupings Needing Special Handling

*Mixed Categories in English.* In his PhD thesis,<sup>25</sup> Malouf analyzes English verbal gerunds and concludes that they constitute a mixed category. By this he means that the gerund *simultaneously* exhibits nominal and verbal characteristics. Or as Aarts et al., summarize Malouf’s argument:<sup>26</sup> “gerunds are nominal in their external syntax and verbal in their internal syntax through a cross-classification of head<sup>27</sup> values.” This behaviour has implications for the lexicon, as will become clear when we discuss the hierarchical lexicon. Aarts et al. display a simplified version of Malouf’s “head hierarchy” graph structure (the top levels of a simplified hierarchical lexicon, as it happens) embodying this assertion:<sup>28</sup>



The critical point is that the gerund simultaneously exhibits *both* nominal and verbal characteristics. Crucially, *analysis of the English gerund necessitates categories that are not mutually exclusive.*

*Mixed Categories in Biblical Hebrew.* Failure of mutual exclusivity is also the case for Biblical Hebrew, but matters are a bit more complex. Consider the three phrase markers<sup>29</sup> as rendered by Logos Bible Software and shown below. Each contains the word שָׁרַד, morphologically a Qal active participle, singular and masculine. If one moves from right to left against the senses of the arrows, starting at each שָׁרַד at the far right of each phrase marker, one learns the *function* of that participle in its particular phrase marker.

<sup>25</sup> Malouf, *Mixed Categories*.

<sup>26</sup> Aarts et al., eds, *Fuzzy Grammar*, 21.

<sup>27</sup> Crystal, *A Dictionary of Linguistics and Phonetics*, 215, defines a *head* as: “the central element [in an endocentric phrase] which is distributionally equivalent to the phrase as a whole.”

<sup>28</sup> Aarts et al., eds, *Fuzzy Grammar*, 21; Malouf, *Mixed Categories*, 65.

<sup>29</sup> For an introduction to the Andersen–Forbes representation of the syntactic structures of the Hebrew Bible, see the contribution by Andersen and Forbes included in Falla, “A New Methodology,” 176–79. See also Andersen–Forbes, “Biblical Hebrew Grammar Visualised.”

Consider the word שׁוֹבֵר in the phrase marker that begins at Jer 48:32. If we “swim upstream” to the next node, we see that it is labelled 

sbj
gram

. This tells us that, on the basis of Hebrew grammar (*gram*) we may assert that the word is the subject (*sbj*) of the larger unit of which it is one part. As regards its function, we classify it as a pure noun participle.<sup>30</sup> “Swimming upstream” further, we reach the leftmost node, labelled 

cl
oblq

. This tells us that the unit that we are dealing with is a clause (*cl*) and that we assert this on the grounds of *oblq* = obliqueness, a concept whose discussion is beyond the scope of this essay.<sup>31</sup> Note that this clause has an entirely satisfactory predicator 

pred
gram

, the verb שָׁבַר, a Qal perfect 3ms.

Next consider שׁוֹבֵר in the phrase marker that begins at Jer 51:55. If we “swim upstream” to the next node, we see that it is labelled 

vb ptc
gram

, telling us that on the basis of Hebrew grammar (*gram*), we may assert that the word is a *purely verbal participle*, a **vb ptc**.<sup>32</sup> In this main clause, the participle is the predicator.

Finally, consider שׁוֹבֵר in the phrase marker that begins at Jer 48:18. The word is a *qal* (“ground”) active participle, nominal externally (being part of the clause’s subject) but verbal internally (having its own direct object **dir obj** internal to the subject, as part of a 

nom ptc
oblq

, a nominalized participial clause-like construction).

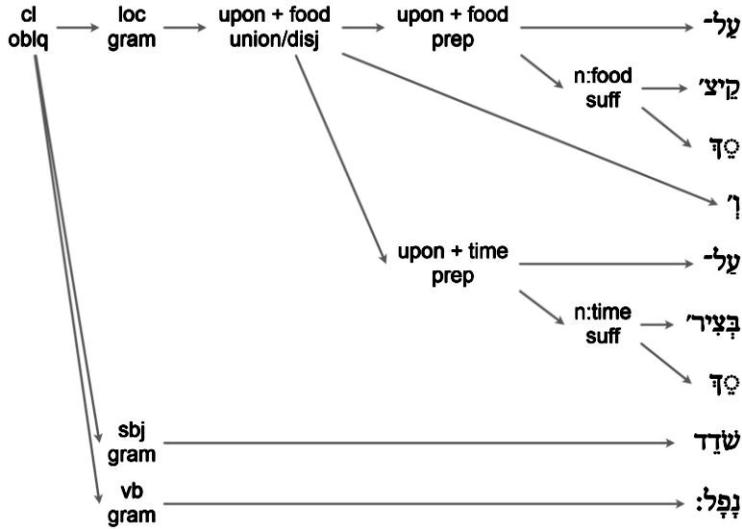
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<sup>30</sup> That is, this participle exhibits only nominal function here.

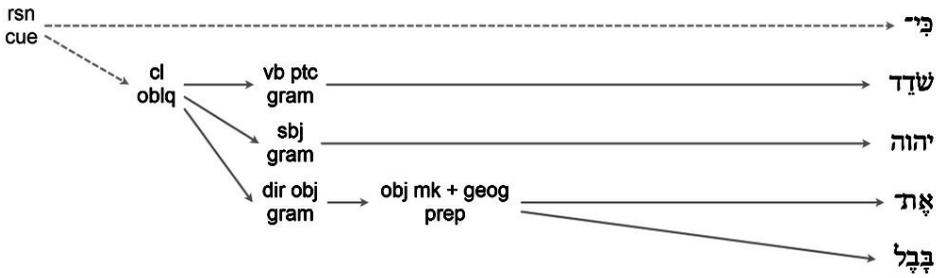
<sup>31</sup> Put very informally, the obliqueness principle specifies how clauses and clause-like structures are assembled. The ordering of participants is usually from most important (= least oblique) to least important (= most oblique).

<sup>32</sup> That is, this participle exhibits only verbal function here.

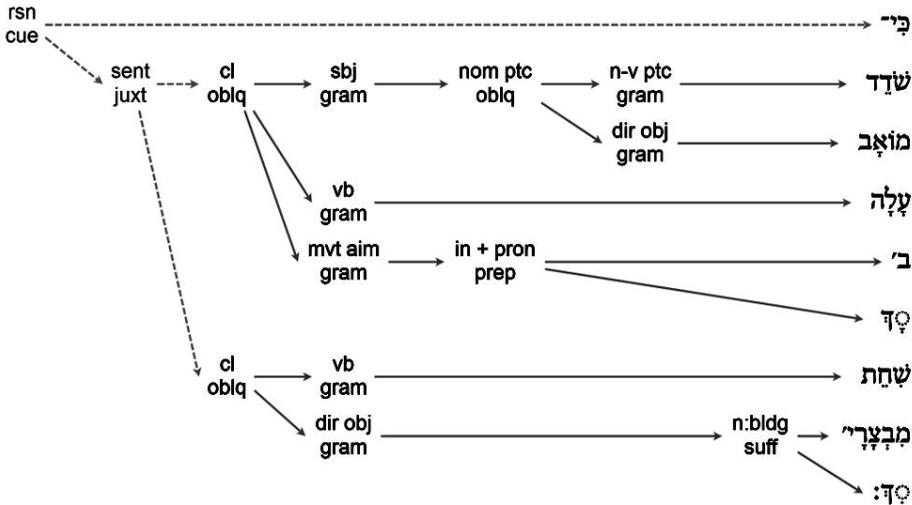
Jer 48:32



Jer 51:55



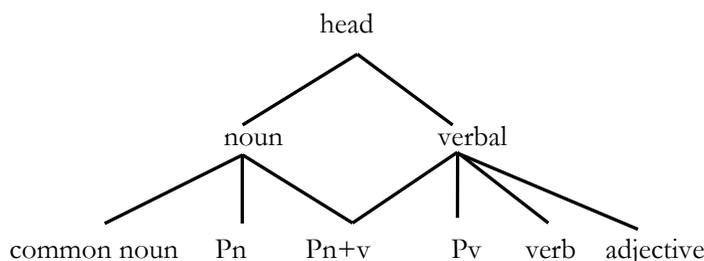
Jer 48:18



Assuming that the sorts of states of affairs exemplified in the diagram can be detected,<sup>33</sup> one must decide how to proceed once they are diagnosed. There are two basic options:

1. subdivide the mixed category into mutually exclusive categories
2. declare the category to have the property of gradience.

As presently realized, the Andersen–Forbes database takes the former option for participles. If we symbolize the purely nominal participles by P<sub>n</sub>, the purely verbal participles by P<sub>v</sub>, and the mixed noun-verb participles by P<sub>n+v</sub>, then the “head hierarchy” for the Andersen–Forbes taxonomy currently looks like this:



Classifying the kinds of participles into three distinct classes<sup>34</sup> makes sense, given that their phrase marker representations are distinctly different and hence readily identifiable. The alternative of gradient categories does, however, exist. Although probably not well suited to the case of the participles, a gradience analysis is superior when the behaviour of items is continuously gradated.

*Gradient Categories.* The notion that some linguistic phenomena are best described in terms of continua has a fairly long history.<sup>35</sup> The concept comes in two varieties. In the first approach, best seen in the work of Ross, the continua are one dimensional and are called *squishes* or *clines*. I have investigated this approach elsewhere.<sup>36</sup> Based upon the distributions of word classes, I was able to infer a word-class squish for the Hebrew Bible with the classes ordered like this:

substantives < nouny verbals < prepositions < verbs < quasiverbals < “ragbag”

In the second approach to continua, motivated by the insights regarding prototype effects produced by cognitive psychologists, the continua may be multidimensional. Since uni-

<sup>33</sup> Methods of detecting taxonomically anomalous situations will be taken up in section 3.3 below.

<sup>34</sup> It should be noted that we recognize a fourth category of participles, symbolized as P<sub>c</sub>, a quite small group (just over 100 tokens). Such participles are morphologically in the construct state and so behave like nominals both before and after themselves and also behave like verbals in having internal arguments. The group is too small and too esoteric for consideration here. It is briefly touched on in Falla, “A New Methodology,” 179.

<sup>35</sup> Aarts et al., eds., *Fuzzy Grammar*, 12–16.

<sup>36</sup> Forbes, “Squishes, Clines, and Fuzzy Signs.”

dimensional spaces are the simplest (non-trivial) spaces, the prototype perspective would include the squish perspective, were it not for these differences between them:

- “Squishers” view their data as shading into each other. The data are seen as forming “smears” rather than separate, distinct clusters. Squishers focus on *inter-class* variability.
- “Prototypers” see the data as defining distinct clusters. Their focus is on *intra-class* variability. The closer a datum is to the centroid of its cluster, the more prototypical that datum is judged to be.

Given these differing perspectives, I have formulated the classification problem so that both options are available (see section 3.3 below). The data determine which is the better perspective in each given case.

Introduction of gradient/prototype categories has several benefits. Manning speculates that there would be benefit in their use for diachronic studies:

One can avoid accepting gradual change by stipulating categoricity. But the results of such moves are not terribly insightful: it seems that it would be useful to explore modeling words as moving in a continuous space of syntactic category, with dense groupings corresponding to traditional parts of speech.<sup>37</sup>

Schütze sees gradient categories as important in understanding language learning:

[A] gradient model explains [language learning] better than a discrete model in which the acquisition process cannot move forward smoothly.<sup>38</sup>

But gradient/prototype categories have their problems. Wierzbicka warns against “prototype reductionism” wherein researchers too readily attempt to overcome difficulties in their theories by invoking prototype effects.<sup>39</sup> A further problem is the fact that the usual discrete symbol-based syntactic formalisms simply cannot cope with gradient/prototype effects.<sup>40</sup> I conjecture that probabilistic approaches to syntax may overcome this deficiency. Bod et al. assert:

[W]hile categorical approaches focus on the endpoints of distributions of linguistic phenomena, probabilistic approaches focus on the gradient middle ground.<sup>41</sup>

But, in fact, the probabilistic approach includes the entire distribution.

### 3.3 Computational Methods for Identifying Mixed and Gradient Categories

Rigorous study of word/form distribution does not appear to have been done in Semitic studies. In an effort to gain fresh insight into Semitic taxonomy, I have begun a series of computational investigations applying and extending the concept of TAG SPACE<sup>42</sup> to the

<sup>37</sup> Manning, “Probabilistic Syntax,” 315.

<sup>38</sup> Schütze, *Ambiguity Resolution in Language Learning*, 5.

<sup>39</sup> Wierzbicka, “Prototypes Save,” 461.

<sup>40</sup> Aarts et al., eds, *Fuzzy Grammar*, 9.

<sup>41</sup> Bod et al., eds., *Probabilistic Linguistics*, vii.

<sup>42</sup> Schütze, *Ambiguity Resolution in Language Learning*, 27–63.

distributional patterns of words and forms found in the Hebrew Bible. According to Schütze:

TAG SPACE is a multi-dimensional real-valued vector space [wherein proximity] in the space corresponds to proximity in syntactic function.... Contexts, not word types, are classified syntactically.... Rather than assuming discrete categories with sharp boundaries, the representational medium of a multi-dimensional space can capture smooth clines between categories.<sup>43</sup>

Two studies based on TAG SPACE have been published, and three more are planned. The five studies are:

1. Published: In my paper on squishes,<sup>44</sup> I examined the clustering behaviour of *human-classified* words and forms. I was able to use mathematical methods to infer a part-of-speech squish for Biblical Hebrew and use it to find ways of:
  - a. characterizing class heterogeneity
  - b. locating outlier tokens in “squish space.”
2. Published: In my paper on distributionally-inferred word and form classes,<sup>45</sup> I showed how the distribution patterns of complete words/forms could be used to cluster them into significant syntactic categories.
3. Yet to Do: In both studies, only high frequency types could be clustered, and a few of the clusters exhibited anomalous inclusions. In future work, both sorts of problems should be overcome, or at least greatly lessened, by carrying out pre-processing based upon inflectional and distributional tests to consolidate low-frequency tokens into usable composite groups. Once this level of finesse in the analysis is achieved, *it should be possible to identify prototypical and outlier members of automatically-identified classes.*
4. Yet to Do: Word sense resolution and argument structure inference should both be possible via alternate distributional analyses.
5. Yet to Do: Combining all of the approaches referred to above plus increasing the sophistication of the clustering methods used (along paths already known to me<sup>46</sup>) should result in the best possible automatically-generated hierarchical lexicon.

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<sup>43</sup> Schütze, *Ambiguity Resolution in Language Learning*, 29, 33, 63.

<sup>44</sup> Forbes, “Squishes, Clines, and Fuzzy Signs.”

<sup>45</sup> Forbes, “Distributionally-Inferred Word and Form Classes.”

<sup>46</sup> *Technical Note*: There are excellent grounds for believing that part of the spurious behaviour exhibited by some type clusters reported on in my two previous papers was due to the distorting effects of over zealous dimensionality reduction of the TAG SPACE through the use of hierarchical clustering and two-dimensional scaling. The cophenetic correlation coefficient (characterizing the adequacy of clustering) was too low and Kruskal’s stress (characterizing the distortion in scaling) was too high. Two options for improving matters should be investigated: 1. enhance the efficiency of data use through: a. appropriate data pre-processing and/or b. use of singular value decomposition, and 2. use less distorting (but consequently less intuitive) clustering procedures and assessments.

### 3.4 The Potential of Nuanced Syntactic Categories

Algorithmic detection and delimitation of mixed and gradient categories holds the promise of producing rigorous taxonomies of Semitic languages:

- Their use should enable lexicographers to cease merely recycling the received wisdom as regards category membership.
- Their use may allow the discovery of previously undetected instances of homonymy/polysemy.
- Their use might allow lexicographers to map out and assess the prototype–outlier internal structures of parts of speech.

Much work remains to be done before these benefits can be realized.

## 4. THE HIERARCHICAL LEXICON

First published in 1852, Roget's Thesaurus is, in fact, an organizationally simple hierarchical lexicon. Working from the bottom up, its words are organized into groups on the basis of their "meaning." Those groups are gathered to form groups of groups, and the process is repeated until the words are all in one group ("Top"). Thus, we have a hierarchy of groups from most general down to most specific. The top two levels of the hierarchy look like the partial tree shown below.<sup>47</sup>

For the final levels shown (five levels down in the hierarchy), the thesaurus has an entry which is then further subdivided. For example, the words corresponding to

Top → Abstract Relations → Existence → Being in the Abstract → Existence

take up the first page of the thesaurus, with the group divided into nouns, verbs, adjectives, and adverbs (a sixth level), which in turn are each further divided into sub-senses (a seventh level).

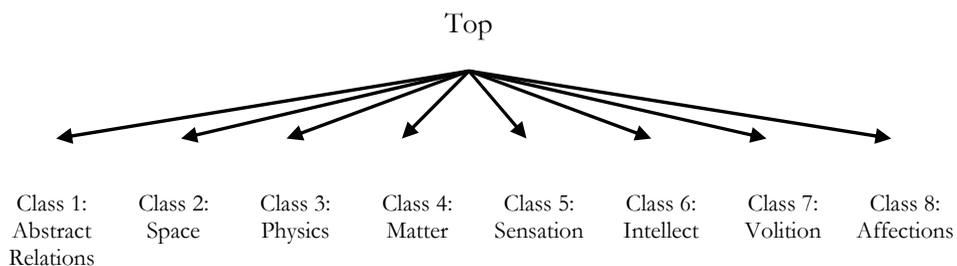
The fundamental idea is that anything that is true of some node of the hierarchical lexicon (as regards the organizing criteria) is also true of all descendents of that node.

Readers will already have called to mind the important work of Louw and Nida<sup>48</sup> and the works produced by their various disciples. Although a proper hierarchical lexicon includes semantic specifications, consideration of this area of work is beyond the scope of the present essay. I am focusing on syntax.

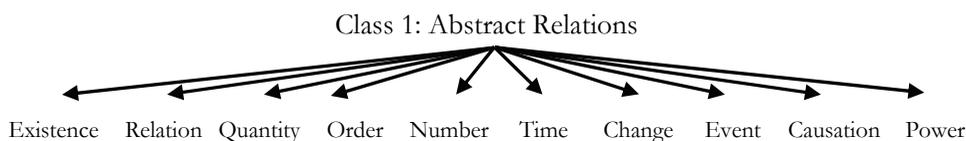
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<sup>47</sup> The partial tree shown here is inferred from the "Synopsis of Categories" in Roget, *Roget's International Thesaurus*, xvii–xxiv.

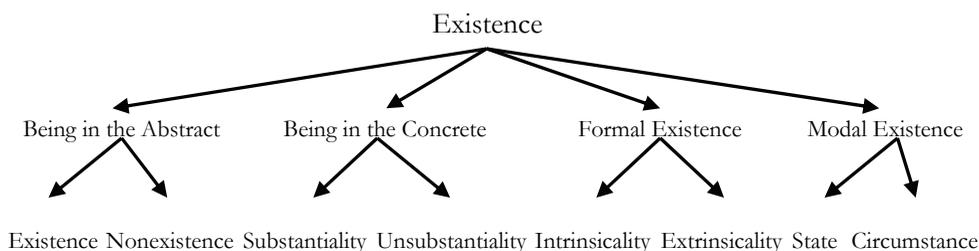
<sup>48</sup> Louw–Nida, *Greek-English Lexicon*.



Each of the daughter nodes (the various classes) dominates its own sub-tree. For example, the next level below Class 1 has ten daughters:



Each daughter node dominates its own sub-tree. For example, “Existence” has four daughters, each of which has two daughters:



Meanwhile, progress has been made in linguistics as regards the lexicon. Indeed, the lexicon has moved to centre stage. According to Cahill and Gazdar:

In contrast to linguistic work in the 1960s and 1970s, where the lexicon was assumed to be no more than a simple word list, current [language processing] work mostly places the lexicon at the centre of attention, assuming that almost all of the morphology, syntax, semantics and phonology of a language is to be captured within the lexicon rather than in the extralexical components.<sup>49</sup>

We turn next to four ideas that make the hierarchical lexicon so powerful.

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<sup>49</sup> Cahill–Gazdar, “Multilingual Lexicons for Related Languages.”

semantics and phonology of a language is to be captured within the lexicon rather than in the extralexical components.<sup>49</sup>

We turn next to four ideas that make the hierarchical lexicon so powerful.

#### 4.1 Loading Up the Lexicon

To simplify their grammars, linguists have created elaborate lexical entries for words (and other entities of linguistic interest). I prefer the representations used by Sag and Wasow,<sup>50</sup> and by Sag et al.,<sup>51</sup> and will follow their approach here. The information contained in Sag–Wasow’s full lexical entry for the word “book” is shown on the next page.<sup>52</sup> It would take us too far afield to discuss each item, so I will only make a few comments intended to help readers appreciate the substantial amount of information that is encoded in present-day lexical entries.

- The structure shown is termed an *attribute-value matrix*. The arrangement is equivalent to a graph structure.
- The typographical conventions are simple: attribute names are in small capitals, their values are to their right, angle brackets enclose lists, square brackets enclose complex feature values, and atomic values are in italics.
- Here, the top left entry tells us that we are dealing with a *word*, not a *phrase*.
- Then there are three major sets of attributes (or “features”): SYN = *syntax*, ARG-ST = *argument structure*, and SEM = *semantics*.
- The item has a HEAD (actually, is a head) whose part of speech is *noun*.
- The word cannot be an anaphor. (ANA = –.)
- For determination of agreement (AGR), the word is 3<sup>rd</sup> person singular.
- The argument structure (ARG-ST) is a determining phrase (DetP) which is such that it agrees with the features specified under AGR.
- The index 1 under both HEAD and ARG-ST is co-referential. That is, the AGR feature value is shared in the two attributes.
- The DetP must be a count rather than a mass phrase (COUNT = +).
- The scope of this essay precludes my going into the rich information encoded in the semantics part of the attribute-value matrix.

One can see that an attribute-value matrix packs a great deal of information into a small area. But, were each entry of the lexicon stored in the completely expanded form shown above, the amount of redundancy (and wasted memory) would be substantial. Dealing with this profligacy is part of the reason that hierarchical organization is called into play.

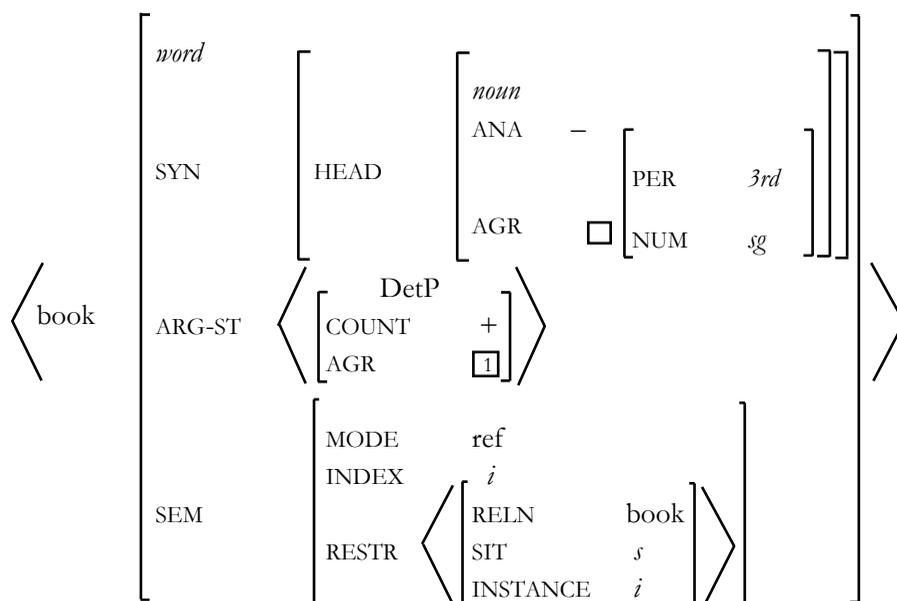
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<sup>49</sup> Cahill–Gazdar, “Multilingual Lexicons for Related Languages.”

<sup>50</sup> Sag–Wasow, *Syntactic Theory*, 1<sup>st</sup> edition. The 1<sup>st</sup> and 2<sup>nd</sup> editions are very different. Several of my examples are from the first.

<sup>51</sup> Sag et al., *Syntactic Theory*, 2<sup>nd</sup> edition.

<sup>52</sup> Sag–Wasow, *Syntactic Theory*, 1<sup>st</sup> edition, 186.



#### 4.2 Hierarchy Minimizes Redundancy While Encoding Systematic Relations

Originally, the lexical hierarchy disciplined the assembling of semantically homogeneous groups of words, the basic resource enshrined in a thesaurus. As syntacticians extended the exploitation of hierarchical relations to the whole of their discipline, they realized that using hierarchy yields two further very helpful benefits:

- Minimizes redundancy, simplifying grammars and speeding parsing
- Makes explicit many of the regularities in the language.

The hierarchy of types in syntactic theories has become quite elaborate. Indeed, in their syntax of English, the type hierarchy devised by Sag et al.<sup>53</sup> has three levels above *word* and *phrase*. Their complete type hierarchy has as many as seven levels and has almost forty final nodes (the lowest level nodes shown in the hierarchy). For example, one path from top to bottom reads:

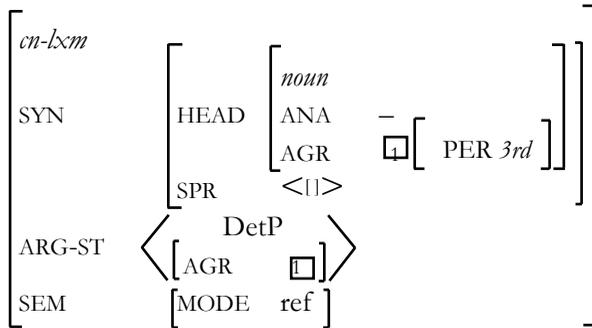
feat-struct → synsem → lexeme → infl-lxm → verb-lxm → tv-lxm → stv-lxm

Note that *synsem* = “a complex of syntactic and semantic information;” *infl-lxm* = inflecting-lexeme; *tv-lxm* = transitive-verb-lexeme; and *stv-lxm* = strict-transitive-verb-lexeme. In this chain of categories, each category is a superset of all items to its right.

To get a feel for how redundancy is squeezed out of the hierarchical lexicon, consider the situation for the word “book.” This word is a common noun (encoded as *cn-lxm* by Sag and Wasow). That is, in the lexical hierarchy a node labelled *cn-lxm* will immediately

<sup>53</sup> Sag et al., *Syntactic Theory*, 2<sup>nd</sup> edition, 273–78.

dominate “book” (will be its mother). Now, a certain amount of information is true of all common nouns. Specifically, their attribute-value matrix is:<sup>54</sup>



All of the attribute specifications that appear in this *cn-lxm* attribute-value matrix can be removed from the attribute-value matrix for “book,” since they will be inherited by that daughter node. As we will see in the next sub-section (*Defeasible Defaults*), a substantial amount of the information contained in the common noun attribute-value matrix is also typically true of its mother node, *noun-lxm*, and so can be moved up into that node if the information is suitably marked.

### 4.3 Defeasible Defaults: Providing for Exceptions

At this point in pushing information as high as possible in the type hierarchy, a further notational refinement is called for. Consider the anaphor attribute (ANA) having value “-” for common nouns. Since nouns include proper nouns, common nouns, and pronouns, we cannot simply assign ANA the value “-” for all nouns. Pronouns emphatically can be anaphors. We need a way of indicating that an attribute value is typically true (is true by default) but that the default value can be altered in a daughter attribute-value matrix when countermanded locally. (We say that the default is defeasible.) The notational convention for indicating that “over-ruling” is allowed adds a slash between the attribute name and its (defeasible) default value. Thus, in the attribute-value matrix for *noun-lxm*, the anaphor information will read:

$$ANA / -$$

Similarly, to allow the person attribute to cater for the pronouns, we will have:

$$PER / 3rd$$

Defaults have significance as regards prototypicality:

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<sup>54</sup> For the nuances of this attribute-value matrix, see Sag–Wasow, *Syntactic Theory*, 1<sup>st</sup> edition, 179.

Prototype categories are represented as default constraints on types high up in the type hierarchy. Since such types tend to be very general, the properties of the prototype will be inherited by [specific words].<sup>55</sup>

#### 4.4 Multiple Inheritance

A final extension is to allow any node to have more than one mother node. This allows the hierarchical lexicon to handle mixed categories such as the gerunds discussed in section 3.2 above. When a category has more than one mother (is “multi-dominated”), then it inherits all of the information that is present in, and consistent between, its mothers. Such a category exhibits *multiple inheritance*.

#### 4.5 The Potential of the Hierarchical Lexicon

Now that the lexicon incorporates so much of a language’s grammar, writing its lexicon is tantamount to producing its grammar. Hence, the prospect of having an extensive hierarchical lexicon for any Semitic language soon is faint indeed. But, syntacticians should be able to create the upper reaches of the type hierarchy for, say, Hebrew and/or Syriac. Having such specifications in hand would allow lexicographers to mark word tokens and types with much more refined and informative part-of-speech labels than is now the case. It would also allow lexica to replace the present day jumble of unexplained part-of-speech abbreviations with attribute-value matrices showing the characteristics of the parts of speech used. Then, as the syntacticians gained coverage of the languages being represented, the lower levels of the hierarchies could be filled in, yielding ever more precise classifications.

### 5. CUSTOMIZED PRESENTATION OF SYNTACTIC CATEGORIES

By now, some readers may be thinking: “We don’t want to have to learn and remember all the ins-and-outs of some particular, possibly transient, modern syntactic representation. We want to work with the old ‘tried-and-true’ categories.”

Earlier, I made the case that “tried” categories often are a long way from “true” categories. Nonetheless, I understand that while working with categories such as *pdp-lxm* (“predicational-preposition-lexeme”) and *piv-lxm* (“prepositional-intransitive-verb-lexeme”) might be precisely what specialist readers would want, such specificity may be beyond the needs and interests of many other readers.

Since modern lexica should be constructed as “repurposable” databases rather than as books, several paths to presentational flexibility lie to hand. I will introduce and comment on two options. Both are user friendly. The first is trivially simple to formulate and implement, while the second is tricky. The options are to:

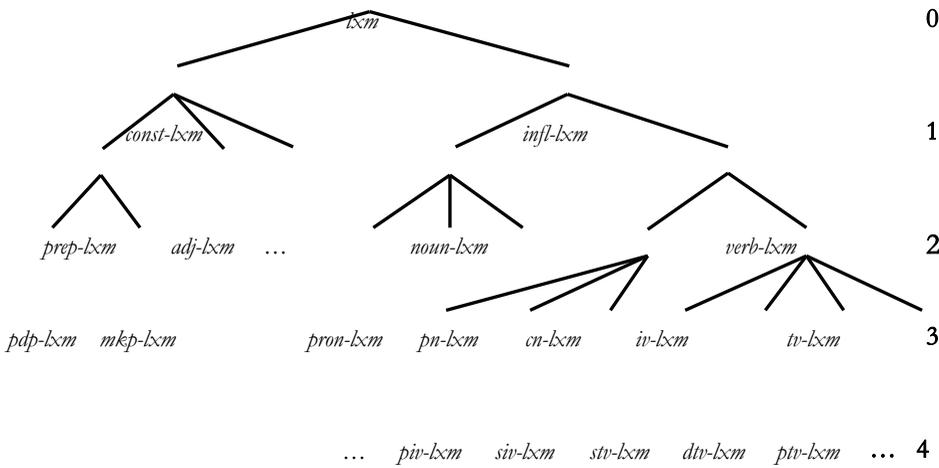
- Limit the type hierarchy.
- Map hierarchical information onto the categories of specific grammars.

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<sup>55</sup> Malouf, *Mixed Categories*, 148.

5.1 Limit the Type Hierarchy

The diagram shows part of the type hierarchy specified by Sag and Wasow.<sup>56</sup>



[ Ever more specific sub-categories down to word level attribute-value matrices]

Legend:

Level	Abbrev.	Full name	Level	Abbrev.	Full name
0	<i>lcm</i>	<i>lexeme</i>	3	<i>pdp-lcm</i>	<i>predicational-preposition-lexeme</i>
				<i>mkp-lcm</i>	<i>marking-preposition-lexeme</i>
1	<i>const-lcm</i>	<i>constant-lexeme</i>		<i>pron-lcm</i>	<i>pronoun-lexeme</i>
	<i>infl-lcm</i>	<i>inflecting-lexeme</i>		<i>pn-lcm</i>	<i>proper-noun-lexeme</i>
				<i>cn-lcm</i>	<i>common-noun-lexeme</i>
2	<i>prep-lcm</i>	<i>preposition-lexeme</i>		<i>iv-lcm</i>	<i>intransitive-verb-lexeme</i>
	<i>adj-lcm</i>	<i>adjective-lexeme</i>		<i>tv-lcm</i>	<i>transitive-verb-lexeme</i>
	...	<i>other constant lexemes</i>			
	<i>noun-lcm</i>	<i>noun-lexeme</i>	4	<i>piv-lcm</i>	<i>prepositional-intransitive-verb-lexeme</i>
<i>verb-lcm</i>	<i>verb-lexeme</i>	<i>etc.</i>		<i>etc.</i>	

For printed editions of a lexicon, one might supply information across several levels, coded by colour and/or position in the entry. For computer access, vendors should easily be able to let users select the specificity level of the information that they wish to see for any given analytic foray. Interest in the various levels likely would distribute like this:

- It is difficult to imagine any users who would wish to know only the information embodied in levels 0 and 1 of the type hierarchy above.

<sup>56</sup> Sag-Wasow, *Syntactic Theory*, 1<sup>st</sup> edition, 176, 180–81.

- Level 2 might be termed “the traditional level.” All users should readily comprehend this level of information.
- Most users would be happy, I suspect, having the additional refinement afforded by the Level 3 categories.
- Specialists might want to see the categories included in the *maximal projection* of the type hierarchy. The maximal projection is the set of all nodes at the distal ends of tree branches, their “leaves:” level 4 plus the non-verb parts of level 3.
- Levels “below the diagram” (down to word-specific attribute-value matrices) are unlikely to be available any time soon but would, in any case, be of interest only to linguistically advanced users, I suspect.

## 5.2 Map Hierarchical Information onto the Categories of Specific Grammars

The ways of looking at and dealing with syntactic problems underlying the type hierarchy and attribute-value matrices introduced above have been increasingly influential in linguistics for more than two decades. They are not “flashes in the pan” at risk of suddenly becoming irrelevant. Nonetheless, there may well be potential users of lexica who have their preferred, more traditional, ways of categorizing syntactic entities. Although it likely would be economically unsound to print editions of a lexicon tailored to the disparate desires of small groups of users,<sup>57</sup> such tailoring may eventually be doable by analysis-and-display engines of the sort created by various Bible software vendors. To accomplish such customization, one would need a way of mapping from a meta-theoretical<sup>58</sup> representation of the syntactic facts onto the representational categories used by various syntactic theories.

Almost two decades ago, it was proved that the desired mapping is possible for this wide range of (then current) syntactic theories:<sup>59</sup>

- |                                      |  |
|--------------------------------------|--|
| • Simple phrase structure grammar    | • Transformational grammar             |
| • Tagmemics                          | • Government-binding theory            |
| • Augmented phrase structure grammar | • Generalized phrase structure grammar |
| • Relational grammar                 | • Systemic grammar                     |
| • Arc pair grammar                   | • Categorical grammar                  |
| • X-bar syntax                       | • Indexed grammar                      |

The proof also showed that:

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<sup>57</sup> Aficionados of on-demand digital book production might disagree with this assessment, but as the co-author of many books, I would not look kindly on the need to produce and maintain disparate versions of the same basic text. However, the method of approach that I am about to sketch might also be used to produce differing versions *automatically*. Camera-ready copy for one book of which I am co-author was literally produced (under Unix and LaTeX) by my typing the command “book,” namely: Andersen–Forbes, *The Vocabulary of the Old Testament*.

<sup>58</sup> Meta-theoretical = outside/above the theories.

<sup>59</sup> Gazdar et al., “Category Structures,” 1–19.

[T]here is somewhat more commonality among the diverse approaches [to syntax] currently being pursued than there appears to be when those approaches are viewed in the formalisms used by their practitioners.<sup>60</sup>

Grammars that assign sets of values to attributes and those that share values across attributes were not included in the proof, thereby leaving the question of “mappability” unanswered for important syntactic theories such as:

- Functional unification grammar
- The PATR II formalism
- Lexical functional grammar
- The recent Sag *et al.* grammar

Unfortunately, the proof that the categories for the grammars in the first list can be extracted from a meta-theoretical database did not show how to define the needed data structures nor how to implement the mappings. In addition to these missing essential pieces, we do not even know if the categories for the many important grammars in the second list can be recovered, even in principle, from a suitably defined meta-theoretical data structure. In short, the specification of data structures and algorithms for generating category information for standard grammars remain to be worked out, likely an arduous task.

### 5.3 The Potential of Customized Presentation of Syntactic Categories

Given that:

1. we do not know if the categories for syntactic formulations that are currently under active investigation can be recovered from an overarching data structure *and*
2. we do not have a specification for the data structures that would suffice for older syntactic theories that we know to be mappable,

it seems wiser simply to opt for the hierarchy-limiting approach to flexible category presentation. Borrowing from the type hierarchies for various languages that are already in the literature, it should not be too tall an order to specify a suitable upper hierarchy for Biblical Hebrew and/or Syriac.

## 6. THREE AREAS OF COLLABORATION?

I have proposed three areas where syntacticians should be able to help advance the lexicographer’s art:

- Algorithmic detection and delimitation of mixed and gradient categories
- Specification of partial yet useful type hierarchies for target languages
- Enablement of customized presentation of syntactic categories.

*Perhaps the 21st century will become, in linguistics, the era of the dictionary and of an integrated approach to linguistic description.*

Anna Wierzbicka, Review of Mel’čuk and Žolkovskij.

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<sup>60</sup> Gazdar, *et al.*, “Category Structures,” 2.

**PART THREE**  
**WORDS, TEXTS, AND CONTEXTS**



## CHAPTER 7

# A SYNOPSIS-BASED TRANSLATION CONCORDANCE AS A TOOL FOR LEXICAL AND TEXT-CRITICAL EXPLORATION

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From 2000 to 2004 the Peshitta Institute in Leiden and the Werkgroep Informatica at the Vrije Universiteit Amsterdam joined forces in the CALAP (Computer-Assisted Linguistic Analysis of the Peshitta) project in which a database of the Peshitta of Kings has been developed. One of the products is a translation concordance at word level based on a synopsis at clause level of the Hebrew and Syriac versions of these texts. The results are useful both in showing the general distribution of the renderings of a lexical item and in pointing out glaring exceptions, which are often of particular text-critical or linguistic interest.

### 1. LANGUAGE—FROM PHONETIC/GRAPHIC MATERIAL TO MESSAGE

Languages are those remarkable phenomena which use sound to convey messages. The fascinating puzzle of how this occurs occupies specialists in many fields, from phoneticians to psychologists, from grammarians to anthropologists and poets. The ways in which languages convey messages by means of raw phonetic data, or a written representation of this, are as diverse as the thousands of languages of the world. Such variety in phonological systems and language strategies is manifested, that one could say that the characteristics in themselves are arbitrary—no universal rule determines which sounds or strategies a particular language might employ to convey a particular significance. Yet in spite of variation and shift in language use and in spite of the notorious exception which confirms the rule, there is still a high degree of consistency and system within a single language, for otherwise it would not function as an efficient tool for communication.

### 2. COMPARISON OF LANGUAGES

With all this diversity among languages, one could question whether there are points of similarity, given the shared raw materials (sound) and the end product (a message). Can sound systems and language strategies be compared in a significant manner? One approach is to compare the formal components of one language with those of another, that is:

- the phonetic material itself
- the phonological system which filters this raw data to distinguish between meaningful differences and non-distinctive variation
- the grammar which ascribes certain systematic values to the smallest meaningful units—morphemes—and combines these into words

- the syntax which organizes these smaller units into phrases, clauses, and larger textual units.

The selection of basic phonetic raw material and the strategies used to systematize it into meaningful expressions distinguish languages one from another; each aspect provides insight into how languages both resemble and diverge from one another.

From 2000 to 2004, the Peshitta Institute in Leiden and the *Werkgroep Informatica* at the *Vrije Universiteit Amsterdam* worked together in developing a database of the Syriac version of the Books of Kings. The goal of the project was to compare the Masoretic text with that of the Peshitta, using the Leiden BTR text<sup>1</sup> supplemented with 9a1 material.

The project thus focussed on a text and a translation of either that same text or one closely related to it. The two languages involved are, furthermore, both Northwest Semitic languages, related both in language typology and in vocabulary. One could remark that within the broad scale of diversity among languages, this project is not an extremely challenging undertaking.

Nonetheless, when a text is translated, many changes occur. The central question has been: how can the host of differences between the Hebrew and Syriac versions be explained? One could think of aspects such as:

- the requirements of the language systems involved
- the style of translation used (free—literal)
- the liberties taken by the translator (exegetical alterations such as additions, omissions, transpositions, and changes with regard to content or meaning)

In addition to these categories, one needs to take into account that neither the original Hebrew source text nor the original Syriac translation itself has been preserved. Differences occurring between the two versions might, therefore, be due to two additional factors:

- a form of the Hebrew *Vorlage* used to produce the Peshitta differed from the Masoretic text
- both intentional and unintentional changes which could have been made in the original text of the Peshitta during the process of textual transmission.

Thus the question above may be refined as follows:

*Which formal deviations from the Masoretic text encountered in the Peshitta relate to the requirements of the Syriac language, and which are a result of the composition and transmission of the translated text?*

To put it differently: what is systematic and what is incidental?

In order to answer these questions, the CALAP project (Computer-Assisted Linguistic Analysis of the Peshitta), funded by the Dutch Scientific Research Foundation (NWO), was initiated. Several types of expertise were combined:<sup>2</sup>

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<sup>1</sup> BTR is a combination of Basic Text (BT) and TR (Textus Receptus). The designation BTR issued for the text type represented in 7a1 and other manuscripts from the sixth to ninth centuries.

<sup>2</sup> Cf. Jenner–Van Peursen–Talstra, “CALAP: An Interdisciplinary Debate between Textual Criticism, Textual History and Computer-Assisted Linguistic Analysis.”

- textual criticism which focusses on the exceptions and differences—that which is incidental
- linguistics which focusses on the patterns which more generally hold true—that which is systematic
- computer technology

### 3. IMPLEMENTING COMPUTERS FOR COMPARING LANGUAGES

An essential dimension of the project has been the use of computer programs. The advantages of computer implementation lie in the scope of data which can be processed and the verifiability of the results. The drawback lies in the initially disproportional amount of time required both to prepare the textual data by means of morphological coding and to develop programs which are able to deal with data in the two languages concerned. The programs needed to be capable of segmentalizing the string of, in this case, graphic symbols into units which function within the systems of the separate languages and which can be recombined into larger units functioning at the various levels within the hierarchical system of each language.

To make a meaningful comparison, it is essential to have units which can rightfully be compared with one another. To begin with, the Books of Kings were chosen—the Hebrew text and a Syriac rendering of this text or a text closely resembling it. Each version of the Books of Kings being studied is divided into two books, each corresponding book presents the same number of chapters, and each of these chapters presents an equal number of verses with one exception: 1 Kings 3:23 is skipped in the Peshitta (the Syriac text jumps in its numbering from verse 22 to verse 24). The units mentioned have been taken to be formally comparable to one another.

The Syriac data were prepared following the strategies developed for treating Hebrew data by the Werkgroep Informatica of the Vrije Universiteit Amsterdam. Taking one chapter at a time, codes are inserted into the linear text to isolate the morphemes. With the aid of computer programs, patterns of morphemes are recognized as yielding particular grammatical functions within a word, patterns of words are recognized as forming phrases, and combinations of phrases are recognized as functioning as clause constituents.

Once the data were thus prepared, strategies were developed whereby these isolated formal units could be meaningfully compared with one another. A linear comparison of words or even of lexical entries (to allow for the elements which are not written independently but are attached to another form) soon runs aground because of the differing number of items needed in the separate languages to represent a comparable unit. As illustration, we give a clause from 2 Kings 23:5:

ויקטר בבמות בערי יהודה ומסבי ירושלם

“and he offered incense in the high places in (the) cities (of) Judah and (the) surroundings (of) Jerusalem”

ܠܚܝܬܝܢ ܕܥܝܪܘܫܐܝܡ ܕܝܘܕܐ ܘܕܥܝܪܘܫܐܝܡ ܕܝܘܕܐ ܘܕܥܝܪܘܫܐܝܡ ܕܝܘܕܐ

“to place incense upon the high places in the cities of Judah and in her surroundings, that of Jerusalem”

The Hebrew text contains six words separated by blank spaces and the Syriac eight. If we are to count separately the elements such as prepositions and conjunctions which are written attached to the following word, we come to eleven in Hebrew and fourteen in Syriac. Neither the verbal tenses used in these clauses nor the introductory particles preceding the verbs are identical. The preposition indicating the location where the activity of the verb takes place is not a translation at word level of the preposition in the other language. The structure of the noun phrase contains considerably more elements in Syriac than in Hebrew. Yet these two clauses are taken to be a rendering of one another.

Quite early in the course of this research it became apparent that though vocabulary and internal phrase structure may vary considerably between the two versions, clauses as whole units could be matched meaningfully with each other, for at clause level the constituent structures manifest a high degree of similarity. Based on this observation, a program was developed to create a synopsis of the two versions at clause level. Within the clause level, clause constituents, that is, the units with a corresponding syntactic function in relation to the predicate, have proven to provide a fairly dependable basis for comparison. The units functioning as clause-level constituents in the example above are given in table 1.<sup>3</sup>

Observing the centre columns in table 1, the only difference between the two versions at clause-constituent level is that Syriac has an explicit direct object while Hebrew does not. This difference can be explained by the fact that Syriac uses the idiomatic expression “place incense” (verb + direct object) which is the usual translation equivalent for the single word occurring in Hebrew “turn into smoke; offer incense,” where the object is not expressed in a separate clause constituent.

When the phrases occurring as clause constituents are compared, however, more differences appear. The first concerns the introductory element functioning as a conjunction connecting the clause to the preceding context. In Hebrew, the conjunction “and” connects this clause with the preceding context as a coordinated element of the same level. In Syriac the preposition “to” introduces the following infinitive clause as subordinate to the preceding context. The question arises whether the one particle is a translation of the other. The opposite often is encountered when, for example, the Hebrew infinitive “to say” is rendered in Syriac by a finite form “he said.”

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<sup>3</sup> In this presentation we add a transcription of the examples, following the conventions used by the Werkgroep Informatica, for the benefit of those unfamiliar with Hebrew and/or Syriac. The corresponding characters of the Hebrew and Syriac alphabets are represented by the following letters of the Roman alphabet: > B G D H W Z X V J K L M N S < P Y Q R F C T, though Syriac lacks the F (ܦ).

MASORETIC TEXT		PESHITTA	
<i>Text</i>	<i>Clause Constituent</i>	<i>Clause Constituent</i>	<i>Text</i>
ו [w] “and” <sup>4</sup>	coordinate conjunction	subordinate conjunction <sup>5</sup>	ל [L] “to”
יקטר [JQVR] “he offered incense”	verbal predicate	verbal predicate	מסמ [MSM] “place” (inf.)
---	---	direct object	מסמ [BSM>] “incense”
בבמות [BBMWT] “in the high places”	locative phrase	locative phrase	לל חמלה <L <LWT> “upon the high places”
בערי יהודה ומסבי ירושלם [B<RJ JHWDH WMSBJ JRWCLM] “in the cities of Judah and surroundings of Jerusalem”	locative phrase	locative phrase	מסמול ומסמול מסמול ואסמול [BQWRJ> DJHWD> WBXDRJH D>WRCLM] “in the cities of Judah and in the surroundings of Jerusalem”

**Table 1. Parallel Clause Constituents in 2 Kings 23:5**

To understand the effect in this case, the preceding context also needs to be taken into account:

MT: “and he [Josiah] put an end to the (idolatrous) priests, whom the kings of Judah had ordained, *and* he offered incense in the high places ...”

P: “and he killed the (idolatrous) priests, those whom the kings of Judah had installed *to* offer incense upon the high places ...”

By means of coordination, the Masoretic text thus presents the subject of the preceding clause as the subject of the clause under discussion, so that it is King Josiah who “offered incense in the high places.” In the Peshitta, by subordinating the clause to the preceding, it is the priests who were installed by the kings of Judah “to place incense upon the high places.” Although in other contexts translating the Hebrew infinitive “to say” by “he said” makes little difference in the translation, in this example rendering a finite verbal form by an infinitive has far-reaching consequences for the significance of the text. The motivation for this would appear to be more exegetical than linguistic in nature.<sup>6</sup>

<sup>4</sup> The conjunction ו [w] “and” functions here both as a coordinating conjunction at clause level and as an indication of the verbal tense used (imperfect consecutive).

<sup>5</sup> The preposition ל [L] “to, for” is here analyzed as functioning as a subordinating conjunction, embedding the following infinitive clause in the preceding independent clause.

<sup>6</sup> Cf. a comment of F.I. Andersen on this case (personal communication): “More likely a defect in

Within the phrases thus matched as clause constituents, the words are matched, using the part of speech as significant determinant. In this way, differences in the phrase structure of the two versions become visible (see table 2).

MASORETIC TEXT			PESHITTA		
<i>Form</i>	<i>Analysis</i>	<i>Translation</i>	<i>Translation</i>	<i>Analysis</i>	<i>Form</i>
כ [B]	Preposition	“in”	“upon”	Preposition	ܟܠ [ <L ]
(ה) [H]	Def. article	“the”	---	---	---
במזות [BMWT]	Noun: pl. abs. state	“high places”	“high places”	Noun: pl. emph. state	ܟܠܟܠ [ <LWT > ]

**Table 2. Parallel Words in the First Locative Phrase**

Two differences are noticeable: the preposition “in” is translated by “upon” and Hebrew uses the definite article plus a noun in absolute state, while Syriac uses the emphatic state of the noun. The latter difference is a common aspect of the grammar of the two languages and needs no further comment here. The difference in the preposition used, however, can be approached in several different ways, such as:

- At word level one could check how often these two prepositions are coupled as renderings of one another; one could search in both directions—when “in” is translated as “upon” and *vice versa*
- In relation to the verb used in the clause, one could look into how the preposition is related to a specific verbal valence pattern, so that the prepositions would not be a translation at word level, but be part of a larger pattern of a verb with its satellites.

We will not pursue these possibilities further in this article.

The second prepositional phrase presents more divergences than the first one. These can be illustrated by means of tree diagrams (see below).

In Hebrew a single preposition governs two coordinated noun phrases each composed of a noun in construct state governing a proper name, which is taken to be in absolute state. In contrast, Syriac repeats the preposition “in” and has thus two coordinated prepositional phrases instead of one.<sup>7</sup> Furthermore, instead of the construct state binding constructions as in Hebrew, Syriac makes use of the preposition ܟܠ, “of” to indicate a governing relationship, once with and once without a possessive pronoun on the first noun: “cities of Judah” and “surroundings of her of Jerusalem.”

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MT, since the versions are all against it. Yet they do not point unanimously to an emendation. The choice is between plural (LXX, Targ.) and infinitive (Luc., Vulg., P). Both indicate that the priests, not Josiah, did it. The changes are not really exegetical, but rather glossing over an unacceptable MT.”

<sup>7</sup> For a treatment of this phenomenon and for more examples, see Dyk–Van Keulen, “Of Words and Phrases: Syriac Versions of 2 Kings 24:14.”



MASORETIC TEXT			PESHITTA		
<i>Form</i>	<i>Analysis</i>	<i>Translation</i>	<i>Translation</i>	<i>Analysis</i>	<i>Form</i>
ב [B]	Preposition	“in”	“in”	Preposition	ܒ [B]
ערי [<RJ]	N pl. c. state	“cities of”	“the cities”	N pl. emph. state	ܥܪܝܐ [QWRJ>]
---	---	---	“of”	Preposition	ܕ [D]
יהודה [JHWDH]	Proper noun abs. state	“Judah”	“Judah”	Proper noun abs. state	ܝܗܘܕܐ [JHWD>]
ו [W]	Conjunction	“and”	“and”	Conjunction	ܘ [W]
---	---	---	“in”	Preposition	ܒ [B]
מסבי [MSBJ]	N pl. c. state	“surroundings of”	“surroundings of”	N pl. c. state	ܡܫܒܝܐ [XDRJ]
---	---	---	“her”	3fs. suffix	ܗ [H]
---	---	---	“of”	Preposition	ܕ [D]
ירושלם [JRWCLM]	Proper noun abs. state	“Jerusalem”	“Jerusalem”	Prop. noun abs. state	ܝܪܘܫܠܡ [ >WRCLM]

**Table 3. Parallel Words in the Second Locative Phrase**

This example is fairly straightforward, but the same approach can be used to match elements in more complicated cases, such as when one version uses an adjective and the other a subordinate clause to express the same meaning.

In this manner, lists of parallel lexemes, parallel phrases, and parallel clauses occurring within corresponding verses within corresponding chapters are produced. Both the correspondences and the points of difference are systematically brought to the fore. Furthermore, omissions and additions are clearly delineated.<sup>8</sup>

At each level, a comparison of the language systems can be made, from graphic signs, up through morphology, word structure, phrase structure, clause structure, and text composition.

#### 4. THE TRANSLATION CONCORDANCE

One of the products of this process is an electronic translation concordance at word level. In this concordance, elements are matched not only when they are the expected translation at word level, but also when unexpected elements occur at corresponding positions in the synoptically aligned texts, that is, unexpected in the sense that the one element is not a

<sup>8</sup> More on the electronic translation concordance can be found in Dyk, “Lexical Correspondence and Translation Equivalents: Building an Electronic Concordance.”

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- The most frequently occurring translation equivalents of a form in the one language or the other
- Synonyms of a form in the one language or the other, and their distribution
- Glaring exceptions to these two possibilities.

Particularly the third possibility often turns out to be of special interest to text-critical scholars and linguists alike.

#### 5. THE TRANSLATION CONCORDANCE AS HERMENEUTIC KEY

To illustrate the most frequently occurring equivalents and the occurrence of synonyms, we take as example the Hebrew verb הלכ [HLK] “go, walk.” In the texts treated, the following equivalents occur (in alphabetical order):

הלכ [HLK] “go, walk”	139× הלכ [ZL] “go, walk, travel”
	14× הלכ [T] “come, arrive”
	51× הלכ [HLK] “go, proceed, walk, travel”
	6× הלכ [JBL] Pa. “bring, escort;” Aph. “bring, lead, carry, receive”
	2× הלכ [HPK] “turn, change, move, return”
	1× הלכ [XW] “show, manifest, declare”
	1× הלכ [BR] “pass by, cross over, pass through”

<sup>9</sup> This definition of “corresponding” elements is also being implemented in the concordance being prepared by the Peshitta Institute Leiden. Compare Borbone’s definition of “corresponding word” in his “Correspondances lexicales entre Peshitta et TM du Pentateuque,” esp. p. 2. Cf. also Borbone–Jenner, *The Old Testament in Syriac according to the Peshitta Version, Part V Concordance*, vol. 1 *The Pentateuch*, xii.



2 Kings 20:9 tells of the shadow of the sundial which is to go ten degrees forward or backwards. Viewed from the patterns described above, one would expect ܠܠ [ >ZL], but we find ܠܠܢ [HLK].

From the list, we see that Hebrew הלך [HLK] is also translated by six other Syriac verbs. The translation concordance provides the Hebrew verbs to which these six Syriac verbs correspond.

138× בוא [BW>] “come, enter”	ܠܠ [ >T>] “come, arrive”
14× הלך [HLK] “go walk”	
1× יצא [JY>] “exit, go out”	
2× ירד [JRD] “descend”	
1× ישב [JCB] “sit, dwell, remain”	
9× לקח [LQX] “take”	
6× שוב [CWB] “return”	
8× (omitted)	

Table 7. Hebrew items occurring where ܠܠ [ >T>] occurs in Peshitta Kings

3× בוא [BW>] “come, enter”	ܠܠܢ [JBL] Pa. “bring, escort;” Aph. “bring, lead, carry, receive”
6× הלך [HLK] “go, walk”	
1× ירד [JRD] “descend”	
1× נשא [NF>] “carry, lift up”	
2× (omitted)	

Table 8. Hebrew items occurring where ܠܠܢ [JBL] occurs in Peshitta Kings

4× אחרנית [ >XRNJT] “end, result”	ܠܠܢܢ [HPK] “turn, change, remove, return”
1× בוא [BW>] “come, enter”	
1× הלך [HLK] “go, walk”	
1× הפך [HPK] “turn, change, demolish”	
1× כמר [KMR] “grow excited”	
1× סבב [SBB] “turn, march around, surround”	
82× שוב [CWB] “return”	

Table 9. Hebrew items occurring where ܠܠܢܢ [HPK] occurs in Peshitta Kings

1× אָמַר [>MR] “say, speak”	ܡܘܠ [XW>] “show, declare”
1× הָלַךְ [HLK] “go, walk”	
1× יָדַע [JD<] “know;” Hif. “make known”	
37× נָגַד [NGD] Hif. “make known, report, tell”	
8× רָאָה [R>H] “see;” Hif. “cause to see; show”	

**Table 10. Hebrew items occurring where ܡܘܠ [XW>] occurs in Peshitta Kings**

1× בָּעַר [B<R] “burn, kindle, burn down”	ܡܘܠ [BR] “pass by, cross over”
1× הָלַךְ [HLK] “go, walk”	
21× סוּר [SWR] “turn aside, depart from”	
25× עָבַר [BR] “pass by, cross over”	
1× שָׁה [F<H] “do, make”	

**Table 11. Hebrew items occurring where ܡܘܠ [BR] occurs in Peshitta Kings**

1× אֶל [>L] “to, towards”	ܡܘܠ [L] “enter, come in”
84× בּוֹא [BW>] “come, enter”	
1× הָלַךְ [HLK] go, walk”	
1× נָכַח [NKH] hif. “strike, smite”	
1× נָתַן [NTN] “give”	
1× (omitted)	

**Table 12. Hebrew items occurring where ܡܘܠ [L] occurs in Peshitta Kings**

Again, the context should be checked to see if there are clues present to illuminate the choice of words. As can be seen, some forms have a strong preference for a particular rendering, such as Hebrew בּוֹא [BW>] for ܡܘܠ [>T>], while others show a broader distribution in the choice of renderings. This makes the skewed distribution of ܡܘܠ [HLK] and ܡܘܠ [>ZL] as translations for הָלַךְ [HLK] even more remarkable, and confirms the hunch that there might be a specific semantic value for the use of ܡܘܠ [HLK] in Syriac.

These were but a few examples of

- most frequently occurring equivalents in the one language or the other
- synonyms of a form in the one language or another.

We still need to give an example of:

- glaring exceptions to the two possibilities.

## 6. THE POSSIBLE EFFECTS OF PHONETIC CHARACTERISTICS/GRAPHIC REPRESENTATION ON THE TRANSLATION

Let us look at the renderings of the number אֶחָד [ >XD] “one.” In the treated texts we find the following forms in the electronic translation concordance:

אֶחָד [ >XD] “one”	1× אָסַב [ >XD] “take, seize upon, lay hold of”
	1× אַסְבַּע [ >XRJN] “other; next”
	87× אֶחָד [XD] “one”
	1× אֶחָד [QRJ] “beam; plank”
	2× (not rendered)

**Table 13. Syriac items occurring where אֶחָד [ >XD] occurs in MT Kings**

The first one in the alphabetically ordered list is remarkable: how did the verb “take, seize, lay hold of” get into the sentence where in the Masoretic text we read the number “one”? The text is to be found at the end of 1 Kings 4:19:

וּנְצִיב אֶחָד אֲשֶׁר בְּאֶרֶץ

[WNYJB >XD >CR B>RY]

“and (there was) one garrison which was in the land”

סִמְעָא אָסַב אֶחָד בְּאֶרֶץ

[WQJWM> >XDW B>R<>]

“and a garrison seized/laid hold of the land (had the land in its grip)”

It is clear that in the end the general portent of the Hebrew sentence is transmitted in the translation, but it must be admitted that at word level unexpected elements occur: Hebrew “one” is rendered as “take, seize, lay hold of” in Syriac. Let us, however, listen to the sound of the two words involved: [ʿeχad]—[ʿeχad]. Could phonetic characteristics have had an influence on the choice in the translation?

If we are to compare with the other forms in the Masoretic text to which אָסַב [ >XD] “take, seize upon, lay hold of” corresponds in the Peshitta, we find the following alphabetical list:

1× אֶחָד [ >XD] “one”	אָסַב [ >XD] “take, seize upon, lay hold of”
1× אֶחָז [ >XZ] I “seize, grasp, hold fast”	
2× אֶחָז [ >XZ] II “cover”	
1× הִיָּהּ [HJH] “be”	
7× חֹזֵק [XZQ] “be strong;” hif. “grasp”	
2× כֹּל [KWL] “contain; hold (content)”	
13× תִּפְשׂ [TPF] “lay hold of, seize”	
3× (not rendered)	

**Table 14. Hebrew items occurring where אָסַב [ >XD] occurs in Peshitta Kings**

We begin at the bottom of the alphabetically ordered list, ignoring the three cases not rendered.

In frequency of occurrence, the last three forms appear to be the more usual equivalents, most likely the variation being due to the specific context. Moving further up the list we find a curious case where ܐܫܒ [ >XD] “take, seize upon, lay hold of?” occurs where the Hebrew has the verb הִיָּה [HJH] “be,” namely in 1 Kings 4:7:

ܟܕܫܐ ܒܫܢܐ ܝܗܝܐ ܥܠ-ܗ [ܗ] ܐܚܕ ܠܟܠܟܠ

[XDC BCNH JHJH <L H>XD LKLLKLL]

“a month in the year (was it) upon one to provide (victuals)”

KJV: “each man his month in a year made provision”

ܡܢܐ ܚܝܠܐ ܐܫܒ ܗܘܐ ܥܠ ܗܘܐ ܠܚܘܫܐ ܚܝܠܐ

[JRX > BCNT > >XD <L XD LMTSRJW]

“a month in the year laid hold upon one to sustain”

In the Masoretic text the number ܐܚܕ [ >XD] “one” occurs but once and the main verb is הִיָּה [HJH] “be,” while BTR has the number ܐܫܒ [XD] “one” and the verb ܐܫܒ [ >XD] “take, seize, lay hold of,” both of which sound similar to Hebrew ܐܚܕ [ >XD] “one.” Probably text-critical aspects would throw more light on this example. The fact that this case and the example discussed above both occur in 1 Kings 4 is noteworthy, but at this point in the research it would go too far to jump to conclusions as to particular characteristics of the translation of this chapter.

Going now to the first three cases in the alphabetical list (table 14), we are struck by the similarity in sound between the Hebrew form and the Syriac. The fact that many Hebrew words with a Zayin [Z] have a related Syriac form with a Dalath [D] puts these three cases in a particular perspective. Although for Hebrew ܐܫܒ [ >XZ] I “seize, grasp, hold fast,” ܐܫܒ [ >XD] would appear to be a logical choice as far as meaning goes, this occurs but once as its equivalent, and appears, therefore, in spite of the similarities both in meaning and sound, not to be the usual rendering within the corpus. The renderings of Hebrew ܐܚܕ [ >XD] “one,” ܐܫܒ [ >XZ] I “seize, grasp, hold fast,” and ܐܫܒ [ >XZ] II “cover” as ܐܫܒ [ >XD] “take, seize upon, lay hold of” could possibly have been influenced by the phonetic characteristics of the word in Hebrew.

Such a conclusion may appear to have been drawn far too hastily, but from our research, it has become clear that this is not an isolated phenomenon, but occurs repeatedly in the Books of Kings. Beginning with the variation in spelling observable in the renderings of names—where it is most probable that the two are meant to correspond—a list of rules has been deduced which takes into account where a systematic phonological shift can be observed. When the sound shifts within proper names were systematically accounted for, other possible correspondences came to light. Unexpected renderings at word level often turn out to exhibit a correspondence in sound with the word which occurs at that position in the syntax in the Masoretic text. Once the possibility of the effect of phonetic/graphic

similarities was recognized, the effects are detectable in otherwise unsuspected cases. The encountered systematic variation includes the following phenomena:<sup>10</sup>

- voiced/voiceless variation in plosives at the front and back of the oral cavity<sup>11</sup>
- fuzziness in the velar–laryngeal–pharyngeal area of the articulatory track<sup>12</sup>
- fluidity of the sibilants<sup>13</sup>
- interchange of letters similarly written<sup>14</sup>
- variation in *matres lectionis*
- assimilation of the alveolar nasal<sup>15</sup>
- possible influence of grammar on the spelling of related forms
- translation of components of a word
- words written as a unit or as more than one unit
- consonants written twice to single consonants
- metathesis<sup>16</sup>

Other examples of equivalences which could be motivated by systematic shifts include:

- 1 Kings 6:21 עבר [<BR] “cross over, pass by” and חבב [<BD] “do, make”
- 1 Kings 7:30 עבר [<BR] “opposite, beyond” and חבב [<BD] “deed, action, work”
- 1 Kings 8:35 ענה [<NH] “oppress” and חל [<N>] “answer”
- 1 Kings 8:41 הוּא [HW>] “he” and הוּא [HW>] “he was”<sup>17</sup>
- 1 Kings 11:27 סגר [SGR] “close, shut” and סגר [SKR] “shut, stop, block”—the usual rendering for סגר [SGR] is אָסַב [XD] “take, seize, lay hold of”
- 1 Kings 18:5 כרת [KRT] Niphal “be felled, be exterminated, be cut off” and כָּרַח [GRD] Pali “be wanting; be absent, be lacking, fail, cease”
- 1 Kings 21:19 ה [H] (question marker) and ה [H>] “see; behold”

<sup>10</sup> A more extensive treatment of these phenomena is to be published in Dyk–Van Keulen, *Language System, Translation Technique, and Textual Tradition in the Peshitta of Kings*, Ch. 3: “Linguistic Characteristics of the Hebrew and Syriac Versions of Kings at Word Level.”

<sup>11</sup> Cf. Lipiński, *Semitic Languages*, 110; Murtonen, *Hebrew in its West Semitic Setting*, Part One, Section A: *Proper Names*, 271–74, 315.

<sup>12</sup> Cf. Lipiński, *Semitic Languages*, 140–41, on the “widespread reduction” of Semitic laryngals, pharyngals, and velars. For similar variation within Hebrew material, cf. Murtonen, *Hebrew in its West Semitic Setting*, Part One, Section A: *Proper Names*, 315, 317; Murtonen, *Hebrew in its West Semitic Setting*, Part Two: *Phonetics*; Part Three: *Morphosyntactics*, 20.

<sup>13</sup> Cf. Gray, *Introduction to Semitic Comparative Linguistics*, 11, 14, 19–20; Garr, *Dialect Geography of Syria–Palestina, 1000–586 BCE.*, 28–30; Lipiński, *Semitic Languages*, 131.

<sup>14</sup> Cf. Gray, *Introduction to Semitic Comparative Linguistics*, 11, 19; Lipiński, *Semitic Languages*, 131–33, 191; for comparable variation in the transcription of Hebrew material in Greek, cf. Murtonen, *Hebrew in its West Semitic Setting*, Part One, Section A: *Proper Names*, 315, entry 1372.

<sup>15</sup> Cf. Garr, *Dialect Geography of Syria–Palestina, 1000–586 BCE.*, 43–44; E. Lipiński, *Semitic Languages*, 186–87.

<sup>16</sup> Cf. Lipiński, *Semitic Languages*, 192–93.

<sup>17</sup> See also 1 Kings 11:14; 19:19; 20:12, 16, 28; 22:33; 2 Kings 8:27; 19:37.

- 1 Kings 22:38 הַזְנוּת [HZNWT] “the whores” and אֲמוֹנָה [ZJNH] “his armour”
- 1 Kings 22:45 שָׁלֵם [CLM] Hiphil “come to an agreement with, live in peace with” and מָחַר [CLM] Peal “come to an end, be finished;” Pael “make an end, to make restitution”
- 1 Kings 22:47 בָּעַר [B<R] “burn, kindle” and חָבַח [<BR] “pass by, pass over”
- 2 Kings 2:12 רֶכֶב [RKB] “chariots” and רֶכֶב [RKB] “horsemen”
- 2 Kings 3:10,13 כִּי [KJ] (adversative particle) “for, that” and כִּי [KJ] (adverbial) “now, indeed, verily, truly”
- 2 Kings 4:8 מָדִי [MDJ] “as often as” and מַה [M> D] “that which”
- 2 Kings 4:23 שְׁלוֹם [CLWM] “peace (greeting)” and שְׁלוֹמִי [CJLWMJ] “Shilomite”
- 2 Kings 6:1 נֹא הִנֵּה [HNH N>] “behold now” and הִנֵּה [HN>] “that”
- 2 Kings 12:4 קָטַר [QVR] Piel “send sacrifice up in smoke” and חָלַח [<VR] Aphel “produce fumes, burn incense or perfume, make a fragrance” (see also 2 Kings 14:4; 16:4)—the usual rendering for קָטַר [QVR] is מָסַח [SWM] “place (incense)”
- 2 Kings 15:10 קָבַל-עַם [QBL-<M] “battering ram” (uncertain) and לְמִוְלָא [LWQBL] “against, before”
- 2 Kings 19:32 קָדַם [QDM] “be in front of” and מָצַח [QRM] “overlay”
- 2 Kings 21:13 מָחָה [MXH] “wipe, wipe clean, destroy” and מָחָה [MX>] “strike, smite, wound”
- 2 Kings 23:30 שָׁם [CM] “there” and מָסַח [SM>] “incense”
- 2 Kings 24:14, 16 חָרַשׁ [XRC] “craftsmen” and מְשָׁל [DXC>] “guardsmen” (9a1)<sup>18</sup>

The list could be extended, but we believe the point is clear.<sup>19</sup> One can observe that whatever text-critical explanation could be brought to bear, in certain cases one can hardly escape the reality of the effect of the phonetic characteristics/graphic representation of the item upon its rendering.

<sup>18</sup> For a detailed treatment of this example see Dyk–Van Keulen, “Of Words and Phrases: Syriac Version of 2 Kings 24:14.”

<sup>19</sup> A more extensive list of examples with discussion is to appear in Dyk–Van Keulen, *Language System, Translation Technique and Textual Tradition in the Peshitta of Kings*, Ch. 5, section 1.6: “Similarity in Consonants, Difference in Meaning: Word Image and Semantic Domain.”

<i>anywhere in the word</i>	<i>word initially</i>	<i>word medially</i>	<i>word finally</i>
𐤎 [g] → 𐤏 [k]	𐤌 [g] may be added word initially	𐤎 [g], 𐤏 [w], 𐤐 [j], or 𐤑 [n] may be omitted	𐤎 [g], 𐤐 [j], or 𐤑 [t] may be omitted
𐤒 [b] → 𐤓 [p]	𐤎 [g], 𐤏 [w], or 𐤐 [j] may be omitted	𐤌 [g], 𐤍 [w] or 𐤎 [j] may be inserted	𐤑 [h] → 𐤌 [g], 𐤍 [w], or 𐤎 [j]
𐤔 [g] → 𐤕 [k]	𐤌 [g], 𐤍 [w] or 𐤎 [j] can be inserted after initial consonant		𐤖 [m] → 𐤗 [n]
𐤛 [d] → 𐤜 [r]	𐤐 [j] → 𐤌 [g], 𐤍 [n]		𐤌 [g], 𐤍 [w], 𐤎 [n], or 𐤏 [t] may be added
𐤝 [z] → 𐤞 [d], 𐤟 [y]	𐤑 [n] → 𐤐 [j]		
𐤠 [x] → 𐤡 [c]			
𐤢 [k] → 𐤣 [q]			
𐤤 [s] → 𐤥 [y]			
𐤦 [c] → 𐤧 [g], 𐤨 [q]			
𐤩 [y] → 𐤪 [z], 𐤫 [v], 𐤬 [c]			
𐤭 [q] → 𐤮 [y]			
𐤯 [r] → 𐤰 [d]			
𐤲 [f] → 𐤳 [s], 𐤴 [c]			
𐤶 [c] → 𐤷 [t]			

**Table 15. Differences accepted as Systematic Variation**

The spelling differences presented in table 15 have been recognized as potentially systematic variation between items. The variation which can occur anywhere in the word is presented in the first column and involves the voiced/voiceless variation in plosives at the front and back of the oral cavity, fuzziness in the velar-laryngeal-pharyngeal area of the articulatory track, the fluidity of the sibilants, and the interchange of letters similarly written. The other columns present primarily the variation in *matres lectiones* as well as the assimilation of the alveolar nasal and the possible influence of grammar on the spelling of related forms. This is not to say that the use of a different letter in the spelling always indicates a difference in phonetic characteristics, but sometimes only in graphic representation. It seems that at times certain letters have been recorded by another letter which seems to sound alike or be articulated in a similar fashion.<sup>20</sup> It is fascinating to observe that in such cases in spite of the

<sup>20</sup> Cf. Kaufman, "Reflections on the Assyrian–Aramaic Biligual from Tell Fakhariyeh," 146–47, as quoted in W.R. Garr, *Dialect Geography of Syria–Palestine*, 29.

difference in the meaning of these forms which resemble each other *qua* sound, the general significance of the sentence in which they occur is preserved in the translation.

A word of caution is necessary at this point: we are not maintaining that these rules are arbitrarily applicable to the whole range of the possible lexical entries, but only to forms paired with one another based on a synopsis at clause level. For example, though the Peshitta can have ܘ [ < ] where the Masoretic text has ܘ [ > ] in the items occurring in corresponding positions, such as in ܫܠܡܢܐܫܪ [CLMN > SR] and ܫܠܡܢܐܫܪ [CLMN < SR] “Shalmaneser” in 1 Kings 17:3, this interchangeability of consonants is not applicable, for example, to the verbs ܐܝܒ [JD > ] (corresponding to Hebrew ידה [JDH] Hiphil “praise, confess”) and ܐܝܒ [JD < ] (corresponding to Hebrew ידע [JD < ] “know”), which are unlikely to appear in corresponding positions in a synopsis-based translation concordance.

From the texts treated thus far, a broad range of variation has been observed. Although most volumes on comparative Semitics present shifts,<sup>21</sup> there is nothing as surprising as language data itself. Many of the correspondences appearing in our material do not appear in the charts on comparative Semitics, probably because such charts portray systematic language development, while we have registered the vicissitude of the data as encountered in the actual text corpus studied.

The list of systematic spelling differences is another product of the words coupled in the electronic translation concordance which has been developed on the basis of a clause-level synopsis of the texts. It could well be that the list is not yet complete, but will need to be expanded as more data is treated.

This is not to say that simply the single phonetic/graphic dimension can explain all cases with a sound correlation. All cases will need to be carefully treated using text-critical insights. Nonetheless, this research has brought to light the possible effect of the phonetic characteristics/graphic representation of an item upon its transmission, and these aspects should be taken into consideration in dealing with text-critical questions.

## 7. CONCLUSIONS

By coupling words to one another on the basis of a synopsis at clause level, with phrases matched according to their function as clause constituents, and with parts of speech serving as a basis for matching words within a phrase, a translation concordance has been developed which presents the distribution of the Peshitta renderings of Hebrew forms within the Books of Kings. Most frequent equivalents, the range of synonyms, and glaring exceptions to both of these two come to light. The exceptions are often an indication of cases of particular interest to both linguists and text-critical scholars.

From the findings, it has become apparent that it is plausible that not infrequently the phonetic characteristics of the source text item have influenced the choice in the rendering. We would like to propose that to the list of traditionally accepted text-critical explanations

<sup>21</sup> See above, notes 11–16; Muraoka, *Classical Syriac for Hebraists*, 5.

for differences between source text and translation—such as harmonization, *ad sensum* rendering, exegetical explanation, and as last resort the unproven and elusive “different *Vorlage*”—should be added the influence of the phonetic characteristics/graphic representation of the item in the source text. The numerous examples encountered within the Books of Kings give reason to propose that the phonetic aspect should not be disregarded.



## CHAPTER 8

# CONTEXT OF SITUATION IN BIBLICAL LEXICA

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The social context of meaning has become a prominent issue in recent linguistic and semantic research, but the practicalities of how to incorporate such data in lexica are complex. Although traditionally there used to be a distinction between information contained in a dictionary and that in an encyclopaedia, that distinction has been blurred in lexica on ancient languages owing to our lack of familiarity with the ancient world. It is a distinction that cognitive linguistics also wishes to minimize. The need for some contextual information in biblical lexica is advocated, although such data should be used with restraint. Examples are taken from Greek lexica to illustrate the advantage of this information.

### 1. INTRODUCTION

The lexicographer is by nature a pragmatist. He or she must deal with a vast quantity of data, and come to a conclusion no matter what problems lurk amidst the evidence. The uncertainties and alternatives that one might discuss in an academic article are not for the most part welcome in a dictionary. Once a definition has been derived, choices have to be made as to which examples to include, how many subdivisions of meaning to provide and how extensive the definition should be or how many glosses to be given. Although we are too acutely aware of the limitations of our knowledge regarding ancient languages, the lexicographer must provide a confident, and to an extent conclusive, lexical entry for the dictionary-user.

On another level too the lexicographer is a pragmatist. Linguistic theories and issues in semantics are taken on board as far as possible, but can never be fully implemented in a lexicon. Many of us will have had the experience of reading a semantic textbook and appreciating the clarity and precision of the author, only to find that it is not so easy to follow the exacting linguistic standards when confronted by real examples. Compromises are made between well-reasoned theory and the realities of a lexical system. If a linguistic approach is taken, then the result is usually a lexicon of a particular type: a lexicon of ... “discourse analysis,” “cognitive linguistics,” “word domains,” and so on.<sup>1</sup> Whilst these are

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<sup>1</sup> The leading example in our field is, of course, Louw–Nida, *Greek-English Lexicon of the New Testament Based on Semantic Domains*. Poythress’ “Greek Lexicography and Translation: Comparing

important contributions, users still wish to consult what they consider to be a “standard” lexicon, such as LSJ on the Greek side or BDB on the Hebrew side, believing, probably mistakenly, that they receive a more balanced presentation of the semantic data. In reality all lexica are based on some linguistic principles, changing according to the fashion of the time. One might, for example, note the well-known title of the original *Oxford English Dictionary*, which began as *A New English Dictionary on Historical Principles* (first fascicle, 1884), making explicit the ordering of the material. Many lexica aim to strike a balance between the application of linguistic theory, on the one hand, and the needs of the users to see clearly the meaning of the words in the texts that they are studying, on the other. A particular problem in this area is the growing emphasis in linguistics on the context for determining meaning and how far extra-lexical and extra-linguistic data should or could be incorporated. Here focus will be given to the incorporation in a lexicon of the social and historical applications of any given word.

## 2. CONTEXT AND LEXICOGRAPHY

In recent years an emphasis in lexicographic research has been placed on the meanings of words in their lexical context,<sup>2</sup> especially as a response in biblical research to an over-reliance on etymological evidence. *The Dictionary of Classical Hebrew* edited by Clines can be seen in this light, with its central presentation of the syntagmatic evidence. Such information might more strictly be called “cotext” by linguistics. Cotext and context can be seen on a number of levels. Starting from the syntagmatic relationship, cotext may include the passage, the discourse, the genre and even an author’s complete works. This can then be expanded outwards into the wider context, incorporating the social and historical context in which a word is used, which is also of prime importance for meaning. Developments in the philosophy of language have led to an increasing emphasis upon the function of a word in an utterance as defining linguistic meaning, notably in speech-act theory and pragmalinguistics (pragmatics, for short). Consequently our attention is drawn to the wider socio-historical background for determining that extra-linguistic context.<sup>3</sup> I have noted elsewhere some of the debates regarding how far context forms part of semantics,<sup>4</sup> and whether it should be

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Bauer’s and Louw–Nida’s Lexicons” is perhaps typical of reactions to such works. He suggests that Louw–Nida’s *Lexicon* “will not help the exegete who needs exact information about distinct meanings” (page 296), and, therefore, that Bauer’s is “the main and indispensable lexicon.” Thus, it is the standard lexicon that he prefers, and this he reinforces by also suggesting the scholar will need regular recourse to LSJ.

<sup>2</sup> E.g., Barr, *The Semantics of Biblical Language*, 274; Sawyer, *Semantics in Biblical Research: New Methods of Defining Hebrew Words for Salvation*, 112.

<sup>3</sup> Cf. O’Connor, “Biblical Hebrew Lexicography: יָלַד ‘Children, Dependents’ in Biblical and Qumranic Hebrew,” 31–33.

<sup>4</sup> Aitken, “Lexical Semantics and the Cultural Context of Knowledge in Job 28, Illustrated by the Meaning of יָקַר,” 119.

seen as pragmatics proper, independent of lexical semantics, even though the distinction between semantics and pragmatics is a fine one. We should, nonetheless, maintain the distinction between linguistic meaning, and more specifically lexical meaning, from the meaning of an utterance (the opposition between semantics and pragmatics).<sup>5</sup> A lexicon should focus on the former, namely, lexical meaning, even if occasionally the usage of a word in particular contexts would require separate sub-definitions within the lexicon. But a distinction still remains between such contexts as polite usage, figurative language, and technical terms, which should find a natural place in a lexicon, and the extra-linguistic contexts of irony, ambiguity, or other implicatures of the utterance, which would not normally be included. Here attention will be paid to how far a lexicographer should be aware of the social context of words in framing lexical definitions, and accordingly how far socio-historical information, or “context of situation” as it was termed by Malinowski,<sup>6</sup> should be recorded in biblical lexica.

The importance of such contextual “background” is readily apparent in an observation made by Silva.<sup>7</sup> In a discussion of “grammatico-historical interpretation” he notes how much effort biblical exegetes have expended in reconstructing the historical background, and how this is indicative of the importance placed by them upon such contextual information. It is reflective of the need to understand better the period in which the writers framed their expressions: “To a large extent, the interpretation of ancient literature consists in bridging the temporal and cultural gaps that separate us from its authors.”<sup>8</sup> This is valid, as we can easily be misled into believing a word has the same denotation and connotation as in our own language. However, one of the examples he gives raises issues pertinent to the topic in question. He points to the apparently “trivial” comment that in Luke 15:20 the father of the prodigal son is described as running (τρέχω). Silva follows Bailey’s view that the cultural expectations of the time that an elderly man should walk slowly, and thus with dignity, are here broken in order to draw attention to the humility of the man (and by transference God).<sup>9</sup> He, therefore, sees this as an example where the key to the interpretation of the passage lies in an understanding of its social context.<sup>10</sup> This is a case where the contextual information informs, however, on the interpretation of the particular New Testament passage and not on the meaning of the word, whose lexico-semantic content continues to mean “to move at a rapid pace” or “to run.” Although the reader of the lexicon might not

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<sup>5</sup> This has long been a distinction in the philosophy of language and a continued issue of discussion. Amongst recent writers, we might note Bach, “The Semantics-Pragmatics Distinction: What it is and Why it Matters,” 65–84; Bach, “Semantic, Pragmatic,” 284–92; Szabó, ed., *Semantics vs. Pragmatics*.

<sup>6</sup> See Malinowski, “The Problem of Meaning in Primitive Languages,” 296–336.

<sup>7</sup> Silva, *Biblical Words and their Meaning*, 146.

<sup>8</sup> Silva, *Biblical Words and their Meaning*, 145.

<sup>9</sup> Bailey, *Poet and Peasant: A Literary-Cultural Approach to the Parables in Luke*, 181.

<sup>10</sup> Silva, *Biblical Words and their Meaning*, 146.

know the social conventions behind the action and might find it useful for understanding the passage at hand, this remains the task of the commentary rather than the dictionary. Such a distinction will help us in determining what should be included in a lexicon, namely data that inform on the lexical semantics rather than on example-specific occurrences of a word.

### 3. DEFINITIONS

The issue of the inclusion of contextual information has become more apparent as definitions, as opposed to glosses, become a preferred lexicographic method in biblical studies.<sup>11</sup> The ability of definitions to include descriptive material, in contrast to the mere equivalents of a gloss, does allow for contextual information to be incorporated into the dictionary entry. Definitions in ancient lexicography were first successfully applied in the *Oxford Latin Dictionary*, although Schleusner in his Septuagint and New Testament lexica had used them (not always consistently) more than a century ago.<sup>12</sup> Louw and Nida have opted for definitions,<sup>13</sup> as have BDAG, Muraoka, and the ongoing Cambridge Greek Lexicon Project.<sup>14</sup> For the most part definitions are confined to lexical semantics, as illustrated by the following examples from these lexica:

ἀσάλευτος: 1. not being subject to movement; 2. not subject to alteration of essential nature or being, unshakable, enduring.<sup>15</sup>

μετανοέω, μετάνοια: to change one's way of life as the result of a complete change of thought and attitude with regard to sin and righteousness – 'to repent, to change one's way, repentance.'<sup>16</sup>

εἶδον: 1. to perceive visually [...]<sup>17</sup>

In each case the lexical semantics are described, providing as broad a definition as possible to cover the individual uses of the word concerned. One might contrast these examples with the definitions, or perhaps better, the glosses, provided in LSJ: respectively, "unmoved, unshaken" (page 254), "2. change one's mind or purpose; 3. repent" (page 1115), "see, look; discern, perceive" (page 1245). Nevertheless, wider contextual information can be called upon to illustrate or clarify the definition. Usually this is information that is not presented as part of the definition, but is given further down in the entry. The distinction, however, between what the lexical item contributes to the context and what the context itself contributes is difficult to determine, and at times one might wish to see more contextual

<sup>11</sup> See Lee, *A History of New Testament Lexicography*, 15–29.

<sup>12</sup> Schleusner, *Novum Lexicon Graeco-Latinum in Novum Testamentum*; Schleusner, *Novus Thesaurus Philologico-Criticus: sive, Lexicon in LXX. et reliquos interpretes graecos, ac scriptores apocryphos Veteris Testamenti*. Cf. Lee, *A History*, 75–77.

<sup>13</sup> Louw–Nida, *Greek-English Lexicon*.

<sup>14</sup> Muraoka, *A Greek-English Lexicon of the Septuagint: Chiefly of the Pentateuch and the Twelve Prophets*.

<sup>15</sup> BDAG, 141.

<sup>16</sup> Louw–Nida, *Greek-English Lexicon*, 1:509 (§ 41.52).

<sup>17</sup> Muraoka, *Greek-English Lexicon*, 146.

information in the definitions themselves. We should, nevertheless, still be cautious not to confuse contextual reference with lexical meaning. However, there is a place for contextual evidence within the proper clarification of the lexical meaning. Let us begin with some examples of this contextual information from current lexica.

The Cambridge Greek Lexicon Project, currently in progress, has a clear statement on the use of definitions and contextual information:

We have adopted a semantic method of organising the articles, closer in style to the *Oxford Latin Dictionary* than to other Greek dictionaries. As far as the limitations of space allow, we give an extended definition of each word rather than just single-word translations. Contextual information is also included, in order to give a picture of the ways in which meanings can vary, and help students develop a sensitivity to the subtleties of Greek word meaning.<sup>18</sup>

The purpose and intended audience of a lexicon is important for deciding the extent to which such material is included. As is clear from the quotation, the *Cambridge Greek Lexicon* is aimed at students and those in the early stages of studying Greek, for whom further information might be required given their inexperience both of the language and of the ancient world. This can be illustrated by the case of the people called the *Λιβυφοινίκες*, glossed as “Libyophoenicians,” where the problem of geographical equivalences between ancient and modern locations is acute. Accordingly the lexicon provides the additional information that they are the “people of Africa subject to the Carthaginians, with some degree of mixed Libyan and Phoenician descent.”<sup>19</sup> This is only to be expected with geographic or ethnic terms when the entities no longer exist today. Similar problems can arise in the case of realia, where a scientific definition might be required.<sup>20</sup> However, as will be argued here, the same dissonance can occur with most words, even if to a lesser extent.

In BDAG the reviser Danker has at times aimed at ensuring the reader does not confuse the meaning of a word under the influence of our own modern conceptions. Thus, under *Ἰουδαῖος* there is a long discussion of the term as a geographical denotation “Judean” (rather than a “Jew”) and an explanation of how it came to be used of Jews, namely, through association with practices originally associated with Judea.<sup>21</sup> Likewise, it is advised that the translation “bishop” for *ἐπίσκοπος* “is too technical and loaded with late historical baggage for precise signification of usage of *ἐπίσκοπος* and cognates.”<sup>22</sup> Aside from such cautionary

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<sup>18</sup> Webpage (accessed: 23rd August 2006): <http://www.classics.cam.ac.uk/glp/index.html>.

<sup>19</sup> This illustrative example was taken from the webpage (accessed: 23rd August 2006): <http://www.classics.cam.ac.uk/glp/publishing.html>.

<sup>20</sup> The webpage of *The Oxford English Dictionary* contains a helpful example of the processes required in determining the proper definition of a rare substance (accessed: 23rd August 2006): <http://dictionary.oed.com/about/writing/definition.html>.

<sup>21</sup> BDAG, 478–79.

<sup>22</sup> BDAG, 379–80.

remarks, words such as ἐπίσκοπος are explained in the context of the usage of the term more generally. Thus,

In the Gr.-Rom. world ἐ. freq. refers to one who has a definite function or fixed office of guardianship and related activity within a group [...], including a religious group.<sup>23</sup>

This is important additional information that explains the function of the ἐπίσκοπος, and from this one can derive a better understanding of what an ἐπίσκοπος actually was. For entries such as drachma, some explanation is also welcome, and indeed Danker provides thirteen lines on the monetary value and spending power of the drachma in antiquity.<sup>24</sup> Much of this information could be considered necessary, although negative statements regarding misunderstanding and some evaluative judgements can distract more than inform. The task is to keep such contextual information to a minimum, whilst letting it have an influence on both the definitions and any phrases that are included for the purpose of qualifying particular definitions.

#### 4. DICTIONARY VERSUS ENCYCLOPAEDIA

It is often stated that our knowledge of Greek is limited to such an extent that it is difficult or even impossible to ascertain much of the social background behind any given word.<sup>25</sup> Whilst this is true, it is an impetus for further consideration of context owing to the value of any such information that might be gleaned for the meaning. However, in the examples covered so far there is a danger of the blurring of the distinction between a dictionary and an encyclopaedia. Conventionally dictionaries represented relations within a language, whilst knowledge derived from an encyclopaedia presupposed extra-linguistic information.<sup>26</sup> But as we have already said, extra-linguistic information is now an essential part of any understanding of meaning. Dictionaries are categorial organizers, presenting hierarchical information and components from which we may derive inferences as to the meaning of a word when encountering it in a text. They provide a brief but global summation of meaning. Encyclopaedias aim to encompass all information that we might know (or ever wish to know) about the item, governed only by the variability in nature. They are recorders of information in its multiplicity of manifestations. No dictionary would ever claim to cover all such knowledge (and in reality few encyclopaedias can either), but even in the case of encyclopaedias the knowledge is selected according to what is deemed of value or importance to the community at which it is aimed. Nonetheless, in general a distinction lies between the knowledge presented in dictionaries—categorial knowledge—and that presented in encyclopaedias—knowledge by properties.

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<sup>23</sup> BDAG, 379.

<sup>24</sup> BDAG, 261.

<sup>25</sup> Cf. Boyd–Taylor, “Linguistic Register and Septuagintal Lexicography,” 149.

<sup>26</sup> Cf. Eco, *Kant and the Platypus: Essays on Language and Cognition*, 226.

However, as soon as we are presented with a language with which we are not *entirely* familiar we require encyclopaedic knowledge to ascertain distinctions in the meaning. Certainly, every ancient language is a case in point of languages of which we have a limited knowledge, and from whose cultural background we are distant, both in time and appreciation. Nevertheless, even in any bilingual dictionary there must be some assumption that the cultural presuppositions are not exactly the same. This is to be distinguished from a monolingual dictionary in which the speakers are considered to be native or fluent, and therefore likely to be familiar with the culture concerned.

An example from Eco's *Kant and the Platypus* can be adapted to illustrate this distinction between dictionary knowledge and encyclopaedia knowledge. An encyclopaedia entry on "dog" would discuss not only its biological features, but also its associations in literature and art, popular sayings such as "it's raining cats and dogs" (as many a dictionary would also have to), and the domestic uses of the dog. If the encyclopaedia were truly aiming to be comprehensive, it would include every detail about dogs, even that I have a black Labrador whose name is "Rogan." We may contrast this with the OED definition of dog, which begins:

A quadruped of the genus *Canis*, of which wild species or forms are found in various parts of the world, and numerous races or breeds, varying greatly in size, shape, and colour, occur in a domesticated or semi-domesticated state in almost all countries.<sup>27</sup>

This is then followed by figurative uses, and its use as a term of reproach, and so on (in fact fourteen categories before even reaching phrases and proverbs). This might seem quite extensive, in a similar manner to the encyclopaedia, but incidental information is not given. A distinctive feature of the dog that is necessary for the categorial dictionary definition is that it is "domesticated", whilst in the encyclopaedia the incidental occurrences of its domestication and the multiple uses to which it is put are recorded. But what if you had never seen a dog before, and you did not live in this world to be aware what different races or breeds are, and you found the idea of a domesticated dog very hard to imagine (and it might still be for some cultures today)? You would need more information than that provided by a dictionary. This would especially be the case if one day you are walking down the street and are confronted by a vicious Alsatian: how will you recognize it? The normal inferential rules cannot operate. It has four legs, and therefore you know from the dictionary that it is not a walrus, but it also does not have stripes, so that you know that it is not a zebra. But how do you know that it is not a cat or a hippopotamus? *We* know because we have seen cats and hippopotamuses, and can make the inference, but the fewer animals that we have seen the more difficult it is (as children prototypically experience). Historically, we are aware of this problem from the tales of discoveries by Europeans of such seemingly impossible animals as the ostrich or the platypus, neither of which fitted into the categories

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<sup>27</sup> *The Oxford English Dictionary*, 9:921.

then current. The same applied to the apparent discovery of the “unicorn”: the animal concerned was in fact a rhinoceros, but the unicorn was a known category (even if a mythical one) and the rhinoceros not, and the latter was therefore subsumed under the known category.<sup>28</sup>

Returning to ancient languages, when confronted with categories in the ancient world, we are faced with the same difficulties as someone who has never before seen a dog, and a dictionary definition in many ways does not suffice. Unless we have sufficient knowledge of the history and social conventions of the time period, it can be difficult to appreciate properly the signification of a word. We, therefore, come back once more to the needs of the user of the dictionary. In providing scholarly dictionaries, to be distinguished from glossaries for the language learner, we aim to provide a tool for gaining an understanding of the use of the word. Hence a certain degree of encyclopaedic information is needed, but the problem remains, how much? Those using advanced dictionaries are presumably knowledgeable regarding the historical period, but at the same time will not have undertaken all the research that the lexicographer has, and might not therefore be aware of the connotations and uses in context of situation of the words. The discussion here will therefore focus on how far we should include such contextual information, and illustrations will principally be taken from Greek lexica. In some cases the contextual information might be seen as irrelevant to the lexical semantics, in some it might be seen as diachronic rather than synchronic evidence, and in some it is simply uncertain whether the contextual information is valid for the particular biblical occurrences.

## 5. HEBREW, GREEK, AND SYRIAC SOURCES

It is not surprising that my examples are taken from Greek rather than Hebrew lexica. For Hebrew we have few sources recording the language external to the biblical corpus, and we are interested in these other sources in which the language use in wider contexts might be illustrated. It is true that we have many Hebrew inscriptions (although only enough to fill one volume),<sup>29</sup> but they are often short and only give a small glimpse of the language. When looking at Biblical Greek, in contrast, we already have a 500-year history of the language (between Homer and the Septuagint translation of the Pentateuch), and we have multiple volumes of inscriptions and papyri, covering every aspect of life and in many registers and dialects. Accordingly, for Greek we can determine much about the use of the word beyond its occurrences in the Bible. In fact our main problem is that we can easily be overwhelmed by the immense quantity of the data, and the inaccessibility of the literature to the non-

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<sup>28</sup> The discoveries of these animals are discussed by Eco, *Serendipities: Language and Lunacy*, 70–71.

<sup>29</sup> Although there have been many published volumes of inscriptions, they have all been gathered in Davies, *Ancient Hebrew Inscriptions: Corpus and Concordance*. Although a supplement has since been produced, it all could still be combined easily into one volume: *Ancient Hebrew Inscriptions, Volume 2: Corpus and Concordance*.

specialist. It is material, nonetheless, that requires exploration, and advances in Greek lexicography await further study of such material. In particular the thousands of papyri and inscriptions provide contemporaneous data to the biblical material and offer important witnesses to biblical usage.<sup>30</sup>

Syriac lexicography is probably somewhere between the two (although more closely analogous to Hebrew). From the early centuries of the Common Era we find Old Syriac inscriptions<sup>31</sup> that are non-Christian (primarily from Turkey) as well as three legal parchments from the third century CE, that give us an insight into the use of the language in non-biblical contexts. This is not an ample amount, and the majority of the inscriptions are either dedicatory or funerary. But the legal parchments provide material comparable to that for Greek, if on a far smaller scale. Also for Syriac there are compositions from a much later period, such as translations of Aristotle and other secular works that allow one to see further uses, although if our focus is on the Peshitta, the time-frame for these is problematic.

Having said this, our resources for Hebrew can be strengthened by recourse to Ancient Near Eastern evidence. Both comparative linguistic and comparative sociological information can be gathered to interpret the Hebrew words. This is particularly the case where similar social functions are denoted, such as prophet, soothsayer, eunuch, or equestrian. Historians of Israelite society and religion have used this evidence widely, but it is not always conveyed in the lexica. In this light, let me begin with a possible illustration from Hebrew, making use of the evidence that could be inferred from Hebrew inscriptions alone, without entering into the comparative data. The Hebrew verb אָרַר “to curse” is distinctive in being the prime verb within that field in use in Hebrew inscriptions, appearing as much as ten times.<sup>32</sup> The evidence from inscriptions is not utilized in most Hebrew lexica, but does appear in Zorell’s *Lexicon*.<sup>33</sup> Nevertheless, the physical context in which these curse inscriptions appear has not been included in the information that the lexicon records, even

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<sup>30</sup> Silva (*Biblical Words and their Meaning*, 201–11), who is emphatic on the importance of context, includes an appendix by Jobes on Greek verbs from the semantic domain of “worship” in which she demonstrates well the value of syntagmatic and paradigmatic evidence, but lacks any real discussion of the context, confining herself to the extra-biblical sources of Philo, Josephus, and Epictetus. The importance of inscriptions for this sort of field is invaluable, especially given the number of Greek religious texts on stone from Egypt.

<sup>31</sup> There are precisely one hundred in Drijvers–Healey, *The Old Syriac Inscriptions of Edessa and Osroene*.

<sup>32</sup> In fact, there is only one certain instance of any other Hebrew word within the semantic field in inscriptions, namely אָרַר (Davies, *Ancient Hebrew Inscriptions*, no. 15.003.1). The same verb might be attested in another Iron Age inscription, but the interpretation is problematic (see Naveh, “Hebrew Graffiti from the First Temple Period,” 204). Catastini, “Note di epigrafia ebraica I–II,” 133–34, has identified the verb אָרַר with the meaning “to curse” in another inscription, but even if he is correct in this identification, it would be a case of euphemism rather than an additional lexical item.

<sup>33</sup> Cf. Aitken, “Other Hebrew Lexica,” chapter 14 in this volume, for the incorporation of such material in Hebrew lexica.

where it might have been. The inscriptions containing the verb אָרַר (usually in the Qal passive participle) all seem to appear on the walls of tombs, as in the case of an inscription in a Siloam tomb,<sup>34</sup> or in a cave in En-Gedi overlooking the Dead Sea,<sup>35</sup> or carved on the limestone walls of the antechamber of a tomb at Khirbet Beit Lei (eight kilometres east of Lachish).<sup>36</sup> This setting of the curse words on the walls of tombs can be interpreted as evidence that the verb denoted a threat to ward off potential violators. In that way אָרַר has an immediate effect upon the reader, threatening action to anyone breaking the prohibition, and might not be a prayer to God to protect the deceased, as it is often understood to be. In Speech-Act theory, this would be termed its perlocutionary force. The inscription might have been considered, therefore, apotropaic by the writer or the reader, the verb denoting the expression of a threat to inflict harm upon the violator. The context in tombs might provide an additional clue, since in some cultures the bones of the deceased are thought to have protective powers, and although we cannot conclude with any certainty that such a belief existed in Israelite culture, it is indicative that the power of a protective curse could be indicated by its location on a tomb without the need for a prayer to God. The effect on the reader is probably immediate, owing merely to the social conventions that such wording is a form of warning (and the most frequent form attested of the verb אָרַר) and there is little need for recourse to belief in any particular higher power. There will always be disagreement on how to interpret such verbs, but the context, namely, its role as a threat to those who disturb the tomb and its actual presence on the tombs, should be taken seriously. The origins of its use might lie in a belief in the power of the bones, and its efficacy, and thereby its communicative force, rest in the semantic convention that such statements denote a warning.

## 6. EXAMPLES FROM GREEK VOCABULARY

### 6.1 Titles and Occupations

Titles and occupations are obvious choices for the incorporation of contextual information into their definitions. The functions of such positions are usually culturally bound, and any definition of them requires an explanation of their role within the society, with due care being taken not to present data that might mislead owing to the presence of similar functions within our own societies. Despite this, lexicographers have tended to offer one word glosses that reveal very little of the functions of the person. It is appropriate to begin, therefore, with a straightforward example, a cultural-specific title for which one should examine the context to appreciate its connotation.

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<sup>34</sup> Davies, *Ancient Hebrew Inscriptions*, no. 4.401, dated on palaeographic grounds to 700 BCE.

<sup>35</sup> Davies, *Ancient Hebrew Inscriptions*, 20.002, also dated to *circa* 700 BCE.

<sup>36</sup> Davies, *Ancient Hebrew Inscriptions*, 15.001, that might be a warning similar to no. 20.002. This inscription, along with other graffiti in the tomb, is dated either to *circa* 700 BCE on palaeographic grounds or to the sixth century on the basis of a possible historical background to it.

The noun ἀρχισωματοφύλαξ is attested in the Septuagint, Jewish-Greek literature, some Hellenistic Greek texts, and in Ptolemaic papyri and inscriptions. A sampling of the lexica indicates that there is a stereotypical translation for it: in English “chief of the bodyguard,”<sup>37</sup> and in other languages similar equivalents, such as the Spanish “alto personaje del cuerpo de guardia,”<sup>38</sup> and the Italian “capo delle guardie del corpo.”<sup>39</sup> Muraoka differs slightly in rendering it by “head of security service,”<sup>40</sup> perhaps intending to indicate that the position is not so much that of a bodyguard but of a royal court member responsible for overall security. All these lexica have taken the component forms (ἀρχι- prefix, σῶμα, and φύλαξ) and produced a translation that is dependent on all three components, although it is likely that the recent lexica are ultimately deriving their translations from LSJ. There are, however, two contextual features of this term that we should consider. One is the connotation in the language of the prefix ἀρχι-, and the other the actual role in the historical sources attributed to the ἀρχισωματοφύλαξ.

There is a natural tendency to translate words with ἀρχι- prefix as “head-” or “chief-” as the lexica cited above all do, or specifically to explain such terms as indicating the head of a hierarchical order.<sup>41</sup> The prefix ἀρχι- becomes increasingly common in *koine*, however, and often seems to denote merely a position of importance, and especially as a term of prestige in professional titles (compare ἀρχιτέκτων; ἀρχιατρός) without the person concerned necessarily being in charge.<sup>42</sup> Horsley even suggests that at times such titles are intended merely to sound more impressive.<sup>43</sup> It might also form a type of polite address, and hence serve pragmatically as an implicature of respect or politeness. In this regard the use of the vocatives ἀρχέμπορε and ἀρχιγεωργέ as complimentary terms of address in the second-century CE *Vita Aesopi* may be noted.<sup>44</sup> The preference for ἀρχιερεύς in the Roman period, including its use in Jewish circles without necessarily denoting the *high*-priest, is a reflection of this growing preference for the prefix. Nevertheless, this does not preclude the use of the prefix on words for the heads of institutions, and later in the Roman context ἀρχιερεύς could be used of the heads of a government bureau or those especially associated with the Roman prefect.<sup>45</sup> As an example of the loss of force of the prefix over time, though, we find

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<sup>37</sup> So LSJ, 253; LEH, 86.

<sup>38</sup> *Diccionario griego-español*, 544.

<sup>39</sup> Montanari, *Vocabolario della lingua greca. Con la collaborazione di Ivan Garofalo e Daniela Manetti; fondato su un progetto di Nino Marinone*, 2.

<sup>40</sup> Muraoka, *Greek-English Lexicon*, 69.

<sup>41</sup> Sznol, “«Jefe» o «supremo»: estudio lexicográfico de compuestos con ἀρχι en fuentes judías y en la ‘koine’ oriental,” 55–70.

<sup>42</sup> Gangutia Elícegui, “Los compuestos de ἀρχι,” 85.

<sup>43</sup> Horsley, *New Documents Illustrating Early Christianity 2: A Review of the Greek Inscriptions and Papyri Published in 1977*, 18.

<sup>44</sup> Shipp, “Notes on the Language of *Vita Aesopi* G,” 98.

<sup>45</sup> Mason, *Greek Terms for Roman Institutions. A Lexicon and Analysis*, 113–17.

in the Roman period a development that ἀρχιερεύς is regularly collocated with the adjective μέγιστος for the most important Roman priesthood by the time of the Flavians.<sup>46</sup> This would seem to be redundant had the ἀρχι- prefix still had semantic force by this time. It would thus seem that we cannot be certain whether or not the ἀρχι- prefix should be translated as “head, chief,” and its function as a marker of (honorific) status might be more significant.

The second issue regarding the term ἀρχισωματοφύλαξ is that of the actual role of a person so titled. The prime discussion of ἀρχισωματοφύλαξ has been by Mooren in the context of aulic titulatures, who has identified a change in the usage from a true aulic titlature to an honorific title in the early second century BCE.<sup>47</sup> Whether honorific or not, it is not clear whether “bodyguard” is an appropriate designation for someone in the close circle of the royal (Ptolemaic) court. Even if the person had some responsibility for security, as implied in Muraoka’s definition, the ἀρχισωματοφύλαξ was an important official in the court, and this ought to be brought out in any definition. Although it serves in the LXX as an appropriate translation of the Hebrew, it might well have been chosen as a term because of, or with the added advantage of, its status in the court. This seems to be the reason for its choice in the *Letter of Aristeas*.<sup>48</sup> For further comparison, the related title σωματοφύλαξ was given to those with responsibility for royal protection, whether in the court, on hunting trips or in battle,<sup>49</sup> but also seems to have been associated with the status it conferred upon its holders. For the later years of the Macedonian court, sometimes no one was given the title, implying that its function was not always essential.<sup>50</sup> In the case of the ἀρχισωματοφύλαξ, the fact that someone so-called is often referred to by two titles (for example, στρατηγός;<sup>51</sup> διοικητής)<sup>52</sup> implies that at least one title is honorary or that the role indicated was not the only function, although responsibility for security would probably have been a full-time job. The *Diccionario griego-español* appropriately inserts after its definition of ἀρχισωματοφύλαξ the words “en la corte ptolemaica” in non-italic script, thereby refining its definition, and by those few words providing an important piece of information for the astute reader.

It still remains possible that the ἀρχισωματοφύλαξ was a “chief of the bodyguard,” but the two pieces of contextual information, one on the implicature of the prefix and one on the social function of a person so-called, raises considerable doubt. How does one convey that doubt and all the data in a brief lexicon entry? The easiest method would be with a definition rather than a gloss. If a gloss were needed, then one might choose in English an

<sup>46</sup> Mason, *Greek Terms for Roman Institutions*, 12, 115.

<sup>47</sup> Mooren, *The Aulic Titlature in Ptolemaic Egypt: Introduction and Prosopography*; Mooren, *La hiérarchie de cour ptolémaïque. Contribution à l'étude des institutions et des classes dirigeantes à l'époque hellénistique*.

<sup>48</sup> Hadas, ed., *Aristeas to Philocrates (Letter of Aristeas)*, 12, 40.

<sup>49</sup> Heckel, “*Somatophylakia*: a Macedonian *Cursus Honorum*,” 279–94.

<sup>50</sup> Heckel, “*Somatophylakia*,” 293–94.

<sup>51</sup> BGU 6, 1247.1 (c. 149–148 BCE).

<sup>52</sup> PBerl, Zill, 1, 2, 22 (156–155 BCE).

equally honorific title such as “King’s Chamberlain” or “Knight of the Garter,” indicating that its root elements are more honorific or historical than real functions, although there is the danger to mislead. A possible definition might run as follows:

ἀρχισωματοφύλαξ m.

A person with an office of status in the Ptolemaic court, initially with some responsibilities for protection of the king but over time becoming honorific.

Perhaps a grandiose-sounding version of σωματοφύλαξ

The noun ἐνταφιαστής, attested in Gen 50:2, is often understood to be an “undertaker, embalmer” as it is glossed in LSJ,<sup>53</sup> and the biblical lexica have followed in this understanding. LEH, for example, has the same equivalents as LSJ, “undertaker, embalmer; neol.?”<sup>54</sup> Nevertheless, the revised Supplement to LSJ has modified its definition to “one who provides for burial,”<sup>55</sup> and Muraoka provides a similar definition to this revised one, along with the gloss from the original LSJ: “one who prepares the burial: undertaker.”<sup>56</sup> BDAG likewise gives the definition “prepare for burial, bury.”<sup>57</sup> There is, therefore, a certain uncertainty over the precise denotation of the word that we must explain, and, having accounted for that, we need to determine the precise role and social position of the person concerned.

The earliest occurrence of ἐνταφιαστής is in fact in the LXX, although it is unlikely to be a LXX invention, given its appearance in other (later) Hellenistic sources and the fact that it is a natural formation in Greek from the adjective ἐντάφιος “belonging to or used in burial.”<sup>58</sup> The root implies that the noun merely denotes someone with functions related to burial, rather than specifically embalming, and as such the revised definition in the LSJ Supplement, Muraoka and BDAG can be accounted for. The Hebrew text of Genesis 50 certainly speaks of embalming, but this should not be our guide for understanding the Greek, and the verb in the Greek is ἐνταφιάζω, cognate with ἐνταφιαστής. Indeed, in Herodotus the Greek word used for embalming is ταριχεύω (Herodotus, *Histories* 2.85–89), a verb more generally used of preserving any item (such as “pickling” berries in Plato, *Symposium* 190d). At the same time the normal way of speaking of preparing for burial would have been to use the verb θάπτω.<sup>59</sup> It appears that ἐνταφιάζω and the noun ἐνταφιαστής have developed as additional items of vocabulary in the field of burial practices, and supplementary evidence to the LXX suggests that they could be used specifically of embalming. For, some of the surviving mummy labels name the actual embalmers and call

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<sup>53</sup> LSJ, 575.

<sup>54</sup> LEH, 206.

<sup>55</sup> *Greek-English Lexicon: Revised Supplement*, 119.

<sup>56</sup> Muraoka, *Greek Lexicon*, 188.

<sup>57</sup> BDAG, 339.

<sup>58</sup> LSJ, 575.

<sup>59</sup> Noted by Harl, *La Bible d’Alexandrie* 1. *La Genèse*, 315.

them by the term ἐνταφιαστής (for example, *Sammelbuch* 1.25; 1.3442).<sup>60</sup> Allusions in other papyri also imply that the office involved actual embalming.<sup>61</sup>

It seems that the more recent lexica are not necessarily correct to exclude the role of embalming, even if preparation for burial might encompass it within the definition. Nevertheless, it seems that an ἐνταφιαστής could also have wider skills, including those of autopsy. A mid-second century CE (*circa* 159 CE) papyrus from Oxyrhynchus (POxy 3:476.8) refers to two ἐνταφιασταί who were called upon to examine a dead body, indicating their anatomical knowledge.<sup>62</sup> In an Egyptian context the priests included a class of doctors, who no doubt would have also been embalmers. It is possible that one duty of physicians even in Greece was also to embalm, and certainly some anatomical knowledge would have been needed for embalming,<sup>63</sup> although how much is not clear. Herodotus' well-known description of Egyptian mummification procedures, involving the dragging of the brain out through the nostrils with a hook or injecting cedar oil to dissolve the stomach and intestines (*Histories* 2.86–87), would have required little detailed knowledge. In Alexandria there developed, however, a sophisticated knowledge of human anatomy, and these Alexandrian doctors might well have used their knowledge for embalming, too. As with most aspects of ancient medicine, ability and customs would have varied from region to region.

This evidence might assist in explaining the biblical passage. In the two occurrences of ἐνταφιαστής in Gen 50:2, the noun is collocated in each case with the cognate verb ἐνταφιάζω. It is clear that they are responsible in the passage for embalming, since they are assigned the task of handling Jacob's dead body. However, that does not mean we should understand ἐνταφιαστής as a word denoting merely "embalmers." Indeed, in the passage it is a translation of the Hebrew word for "physician" (participle נָפֵט), and, even though they were actually embalming the body, they might also have been physicians such that the LXX translators were probably aiming to introduce a word more suitable to the Egyptian context.<sup>64</sup> Given the medical ability of some embalmers, as illustrated by the papyri, it is also

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<sup>60</sup> All references to papyri are given according to the abbreviations of Bagnall, *et al.*, *Checklist of Greek, Latin, Demotic and Coptic Papyri, Ostraca and Tablets*.

<sup>61</sup> Comparative evidence has been recorded by Deissmann, *Bible Studies: Contributions, Chiefly from Papyri and Inscriptions, to the History of the Language, the Literature, and the Religion of Hellenistic Judaism and Primitive Christianity*, 120–21; Moulton–Milligan. *The Vocabulary of the Greek Testament Illustrated from the Papyri and Other Non-Literary Sources*, 217. See also Harl, *La Genèse*, 315; Morenz, "Aegyptische Spuren in der Septuaginta," 257. It might also be noted in this regard that the adjective ἐντάφιος could be used as a substantive to denote the shroud for wrapping the dead body (e.g., Polybius 15.10.3) and this might have implied some association with the practice of embalming.

<sup>62</sup> Moulton–Milligan, *Vocabulary*, 217. A compound form is also attested: ἀρχ(ι)ενταφιαστής (Memphis; 99 BCE: UPZ 1:106.10; 107.12; 108.2, 22; 109.2). This is defined by the *Diccionario griego-español* (p. 538) as "*presidente de una corporación de embalsamadores*."

<sup>63</sup> See Brier–Wade, "Surgical Procedures during Ancient Egyptian Mummification," 89–97. Cf. Driver, *The Book of Genesis*, 395.

<sup>64</sup> Deissmann, *Bible Studies*, 120–21; Harl, *La Genèse*, 315.

a sensible translation. In order to encompass all these facets within the definition, it would have to read something like this:

ἐνταφιαστής m.

someone trained in anatomical knowledge, especially for preparing a body for burial or embalming

## 6.2 Technical Terms

The identification of technical terms can be haphazard. If a term, apparently attested elsewhere in a technical context, is found outside of the technical usage in a literary passage, there are two alternative ways of viewing the term. Either it is a technical term that is being used in a metaphor or for its striking effect in the literary passage, or it is a term that can be both technical and non-technical. An example of the latter is the English noun “discharge,” which refers in physics to the transference of energy between two bodies, or in a military context to the particular type of dismissal from service. At the same time, discharge can refer to any type of unloading or emission. If there are few cases of the possible non-technical uses, which is a common problem with our limited range of sources for ancient languages, then we must consider all the evidence at our disposal.

In Song 5:10 we find the verb ἐκλοχίζω, which, judging by LEH,<sup>65</sup> is first attested in this passage:

ἀδελφιδός μου λευκός καὶ πυρρός ἐκλελοχισμένος ἀπὸ μυριάδων

My beloved is fair and ruddy, selected from tens of thousands

LSJ, which only records this occurrence, and LEH both define ἐκλοχίζω as “to pick out of a cohort or troop,” identifiable from the root λόχος “band, troop.”<sup>66</sup> Montanari renders similar in Italian: “*scegliere tra i soldati: p. in pf. pt. m. scelto fra la truppa VT. Cant 5:10.*”<sup>67</sup> In the LXX it is not immediately obvious that ἐκλοχίζω is a military term, which would be implied by the use of “cohort” and “troop” in the definitions. The definitions themselves are wordy, in part owing to the attempt once more to find correspondences in English for the root elements in the Greek. However, we now have an additional attestation of the word in a first-century BCE inscription from Hermupolis magna. In a list of officials we read of the:<sup>68</sup>

ἐγλελοχισμένοι μαχαιροφό(ροι) βα(σιλικοί)

royal select swordsmen

This source has also now been recorded by the *Diccionario griego-español*, whose definition is:

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<sup>65</sup> LEH, 184. They characteristically mark the verb as a neologism. As we shall see, the verb is attested in a first-century BCE source, which is usually the same date as that assigned to LXX Song of Solomon.

<sup>66</sup> LSJ, 512; LEH, 184.

<sup>67</sup> Montanari, *Vocabolario*, 635.

<sup>68</sup> Preisigke, ed., *Sammelbuch griechischer Urkunden aus Aegypten*, 4206, line 239.

“1. milit. *escoger, seleccionar entre las compañías.*”<sup>69</sup> The inscription is remarkable in that it witnesses to the same meaning and usage (the perfect passive participle) for ἐκλοχίζω as that found in Song 5:10, although in the inscription it is clear that the participle is referring to a group of soldiers. In Song of Solomon there are a number of military terms (for example, Song 7:1), and here the presence of μυριάς “ten thousand, myriad, countless numbers,” which could be used of military troops, might have governed the choice. It can be compared to Judith 2:15 where the troops are said to be “picked” (ἐκλεκτός), and are arranged in units measured by μυριάς and μύριος. Therefore, a possible definition of this verb should note that it is a verb denoting the selecting of a military kind, as *Diccionario griego-español* does and the other lexica imply, although were we to gloss it in English we might prefer a term such as “hand-picked,” which is not from the same root but conveys a similar idea.

In the case of ἐκλοχίζω it is important not to be guided by the root too much. We also find the word in the medieval Atticist Thomas Magister<sup>70</sup> who records the perfect form ἐκλέλοχε as non-Attic and instead prefers the form ἐξείλοχεν. This latter form appears in the *Epitome of Cassius Dio* (*Epitome* 67.12.4) to denote the excerpting of passages from a historian, and therefore continues the sense of “to select” but without any connotation of choosing soldiers.<sup>71</sup> Hesychius<sup>72</sup> glosses in his lexicon entry the participle μαιούμενος as ἐκλοχίζων, which would provide a second meaning for the verb of “giving birth, acting as midwife,” and there could be confusion in this case with the verb ἐκλοχεύω.<sup>73</sup>

A definition of the verb ἐκλοχίζω needs to be able to bring out both its military and its non-military connotations, but ought not to aim at rendering the root elements. It does not seem that the verb is applied to those picked *out of* a troop, but rather for a troop that is itself specially selected:

#### ἐκλοχίζω

1. *military*: to select for a special purpose. Perf. pass. ptc. “hand-picked”
2. to excerpt or extract
3. equivalent of ἐκλοχεύω “to bring forth at birth”

### 6.3 Divine Epithets

The handling of divine epithets is particularly problematic. It has long been recognized that the idiom in the Hebrew Bible has often been rendered by quite a different one in the Greek translation,<sup>74</sup> but this does not mean that the translators were necessarily uncomfortable with

<sup>69</sup> *Diccionario griego-español*, 1377.

<sup>70</sup> Ritschl, *Thomae Magistri sive Theoduli monachi ecloga vocam Atticarum*, ε 113.

<sup>71</sup> Cf. Cary, *Dio's Roman History* 8, 345: “he had excerpted.”

<sup>72</sup> Latte, *Hesychii Alexandrini lexicon* 2, μ 93.

<sup>73</sup> The occurrence in Hesychius is the only one that the *Greek-English Lexicon: Revised Supplement* (p. 109) adds to the LXX reference of LSJ.

<sup>74</sup> The most recent major study of this feature is Olofsson, *God is My Rock: A Study of Translation*

the Hebrew idiom. Rather, they seem to have been aiming to find a suitable conceptual equivalent in their own language. The lexicographer's task is, therefore, to convey the associations and connotations that were intended and no doubt were brought to mind by the use of these terms. At the same time, it might be important to note the origins of the particular term in its secular context, indicating how the translators, as their Hebrew forebears, had spiritualized the terms. Of special importance is the way the term was applied to other gods in antiquity, and therefore the associations attendant upon that usage.

ἀντιλήμπτωρ has a regular series of equivalents in the lexica: the glosses of LSJ, "helper, protector,"<sup>75</sup> are repeated in LEH ("helper, protector; neol."),<sup>76</sup> and the *Diccionario griego-español* ("auxiliador, protector"),<sup>77</sup> and in reverse order in Montanari ("protettore, soccorritore").<sup>78</sup> It is a title that appears twenty times in the LXX (most frequently in the Psalms: sixteen times) and once in 1 Enoch before becoming a popular term in Christian sources. By Christian times it had become a stereotyped expression, but in the LXX we might still have the situation where it is a live metaphor, expressing connotations that would have been known to Jews at the time. What is striking about the term, and this is a point noted but without detailed remark by those writing upon it,<sup>79</sup> is that it does not appear in any literary source apart from Jewish and Christian.

ἀντιλήμπτωρ is used of God as deliverer in the LXX Psalms, translating various Hebrew terms, notably those denoting either "rock" or "protection." In Hellenistic times, ἀντιλήμπτωρ seems to have started as a legal term in the papyri (also spelt as ἀντιλήπτωρ),<sup>80</sup> and although our earliest example is from 158 BCE (UPZ 1 14 r2.18), close to the time of the LXX translations, it is more likely that the term was already in secular use before being adopted by Jewish translators than the other way round. It is possible that it had become a term in Jewish worship before its application in the LXX, although on that our sources are silent. In the papyri, it was usually the Ptolemaic king or other officials of the Ptolemaic and Roman periods that were appealed to as an ἀντιλήμπτωρ "helper" in legal issues requiring royal resolution. In the first occurrence (UPZ 1 14 r2.18), however, it is the Egyptian gods who are appealed to by the title ἀντιλήμπτωρ.<sup>81</sup> Montevecchi, following up the work of

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*Technique and Theological Exegesis in the Septuagint.*

<sup>75</sup> LSJ, 158.

<sup>76</sup> LEH, 55.

<sup>77</sup> *Diccionario griego-español*, 340.

<sup>78</sup> Montanari, *Vocabolario*, 231.

<sup>79</sup> Deissmann, *Bible Studies*, 91, and his predecessors had noted this fact, and even with greater electronic searches available to us the evidence remains the same. Montevecchi, "Quaedam de graecitate Psalmorum cum papyris comparata," 293–310, discusses its use in papyri without mentioning its non-existence in literary sources. *Diccionario griego-español* (p. 340) is once more close to the mark, noting that it is only attested in Hellenistic sources and papyri, but does not make clear that is only Jewish and Christian literature that contains it.

<sup>80</sup> Deissmann, *Bible Studies*, 91; Montevecchi, "Quaedam de graecitate Psalmorum."

<sup>81</sup> Cf. Passoni Dell'Acqua, "La metafora biblica di Dio come roccia e la sua soppressione nelle

Deissmann, notes how a number of terms familiar from the Psalms are found in these petition documents, including σωτήρ, καταφυγή and βοηθός. She concludes that these terms were chosen for the LXX as normal petitionary terms of the time, observing that they appear more frequently in Ptolemaic-era papyri than Roman.<sup>82</sup> As she puts it, the translator chose the Greek terms to make the passages intelligible to Greek ears, capturing the force, feeling, poetic colour, and divine inspiration of the Hebrew poetry, more powerfully than by word or letter.<sup>83</sup> Olofsson suggests that in the Psalms many of the titles in Greek were chosen as words devoid of religious connotations and lacking pagan associations.<sup>84</sup> In this case he is only partially correct. The term is certainly very rare and not literary, and in that sense there seems to be an attempt at avoiding the most common pagan terms, as seems to be the best explanation for a number of Septuagint terms.<sup>85</sup> Nevertheless, it appears to have been a term of legal appeal to a (human) protector, and came also to be applied to the gods, including the Jewish one. With such in mind, it is difficult to offer a brief definition:

ἀντιλήπτωρ m.

1. someone who assists in legal matters upon appeal
2. title of god as a judicial protector, in Egyptian, Jewish, and Christian sources and as one who assists his people in their times of need, distinctive of smaller cults

The evidence for δικαιοκρίτης is comparable to that of ἀντιλήπτωρ. The word appears in 2 Macc 12:41, and it has been rendered in the lexica by its component elements: “righteous judge,”<sup>86</sup> Montanari “*giudice giusto o equo*,”<sup>87</sup> and “*juex justo*.”<sup>88</sup> The *Diccionario griego-español* adds the gloss “*ponderado*” (“prudent”?) for its appearance in Jewish and Christian literature. δικαιοκρίτης in 2 Maccabees is a term used of God (δικαιοκρίτης κύριος) and adopted in this sense by some Church Fathers (for example, Origen, *Fragmenta in Psalmos* 18:12<sup>89</sup>). It is also used of God in the Jewish Sibylline Oracle 3.<sup>90</sup> The concept of God as a κριτής δίκαιος “just judge” is already biblical (Ps 7:12) and used elsewhere in 2 Maccabees (12:6; compare Ps of Sol 2:18; 9:2), and the formation of the compound form from the adjective and noun would be a natural development. There is nothing exceptional about the formation in *koine*.

It is not clear from the lexica when and where the noun was first coined, and consequently whether or not it has a particular denotation. Its first attestations in non-Jewish

antiche versioni,” 434.

<sup>82</sup> Montevicchi, “Quaedam de graecitate Psalmorum,” 106.

<sup>83</sup> Montevicchi, “Quaedam de graecitate Psalmorum,” 104.

<sup>84</sup> Olofsson, *God is My Rock*, 147; cf. p. 84.

<sup>85</sup> Cf. Pleket, “Religious History as the History of Mentality: The ‘Believer’ as Servant of the Deity in the Greek World,” 152–92.

<sup>86</sup> LSJ, 428; LEH, 154.

<sup>87</sup> Montanari, *Vocabolario*, 536.

<sup>88</sup> *Diccionario griego-español*, 1090.

<sup>89</sup> Cf. Pitra, *Analecta sacra spicilegio Solesmensi parata* 2, 3.

<sup>90</sup> Geffcken, *Oracula Sybyllina*, line 704.

literature are from the second century CE, appearing in Aelius Herodianus' *General Prosody* (2nd century CE)<sup>91</sup> and a papyrus petition to a prefect from Letopolis in the Nile delta (PRyl 2 113.35; 133 CE). In the latter the petitioner addresses the prefect with the words "I entreat you my lord and just judge (δικαιοκρίτην)." In a similar manner, it is used as a term of respect to a dignitary in the *History of Alexander the Great*, where Alexander is described as δικαιοκρίτης (recension φ 289). This non-Jewish evidence suggests that the Jewish authors in this case, too, might have adopted a term of official address and applied it to God. In particular, it seems to have been used in the context of petitions, and this is applicable in 2 Maccabees, where the Jews turn to God for forgiveness for the sins of idolatry. Therefore, a definition that attempts to incorporate this information would require a fairly lengthy description, but could read:

δικαιοκρίτης m.

A title said of someone in authority who is being sought in petition, denoting a fair arbiter with the implication that they will therefore fulfil the request. Of God, in Jewish tradition.

A final difficult term used of God is προπάτωρ (3 Macc 2:21), which has been glossed in the lexicæ as "first founder of a family, forefather; ancestor of a tribe; primal god," "forefather,"<sup>92</sup> and "progenitore, avo, fondatore, inventore."<sup>93</sup> As a "forefather" it denotes either a human ancestor (for example, Pelops in Euripides, *Orestes* 1441; Abraham in Rom 4:1) or a god as founder of the pantheon, especially of Zeus (Sophocles, *Ajax* 387). The noun did come to denote from this a founder or inventor (Vettius Valens 3.22).<sup>94</sup> In Jewish writers, apart from the Septuagint, it is used of ancestors. The restriction of the gloss in LEH to only "forefather" is, therefore, justified. προπάτωρ appears in 3 Macc 2:21 in a series of titles applied to God, and it is rendered by Hadas as "primal" (compare PGM 1.341). Hadas suggests that the term here is rare and poetic, and is used exclusively of divine or deified ancestral founders of a line.<sup>95</sup> It is, however, perhaps not so rare or poetic by the late Hellenistic and Roman periods (appearing in Diodorus Siculus, Plutarch and Cassius Dio, and the magical papyri), and it is not clear that all ancestors are in fact deified. Rather, it seems likely that the author of 3 Maccabees has chosen the term since it is used so often of Zeus, and is continuing a tradition of applying vocabulary and images of Zeus to the Jewish God.

Once more, a definition of the term should incorporate this evidence, noting how the word is an adoption of one used of Zeus, with the implications of "primal," as seen in magical papyri, perhaps denoting the Jewish God as supreme and the creator.

<sup>91</sup> Cf. Lentz, *Grammatici Graeci* 3.1.

<sup>92</sup> LSJ, 1494; LEH, 519.

<sup>93</sup> Montanari, *Vocabolario*, 1696.

<sup>94</sup> Cf. LSJ, 1494.

<sup>95</sup> Hadas, *The Third and Fourth Books of Maccabees*, 42.

#### 6.4 Rare Terms

It is perhaps a misnomer to call this section “rare terms” when all the words covered so far have been poorly attested. Nevertheless, those that we have considered have a reasonable number of examples outside of the biblical evidence. When a word is hardly attested at all, difficulties arise for the lexicographer, including how far the uncertainties or indeed possibilities should be described, and how to present a definition from the context that is likely to reflect the lexical semantics rather than the context-bound information, without resorting to a mere translation of the component elements.

ἱματιοφύλαξ, attested in the LXX at 4 Kgdms 22:14, is a good example of these problems. It has naturally been rendered by its component elements as “keeper of the wardrobe,”<sup>96</sup> or “guadarobiere.”<sup>97</sup> Elsewhere it is attested only in a papyrus from the sixth or seventh century CE (StudPal 8, 1109.2, from the Arsinoite nome in Egypt) and even then in a reconstruction, and occasionally in Church Fathers and Medieval writers. It is therefore very difficult to determine much of the meaning, but perhaps we can provide a more helpful definition than the enigmatic “keeper of the wardrobe.” In the LXX ἱματιοφύλαξ translates a Hebrew construct expression that seems to denote one who protects the clothes.<sup>98</sup> Cogan and Tadmor note a similar title in Babylonian texts (CAD S. 225b),<sup>99</sup> and Montgomery and Gehman give the possibilities that in 4 Kgdms 22:14 the person so-titled is an officer, either of the king or of the temple.<sup>100</sup> One may compare 4 Kgdms 10:22 where the στολιστής (probably a misreading of the Hebrew) is a person who brings in the clothing for the priests of Baal (for clothing of sacred staff at such rites, compare Lucian, *de dea Syra* 42<sup>101</sup>). Whilst it is possible that the translator has invented the word ἱματιοφύλαξ to convey the Hebrew term, a cognate verb ἱματιοφυλακέω is attested in Lucian (*Hippias* 8<sup>102</sup>), where it is used in a phrase denoting the cloakrooms at the public baths (a profane use compared to that of the LXX). This could represent one of three possibilities: the LXX influenced Lucian, who came from Syria after all; the word (whether noun or verb) already existed and therefore was used by both; both the LXX and Lucian represent the ease with which one may create compound forms in Greek. Any of these are feasible explanations, but in favour of the existence of the word, the profane use by Lucian suggests it was in general circulation in that sense. A cognate ἱματιοφυλακεῖον “cloak-room” is attested in the third century CE,<sup>103</sup> and LSJ records a gloss in which this word is used, too. It therefore is possible that in the LXX

<sup>96</sup> LSJ, 829; LEH, 288.

<sup>97</sup> Montanari, *Vocabolario*, 946.

<sup>98</sup> Cf. Tov, “Compound Words in the LXX Representing Two or More Hebrew Words,” 189–212.

<sup>99</sup> Cogan–Tadmor, *II Kings: A New Translation with Introduction and Commentary*, 283.

<sup>100</sup> Montgomery–Gehman, *A Critical and Exegetical Commentary on the Books of Kings*, 526.

<sup>101</sup> Lightfoot, ed., *Lucian: On the Syrian Goddess*.

<sup>102</sup> Harmon, *Lucian*, 1.

<sup>103</sup> Kiessling, ed., *Sammelbuch griechischer Urkunden aus Aegypten* 8, 9921.11.

we have a technical term for a temple official, similar to that found in Babylonian texts and to a *στολιστής*. A cautious definition might read:

*ίματιοφύλαξ* m.

A temple official of importance with possible responsibility for priestly garments.

Equivalent to a *στολιστής*

## 7. CONCLUSION

There have been many advances in Greek lexicography in recent years, reflected in the range of lexica that have been produced and the innovations within them. Some of these lexica have incorporated new data and new linguistic theories, and the appearance of definitions has been a marked development, leading to a greater degree of descriptive content that incorporates contextual information. Nevertheless, the legacy of Liddell and Scott and their predecessors is apparent in a number of recent lexica in their tendency to translate the component elements of a word, which can often lead to stilted and uninformative glosses.

The examples given here have shown how attention to the history of a word (although not to such diachronic elements as etymology), its use within different types of literature and other sources, and especially the social circumstances within which a word is used are important. For ancient languages a greater degree of historical descriptive evidence is required than might be for monolingual lexica, although lexical meaning must remain the focus. The difficulty for the lexicographer is determining how much information is relevant for inclusion within the lexicon. The aim has been to avoid material more appropriate for a commentary but to use the contextual evidence to provide definitions that convey something of the connotations of the word, the function within society and register within which it might be used. All the examples are to some extent limited by our knowledge of the period and the few attestations of each word, but it has been shown that it is possible to say more than the current lexica allow. The tendency to opt for glosses, or for definitions that are little more than a rewording of the glosses, is not sufficient. More detailed definitions that describe the uses of a particular word are called for. They need not be extensive or cover many lines of the lexicon, but some additional information as presented here would serve the needs of the lexicon user to a far greater extent than what is currently available.



## CHAPTER 9

# NEW TOOLS AND METHODOLOGIES FOR BIBLICAL LEXICOGRAPHY

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The efficiency and the quality of a lexicographer's work can be greatly enhanced by effective methodology and appropriate tools. One tool that has been specifically designed for creating lexica of biblical texts is the program Source Language Tools, developed by the United Bible Societies. This program consists of two sets of tools: textual ones and lexical ones. The textual tools give access to interlinear versions of the biblical source texts and allow for different kinds of searches. The lexical tools give access to existing lexica but also allow the user to create new ones. One of the dictionaries that is currently being created with the help of Source Language Tools is the Semantic Dictionary of Biblical Hebrew (SDBH), under the auspices of the United Bible Societies. This paper will explain the theoretical framework behind this dictionary and demonstrate how the computer tool facilitates the compilation process.

### 1. INTRODUCTION

The creation story in the Bible contains an interesting statement about language:

So out of the ground the LORD God formed every beast of the field and every bird of the air, and brought them to the man to see what he would call them; and whatever the man called every living creature, that was its name.

(Gen 2:19, RSV)

This Bible passage describes the creation of language. It does that in a way that closely corresponds to the cognitive linguistic perspective: language is a product of the human mind. Humans observe the world around them. They reflect on the objects, states, processes, activities, relations, and other concepts. They recognize, they categorize, and assign names. The product of this process is a powerful tool for communication, firmly embedded in a system of experiences, beliefs, and practices: language.

The task of a lexicographer is to describe the different lexical units of a particular language in such a way that it provides the audience with the keys to the world behind that language. Each dictionary entry is a piece in a jigsaw puzzle that, when completed, should result in a full-color panorama of an entire language including the culture and way of thinking underlying it. Language is not a mechanism that can be separated from the world it originates in. It is merely a window through which we can discover how a community perceives the reality surrounding it and how that reality influences its thoughts and actions.

Linguists working with living languages are in a perfect position to study language in this way. Biblical lexicographers, on the other hand, face a situation that is far from ideal. They have to deal with ancient languages that are no longer spoken in the same form today, and that reflect cultures that have either disappeared or undergone significant change. They have to base their research on a static body of data, often of a rather limited quantity, sometimes spanning a relatively large period of time, and representing different dialects. There are no live conversations to listen to, nor language informants to interview.

In the first part of this contribution I would like to discuss a number of methodological issues regarding biblical lexicography and deal with questions such as what the best strategy would be for discovering the world behind a word in the situation described in the preceding paragraph. This will be done from a contemporary linguistic perspective, strongly influenced by cognitive semantics, which, in my opinion, yields the best results for biblical lexicography.

The second part of this article will focus on some of the more practical aspects of the work of a lexicographer working with biblical data. It will give a description of a new computer tool that has been tailored for lexicographic projects dealing with biblical data, and which fully supports the new methodology. Both the methodology and the tool that will be described in this paper have already been quite successfully applied and implemented in a lexicographic project: the *Semantic Dictionary of Biblical Hebrew*,<sup>1</sup> sponsored by the United Bible Societies. Due to the focus of the latter project, the examples used to illustrate the new methodology will all be from Old Testament Hebrew. In section 3.4 we will address the question of how it can be applied to Syriac lexicography.

## 2. WORDS IN CONTEXT

Most lexicographers will agree that the most reliable source of information for a lexicographer is the context. Some even claim that words without context have no meaning at all. That, however, depends on the definition of context. Context is more than the words preceding and following the words being studied. When discussing context, *cognitive* context should be included. Ungerer and Schmid show that in cognitive linguistics the term “context” is seen primarily as a mental phenomenon.<sup>2</sup> Even single words, pronounced or written in isolation, have a certain amount of cognitive context. If one stands before an audience and pronounces the word “cup” at least some degree of communication will take place. In the majority of instances it will evoke in the mind of the hearer the image of a container from which one can drink (provided, of course, that the hearer understands English and has some knowledge of cups in general). The cognitive context in the mind of the hearer contains enough information to enable him or her to process this word. It goes

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<sup>1</sup> The first results of this project have already been published on the project website: [www.sdbh.org](http://www.sdbh.org).

<sup>2</sup> Ungerer–Schmid, *An Introduction to Cognitive Linguistics*, 46–47.

without saying, that the quality of the communication increases along with the quantity of the context.

This cognitive context enables the hearer to list other terms that belong to the same cognitive category as “cup,” such as “glass,” “tumbler,” “mug,” “beaker,” and other drinking gear. These terms belong together and it is impossible to write a dictionary entry on one of these words without taking the other category members into consideration, as we will see in detail in the next subsection.

## 2.1 Semantic Domains

According to Nida words “have meaning only in terms of systematic contrasts with other words which share certain features with them but contrast with them in respect to other features.”<sup>3</sup> In other words, each particular word is a member of a larger group of words that have certain aspects of meaning in common. Such a group can be called a *semantic field* or a *semantic domain*. The meaning of a word can only then be fully understood when studied in combination with other words that belong to the same semantic domain. Kittay and Lehrer<sup>4</sup> confirm this: “the meanings of words must be understood, in part, in relation to other words that articulate a given content domain and that stand in the relation of affinity and contrast to the word(s) in question.”

Louw and Nida were among the first to introduce the concept of semantic domains into the field of biblical lexicography. Their *Greek-English Lexicon of the New Testament Based on Semantic Domains*,<sup>5</sup> first published in 1989, was a first effort to show how the use of semantic domains can help a lexicographer write more accurate descriptions of the meanings of lexical entries.

Louw and Nida’s framework, however, was based on componential analysis of meaning, a theoretical model quite popular in the seventies of the previous century, which made use of binary features to distinguish between related meanings. In chapter 15 of the present volume I outline some of the shortcomings of this model and try to present an alternative, namely, the application of a much more recent discipline in linguistics: cognitive semantics. Whereas Louw and Nida’s framework is one-dimensional (that is, one meaning belongs to one semantic domain), cognitive semantics allows for a multi-dimensional approach (that is, one meaning belongs to several interrelated semantic domains). This latter approach can bring us much closer to the complex cognitive reality of the world behind the word.

## 2.2 Networks of Semantic Domains

Words can be grouped in domains in more than one way. In chapter 15 I will explain in some detail how one can make a distinction between two kinds of semantic domains:

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<sup>3</sup> Nida, *Componential Analysis of Meaning*, 32.

<sup>4</sup> Kittay–Lehrer, *Frames, Fields, and Contrasts*, 3–4.

<sup>5</sup> Nida–Louw, *Greek-English Lexicon of the New Testament Based on Semantic Domains*.

- *lexical semantic domains* (also called *cognitive categories*), which are groups of words that are related *paradigmatically*, for example, the domestic animals mentioned above.
- *contextual semantic domains* (also referred to as *cognitive frames*), which are groups of words that are related *syntagmatically*, that is, they occur together in a prototypical scenario.

Paradigmatically, the word “cow” would belong in most cultures to the cognitive category of DOMESTIC ANIMALS, together with “sheep,” “goat,” and so on. When looked at from a syntagmatic perspective, on the other hand, cows could be pictured in many different scenarios all over the world, such as:

- DAIRY: the cow as a provider of dairy products (together with other related objects and events, such as “grass,” “milking,” “butter,” “whey,” “cheese”)
- MEAT: the cow as a provider of meat (together with terms such as “butcher,” “knife,” “slaughterhouse,” “steak,” “sausage”)
- SACRIFICE: the cow as a sacrificial animal (together with other objects and processes that are part of a sacrificial ritual, such as “priest,” “altar,” “knife,” “blood,” “fire,” “smell,” and so on)
- AGRICULTURE: a cow pulling a plough (together with other objects and events that are part of the same frame, such as “farmer,” “plough,” “land,” “furrow,” “goad,” and so on)

All these different perspectives, when brought together, give the dictionary user the complete picture of the meaning of “cow.”

The different semantic domains to which a word belongs constitute a network that comprises the entire range of aspects of the meaning of the word. Every usage of a word, every passage where it is found, may represent a somewhat different network.

An example from the Hebrew Old Testament illustrates this. From a paradigmatic point of view, the word אֹהֶל, “tent,” belongs to the domain of TEMPORARY CONSTRUCTIONS, together with other words such as סֹכֶה, “booth,” מִלִּינָה, “hut,” and so on. Syntagmatically, it belongs to the frame of NOMADIC LIFE in passages describing people living in tents like the Israelites in the desert (for example, Ex 18:7). In other passages, however, we see soldiers on a military campaign spending the night in tents, which represents the WARFARE frame (for example, 1 Sam 17:54). A third frame is found in 2 Sam 16:22, where a tent is erected on top of a building as a temporary structure where Absalom violates his father’s concubines. There are also the passages where the word אֹהֶל is used to designate God’s temporary dwelling place (for example, 1 Kings 2:28). Finally, there are passages where אֹהֶל is used in a figurative way to refer to life (Isa 38:12) as something that is of a temporal nature. All these figurative connotations are part of the meaning of a word as well and merit a place in the network of semantic domains surrounding it.

### 2.3 Semantic Domains are not Universal

On the basis of the list of different semantic domains containing the word “cow,” the reader may have already correctly concluded that semantic domains may differ from one culture to another. There is no universal set of semantic domains that can be applied to each and every language and culture. The meaning of a word is more than a relation to one particular entity in the practical world. As Nida observes, the meaning of a word relates to “a concept or a set of concepts that people have about an entity or a set of entities in the world around them.”<sup>6</sup> These concepts may vary from one language or culture to another. According to Fillmore and Atkins

... a word’s meaning can be understood only with reference to a structured background of experience, beliefs, or practices, constituting a kind of conceptual prerequisite for understanding the meaning. Speakers can be said to know the meaning of the word only by first understanding the background frames that motivate the concepts that the word encodes.<sup>7</sup>

This may begin to make sense if we look at domestic animals once more. In many cultures all over the world a pig is seen as a domestic animal. In the Old Testament culture, however, it belongs to a totally different domain. Moreover, there are cultures in which domestic animals play a crucial role and there are those where they are totally insignificant. There are areas in the world where working as a shepherd is a highly honoured way of making a living, but there are places where this is seen as a menial task best left to little children. Many Western cultures view a donkey as a stupid animal. The cultural concepts reflected in the Old Testament, however, provide no evidence substantiating this presupposition. In the Western world the fox is regarded as an animal of great cunning. The Old Testament worldview, on the other hand, depicts it as a destructive animal, as we can read in Judg 15:4–5 and Song 2:15. Different languages and cultures can have vastly different ways of categorizing concepts and there is no way in which we can establish one network of semantic domains that fits all languages and cultures.

### 2.4 Identifying Semantic Domains

This means that if we want to compile a dictionary or lexicon of a biblical language we first will have to determine the underlying semantic framework. The next question is: how can the semantic domains relevant to the world behind the biblical texts be identified? The issue raised in the introductory paragraphs resurfaces, namely, the absence of native speakers and the limited amount of data. A structural semantic analysis of the biblical data, however, will yield more results than we at first might be inclined to expect.

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<sup>6</sup> Nida, *Exploring Semantic Structures*, 14.

<sup>7</sup> Fillmore–Atkins “Toward a Frame-Based Lexicon,” 76–77.

### 2.4.1 Generic Terms

One important tool that helps us identify lexical semantic domains is the study of generic terms in a language. A more technical term, employed by Cruse, is “superordinate.”<sup>8</sup> Hartmann and James use the term “hyperonym.”<sup>9</sup> These are terms that are relatively high up in a hierarchy of semantically related concepts. The term “hyponym,” on the other hand, is commonly used to refer to more specific terms that are lower in the hierarchy. Some examples of generic terms in the Old Testament are **חַיָּה**, “living creatures,” **בְּהֵמָה**, “domestic animal,” **דָּשָׁן**, “vegetation,” **כֵּלִי**, “tool, vessel,” and so on. If Biblical Hebrew has a generic term for a range of concepts we can be quite sure that it represents a semantic (sub) domain.

### 2.4.2 Parallelisms and Word Pairs

Another powerful tool is the study of poetry, especially the use of parallelisms and word pairs. A careful reading of the Old Testament leaves little doubt that terms like **מִשְׁפָּט**, “justice,” and **צְדָקָה**, “righteousness,” belong together, as do **חֶסֶד**, “loyalty,” and **אֱמֻנָה**, “faithfulness.”

This type of method has already proven to be quite successful several decades ago by Sawyer,<sup>10</sup> who devoted an entire monograph to the study of one semantic field, namely, SALVATION. What is of special interest is the fact that Sawyer’s semantic analysis consists of at least two different steps. He first defines what he describes as “the minimum lexical group on which a discussion of OT language about salvation can be based.”<sup>11</sup> This group consists of the roots **ישע**, **נצל**, **עזר**, **חליץ**, **מלט**, **פלט**, **פצה**, **פרק**, including a number of derivatives. He then goes on to define a number of contexts in which terms of salvation are found (for example, *spaciousness*, *healing*, *support*, *leading*, *law court*, and so on) and lists all other Hebrew words that play a role of importance in each of those contexts. In this way he constructs what he describes as the “associative field” of **ישע**. This material functions as the basis of Sawyer’s further research, resulting in a set of definitions for each term belonging to this semantic field. Sawyer’s method is still effective today for determining the semantic domains of a language.

### 2.4.3 Metaphors

A third important tool is the study of metaphors and other figures of speech. As has already been proven by scholars such as Lakoff and Johnson,<sup>12</sup> metaphors are seldom accidental but often reflect semantic patterns within the language. These patterns represent the worldview

<sup>8</sup> Cruse, *Lexical Semantics*, 88–92.

<sup>9</sup> Hartmann–James, *Dictionary of Lexicography*.

<sup>10</sup> Sawyer, *Semantics in Biblical Research*.

<sup>11</sup> Sawyer, *Semantics in Biblical Research*, 35.

<sup>12</sup> Lakoff–Johnson, *Metaphors We Live By*.

of the speakers. Apparently the speakers of Biblical Hebrew saw a pattern between the semantic domains of *Agriculture* and *Morals and Ethics*. As a result we find several passages in the Old Testament mentioning people “ploughing iniquity” (Job 4:8), “sowing righteousness” (Prov 11:18), and “reaping calamity” (Prov 22:8). Likewise, they must have perceived a link between weight and importance, hence the fact that the root כבד can signify both “heaviness” and “honour” and that its antonym קלל can refer both to “lightness” and “insignificance.” Third, there is ample evidence that the old Israelites saw a relationship between feelings and liquids, which explains why שפך is not only used for the pouring out of liquids but also for “pouring out” grief (Ps 102:1), anger (Ps 69:25), and so on.

A careful study of metaphors in the Old Testament can help us discover the different ways in which words can be grouped and how they interrelate. It is essential that metaphors be listed in dictionaries of ancient texts because they help the user understand the different semantic and cognitive patterns and relationships in a language, even though a number of cognitive linguists argue that metaphors do not belong in a dictionary.<sup>13</sup> In this aspect dictionaries of modern, living languages must be considered different from those of ancient languages. A living language is dynamic and used every day in new and creative ways. Ancient languages are represented by a fixed, static, and limited data corpus which functions as the sole resource for the entire dictionary. Metaphors are one of keys to the semantic framework behind the language and it would not be right to deny the user this extremely important information.

### 3. WORK IN CONTEXT

There are many good computer tools these days that give access to dictionaries and lexica of biblical languages. Most of these programs allow the user to look up entries, jump from one entry to another, and jump from an entry to the biblical texts where that entry is found and *vice versa*. In most cases these tools are electronic representations of the standard lexica that are also available in print. Their advantage is purely practical. The sources—the biblical text and the dictionaries—are the same, but consulting them goes faster and easier. These tools are not intended, however, to create a new lexicon or add information to an existing one.

When we look for database programs that allow users to create and store dictionary entries, we can observe that numerous such programs are available, but that it is hard to find database editing software that allows for proper interaction between the source text data and the lexicon entries that are being worked on. This is problematic for someone who wants to apply these tools to creating a biblical lexicon, because this concerns the creation of a lexicon based on a small corpus that raises many textual and philological questions. For this reason biblical lexicography is embedded in various kinds of textual and philological analysis. Someone compiling a lexicon based on textual data would be greatly helped by a tool that both gives access to the text and can build and maintain a lexical database at the same time.

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<sup>13</sup> See the discussion in Falla, “A Conceptual Framework,” 33–36.

If we want to develop new research strategies, we need a program that includes both the possibility to create or revise a lexicon and the possibility of constant interaction between the sources and the reference works. This will enable us to have a continuous interaction between the textual data and the tools that have the interpretation of these data both as their basis and as their goal.

In the year 2000 the United Bible Societies appointed me editor of a new dictionary of Biblical Hebrew based on semantic domains. This dictionary is to be the Old Testament counterpart of Louw and Nida's *Greek-English Lexicon of the New Testament based on Semantic Domains* mentioned above. The application of insights from contemporary lexicography, however, has resulted in an underlying theoretical framework that differs in several ways from that of Louw and Nida's. This theoretical framework was introduced in section 2, above.

In view of the lack of suitable tools it was decided to develop software specifically for the task of creating a lexicon for a biblical text. This resulted in the program called Source Language Tools (SLT), to which we now turn our attention.

### 3.1 Source Language Tools

This program handles the biblical languages and their scripts well and is based on Unicode. It consists of two sets of electronic tools:

- TEXTUAL TOOLS that give access to the source text in an interlinear format (with morphological data and glosses) and enable the user to search the source text in different ways (including other scripture texts, textual commentaries, and handbooks) (see figure 1)
- LEXICAL TOOLS which facilitate the creation, display, and editing of dictionary databases (containing cross-links, semantic domains at different levels, and scripture references) (see figure 2)

Each set of tools is located in a separate window. By pressing the ESC key the user can quickly switch from one set of tools to another. In addition, the software allows for various types of interaction between the two sets of tools, such as:

- A user working on a biblical text can look up any word in one of the available dictionaries by clicking on the word. A menu will appear with a list of resources from which a selection can be made.
- A user looking at a dictionary entry can look up all listed scripture passages in any of the available scripture texts, and jump to related entries.
- A user studying one particular semantic domain can pull up a list of all entries belonging to that semantic domain and browse the dictionary for a quick comparison of all related entries.

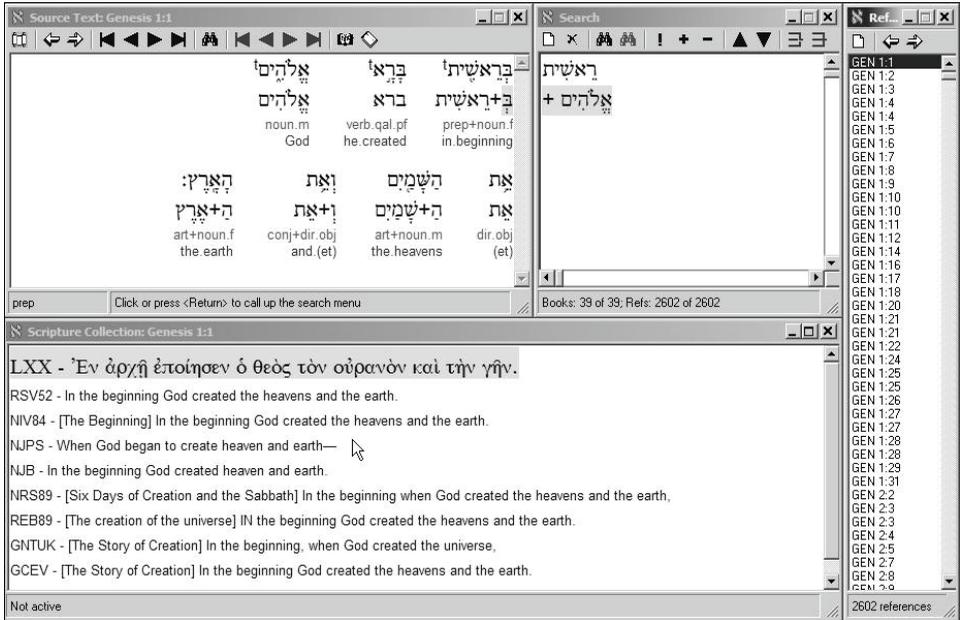


Figure 1. Textual Tools Window

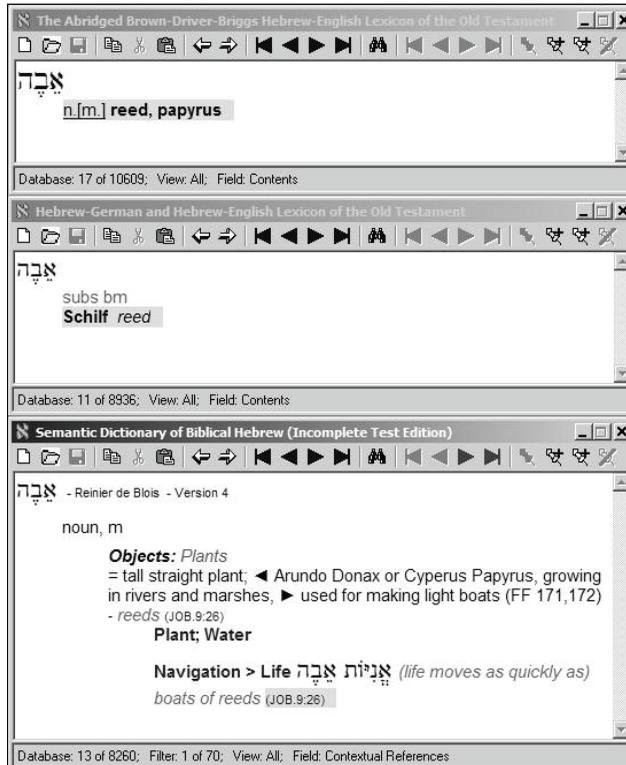


Figure 2. Lexical Tools Window

### 3.2 Displaying Entries in SLT

Figure 3 shows one of the entries of the Semantic Dictionary of Biblical Hebrew the way it is displayed in SLT.

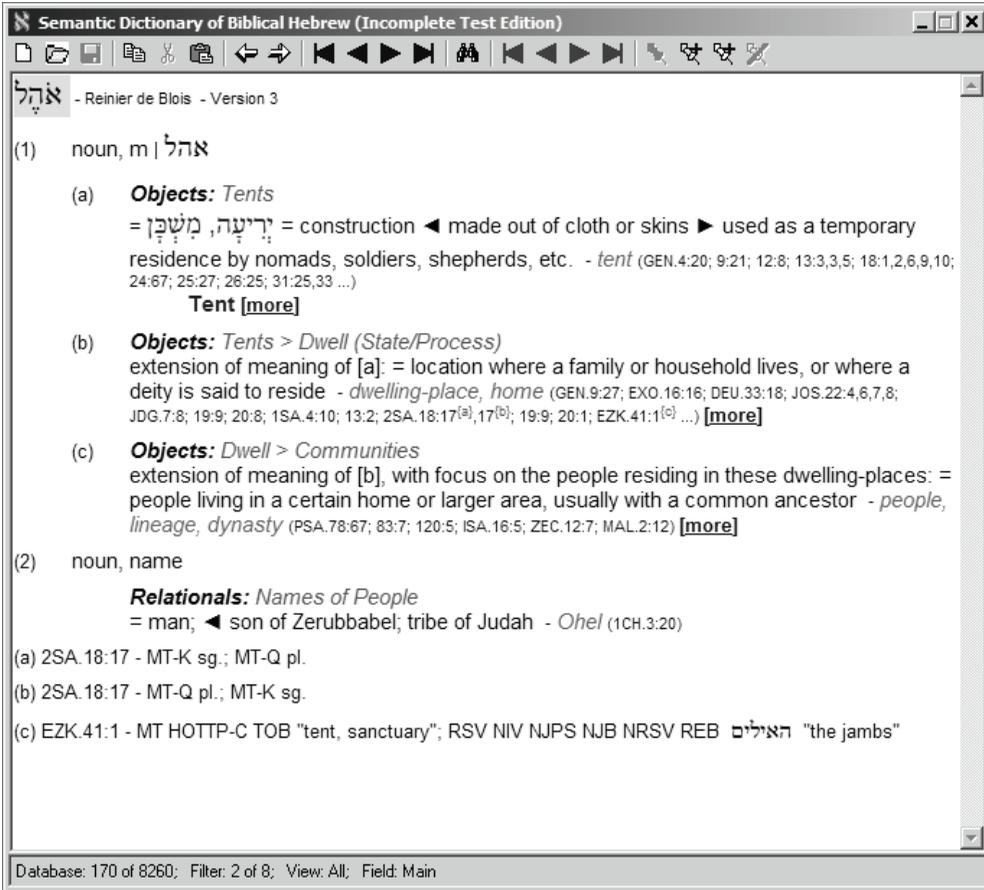


Figure 3. Entry אֹהֶל “tent”

The hierarchical structure of this entry is clearly visible, consisting of two base forms: (1) the noun אֹהֶל, and (2) the proper name אֹהֶל. The noun has three lexical meanings (a), (b), and (c), each of which is presented in the form of a definition, followed by a gloss. All scripture references are given, which are directly linked to the Hebrew text. A double click on a reference will enable the user to view the corresponding verse in an interlinear format (as in figure 1). Different fields are displayed in different colors to help the user have a quick overview.

A click on a semantic domain will produce a list of all entries belonging to that same domain so that comparison can be made between the different entries.

In addition to the three lexical meanings displayed in figure 3, a number of contextual meanings has been defined for each lexical meaning, including different contextual semantic

domains. This information pops up the moment the user clicks on one of the links “[more].” Figure 4 shows the contextual meanings under lexical meaning (1b).

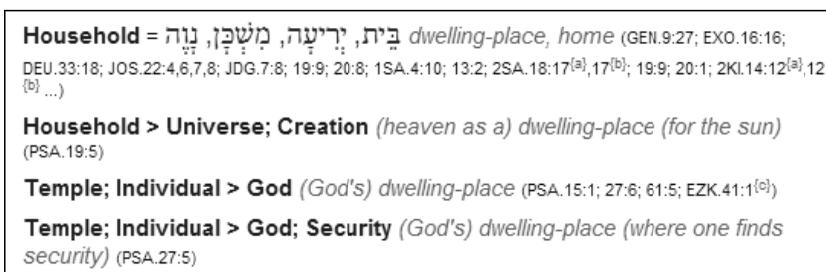


Figure 4. Contextual Meanings

### 3.3 Creating New Entries with SLT

Every entry in the dictionary is based on a template. The program allows the user to make use of different templates depending on the needs of the database. The use of a template guarantees that the database has a consistent structure and that each type of information is processed and displayed in a uniform way. Figure 5 shows the empty SDBH template for אֱהָל.

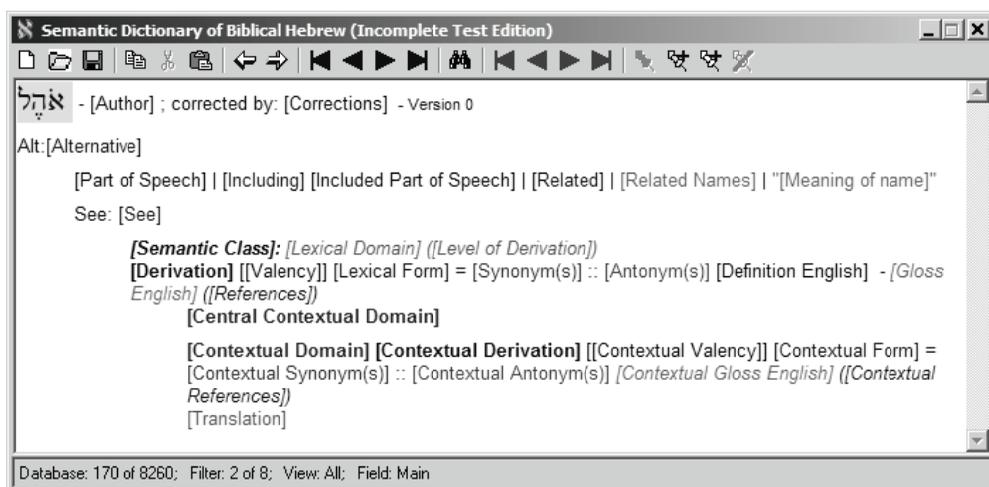


Figure 5. SDBH Template

The indents show the different hierarchical levels used in SDBH: (1) base forms, (2) lexical meanings, and (3) contextual meanings. Subentries can be added, copied, and deleted at each level with a simple click of the mouse.

A field is edited by clicking on it and pressing the SPACE bar. Another window pops up where the contents of the field can be typed. As soon as the window is closed the text will appear in the entry.



It should be noted that the same text can be displayed in different Syriac scripts, such as Serto, Estrangelo, and so on. The user can select the script she or he prefers.

At this stage there is as yet no template for the new Syriac lexicon for use in SLT. In order to give the reader an impression of what a lexicon could look like, however, I have taken the entry ܠܥܠܘܢ, “to eat, consume,” from Jennings’ lexicon<sup>15</sup> to create a temporary template. Figure 7 shows this entry both in the original format and in SLT.

ܠܥܠܘܢ *ate, consumed*, Ac. ix 9. Fut. ܠܥܠܘܢܐ Lk. xiv 15. Inf. ܠܥܠܘܢܐ  
Mt. xii 4, Imp. all perss. has ܠܥܠܘܢܐ. Ethpe. *was eaten, consumed*,  
Jas. v 2. When followed by ܠܥܠܘܢܐ (q.v.) *was calumniated, accused*.  
ܠܥܠܘܢܐ ܕܥܠܘܢܐ ܕܥܠܘܢܐ *his accusations were brought against him*, Lk. xvi 1; cf. xxiii 2. Aph. ܠܥܠܘܢܐ *gave to eat*,  
1 Cor. xiii. 3; *fed*, Rom. xii 20.

ܠܥܠܘܢ

(1) verb, peal  
ܠܥܠܘܢ Fut. ܠܥܠܘܢܐ; LUK.13:15; Inf. ܠܥܠܘܢܐ MAT.12:4; Imp. all perss. has ܠܥܠܘܢܐ.  
*to eat, consume*  
ACT.9:9

(2) verb, ethpeal  
(a) *to be eaten, consumed*  
JAS.5:2  
(b) when followed by ܠܥܠܘܢܐ (q.v.) *to be calumniated, accused*  
LUK.16:1  
ܠܥܠܘܢܐ ܕܥܠܘܢܐ ܕܥܠܘܢܐ  
*his accusations were brought against him*

(3) verb, 'aphel  
ܠܥܠܘܢܐ  
(a) *to give to eat, feed*  
1CO.13:3  
(b) *to feed*  
ROM.12:20

Figure 7. ܠܥܠܘܢ According to Jennings in SLT Format

The advantage of an electronic publication over a printed edition is clear: there is no need to economize on space so there is room for a more elaborate layout of each entry. This makes a dictionary much more accessible to the user.

<sup>15</sup> Jennings, *Lexicon to the Syriac New Testament*.

#### 4. CONCLUSION

In this paper I have made an effort to describe the methodology and tools that are used for the compilation of the Semantic Dictionary of Biblical Hebrew. In the first part we discussed the cognitive context of words. An effort was made to show the importance of the use of semantic domains, and how a cognitive linguistic perspective allows for more than one single layer of semantic domains. We also saw that semantic categorization may have different results in different languages. Some techniques were shown for determining which semantic domains are relevant for a given language.

In the second part of this paper the program Source Language Tools was introduced, which not only gives access to data from the Biblical languages but at the same time enables the user to do lexicographic research and create and edit a dictionary of a Biblical language.

It is hoped that both the theoretical and the practical parts of this article can be of benefit to the new Syriac lexicon.

**PART FOUR**  
**INTERDISCIPLINARY PERSPECTIVES:**  
**HEBREW AND GREEK LEXICOGRAPHY**



# CHAPTER 10

## THE GESENIUS / BROWN–DRIVER–BRIGGS FAMILY

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In terms of historical dependency the English Brown–Driver–Briggs (1906/1907) and the 17th edition of the German *Handwörterbuch* of Wilhelm Gesenius (1915) are closely related, but the internal arrangement of the entries in these lexica differs considerably. The main distinction is that between the alphabetical arrangement in Ges<sup>17</sup> and the root-based arrangement in BDB. Regarding the treatment of supposed but not attested verbal roots, only the revised edition of the *Handwörterbuch* exhibits the caution that current studies in etymology and semantics require. Ges<sup>18</sup> also has some other practical disadvantages: it is not yet completed and it is very expensive.

### 1. INTRODUCTION

Wilhelm Gesenius, who lived in Germany from 1786 to 1842, is often called the father of modern Hebrew lexicography.<sup>1</sup> A discussion of the three lexica of the Gesenius family has as a natural starting point his *Handwörterbuch*.

In the present article, in section 2, two lists are presented, one giving basic information concerning the three lexica, and one with chronological data, showing the internal dependencies between Ges<sup>17</sup>, Ges<sup>18</sup>, and BDB.<sup>2</sup>

In section 3 some details of the two lists are explained, followed by examples for the internal organization or arrangement of the three lexica. In section 4 a short assessment of this family of lexica is given.

My work on the abridged edition of HALAT, especially on the so-called etymological parts,<sup>3</sup> has provided me with the background for this assessment.

Author	Title and description	Publication data	Price
A)			
Wilhelm Gesenius	<i>Hebräisches und Aramäisches Handwörterbuch über das Alte Testament</i> , 17th edition 1915, edited by Frants Buhl; many reprints (unchanged)	Springer Verlag, Berlin etc. 1 vol., 1013 pp.	

<sup>1</sup> For the life and work of Gesenius see Smend, “Wilhelm Gesenius 1786–1842.”

<sup>2</sup> For the dependence of BDB on Ges<sup>17</sup>, see chapter 11 in the present volume.

<sup>3</sup> To speak with O’Connor, “Semitic Lexicography,” 183, the so-called etymological data in Hebrew dictionaries are “not truly etymological but comparative.” For the project of an abridged edition of HALAT, see chapter 13 in this volume.

Author	Title and description	Publication data	Price
Wilhelm Gesenius	<i>Hebräisches und Aramäisches Handwörterbuch über das Alte Testament</i> , 18th edition 1987 (Alef-Gimel); 1995 (Dalet-Yod) 2005 (Kaf-Mem); 2007 (Nun-Pe)	Springer Verlag, Berlin etc. Thus far 4 vols., 1094 pp. Scheduled: 5–6 vols., ±1500 pp.	Thus far €765 (± \$1110)
B) Brown, Driver, Briggs	<i>A Hebrew and English Lexicon of the Old Testament</i> With an appendix containing the Biblical Aramaic. Based on the Lexicon of William Gesenius as translated by Edward Robinson. Edited with constant reference to the <i>Thesaurus</i> of Gesenius as completed by E. Rödiger, and with authorized use of the latest German editions of Gesenius' <i>Handwörterbuch über das</i> <i>Alte Testament</i> by Francis Brown with the cooperation of S.R. Driver and Charles A. Briggs 1907; 2nd edition 1952; many reprints	Oxford University Press, USA  <b>“Oxford Edition”</b>  1 vol. lexical entries: 1127 pp.	\$65
Brown, Driver, Briggs	<i>Hebrew and English Lexicon</i> With an appendix containing the Biblical Aramaic. Coded with the numbering system from Strong's <i>Exhaustive Concordance of the Bible</i> . Based on the lexicon of William Gesenius as translated by Edward Robinson, and edited with constant reference to Gesenius' <i>Thesaurus</i> as completed by E. Rödiger, and with authorized use of the German editions of Gesenius' <i>Handwörterbuch über das Alte Testament</i> Francis Brown, S.R. Driver, Charles A. Briggs 1996 reprinted from the 1906 American edition; several printings	Hendrickson Publishers, Peabody Mass.  <b>“Hendrickson Edition”</b>  1 vol. lexical entries: 1127 pp.	\$35
Index BDB	Index to Brown, Driver, Briggs' <i>Hebrew Lexicon</i> Compiled by Bruce Einspahr, 1982	Moody Publishers, Chicago 1 vol., 456 pp.	\$43

### List 1: Gesenius and its Lineage

## 2. GESENIUS AND ITS LINEAGE

In list 1 appear the two editions of the *Handwörterbuch*, the two editions of BDB, and the Index to BDB, all of which are still available.

Both Ges<sup>17</sup> and BDB represent the status of lexicography and also of Semitic studies from the beginning of the twentieth century: Ges<sup>17</sup> is identical to the 16<sup>th</sup> edition of 1915 and has not been revised since. BDB, both the Oxford and the Hendrickson editions, are reprints of the British edition of 1907 and the American edition of 1906, respectively. Though BDB has undergone many minor corrections which have not affected pagination, the material itself is basically the same as in the editions of 1906 and 1907. This deficiency has hardly been alleviated by the few appended addenda and corrigenda.

Ges<sup>18</sup>, a comprehensive revision of Ges<sup>17</sup>, is more than half-way completed, four volumes having been released over a span of twenty years. The price, in comparison with Ges<sup>17</sup> and especially BDB, is astronomical.

A particular feature of the Hendrickson edition of BDB is the introduction of the “Strong’s numbers” on the margins, that is, of the codes given to the Hebrew words in *Strong’s Exhaustive Concordance of the Bible*.<sup>4</sup> BDB has thereby been made accessible to users with little or no knowledge of the Hebrew language.

56 † I. אָבַל<sup>39</sup> vb. mourn (As. [abálu] v. D1<sup>w</sup>) ...

**BDB: the verb אָבַל “mourn” is labeled in the margin by Strong’s number 56**

The Index mentioned in List 1 is helpful for beginners or those not familiar with Hebrew. It displays for every biblical verse the contextually new lemmas as they are given in BDB, including a translation, the page number in BDB, and the section within the BDB lexical entry:

1 Samuel

Ch	v.	Heb	Eng	Page	Sec
5	10	זַעַק	<i>cry</i>	277 <i>b</i>	2 d
		מוֹת	<i>die</i>	560 <i>b</i>	2
		סָבַב	<i>turn about</i>	686 <i>c</i>	1 d
		עִקְרוֹן	<i>ekron</i>	785 <i>d</i>	
		עִקְרוֹנִי	<i>ekronite</i>	785 <i>d</i>	
		שָׁלַח	<i>send</i>	1019 <i>a</i>	1 e

**Einspahr’s Index: 1 Sam 5:10 with the BDB pages and article sections**

Since 2000 the Hendrickson edition contains an index in ascending numerical order which provides easy access to the numbers for English words found in Strong’s *Concordance*. For many of these numbers there is more than one BDB page reference, thus giving all the entries in which the relevant word is mentioned in both the Hebrew and Aramaic parts of BDB. Since we focus on Hebrew roots or words, the material for readers with little or no

<sup>4</sup> Strong–Kohlenberger–Swanson, *Strong’s Exhaustive Concordance of the Bible*, first edition 1894, with many reprintings. Current editions include, amongst others, *New Strong’s*, *Red-Letter*, and *Strongest Strong’s*.

knowledge of Hebrew will not be discussed further.

<b>Date</b>	<b>Description</b>
1810; 1812	<i>Hebräisch-deutsches Handwörterbuch über die Schriften des Alten Testaments mit Einschluss der geographischen Namen und der chaldäischen Wörter beyrn Daniel und Esra</i> Abridgement of this first edition for schools:
1815	<i>Neues hebräisch-deutsches Handwörterbuch über die Schriften des Alten Testaments</i>
1823	<i>2<sup>nd</sup> edition: Hebräisches und chaldäisches Handwörterbuch über das Alte Testament</i>
1828	<i>3<sup>rd</sup> edition</i>
1829–1858	<i>Thesaurus philologicus criticus linguae hebraeae et chaldaeae Veteris Testamenti (completed by Emil Rödiger)</i> Based on the 3 <sup>rd</sup> German edition of the <i>Handwörterbuch</i> (1828) is the augmented Latin edition:
1833	<i>Lexicon manuale Hebraicum et Chaldaicum in Veteris Testamenti libros</i> <b>1836 translated by Edward Robinson</b>
1834	<i>4<sup>th</sup> edition</i>
1847	<i>2<sup>nd</sup> edition of the Lexicon manuale, ed. by A.T. Hoffmann</i> <b>1854 last revision of Robinson's Gesenius</b>
1857	<i>5<sup>th</sup> edition, ed. by Franz Dietrich</i>
1863	<i>6<sup>th</sup> edition, ed. by Franz Dietrich</i>
1868	<i>7<sup>th</sup> edition, ed. by Franz Dietrich</i>
1878	<i>8<sup>th</sup> edition, ed. by F. Mühlau and W. Volck</i>
1883	<i>9<sup>th</sup> edition, ed. by F. Mühlau and W. Volck</i>
1886	<i>10<sup>th</sup> edition, ed. by F. Mühlau and W. Volck: Hebräisches und Aramäisches Handwörterbuch über das Alte Testament</i>
1890	<i>11<sup>th</sup> edition, ed. by F. Mühlau and W. Volck</i>
1895	<i>12<sup>th</sup> edition, ed. by Frants Buhl</i> <b>1891–1906/1907 BDB, based on Robinson's Gesenius + Thesaurus + Ges<sup>13</sup></b>
1899	BDB <i>13<sup>th</sup> edition, ed. by Frants Buhl</i>
1905	<i>14<sup>th</sup> edition, ed. by Frants Buhl</i>
1910	<i>15<sup>th</sup> edition, ed. by Frants Buhl</i>
1915	Ges <sup>17</sup> <i>16<sup>th</sup> edition, ed. by Frants Buhl</i>
1921	<i>17<sup>th</sup> edition (unchanged reprinting of the 16<sup>th</sup> edition)</i>
1987–	Ges <sup>18</sup> <i>18<sup>th</sup> edition, ed. by Herbert Donner</i>

**List 2: Ges<sup>17</sup>, Ges<sup>18</sup>, and BDB: forerunners, chronology, and dependency**

List 2 shows to what extent and at which stage of the revision process BDB can be classified as dependent on the *Handwörterbuch*. Grey-shaded areas indicate the various editions of the *Handwörterbuch*. The lighter grey towards the bottom indicates a change in the title: from the 10<sup>th</sup> edition on the term “chaldäisch” has been replaced by “aramäisch.” On the right, in

bold, the development of BDB is briefly indicated. At the end, again on the left, with a time interval of more than 70 years, the Ges<sup>18</sup> edition makes its appearance.

The differences between the 17<sup>th</sup> and the 18<sup>th</sup> edition of the *Handwörterbuch* as well as BDB will be discussed in section 3.

### 3. PECULIARITIES OF BDB, GES<sup>17</sup>, AND GES<sup>18</sup>

The main differences between the volumes discussed are that the *Handwörterbuch* presents all entries in alphabetical order, whereas BDB primarily provides an alphabetical listing of the *roots*. In BDB the derivatives under a certain root are given in a smaller font. Between a root with its derivatives and a following root sometimes other words that cannot be traced back to a root are inserted in alphabetical order. In these cases there is no separation indicated, either by font size or by interval.<sup>5</sup>

#### 3.1 First Example: כָּאַב, [כָּאַה], and כַּב

In BDB we have entries under the lemmas כָּאַב, [כָּאַה], and כַּב.<sup>6</sup> Two are vocalized, one of which is also put in brackets, and the third is given without vocalization. The root without vowels does not appear as a *verb* in the Bible, which is why one reads here “√ of foll.,” “root of following.” The item put in brackets does not occur in the Masoretic text in that *form*:<sup>7</sup> only the one vocalized and without brackets can actually be found in the Masoretic text, *inter alia* also in that form. One of the derivatives of כָּאַב, “be in pain,” is מְכַאֵב, “pain.” This lemma is given in a smaller font following the root. The lemma כַּב, “star,” is also given in a smaller font under the assumed root כַּב. Both nouns also appear in the alphabetical order later in the lexicon, but at that point one is referred back to the entries כָּאַב and כַּב.

In Ges<sup>17</sup> the same three lemmas כאב, כאה, and כב are given as consonants with neither vocalization nor brackets.<sup>8</sup> מְכַאֵב is indicated as a derivative of כאב, “Schmerz empfinden,” but is alphabetized under the letter מ. In the entry on כב one is also referred to כַּב.

Ges<sup>18</sup> provides entries only under the lemmas כאב and כאה (each with reference to the derivatives),<sup>9</sup> the root כב is left out. Not until in the entry of כַּב, “Stern,”<sup>10</sup> do we find the reference to a root \*KBB, “brennen,” but with a question mark.<sup>11</sup>

A brief survey of the lemmas כאב, כאה, and כב:

<sup>5</sup> BDB, e.g., 464*b*, 468*a*, 495*a*. Only experienced users will be alert to hints as “prob. loan-word” or “√ unknown” indicating that there is no connection with the preceding lexical entry.

<sup>6</sup> BDB, 456.

<sup>7</sup> In BDB every tri-consonantal root found in the Bible is given in the form of the perfect 3ms. If that precise form is not recorded, the root is presented between brackets.

<sup>8</sup> Ges<sup>17</sup>, 331*b*.

<sup>9</sup> Ges<sup>18</sup>, 521*a*.

<sup>10</sup> Ges<sup>18</sup>, 530*b*.

<sup>11</sup> See the note “Etym(ologie) unkl(ar).” The noun is possibly a primary noun.

BDB	Ges <sup>17</sup>	Ges <sup>18</sup>
כָּאָב	כאב	כאב
[כָּאָה]	כאה	כאה
כבב (√ of foll.)	כּוּכּב s. z. כּוּכּב	—

Example 1: כָּאָב, [כָּאָה], and כבב

### 3.2 Second Example: [כָּוָה], [כּוּל], and כּוּם

In BDB we find the lemmas [כָּוָה], [כּוּל], and כּוּם in close proximity to one another.<sup>12</sup> [כָּוָה] is given in the Qal perfect 3ms. and is put in brackets; [כָּוָה] is given in the Qal infinitive construct and is also put in brackets; כּוּם is not vocalized. Since in BDB the second-Waw/Yodh verbs are listed in the Qal infinitive construct, it is evident just at first glance that [כָּוָה] is not a weak (second-Waw) verb, but one of the 21 verbs in the Old Testament with a “strong” 1 as their middle root consonant—at least according to BDB.

Ges<sup>17</sup> gives the roots כּוּה, כּוּל, and כּוּם without vocalization.<sup>13</sup> In the entry of כּוּם the reader is advised to compare with כּוּמָה, but there is no hint of a reference to the root כּוּם. This inconsistency, probably based on uncertainty, was corrected in Ges<sup>18</sup>, where there is no longer a separate entry for a root כּוּם.

A brief survey of the lemmas כּוּה, כּוּל, and כּוּם:

BDB	Ges <sup>17</sup>	Ges <sup>18</sup>
[כָּוָה]	כּוּה	כּוּה
[כּוּל]	כּוּל	כּוּל
כּוּם (√ of foll.)	כּוּם vgl. כּוּמָה	—

Example 2: [כָּוָה], [כּוּל], and כּוּם

### 3.3 Third Example: bi-consonantal forms generally precede the tri-consonantal

In BDB words thought to be originally bi-consonantal generally precede tri-consonantal forms (“from simple to complex”). In the majority of cases this rule is self-evident.<sup>14</sup> In the case of בַּת, “daughter,”<sup>15</sup> for example, its listing under the entry of בֶּן, “son,” and before the lemma בָּנָה, “build,” is consistent, but nevertheless takes a bit of getting used to; however, looking for בַּת, “daughter,” in the alphabetical order, one will find a reference back to the entry בֶּן.<sup>16</sup>

<sup>12</sup> BDB, 464*b*–465*a*.

<sup>13</sup> Ges<sup>17</sup>, 336*b*–337*a*.

<sup>14</sup> In BDB bi-consonantal words derived from a tri-consonantal root are recorded under the appropriate root, therefore דָּל is given under דָּלָל (195*b*).

<sup>15</sup> BDB, 123*a*.

<sup>16</sup> BDB, 143*b*.

In Ges<sup>17</sup> as well as in Ges<sup>18</sup> **תב** has its own entry, in the usual alphabetical order, following **בשת**.<sup>17</sup>

#### 4. CONCLUSION

The examples show the increasing cautiousness most modern lexicographers show, especially in dealing with etymology.<sup>18</sup> The eagerness to determine the root of a Hebrew word, even in cases where that word is the only proof of such a root (see BDB and Ges<sup>17</sup> under **קט**, second example above), has clearly diminished. Following such a “virtual” root in Ges<sup>17</sup> or BDB one often reads comments such as: “meaning unknown,” “wenn wirklich existierend,” “meaning dubious,” “uncertain,” “perhaps,” and sometimes also simply nothing. The cautiousness is certainly due to the progress in the field of Semitic studies and also to the advance in research in the field of languages such as, for example, Ugaritic. Many texts, including those of Ugarit, were, of course, not available to be taken into consideration when BDB and Ges<sup>17</sup> were compiled.

The 1906 preface of BDB states: “The number of such cases (that is to say: in which questions of etymology are still open) ... is comparatively small.”<sup>19</sup> In the 1915 preface of Ges<sup>17</sup> we can read the words of Frants Buhl: “... die Zahl der Fälle wo ich die Möglichkeit einer sicheren ... Lösung der Schwierigkeiten bezweifle, [hat] bei meiner fortgesetzten Beschäftigung mit diesen Fragen eher zu- als abgenommen.”<sup>20</sup> In the 1987 preface of Ges<sup>18</sup> we read: “bei der Bearbeitung [i.e., of the etymological data] galt die Regel, Unsicheres weitgehend unberücksichtigt zu lassen.”<sup>21</sup>

The preceding examples also show the weakness of a lexical analysis that is primarily root-based, such as in BDB. For didactic purposes a root-based lexicon is indeed valuable, but beginners will be frustrated because of the difficulties in tracing the root of an unknown word back to the correct lexical entry. This problem is evidenced by the various indices and the addition of the Strong’s numbering system, which all try to make using BDB somewhat easier. Nonetheless, the result remains cumbersome.<sup>22</sup>

<sup>17</sup> Ges<sup>17</sup>, 121b; Ges<sup>18</sup>, 185a.

<sup>18</sup> See Barr, *Comparative Philology*, 412–36 (= “Limitations of Etymology as a Lexicographical Instrument in Biblical Hebrew”), esp. 434–35. Warning against etymological speculations based on the evidence in one particular language, Barr pleads for pan-Semitic lexicography (cf. Cohen, *Dictionnaire des racines sémitiques*), but he is also aware of the problems of inner-Semitic semantic variation and loanword adaption. Basically, one should distinguish between different meanings and different usages of a meaning in particular contexts; see De Regt, “Multiple Meaning and Semantic Domains in Some Biblical Hebrew Lexicographical Projects,” 63–75, esp. 65. That same idea was implemented by Clines, *The Dictionary of Classical Hebrew*, unfortunately by renouncing all etymological work.

<sup>19</sup> BDB, x.

<sup>20</sup> Ges<sup>17</sup>, v.

<sup>21</sup> Ges<sup>18</sup>, ix.

<sup>22</sup> See also the short characterization of BDB in Van Steenbergen, “Hebrew Lexicography and Worldview: A Survey of Some Lexicons,” 273–76; cf. O’Connor, “Semitic Lexicography,” 187–88, 191–204, *passim*. Van Steenbergen, 276, stresses the importance of the distinction between usage and

Additionally, in BDB the mere root-based listing has been complemented later by an alphabetical listing with cross references to all the words that appear in the Masoretic text. In that “Mischform” now available, every word is recorded twice. As a result the contents have been considerably enlarged. Since the editors decided that pagination should not be affected, the enlargement was partly at the cost of clarity.

To illustrate this point let us consider two more examples:

- When looking up the word כָּל, “the whole, all,” in BDB and not being aware that the root behind this word is כָּלֵל, which can be found under כָּלֵל, “complete,” one must have a keen eye to detect the reference following כָּלֵל that, for lack of space, has not been given a line of its own.<sup>23</sup>
- כָּר, “lamb,” must be sought under כָּרֵר. To find this, one must read the whole entry for II. כָּר, “pasture,” to the very end to find the annotation “III. כָּר” with a reference to כָּרֵר.<sup>24</sup> Normally one would have expected a new paragraph.

In Ges<sup>17</sup> the roots and words are listed alphabetically, so the lexicon is concise and can be handled easily. The information in the entries is similarly detailed as in BDB. Due to the Arabic, Syriac, or Ethiopic fonts, the etymological parts in Ges<sup>17</sup>, as in BDB, are actually helpful only to specialists.

A real disadvantage of both Ges<sup>17</sup> and BDB is their age. In this respect Ges<sup>18</sup> represents an alternative. The etymological parts of each entry are rewritten, Semitic data other than Aramaic are given in transcription. Ugaritic, Dead Sea Scrolls, Ben Sira, and the inscriptional evidence are incorporated. All the biblical word forms are recorded, the syntactic constructions are augmented, relevant literature is added, and much more. According to its editors, Ges<sup>18</sup> aims to occupy a position between a lexicon and a thesaurus<sup>25</sup>—an admirable undertaking. Nonetheless, besides the disadvantage of its high price, the completion of Ges<sup>18</sup> will still take a considerable amount of time. For the intervening period let us hope for some viable alternatives.<sup>26</sup>

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meaning, i.e., grammatical issues and semantic content—that topic will be dealt with in a forthcoming article of mine.

<sup>23</sup> BDB, 476*a*.

<sup>24</sup> BDB, 499*b*.

<sup>25</sup> Ges<sup>18</sup>, vi.

<sup>26</sup> See chapter 13 in the present volume.

# CHAPTER 11

## ON REVISING AND UPDATING BDB

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The Hebrew Lexicon of Brown, Driver, and Briggs stands tall among the lexicographic endeavours of the past one hundred years. For many it is still a standard resource, still sought after, but seriously in need of updating, especially with regard to its virtually unmatched etymological information. The purpose of this article is to introduce plans for its revision and an account of the resources that will be employed to update its etymological information, which this project regards as a fundamental part of any lexicon of an ancient and incompletely attested language such as Biblical Hebrew. The hope of its editors is that they will publish in the not too distant future a Brown, Driver, and Briggs that can evolve into a Hebrew lexicon of choice for many scholars and students for the rest of this century and into the next century as well.

### 1. INTRODUCTION

BDB, the most successful English dictionary of Biblical Hebrew ever created, was published just over a century ago, in 1907. It was a marvel of superb scholarship and practical ease of use. It is still the dictionary that many of us in the fields of biblical studies, Semitic language studies, and ancient Near Eastern history and archaeology, from students to advanced scholars, turn to first to look up a Biblical Hebrew form. But BDB has also been showing its age for many decades in aspects that this article addresses.

### 2. ETYMOLOGY AS A QUINTESSENTIAL BDB FEATURE

Etymology is a fundamental part of any lexicon of an ancient and incompletely attested language such as Biblical Hebrew. The publication of Barr's *The Semantics of Biblical Language* and *Comparative Philology of the Text of the Old Testaments* in the sixties has been seen by many as a contributing factor. Barr revealed the weak points of etymological practice. He showed us how not to do it. But the remedy for poor work is not no work, but good work. Thus, etymological information based on progress made in the past 100 years now begs for integration in a lexicon—information on which, in part at least, the meanings of Hebrew forms are based.

Etymology is one of BDB's most noteworthy features. Nothing comparable has appeared in recent dictionaries. As one eminent Semiticist commented recently, "If we want an etymology of Classical Hebrew we still need to go to BDB and complement it with more

recent other language-or-dialect-specific resources.”<sup>1</sup> But BDB’s presentation of reliable cognate information in related Semitic languages is quite out of date. For example, in 1907, the year of BDB’s publication, Akkadian lexicography was still in its infancy; inscriptional evidence in various Semitic languages was sparse; and Ugaritic had not yet been discovered. As a result the etymology of BDB is now far less reliable than it should be. A BDB with thoroughly revised and updated etymological information will fulfil a long-felt need and will stand out among all other current lexica.

### 3. AN ACHIEVABLE GOAL

Like other features of a lexicon, etymology requires a sound philosophical basis and methodology. As a lexical feature calling for revision, there is little except the essential preparatory research, which we discuss in the following paragraphs, to hinder its implementation in a revised BDB. Given the time, personnel, and resources, it is an immediately doable task. Most of the other traditional material will still serve for some time to come, though some of it, introduced below, will also be revised.

### 4. ETYMOLOGICAL REVISIONAL RESOURCES

As we have indicated, the most thorough aspect of the revision will be the updating of the information in the cognate sections of each lemma, using the most reliable and recent lexica and dictionaries of the other Semitic languages. Many of these are relatively new.

*Northwest Semitic Inscriptions.* For the Northwest Semitic inscriptional evidence, there is the Hoftijzer–Jongeling *Dictionary of the North-West Semitic Inscriptions*, which again is being updated.

*Akkadian.* For Akkadian, there is Von Soden’s *Akkadisches Handwörterbuch*, completed in 1981, and the *Chicago Assyrian Dictionary*, now nearing completion. For the purposes of this project, the recent *Concise Dictionary of Akkadian* of Black, George, and Postgate is not a substitute for the larger dictionaries, but its editors maintain an important website citing new attestations and new vocabulary.

*Northwest Semitic Words in Akkadian.* There are recent studies of Northwest Semitic vocabulary that appears in Late Bronze Akkadian texts from the west, for example, in texts from Amarna and Emar.

*Jewish Palestinian, Jewish Babylonian, and Judean Aramaic.* For Aramaic dialects, we have Michael Sokoloff’s excellent new dictionaries of Judean, Jewish Palestinian, and Jewish Babylonian Aramaic.<sup>2</sup>

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<sup>1</sup> From correspondence with the Series Editor. The quotation is from Francis I. Andersen and is cited with permission.

<sup>2</sup> Sokoloff, *Dictionary of Jewish Palestinian Aramaic*; Sokoloff, *Dictionary of Jewish Babylonian Aramaic*; Sokoloff, *Dictionary of Judean Aramaic*.

*Syriac.* Among comprehensive Syriac lexica covering all Syriac literature known at the time, R. Payne Smith's *Thesaurus Syriacus*, published between 1879 and 1901, has an unparalleled number of referenced Syriac illustrative examples. But Syriac scholarship has shown that we cannot rely on this otherwise useful work for its etymology. For that aspect of lexical information we must still rely on the second edition of Brockelmann's *Lexicon Syriacum* (1928) and on Goshen-Gottstein's, *A Syriac-English Glossary with Etymological Notes* (1970), which is useful for the selection of vocabulary items that it covers. In the not too distant future, however, we will have Michael Sokoloff's revision and English translation of Brockelmann.<sup>3</sup>

*Ethiopic.* For Classical Ethiopic, we now have Leslau's superb *Comparative Dictionary of Ge'ez*, and for modern Ethiopian, Kane's recent dictionaries of Amharic<sup>4</sup> and Tigrinya,<sup>5</sup> Leslau's of Gurage,<sup>6</sup> and the somewhat older dictionary of Tigre by Littmann and Höfner.<sup>7</sup>

*Ugaritic.* For Ugaritic, there is now the very useful *Dictionary of the Ugaritic Language* of Del Olmo Lete and Joaquín Sanmartín.<sup>8</sup>

*Old South Arabian.* For the Old South Arabian languages, we have the Sabaean dictionaries of Biella<sup>9</sup> and of Beeston, *et al.*,<sup>10</sup> both published in 1982, the somewhat later work on Qatabanian by Ricks,<sup>11</sup> and the still unpublished but accessible work on Minaean by Arbach.<sup>12</sup>

*Modern South Arabian.* For the modern South Arabian languages, there are the invaluable lexica by Johnstone on Harsusi,<sup>13</sup> Jibbāli,<sup>14</sup> and Mehri.<sup>15</sup>

*Arabic.* Arabic remains problematic, as it was for Brown, Driver, and Briggs. For the classical language, the careful *Wörterbuch der klassischen arabischen Sprache*, after several decades, has still produced only the volumes for *kaf* and *lam*,<sup>16</sup> so one must continue to use the older dictionaries, but always with caution, always asking one's Arabist colleagues whether such-and-such a word really exists and really means what the old dictionaries—which all seem to

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<sup>3</sup> Sokoloff, "The Translation and Updating of C. Brockelmann's *Lexicon Syriacum*."

<sup>4</sup> Kane, *Amharic Dictionary*.

<sup>5</sup> Kane, *Tigrinya-English*.

<sup>6</sup> Leslau, *Etymological Dictionary of Gurage* (Ethiopic).

<sup>7</sup> Littmann-Höfner, *Wörterbuch der Tigre-Sprache*.

<sup>8</sup> Del Olmo Lete-Sanmartín, *A Dictionary of the Ugaritic Language*.

<sup>9</sup> Biella, *Dictionary of Old South Arabic: Sabaean Dialect*.

<sup>10</sup> Beeston, *et al.*, *Sabaic Dictionary*.

<sup>11</sup> Ricks, *Lexicon of Inscriptional Qatabanian*.

<sup>12</sup> Arbach, *Le madabien*.

<sup>13</sup> Johnstone, *Harsisi Lexicon*.

<sup>14</sup> Johnstone, *Jibbāli Lexicon*.

<sup>15</sup> Johnstone, *Mehri Lexicon*.

<sup>16</sup> Ullmann, *Wörterbuch der klassischen arabischen Sprache*.

be based on one another—say it means. For the modern Arabic dialects, which must also be consulted, there is a range of dictionaries, which exhibit a range of quality and reliability.

*Eblaite.* In a few instances the revised BDB will cite evidence from Eblaite when it contributes some reliable information that is not provided by any other language, for example, the fact that the root *y-s-r* was originally *I-n*, as shown by an Eblaite lexical entry *wa-ši-lum* for the Sumerogram for “potter.”

*Comparative Semitics.* Finally, there is the useful, if problematic, *Dictionnaire des racines sémitiques* edited by David Cohen; this, too, is taking its time to appear, but about one-third of it has now been published.

## 5. CORRECTING OTHER OUTDATED INFORMATION

In addition to updating the cognate sections, the new BDB will also revise individual entries that new information and scholarship have shown to be incorrect. For example, the new BDB will list two roots for the one listed in BDB as *h-r-š*, on the basis of Ugaritic cognate evidence of roots with different original Semitic consonants, and it will list *hištaḥāwā* under *h-n-b* rather than *š-h-h*.

## 6. ARRANGEMENT AND PRESENTATION

The aesthetic dimension and user-friendliness of an ancient-language lexicon are areas that have received much attention in recent decades, so that the average user’s expectations have justifiably risen with regard to arrangement and presentation. This, too, is an area in which we are seeking the best within the boundaries of the envisaged revision. At the same time, we will retain the familiar basic format of the original BDB. Organization by root, semantic arrangement, and the manner of citation will all remain essentially the same.

### 6.1 Template Database

We will use a template on which we can record for each word the kind of entry it is, its basic meanings, its cognates, its extant forms, the variety of its attested meanings in Biblical Hebrew, and pertinent bibliographic information.

### 6.2 Verbal Root Page Headers

Verbal roots rather than individual words will be used as page headers to assist the user to locate a main entry more easily.

### 6.3 Arrangement by Root

One key feature of BDB that will not change is the arrangement of lemmas by roots rather than strictly by alphabet. In this the new BDB will differ from nearly all other recent Hebrew lexica, but will be in agreement with the format of dictionaries and lexica of most other ancient Semitic languages, with the notable and understandable exception of Akkadian. An

example of this can be seen with Syriac. The International Syriac Language Project has decided to retain organization by root for a future comprehensive Syriac-English lexicon, a decision informed by an investigation into root-versus-alphabetical organization by Terry Falla,<sup>17</sup> who takes into account the investigation into the subject by James Barr and Takamitsu Muraoka.<sup>18</sup>

It is sometimes argued that an arrangement by root is difficult for beginning students. We therefore plan to minimize that difficulty with an extensive cross-reference system. An additional user-friendly option is an alphabetical index of all Hebrew headwords, including any variant spellings. The index would be minimalistic in the information it provides, but would direct the user to the relevant page, column, root, and word. It would facilitate access to any headword within a few seconds.<sup>19</sup> It is a feature that is successfully employed in Louw and Nida's *Greek-English Lexicon of the New Testament*, Falla's five-volume Syriac lexicon,<sup>20</sup> Kiraz's six-volume *Computer-Generated Concordance to the Syriac New Testament*.

In consequence, the revised BDB will be able to retain several advantages of the root-based arrangement, particularly the ability of the reader to note connections among sets of words derived from the same root, and the ease of finding words regardless of their variant spellings.

## 6.4 Types and Presentation of Entries

### 6.4.1 Four Primary Forms of Entry

We foresee at least four main kinds of entries:

- (a) roots that occur as verbs in Biblical Hebrew
- (b) words derived from verbal roots that are not specifically attested as verbs in Hebrew
- (c) primary or isolated nouns
- (d) proper names, when these are not derived from verbal roots

### 6.4.2 Presentational Improvements

The form of each entry will be changed slightly to make it easier to read. This will include indenting the listing of cognates, and probably using fonts more creatively.

Verbal roots will be listed as roots rather than as Qal 3ms. Perfect verbs. This procedure will eliminate a lot of unnecessary brackets that BDB had to use because many verbs are not attested in that form.

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<sup>17</sup> Falla, "A Conceptual Framework."

<sup>18</sup> Barr, "Three Interrelated Factors in the Semantic Study of Ancient Hebrew."

<sup>19</sup> Falla, "A Conceptual Framework," 27.

<sup>20</sup> Falla, *A Key to the Peshitta Gospels*. Two volumes have been published.

### 6.5 English rather than Latin Abbreviations

Given the demise of Latin as a scholastic language, a minor, but, we hope, helpful change will be the use of English abbreviations rather than Latin. We will strive to have a list that is intuitive and shorter than the twelve columns in Ges<sup>18</sup>.

### 6.6 Etymological Information

The presentation of etymological information will represent advances in how we perceive the relationship between Hebrew and a cognate and between the cognates in relation to Hebrew.

#### 6.6.1 Relatedness in Decreasing Order

Cognates will be presented by language and dialect in decreasing order of relatedness to Hebrew, except when one language clearly presents a form more closely aligned in meaning to the Hebrew.

#### 6.6.2 Transliteration in Place of Indigenous Scripts

Transliteration will be employed rather than indigenous scripts, since many Hebraists no longer learn Arabic, let alone Ge'ez or Old South Arabian. Furthermore, extant cognates will be given for all entries, not simply for verbal roots. Although an isolated noun such as *keleb*, “dog,” will be listed at a root *k-l-b*, no meaning will be assigned to that root. Instead the root will be complemented by the cognates of the noun.

### 6.7 Paradigmatic Data and Illustrative Examples

As other editors have done in recent Hebrew dictionaries, we will revise paradigmatic information and illustrative examples to conform to, or at least include, forms as they are attested in the standard critical text of the Hebrew Bible, BHS (see also section 7).

### 6.8 Glosses in Contemporary English

Meanings and nuances of meanings, and manners of expression change, sometimes substantially, in the course of a century. Accordingly, the language style of the glosses will be updated, albeit as minimally as possible.

### 6.9 Personal and Place Names

Since the creation of BDB, interest in ancient-language nomenclature has increased rather than waned. In contradistinction to Ges<sup>18</sup>, we will retain this valuable feature of BDB, but bring to it an updated critical analysis that will take into account both internal Hebrew evidence and comparative evidence.

## 7. EDITIONS OF THE HEBREW BIBLE

### 7.1 *Biblia Hebraica*, New Fifth Edition, Aleppo Text

The new fifth edition of *Biblia Hebraica*, the *Quinta*,<sup>21</sup> will be employed as it becomes available. We will also consult the Aleppo text.<sup>22</sup> Many changes in the text base will be minor. An example is BDB's *yššōq* (page 427*a*, Lev 14:26 and elsewhere), with doubled *š*, versus the ungeminated *yšōq* of BHS.

### 7.2 Other Forms of Biblical Hebrew

As with other recent dictionaries, the revision will include the evidence of other forms of Biblical Hebrew, such as non-Tiberian pointing and extant Greek and Latin transcriptions.

## 8. BIBLIOGRAPHY

A bibliography will be provided only for controversial topics. The current bibliography will be updated for difficult entries.

## 9. CONCLUDING REMARKS

### 9.1 BDB's Birth as a Revision

It may seem almost "sacrilegious" to try to revise BDB, but it is important to remember that BDB itself began as a revision of earlier lexicographic works. To quote the title page, it was "based on the lexicon of William Gesenius as translated by Edward Robinson. Edited with constant reference to the Thesaurus of Gesenius ...,<sup>23</sup> and with authorized use of the latest German editions of Gesenius's Handwörterbuch ..." The final edition of Robinson's *Lexicon*, which bore the same title as BDB's, *A Hebrew and English Lexicon of the Old Testament*, appeared in 1854,<sup>24</sup> just 37 years before the first fascicle of BDB's edition appeared. It is certainly well past time for the next revision.

### 9.2 Keeping what is Best and Updating what is Necessary

The plan for the revised BDB is fairly simple. Like Ges<sup>18</sup>, the revised BDB will keep what is best of the earlier lexicon and update what it is felt cannot be left to a later stage. The revisions to both the cognate sections and the other parts of the lemmas will be based on a collection and analysis of the scholarship on the Hebrew lexicon published over the past century. In addition to consulting other Hebrew lexica published recently, the editorial team will consult articles and other studies in the major biblical and semitic journals, using the

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<sup>21</sup> Schenker, *et al.*, *Biblia Hebraica Quinta: Fascicle 18: General Introduction and Megilloth*.

<sup>22</sup> Editions: Goshen-Gottstein, Breuer, *et al.*, *The Aleppo Codex*; Breuer, *et al.*, *Jerusalem Crown*.

<sup>23</sup> Gesenius, *A Hebrew and English Lexicon of the Old Testament*.

<sup>24</sup> Robinson, *A Hebrew and English Lexicon of the Old Testament*, 5th ed.

information, for instance, in the *École Biblique* bibliography available on CD,<sup>25</sup> in *Elenchus*,<sup>26</sup> in *Old Testament Abstracts*, in *Zeitschrift für Althebraistik*, in the online database *Ma'agarim*,<sup>27</sup> and in our own personal files. The goal is to produce a volume of approximately the same length as BDB, so that it is easy to use and affordable. The revised BDB's editors will have the assistance of several advanced graduate students of Hebrew.

#### 9.4 An Evolving Project for a Long Future

With the revisions that the revised BDB team has in mind, we believe that the work of Brown, Driver, and Briggs can evolve into a Hebrew dictionary of choice for many scholars and students for the rest of this century and into the next century as well.

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<sup>25</sup> *Catalogue de l'École Biblique et Archéologique Française de Jérusalem*.

<sup>26</sup> The online *Elenchus Bibliographicus* of the *Ephemerides Theologicae Lovanienses*.

<sup>27</sup> *Ma'agarim*, The Online Database of the Historical Dictionary of the Hebrew Language at: <http://hebrew-treasures.huji.ac.il>.

## CHAPTER 12

### THE KOEHLER–BAUMGARTNER FAMILY

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The Koehler–Baumgartner lexicon family—designated KB and including KBL, 1<sup>st</sup> edition (1953); KBL, 2<sup>nd</sup> revised and augmented edition (1958); HALAT (1967–1996); HALOT (translated and revised version of HALAT; 1994–2000)—is a prominent and important tool for Hebrew Bible scholars and others engaged in lexicographic study of the biblical text. Two key factors should be kept in mind when evaluating the work. One is indicated by the designation “family,” which calls attention to the multiple editions in which the lexicon has appeared and to the many changes in editors throughout the history of the project. The second is that KB first appeared and developed further during a period of unprecedented scholarly activity by lexicographers and Bible scholars who had at their disposal recently discovered texts and new research tools that had a tremendous impact on their work. The results of these scholarly efforts had a profound effect on KB that can be observed not just from edition to edition, but often from volume to volume within the same edition. KB should therefore be thought of as several different lexica rather than a single one that remained more or less constant from one edition to the next. That there is a strong family resemblance among the various members is undeniable, but the differences that emerged as the project evolved are what will be highlighted here. A brief history of the family will be followed by an overview of some of the main strengths and limitations of the lexicon that have been identified by reviewers and other users. The third edition is the one most commonly used today, so more attention will be devoted to it than to its predecessors. The essay concludes with a description of a revision of HALOT that is currently underway, discussed in reference to the use of Arabic.

#### 1. FAMILY HISTORY

The first edition of KBL was published in fascicle form in German between 1948 and 1957, with Ludwig Koehler compiling the Hebrew material and Walter Baumgartner doing the Aramaic section. What is commonly referred to as the second edition appeared in 1958, but it was really no more than a supplement to the original work. It included such additions as lists of German words and their Hebrew/Aramaic counterparts, botanical and zoological terms, and noun forms proposed on the basis of personal names. All this material was prepared by Koehler. The second edition also added a list of corrections and additions to the original that was compiled by Baumgartner.

The third edition of the lexicon, published between 1967 and 1995, was almost an entirely new work. Baumgartner, who assumed the general editorship when Koehler died in 1956, brought on board as collaborators Benedikt Hartmann, who worked with the Arabic

material, and Eduard Yechezkel Kutscher, who was responsible for Post-Biblical Hebrew and Jewish Aramaic. Among the new features of the third edition the most prominent were the following: 1) meanings were given only in German; 2) all scripts except for Hebrew and Greek were transliterated; 3) much new information was included, especially from Post-Biblical Hebrew and Jewish Aramaic; and 4) there was a shift from frequent appeal to emendations to more attempts to explain the Hebrew words in the light of cognate forms.

There were significant changes in the editorial staff throughout the course of the third edition. Baumgartner and Kutscher died before the second volume came out in 1974, and Hartmann was joined by Johann Jakob Stamm and Philippe Reymond as co-editors. Volume two contains the work of Baumgartner, who had died in 1970, and his original collaborators. This volume was supposed to go through the letter *ayin*, but when Kutscher died in 1971 the decision was made to go no further than the beginning of the letter *nun*, which was as far as he had reached in his study of the Post-Biblical Hebrew.

The first 122 pages of volume three of the third edition are the work of Baumgartner and his colleagues, but the rest of the work—more than 300 pages—comes from Stamm and his collaborators. Ze'ev Ben-Hayyim had replaced Kutscher after the latter's death, and this led to a shift in editorial philosophy. The preface states that the editors have general confidence in the Masoretic text and they are more cautious about conjectural emendations or too much dependence on the evidence from cognate languages. Stamm, who lived until 1993, was able to oversee publication of the Hebrew part of the rest of the third edition, and up through the letter *qoph* in the Aramaic section.

The English version of the lexicon appeared between 1994 and 2000 under the supervision of M.E.J. Richardson. This was both a translation and an editorial improvement, but Richardson acknowledges that he was not able to complete the task as he would have liked.<sup>1</sup> We now turn to a consideration of some of the strengths and weaknesses of the third edition.

## 2. STRENGTHS

The third edition of HALOT was an improvement over the previous two in a number of important ways. The use of transliteration for all scripts but Hebrew and Greek was a cosmetic change but it had the advantage of making the work more user-friendly and accurate. The lexicon was now accessible to a wider range of users, especially those not familiar with the writing systems of some of the words discussed in the entries. In the same way, listing these words in transliteration cut down on the number of typographical errors that might have resulted if they had been kept in their original forms.

From the point of view of content, the main strengths of the third edition lie in its use of newly discovered texts and in a better understanding of the previously known sources.

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<sup>1</sup> A brief overview of how Richardson's translation was an improvement over the German original can be found in Segert, Review of HALAT.

The third edition was able to capitalize on some of the most important developments in the field of biblical lexicography during the previous half century. Especially noteworthy is how it makes use of the Ugaritic texts, the early Hebrew and Canaanite dialects, and the evidence from the discoveries at Qumran. Similarly, advances in the study of the Akkadian dialects, Mishnaic and Samaritan Hebrew, and Samaritan Aramaic were taken into account, which greatly enhanced the quality of the lexicon.

Material from new resources that were unavailable at the time of the earlier editions also significantly improved the third edition. For example, *The Assyrian Dictionary of the Oriental Institute of the University of Chicago* offered a comprehensive treatment of the Akkadian data that could now be consulted in a quicker and more thorough fashion. The same might be said about new dictionaries in lesser known languages such as Mandaic. The growing number of such tools and resources at their disposal was undoubtedly a challenge for the editors because a larger body of evidence had to be taken into account, but the overall result is that the third edition is markedly superior to its predecessors.<sup>2</sup>

The contributions of Kutscher in the area of Post-Biblical Hebrew in the third edition are noteworthy, but are sometimes not as helpful as they might have been. Bringing in evidence from outside the biblical period allows the user to gain a better sense of how a form or meaning functions in the wider Hebrew context, but crucial details are occasionally left out. For example, sometimes all we get is the designation “mhe” without any comment on usage and, in some cases, without even an indication of the word’s meaning.

### 3. WEAKNESSES

KB represented a considerable leap forward in the field of Biblical Hebrew lexicography, but the work is not without its shortcomings. It blazed new ground by bringing together information that had been spread out among many different dictionaries and other resources—a major accomplishment given the lack of a recent predecessor the editors could consult and draw upon. As is inevitable with a work of this size and scope, however, certain things fell through the cracks.

Reviewers of the first edition pointed out a number of flaws in the work. Besides misprints and typographic errors, certain editorial decisions were criticized. Many *hapax legomena* and difficult words were dismissed with the comment “unexplained” even when reasonable proposals had been put forward by scholars. Some felt that Koehler’s decisions on what constituted an acceptable conjectured emendation were sometimes too subjective. At times relevant evidence was left out of entries and was not allowed to play a role in the analysis of a given form or meaning. This was particularly the case when such evidence came from the “new” material discovered at Ugarit.<sup>3</sup> The same can be said about the data from the

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<sup>2</sup> In his review of the first volume, Emerton lists many of the new resources that were consulted for the third edition.

<sup>3</sup> These and other critiques of the first edition can be found, for example, in Reider, *Review of*

Lachish letters and the Samaritan ostraca, which were not included in the etymological discussions.<sup>4</sup>

Another problem with the first edition is the confusing way in which both German and English are used throughout the entries.<sup>5</sup> This is compounded by the poor quality of Koehler's English, sometimes so difficult to understand that knowledge of German is necessary to make sense of it. Related to this is the system of abbreviations used, for example, Js, Ir, and Hs to indicate the books of the prophets Isaiah, Jeremiah, and Ezekiel, respectively,<sup>6</sup> which can be particularly bewildering to the uninitiated. A further drawback of the first edition for some reviewers was the decision to list words in alphabetical order instead of under their roots. Listing nominal forms separately might be appealing to some, especially to beginning students, but it hampers learning the root system of Biblical Hebrew.

In the third edition efforts were made to address and rectify some of these concerns, the result being a significant improvement over its predecessors. Nonetheless, there are a number of weaknesses in the third edition that should be acknowledged and discussed. As noted earlier, when KB was being compiled and revised there was an explosion of data in Biblical Hebrew lexicography through recent discoveries, new resources, and published scholarly proposals in comparative Semitic lexicography. James Barr has said that he doubts that insights into any language have ever grown as fast as Biblical Hebrew did in the mid-twentieth century as the evidence from Arabic, Akkadian, and Ugaritic continued to pour in. He believes that Baumgartner did not always meet well the editorial challenges he faced. Baumgartner's tendency in the third edition to include questionable proposals in the lexicon led Barr to comment, "I am personally surprised that a scholar of his Swiss caution and of his earnestness in minute precision is not more critical in his reception of them."<sup>7</sup>

One area of occasional weakness, therefore, concerns the etymological data found in some entries, something that many have identified as the lexicon's strongest feature.<sup>8</sup> Barr illustrates this problem in a discussion of a proposal put forward by Alfred Guillaume that is based on a single Arabic form that gets its own entry in the third edition. He notes that in the preface the editors give the user no assistance in evaluating what this means. A separate entry suggests that the evidence is reliable, but upon further scrutiny it is clear that Guillaume's proposal is not sound and should not be included in HALOT. Barr suggests

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KBL.

<sup>4</sup> See Honeyman, Review of KBL, 217.

<sup>5</sup> Reider, Review of KBL, 72.

<sup>6</sup> Honeyman, Review of KBL, 215.

<sup>7</sup> Barr, Review of HALAT, 261.

<sup>8</sup> This aspect of the work is treated in some detail in the second part of Emerton's review of the first volume (Review of HALAT, 504–10), where he focuses on problems with the way Ugaritic is used. In this section he also offers a brief outline of what he considers to be an appropriate methodology for comparative lexicography. In his reviews of the subsequent volumes of the third edition (see bibliography), Emerton notes improvements in the way the evidence from Ugaritic and other cognate languages is cited and used.

that it would be beneficial if several categories were set up that would reflect a range of relative reliability within which a given suggestion could be placed.<sup>9</sup>

The use of comparative lexicography in the third edition, particularly as it relates to Arabic, will be discussed in more detail below. For now it should be pointed out that some reviewers, including Barr, believe that with the increase in evidence from the cognate languages the etymological portions of entries often become nothing more than a list or catalogue of forms and meanings that takes up valuable space. He cites as an example the root *'k/l*, which has the identical meaning “to eat” in the nearly twenty languages and dialects listed in the entry.<sup>10</sup> This leads him to suggest that in cases like this it would be better to list the languages that do not have a cognate than to list all the ones that do. “In general, then, the etymological material seems to suffer from the ingestion of too much material ... and from too little discrimination and interpretation.”<sup>11</sup>

#### 4. A NEW FAMILY MEMBER

The limitations of the third edition and further developments in the field suggest that a revision of the work might be in order, and such an effort is presently underway. Professor Chaim Cohen of Ben-Gurion University is the general editor of a project whose outcome will be *A Companion to HALOT*, to be published by Brill. It will contain corrections, additions, and other changes to the lexicon that will address some of the concerns voiced by reviewers and other users of the work. The revision will contain the following features.

- Greater attention will be paid to the internal biblical lexicographic evidence, both semantic and syntactic, especially that which emerges from a careful analysis of the use of parallelism in Biblical Hebrew poetry.
- An effort will be made to establish the proper combination of internal biblical evidence and both semantic and etymological evidence from other ancient Semitic languages. A cornerstone of this method will be that the internal biblical evidence always takes precedence over external evidence.
- Related to this will be an attempt to correct a tendency in the third edition to rely too much on etymological evidence from other Semitic languages at the expense of semantic and syntactic evidence from the biblical text.
- An improvement of the sometimes indiscriminate way etymological comparisons to other Semitic languages are made without careful differentiation between more and less likely equivalents. For example, lack of semantic equivalence is rarely indicated or discussed in the third edition of HALOT.
- Data and evidence from the lexicographic contributions of Jewish commentators and grammarians of the medieval period will be considered and cited where relevant. This

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<sup>9</sup> Barr, Review of HALAT, 261.

<sup>10</sup> Barr, Review of HALAT, 264.

<sup>11</sup> Barr, Review of HALAT, 265.

is something that has been almost totally ignored in earlier editions of the lexicon.

- The bibliographies in individual entries will be updated and expanded.

My specific contribution to this work is in the area of Arabic lexicography. Careful study of the entries in the third edition indicates that the work contains numerous inaccuracies in the way the Arabic evidence is cited and used. My analysis of the first three of the four Hebrew volumes has resulted in an average of slightly more than one mistake per page, which means that there are approximately two thousand errors in the Hebrew portion of the lexicon in the use of Arabic alone. Some of these errors are relatively minor slip-ups that are due to faulty transliteration and other editorial oversights, but many are of a more serious nature that generally fall under one of two categories. First, there are those that are of an etymological nature. Sometimes Arabic cognates of Hebrew roots are proposed that are questionable because one or more of the Arabic letters are not true etymological equivalents of the Hebrew ones. The second type of mistake is semantic, and usually takes the form of a lack of agreement between the meanings of Arabic and Hebrew words or roots that are listed in the entries as cognates. This second type of error is often more subtle and difficult to detect, particularly if one is unable to consult the most reliable Arabic dictionaries. It may therefore prove useful to illustrate the forms this type of error can take by discussing four examples from the second volume of the third edition of HALOT.<sup>12</sup>

#### 4.1 Page 490b Arabic *kasafa*, “to be (look) dark, gloomy”//Hebrew *קספ* II

This Arabic root has no semantic connection with the Hebrew one, and therefore should not be listed as a cognate in HALOT. The primary meaning of the Arabic verb when referring to a person is “to be down on one’s luck, sad.”<sup>13</sup> Meanings associated with darkness are used to describe what happens when the light from the sun or another heavenly body is no longer visible. Gloominess or darkness is never used in the Classical Arabic sources to describe a person’s countenance or physical features. In addition, bad luck, sadness, and darkness are not semantically related to the primary meaning of the Biblical Hebrew root “to long for.” The *Lisan al-‘Arab* never suggests that a person is sad because he or she is longing for something or someone. Arabic therefore contributes nothing to the understanding of the meaning of the Biblical Hebrew root.

#### 4.2 Page 580b Arabic *mkk*, “to press (a debtor)”//Hebrew *מקק*

This is actually a meaning of the fifth verbal form of the Arabic root, which is vocalized *tamakkaka*. In the first form (*makka*) the verb describes the act of sucking milk or marrow. The *Lisan al-‘Arab* (10:491) indicates that this latter meaning gave rise to the one that is

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<sup>12</sup> For a more detailed discussion of the use of Arabic in Biblical Hebrew lexicography and the importance of determining etymological and semantic equivalence see Kaltner, “Arabic,” 61–92.

<sup>13</sup> Ibn Manzur, *Lisan al-‘Arab*, 9:298–300. This thorough and reliable Arabic dictionary was compiled in the thirteenth century.

related to the pressing of a debtor. We see a similar development in English, where the expression “to suck someone dry” can refer to taking all of a person’s money or possessions. There is no true semantic equivalence between the Arabic and Hebrew roots. The basic meaning of the Arabic one (“to suck”) is not found in Hebrew, and the Arabic sources show no evidence of the apparent basic sense of the Hebrew root (“to become low”). In all likelihood, the editors of HALOT seized upon the Arabic meaning “to press” because of its perceived semantic connection with the Hebrew meanings even though it is found only in a single derived Arabic form and is always used in relation to a debtor. Although it is an etymological equivalent of the Hebrew root, semantic equivalence is lacking and so this Arabic root should not be included in the entry. The listing of cognate forms which have only partial equivalence with the Hebrew is one of the most common mistakes in the way HALOT draws upon the Arabic material.

#### 4.3 Page 681a Arabic *nws*, “to be in a state of motion, swing”//Hebrew *nws*

This is another example of partial equivalence in which etymological equals lack a semantic connection. The basic meaning of this Arabic verb is “to dangle or move while hanging,” and it typically describes the movement of branches in the wind. According to the *Lisan al-‘Arab* (6:245), the word *nawasāt* refers to locks of hair or the ends of a turban “because they move.” It is important to note, however, that although they move they do not go anywhere. This highlights an important semantic difference between this Arabic root and the Hebrew one, which means “to flee.” The sense of moving from one place to another, which is primary in the Hebrew, is completely lacking in the Arabic. This distinction is reinforced by the fact that the second form of the Arabic root (*nammasa*) can mean “to stay in one place.” The proposed Arabic cognate therefore does not have semantic equivalence with the Biblical Hebrew root and it should not have been included in HALOT.

#### 4.4 Page 739a Arabic *sabab*, “rope;” *sabīb*, “curl;” *sibb*, “turban”//Hebrew *sbb*

The Hebrew root in whose entry these Arabic terms are mentioned conveys the idea of going around or encircling, but none of the words associated with the Arabic root *sbb* possess this meaning. Edward W. Lane’s treatment of the Arabic evidence in his dictionary highlights this difference when he states in his discussion of the word *sabab* that it describes a rope that hangs down so one can ascend or descend on it.<sup>14</sup> In other words, it is a rope that is stretched out, not curled, that enables a person to get from one place to another. This is related to the other basic meaning of the Arabic word: “cause” or “means.” What HALOT lists as “curl” is actually “a lock of hair,” specifically one that hangs down or is pendant. The

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<sup>14</sup> Lane, *Arabic-English Lexicon*, 4:1284–86. This is the most dependable English language resource available for Arabic lexicography, but it must be used with caution because Lane died prior to completing the work. Most of the entries in the last two volumes of the lexicon are incomplete or not fully developed and are therefore not completely reliable.

same word is also often used in reference to a horse's mane, but here, too, the emphasis is on how the hair hangs from the animal rather than its curled shape. While the meaning "turban" appears to have some semantic connection with the act of curling, the link is not firmly established in Lane's dictionary, which never refers to the twisting or turning of the turban. A further indication that the two roots lack semantic equivalence is the absence in the Arabic of meanings that are central to the Hebrew root like "to cut, wound, revile, vilify." Consequently, these Arabic words should not have been listed as cognates in the HALOT entry.

## 5. CONCLUSIONS

To retrace the history of the Koehler–Baumgartner family is to retrace the history of Hebrew lexicography in the second half of the twentieth century. The various iterations of the lexicon have emerged and taken shape in response to discoveries and developments that have had an enormous impact on our understanding of Biblical Hebrew. Since it first appeared, HALOT has been an essential tool for Bible scholars, and it will continue to play that same important role. In recent times the form, not just the content, of the lexicon has been modified to fit changing circumstances. In addition to the traditional four-volume set, the work is also now available in a two-volume study edition and in CD-ROM format. This is one further indication of HALOT's ability to adapt and therefore ensure its survival in the future.

## CHAPTER 13 KAHAL—THE SHORTER HALAT: A HEBREW LEXICON PROJECT IN PROGRESS

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Professor Johann Jakob Stamm (†1993) was the leading editor of the third edition of Koehler, *et al.*, *Hebräisches und Aramäisches Lexikon zum Alten Testament*. During Stamm's lifetime and with his explicit consent, a group of German and Swiss scholars considered producing an abbreviated, updated, and corrected edition. The project is based at the University of Berne, Switzerland, under the direction of Professor Walter Dietrich. The aim is to reduce HALAT (5 volumes, 1,800 pages) to a single volume of 1,000 pages: *Kurze Ausgabe des Hebräischen und Aramäischen Lexikons zum Alten Testament*. While in principle all of the lexical entries of HALAT will be adopted, some lemmas, for example, conjectures, will be omitted. Etymologies will be shortened and updated, references will be checked, and errors corrected. The publication date is expected to be in 2009.

### 1. INTRODUCTION

In 1953, theologians, Hebraists, and Semitists in the German-speaking and English-speaking world could all use the same dictionary—apart from BDB and Ges<sup>17</sup>, of course. With the so-called KBL one had a dictionary in which the entries were in both German and English (see example 1). Symptomatically, the title of this unifying work was in Latin.<sup>1</sup>

כֹּל : ug. *kl* ; mbh., ja. enthalten, messen *contain, measure* ; sy. af. *كحل* u. palm. Lidz. 295 ; *كَل* Korn messen *measure grain* ; ak. *kullu* halten *contain* ; phl. כִּיל ; *F* יכל, I כלה u. ba. כהל :  
qal : ...

#### Example 1: The initial part of an entry in KBL: כֹּל (p. 426)

When KBL was completely revised in the years following 1967 the glosses were given only in German. Thus, with the appearance of HALAT, there came a parting of the ways.<sup>2</sup>

In 1971, HALAT was translated by William Holladay for the English-speaking world in his concise edition, the so-called HAL. It is a composite work, based on HALAT as well as on the previous KBL. As can be seen from the bibliographical dates, HALAT was far from

<sup>1</sup> Some years earlier, from 1940 through 1949, Zorell's *Lexicon Hebraicum et Aramaicum Veteris Testamenti* provided only Latin translations for the Hebrew and Aramaic entries.

<sup>2</sup> Sokoloff, Review of HALAT, 75, note 2: "One of the drawbacks of HALAT for many users is the fact that as opposed to KBL it is only in German."

finished in 1971.<sup>3</sup> HAL has been designed as a manageable tool at a modest price for students and pastors, but is not suitable for scientific purposes. This dictionary provides, for example, no etymologies (see example 2).

כּוּל: qal: pf. קָלַל: lay hold of, seize Is 40<sub>12</sub>. †  
pilpel: ...

**Example 2: The initial part of an entry in HAL: כּוּל (p. 152)**

So, in the second half of the twentieth century, the well-established BDB of 1906 (see example 3), the bilingual KBL of 1958 (second edition), and the concise HAL of 1971 were available in English.

† [כּוּל] vb. **comprehend, contain** (NH, Aram. *id.*, *measure, measure out*, of dry or liquid measure; Syr. Aph. ܕܡܠܐ *id.*; Ar. كَال *measure grain*)—Qal ...

**Example 3: The initial part of an entry in BDB: כּוּל (p. 465)<sup>4</sup>**

Thereafter Mervyn Richardson translated and to a certain extent revised the German HALAT. Richardson began work in 1993, and by 2000 the so-called HALOT was available in English. While translating HALAT, Richardson made no major corrections in the lexical entries as to their structure and segmentation, in the amount of the material provided, or in the adaptation to the current state of research, in particular in the field of etymology. However, Richardson eliminated a certain number of errors, for example, in the biblical references, checked the bibliographical data, and decoded the abbreviations (see example 4).<sup>5</sup>

כּוּל: MHeb.<sup>2</sup> pilp. Heb. inscr. (Gezer, Jean-H. *Dictionnaire* 120; Donner-R. *Inscripfen* 2:182 and 200:5), hitpalp. to hold out Sir 43; Pehl. and Palm. (Jean-H. *Dictionnaire* 116), JArm. CPArm. (af.) Syr. Mnd. (Drower-M. *Dictionary* 206b) to measure; > Arb. *kyl* (Fraenkel 204); Tigr. *kayyala* (Littmann-H. *Wb.* 422a; Leslau 26); OSArb. *kltm* measure (*ZAW* 75:311); Akk. *kullu*, Ass. *ka"ulu* (AHw. 502a) to hold; Botterweck *Triliterismus* 37f.; basic meaning to hold, take hold of.  
qal: ...

**Example 4: The initial part of an entry in HALOT: כּוּל (p. 463)**

How problematic it was to rely on HALAT is shown in Michael Sokoloff's extensive review on the Aramaic volume of HALAT.<sup>6</sup> This review clearly revealed once again that HALAT as well as HALOT need a profound revision of the entire corpus. Since 1993, Walter Dietrich

<sup>3</sup> See Holladay's comments in HAL, vi: "I have been able to make use of the manuscript of the German third edition through the letter ܘ; for ܘ and beyond I have then resorted to the German first/second edition [i.e. KBL, RHR]."

<sup>4</sup> For more detail on the Gesenius/BDB family, see chapter 10.

<sup>5</sup> See in HALOT, Richardson's prefaces to the volumes I–V.

<sup>6</sup> See Sokoloff, Review of HALAT.

and his team at the University of Berne, Switzerland, have been working precisely on such a thoroughly updated and shortened edition of HALAT, and, running parallel to but independent of the Swiss project, since 2002 Mervyn Richardson has been working on a revised and abbreviated edition of HALOT. Richardson and the Swiss project are now in contact: their aim is to produce a single dictionary with a German and an English version. In content, the two will be identical.

## 2. THE WORK AT THE UNIVERSITY OF BERNE, SWITZERLAND

The team in Berne is preparing the basic material both for the dictionary and for the translation into English. The final result shall be the KAHAL, a reliable and restricted, compact but comprehensive dictionary in a single volume which will comply with scientific requirements.

- It will contain all the lemmas, forms, and references presented in HALAT.
- The Semitic etymological data it will be abbreviated<sup>7</sup> and thoroughly updated.
- The references to and discussions of secondary literature, which expanded in HALAT from volume to volume, will be deleted.
- No more references to extra-biblical sources will be cited.
- Lemmas reconstructed purely for linguistic reasons or for supporting textual conjectures will be removed. For example, verbal roots which are not attested in the Old Testament no longer are provided with an entry of their own, but are placed after the lemma in transcription and between brackets. Derivatives of a verbal root attested in the Hebrew Bible are presented along with this same root in Hebrew letters. In such cases, the sign *F* before the root indicates the entry of the verbal root provided with all the necessary etymological data.
- The biblical references and cross-references in HALAT will be carefully examined and errors will be eliminated.

The keywords in this process are: condensing, updating, correcting, and making consistent. KAHAL shall be published by Brill, Leiden, in one volume of about 1000 pages, just as Ges<sup>17</sup>. The publisher has agreed to set a price which will compete with that of “old Gesenius” (see example 5).

כול: EA *kālu* für etw. sorgen; pun. *tklt* (Lebensmittel-)Lager; ram. *kwl* messen; akk. *kullu(m)* (fest)halten; *F* כלא:  
qal: ...

### Example 5: Initial part of an entry in KAHAL: כול

The team working in Berne comprises Swiss and German scholars under the direction of Walter Dietrich, professor for the Studies of the Old Testament at the University of Berne.

<sup>7</sup> For the criteria for the choices made in the etymological data, see below.

Dietrich himself deals with the lexical entries, except for the etymology. The latter is revised by the present author in close contact with Manfred Dietrich, Professor of Northwest Semitic Philology at Münster, emeritus since 2000. Samuel Arnet, together with his assistant, is responsible for checking for coherence by means of internal and external comparison, and for correcting the mistakes.

About one half of the work for KAHAL has been completed; we hope to finish it in the near future.

### 3. THE ETYMOLOGICAL PARTS

In this final section, I focus on the treatment of etymological aspects. The procedure is as follows:

- Proper nouns are not provided with etymological data. This decision followed logically from the general consensus concerning the elimination of the discussion of secondary literature. Only in unambiguous cases is a link to the underlying root offered.
- Nouns referring to towns, landscapes, and so on, will not be geographically localized.
- Aramaic lemmas with the same origin as lemmas presented in the Hebrew part are not provided with etymological data, but are merely given a link to the equivalent in the Hebrew section.
- Taking the Hebrew as point of departure, references to other Semitic languages are confined to elucidating nuances, and where appropriate, these are updated and their sequence is brought into line with that of other entries.
- The choice, sequence, and completion of the references are based on empirical and semasiological concerns: of primary interest is the immediate family of languages, and only secondarily is the history of languages accounted for. Thus, first the most closely related languages are taken into account (for example, Canaanite, Aramaic), then the cultural neighbours (Akkadian), thereafter, the more remote relatives (for example, Sabaic, Ge'ez, Arabic), and, finally, the further development of the Old Hebrew and Old Aramaic in post-biblical time (that is, Middle Hebrew, Samaritan Aramaic, Syriac). In general, only references of semasiological interest are incorporated into KAHAL, the important nuances of the observable development of meaning. A relationship to the Hamitic language area is also sporadically established, but only if the meaning of a lemma is thereby expanded in some significant way. At times morphological variations are listed as well.
- Uncertain assumptions concerning foreign words or loanwords are omitted.
- Etymological references in HALAT which are not verified in representative dictionaries are no longer included.
- The mentioned emphasis on semantics allows us to specify the meaning of certain *bapax legomena*. With regard to the phenomenon of contradictory meanings, the same emphasis on semantics enables us to critically evaluate the frequent splitting up of roots in HALAT.

#### 4. PROBLEMS

Particular problems which must be coped with include:

- Deletion of a separate entry כּ-*encliticum*.<sup>8</sup>
- Integrating the hitherto existing entry ל-*emphaticum* into the main entry Lamed.<sup>9</sup>
- Whether for lemmas which belong to the so-called class of *plurale tantum*, for example, פּוֹנִיִּים, a singular entry, in this case פּוֹנִיָּה<sup>10</sup>, should be kept.
- Whether to keep an entry \*הַרְהֵרָה (with asterix), “pregnant,”<sup>11</sup> masculine singular, only because of the principle of the basic form.
- Whether to list composite place names with בֵּית under the entry (I) בֵּית<sup>12</sup> while composite personal names with בְּנֵי are listed separately.<sup>13</sup>

In general, the questions evolve around the issue of the level to which corrective action should be applied to HALAT. For example, for the entries I חַי and II חַי, the latter is an adjective, the former a noun,<sup>14</sup> while for עַר one finds only one entry subdivided in part A for the adjective and part B for the noun.<sup>15</sup> These features are not of utmost importance, but when attempting to attain a certain degree of consistency they must be taken into account. In many matters it has been decided to maintain the divisions of HALAT. In the end it is really a question of principle: are we revising the lexicon of Koehler, Baumgartner, and Stamm or are we making our own lexicon? We have decided in favour of HALAT as our basis.

#### 5. EXAMPLES FROM KAHAL

Finally, by means of a couple of examples I would like to demonstrate the process involved in shortening and updating the etymological and lexical data contained in HALAT (see example 6).

HALAT	KAHAL
<p>פּוֹכֵב: Sam.<sup>M115</sup> <i>kūkab</i>, Hier. chocab: &lt; *<i>kawkab</i> &lt; *<i>kabkab</i> (BL 482f); mhe., ug. <i>kēkb</i>, 1 × <i>kēb</i> (UT nr. 1189, Aistl. 1277); ph. פּוֹכֵב Pyrgi 10 (ZAW 77, 346); pehl. כּכּ (DISO 118), ja. פּוֹכֵבָא, sam. BCh. 2, 486, cp. md. (MdD 206a, MdH 582b) sy. <i>kaukeba</i>; ar. <i>kaukab</i>, soq. <i>kibšib</i>, asa. <i>kwkb</i> (Conti 167b), äth. <i>kōkab</i>, tigr. (Wb. 420b): akk. <i>kakkabu</i> (AHw. 421b), amor. <i>kabkabum</i> (Huffm. 220); äg. (BASOR 83, 5f); fem. Form. ja. akk., <i>Kokab</i> als</p>	<p>פּוֹכֵב: sem.; ug. <i>kēkb</i>, <i>kēb</i> Stern; arab. <i>kawkab</i> + Planet, Häuptling</p>

<sup>8</sup> See HALAT, 510b.

<sup>9</sup> See HALAT, 485b–486a.

<sup>10</sup> See HALAT, 886a–890b.

<sup>11</sup> See HALAT, 245b–246a.

<sup>12</sup> See HALAT, 119a–124a.

<sup>13</sup> See HALAT, 133a.

<sup>14</sup> See HALAT, 295a–296a.

<sup>15</sup> See HALAT, 1165b–1168b.



<p>11<sub>6</sub> 27<sub>10</sub> Jr 31<sub>18</sub> 34<sub>18f</sub>, cf. 50<sub>11</sub>, Ez 1<sub>7</sub> Am 6<sub>4</sub> Mi 6<sub>6</sub>  Ps 29<sub>6</sub>, 68<sub>31</sub>, cj. 1K 10<sub>19</sub> (עֵגֶל); עֵגֶל מִרְבֵּק F Jr  46<sub>21</sub> Mal 3<sub>20</sub>; — 2. als Kultbild, sekd. diffamierend  als «Kalb» verstanden; in der Wüste Ex  32<sub>4.8.19f.24.35</sub> Dt 9<sub>21</sub>; in Bethel und Dan 1K 12<sub>26-32</sub>  als Thronpostament d. unsichtbaren Gottes J.  oder als Symbol seiner Präsenz; in אֵל בֵּית Hos  10<sub>5</sub> l עֵגֶל pr. עֵגְלוֹת; in Samaria Hos 8<sub>5f</sub>; ע' מִסְכָּה  Ex 32<sub>4</sub> Dt 9<sub>16</sub> Neh 9<sub>18</sub>, cf. 2K 17<sub>16</sub>; עֵגֶל (ה) זָהָב  1K 12<sub>28</sub> 2K 10<sub>29</sub> 2C 13<sub>8</sub>; עֵגְלִים 1K 12<sub>32</sub> Hos 13<sub>2</sub>  Ps 106<sub>19</sub> 2C 11<sub>15</sub>. †</p>	<p>11<sub>6</sub> 27<sub>10</sub> Jr 31<sub>18</sub> 34<sub>18f</sub>, cf. 50<sub>11</sub>, Ez 1<sub>7</sub> Am 6<sub>4</sub> Mi 6<sub>6</sub>  Ps 29<sub>6</sub>, 68<sub>31</sub>, cj. 1K 10<sub>19</sub> (עֵגֶל); עֵגֶל מִרְבֵּק F Jr  46<sub>21</sub> Mal 3<sub>20</sub>; — 2. als Kultbild, sekd. diffamierend  als «Kalb» verstanden; in der Wüste Ex  32<sub>4.8.19f.24.35</sub> Dt 9<sub>21</sub>; in Bethel und Dan 1K 12<sub>26-32</sub>  als Thronpostament d. unsichtbaren Gottes J.  oder als Symbol seiner Präsenz; in אֵל בֵּית Hos  10<sub>5</sub> l עֵגֶל pr. אֵל בֵּית in Samaria Hos 8<sub>5f</sub>; ע' מִסְכָּה  Ex 32<sub>4</sub> Dt 9<sub>16</sub> Neh 9<sub>18</sub>, cf. 2K 17<sub>16</sub>; עֵגֶל (ה) זָהָב 1K  12<sub>28</sub> 2K 10<sub>29</sub> 2C 13<sub>8</sub>; עֵגְלִים 1K 12<sub>32</sub> Hos 13<sub>2</sub> Ps  106<sub>19</sub> 2C 11<sub>15</sub>. †</p>
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Example 6: Sample entries from HALAT and KAHAL

## 6. CONCLUSION

A short survey of the available Hebrew lexica currently completed reveals some urgent needs for a new lexicon project in the following points:

- eliminating errors and reducing inconsistencies within the lexical entries;
- updating the etymologies;
- while retaining a high academic level, condensing the lexical entries with the aim of more clarity and manageability, especially for students

The Swiss project KAHAL is committed to meeting these requirements, but without creating a new lexicon of its own. The basis of KAHAL is HALAT, and it will have a parallel English translation. Thus, after the parting of ways established by the replacement of KBL, both German-speaking and English-speaking scholars can once more rely on the same dictionary.



## CHAPTER 14

### OTHER HEBREW LEXICA: ZORELL AND ALONSO SCHOEKEL

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There are a surprising number of Biblical Hebrew lexica on the market, and more are in production. Nevertheless, there is a temptation to consult regularly only the one with which we are most familiar. The advantages of considering a number of lexica at a time are discussed, and then the distinctive features of two modern lexica are noted. Zorell's *Lexicon* and Alonso Schoekel's *Diccionario* are compared as products of their time, each reflecting linguistic principles in their organization and content. Illustrations are drawn from the semantic field of derogatory speech to show how each lexicon presents its data and to indicate how informative each of them can be for the careful reader.

#### 1. RECENT HEBREW LEXICA

The choice of lexicon for scholars is often determined by factors other than linguistic. As a *vade mecum* the preferred lexicon is the familiar travel companion, the one with which the scholar has grown up and which is most likely in the scholar's native language. A recent review of one translation project, for example, brought this out clearly when respondents to a questionnaire gave as the lexicon that they most frequently consulted the one used in High Schools for language beginners.<sup>1</sup> The practicality of having a lexicon that is affordable and therefore available on one's shelf is no doubt a determining factor. It is understandable, too, that those not specializing in lexicography are slightly overawed by the array of lexica on the market. In the case of Hebrew there are a surprising number of them, and announcements of new projects to produce new or to revise older ones are not uncommon.<sup>2</sup> The latest to appear was the impressive 1,256-page first volume of M.Z. Kaddari's *A Dictionary of Biblical Hebrew* that is notable in being one of the few, perhaps even the first, written in Modern

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<sup>1</sup> Kreuzer, "Lexicography and Translation: Experiences, Examples, and Expectations in the Context of the Septuaginta-Deutsch Project;" cf. Silva, *Biblical Words and their Meaning*, 32, who draws attention to the need for better understanding of the principles of a lexicon.

<sup>2</sup> The Princeton Hebrew Lexicon Project, for example, was undertaken in the 1990s although its current progress is uncertain; see Roberts, "The Princeton Classical Hebrew Dictionary Project." In an earlier generation, D. Winton Thomas's attempt to revise BDB failed. A new project to revise the etymological information in BDB is discussed in chapter 11 of this volume. Currently underway is the "Semantic Dictionary of Biblical Hebrew" (<http://www.sdbh.org>); see also Lübke, "An Old Testament Dictionary of Semantic Domains;" De Regt, "Multiple Meanings and Semantic Domains."

Hebrew.<sup>3</sup>

We are fortunate in having a number of recent surveys of available lexica.<sup>4</sup> At the same time editors of dictionaries usually describe in journals the features of and reasons behind their structuring of the lexica.<sup>5</sup> The most influential survey, upon which many subsequent studies have depended, is that by Tene and Barr.<sup>6</sup> They trace the history of Hebrew lexicography from Saadiah Gaon's *Agron* in the tenth century up to the present, paying particular attention to the increasing incorporation of comparative material in Hebrew lexica, and, in the nineteenth century, of advances in comparative philology. Lübke's brief overview notes with some justification that in all the Hebrew lexica before 1990 the method has changed little since Saadiah, despite the greater importance of comparative philology.<sup>7</sup> He argues this as prolegomena for advocating a componential analysis of Hebrew and a presentation of the lexical evidence by semantic domains.<sup>8</sup> Nevertheless, as we shall see in the case of the lexica under discussion here, Lübke's criticism remains: there is little semantic advance of significance, although presentation of the material in a different manner can be informative. Danker also provides a short introduction to the main lexica on the market.<sup>9</sup> He begins with Gesenius' and its successors, and mentions briefly the material included and any new semantic principles introduced. His discussion includes Zorell's *Lexicon* and various "Theological Dictionaries," but the book appeared before the publication of Alonso Schoekel's *Diccionario*. Finally, a recent in-depth analysis by O'Connor enters into detail on the linguistic and semantic principles underlying twentieth-century Hebrew lexica.<sup>10</sup> He identifies three main tasks in the constructing of a lexicon: the selection or delimitation of the extent of the corpus, the division or segregation of the data into words and roots, and, finally, the information and evidence actually to be provided to the user. He devotes much space to the first issue of the delimitation of the material to be studied, arguing that Biblical Hebrew should be kept distinct from the evidence of inscriptions, Dead Sea Scrolls

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<sup>3</sup> Kaddari, *מילון העברית המקראית*. It is reported that this lexicon is based on an earlier edition from 20 years ago, but I have not been able to confirm this.

<sup>4</sup> See also Bacher, "Dictionaries, Hebrew," which is primarily a listing of all known Hebrew lexica up to the end of the nineteenth century, some scholarly, some religious. The number of them is, nevertheless, impressive; Silva, *Biblical Words and Their Meaning*, 186–88; Marlowe, "A Summary Evaluation of Old Testament Hebrew Lexica, Translations, and Philology in Light of Key Developments in Hebrew Lexicographic and Semitic Linguistic History," has been unavailable to me.

<sup>5</sup> See, for example, the discussions of their own lexica by the authors in Raymond, "Vers la publication d'un *Dictionnaire d'Hébreu et d'Araméen*," and Alonso Schoekel, "El *diccionario bíblico hebreo-español*."

<sup>6</sup> Tene–Barr, "Linguistic Literature, Hebrew." This is itself in part dependent on the earlier entry in the *Jewish Encyclopedia*.

<sup>7</sup> Lübke, "Hebrew Lexicography: A New Approach."

<sup>8</sup> See further, Lübke, "An Old Testament Dictionary."

<sup>9</sup> Danker, "Hebrew Old Testament Grammars and Lexicons."

<sup>10</sup> Danker, *Multipurpose Tools*, 95–99; O'Connor, "Semitic Lexicography."

(Qumran), and Sirach.<sup>11</sup> His prime reasons for this are to distinguish the undatable (and literary) biblical material from the other datable sources, to keep separate the Qumran Hebrew that is often biblically influenced but reflects semantic change, and to avoid the uncertainties of the readings in the non-biblical sources. The issue of the delimitation of the corpus is a point that we shall return to in considering the lexica under discussion here. O'Connor proceeds to show the three tasks that he has outlined in operation in modern European lexica of Hebrew, although special consideration is given to a critique of *The Dictionary of Classical Hebrew*,<sup>12</sup> whilst also drawing attention to the value of many other lexica. He provides helpful biographical and linguistic background to both Zorell's *Lexicon* and Alonso Schoekel's *Diccionario*.

The other Hebrew lexica that are on the market are in fact many, and one could spend some time looking at each. Reymond's *Dictionnaire d'Hébreu et d'Araméen*<sup>13</sup> is derivative, however, of HALAT, since Reymond himself collaborated on that work. Fohrer's *Wörterbuch* is also derivative, and only provides brief glosses and references.<sup>14</sup> It is thus valuable for speedy consultation, but will not provide the extensive semantic evidence required for scholarly research. Finally, Targarona Borrás's affordable *Diccionario hebreo-español*<sup>15</sup> remains a rival to the other recent Spanish dictionary, that of Alonso Schoekel,<sup>16</sup> but clearly its scope is different, covering the whole of Hebrew from ancient to modern times. Therefore, although containing just over 50% more pages, it understandably has less information per individual word usage than Alonso Schoekel's.<sup>17</sup> Since the focus here is on biblical lexicography, and in view of the high quality of Alonso Schoekel's *Diccionario*, the latter will be discussed here rather than Targarona Borrás's work.

## 2. THE LEXICA OF ZORELL AND ALONSO SCHOEKEL

The two Hebrew lexica that will dominate our discussion, then, are those of Alonso Schoekel and an earlier one in Latin of Zorell.<sup>18</sup> This is not an arbitrary selection of two convenient lexica; rather the choice is dictated by a number of principles. These two are the most extensive among the other Hebrew lexica, and each in its own way draws upon

<sup>11</sup> O'Connor, "Semitic Lexicography," 175–78, 192–98.

<sup>12</sup> Clines, *The Dictionary of Classical Hebrew*. O'Connor's discussion of Clines' *Dictionary* is to be found particularly in O'Connor, "Semitic Lexicography," 195–203.

<sup>13</sup> Reymond, *Dictionnaire d'Hébreu et d'Araméen, Bibliques*. For discussion, see Reymond, "Vers la publication d'un *Dictionnaire d'Hébreu et d'Araméen*."

<sup>14</sup> Fohrer, *Hebräischer und aramäisches Wörterbuch zum Alten Testament*. English translation: *Hebrew and Aramaic Dictionary of the Old Testament*.

<sup>15</sup> Targarona Borrás, *Diccionario hebreo-español. Bíblico–Rabínico–Medieval–Moderno*.

<sup>16</sup> Alonso Schoekel, *Diccionario bíblico hebreo-español*. A Portuguese version is also available: Alonso Schoekel, *Dicionário bíblico hebraico-português*.

<sup>17</sup> Targarona Borrás' *Diccionario* has a total of 1,435 pages, whilst Alonso Schoekel's *Diccionario* amounts to 912 pages.

<sup>18</sup> Zorell, *Lexicon Hebraicum et Aramaicum Veteris Testamenti*.

linguistic principles of the time and contains independent presentations of the semantics. Zorell, completed in 1954, stands in an important time before the revision of KBL that was published in 1958, whilst Alonso Schoekel is the first of a number of new dictionaries in the 1990s, including DCH and Ges<sup>18</sup>. They serve as a reminder of what Michael O'Connor has recently pointed out, that there was no Biblical Hebrew dictionary production between the 1960s and the 1990s.<sup>19</sup> The “Semantics of Ancient Hebrew Database” project has also given recognition to these two lexica as ones that should always be consulted for their semantic evidence.<sup>20</sup> O'Connor has drawn attention to their value in some of his publications,<sup>21</sup> whilst Andersen has suggested that Zorell is “always worth consulting,” and Danker has described it as “beyond question a noteworthy achievement.”<sup>22</sup>

As dictionaries, both Zorell and Alonso Schoekel are potentially one-volume works, devoted to the Hebrew language in alphabetical order. I say “potentially” one-volume dictionaries since both were issued in fascicles. My University Library has bound Zorell as a one-volume lexicon, but Alonso Schoekel as two volumes, reflecting the weightier paper of the latter.<sup>23</sup> Nevertheless, both are convenient sizes for having on one's desk whilst working. As they both have alphabetical listings, they are typical of twentieth-century Hebrew dictionaries in eschewing the practice, common in Arabic dictionaries and applied in BDB (in combination with an alphabetical arrangement), of organizing words by root.

Franz Zorell was a Jesuit and lecturer at the Pontifical Biblical Institute in Rome. He was also known as a compiler of a Greek New Testament lexicon, a rarity amongst modern biblical lexicographers to have produced lexica of both Testaments.<sup>24</sup> His lexicon was sponsored by the Society of Jesus. He died (in 1947) before completion of the Hebrew lexicon, which was then finished by the Polish Jesuit Ludovicus Semkowski.<sup>25</sup> The Aramaic part was, therefore, not written by Zorell, but it is indicative that there was to be a separate section for Aramaic.<sup>26</sup> The older practice of combining Aramaic and Hebrew (as in Gesenius, for example) has rightly been avoided, in recognition of Aramaic as a separate language. This was not something new, however, having already been a feature of BDB in 1907 and of KBL. The layout of Zorell is dense and the typesetting poor, rendering the page

<sup>19</sup> O'Connor, “Semitic Lexicography,” 187–88.

<sup>20</sup> See Hoftijzer, “The History of the Data-Base Project,” 65–85, and Muraoka (ed.), *Semantics of Ancient Hebrew*, ix–xii.

<sup>21</sup> O'Connor, “Biblical Hebrew Lexicography: 712 ‘Children, Dependents’ in Biblical and Qumranic Hebrew,” especially 25–26; O'Connor, “Semitic Lexicography.”

<sup>22</sup> Andersen, Review Article, 51; Danker, *Multipurpose Tools*, 97.

<sup>23</sup> Their size is almost exactly the same in terms of pages: in Zorell the number is 912, and that of Alonso Schoekel is 1,032, including indices (880 pages of main text). In 1984 a fascicle of indices for Zorell was published, taking the total number of pages to 1,005.

<sup>24</sup> Zorell, *Lexicon graecum Novi Testamenti*. For discussion of this New Testament lexicon, see Lee, *A History of New Testament Lexicography*, 140–41.

<sup>25</sup> See O'Connor, “Semitic Lexicography,” 188.

<sup>26</sup> The Aramaic section was eventually compiled, and expanded with comparative data by Vogt, *Lexicon linguae Aramaicae Veteris Testamenti documentis antiquis illustratum*.

hard on the eye. Nevertheless, some differentiation is brought out by the typographic arrangement: glosses are indicated in italics and further descriptions of the word usage, whose precise purpose is unclear, in plain type. All the glosses and descriptions are, of course, in Latin, which might nowadays limit its usability for some. Nevertheless, Latin as the language of the Catholic Church was a natural choice for Zorell, and in this respect it is appropriate to compare with Alonso Schoekel's choice of Spanish, the second largest language of current worldwide Christianity.

Zorell follows the habit of many dictionaries in providing a gloss at the beginning and then subdividing the meanings, although at times the relationship between the constituent parts is not clear. The problem of the gloss, that is, an equivalent word for the Hebrew in the dictionary target language, has been a subject of debate in lexicography.<sup>27</sup> The limitations of the use of the gloss in LSJ in particular have been noted.<sup>28</sup> Rarely does a word in one language have a matching equivalent in another, and hence a gloss alone does not indicate the limits of that equivalence. A well-known example in books on semantics, deriving from de Saussure, is that of English *sheep*, which in French could be glossed as *mouton*. However, they are not of equivalent "value" since English has the additional word *mutton* for the meat of the animal.<sup>29</sup> A second problem, manifest in both LSJ and Zorell, is with the presentation of an entry comprising glosses. Often a first gloss, almost as an equivalent for the headword, is given and then this is subdivided into different glosses or uses. Sometimes the first gloss does not reappear in the subdivisions, and it is not clarified whether the sub-meanings are aspects of the first example or alternates. At the same time a mere listing of glosses often provides translation equivalents rather than definitions, causing the user merely to choose an equivalent for their particular passage rather than understanding the meaning in context. A typical example of the problems can be seen in the definition of נִבֵּא Niph'al in Zorell (pages 491–92). First, a gloss is given of *prophetavit* (note that Hebrew verbs are translated by the perfect 3ms. of Latin verbs to conform to the morphology of the Hebrew). This is followed by different uses of the verb, each provided with a definition (in italics). At times a longer explanation of the definition is also recorded (in plain type):

נִבֵּא Ni.

*prophetavit*; 1) *ut propheta a Deo missus locutus est, monens, minans, consolans, docens etc., id quod etiam falsi prophetae imitate sunt (locos, ubi falsi prophetae loquuntur, asterisco \* notabimus, etiam in Htp.)...*

2) *ecstasi abreptus est...*

3) *sacrae musicae et cantui operam dedit...*

English translation:

<sup>27</sup> See especially Lee, *A History*, 15–29.

<sup>28</sup> See especially Glare, "Liddell & Scott: Its Background and Present State;" Chadwick, *Lexicographica Graeca. Contributions to the Lexicography of Ancient Greek*, 7–30.

<sup>29</sup> See, e.g., Palmer, *Semantics*, 67.

נִבֵּא Ni.

*He prophesied; 1) as said of a prophet sent by God, warning, threatening, consoling, teaching etc., an act that even false prophets imitated (we will indicate with an asterix \* places where false prophets are mentioned, even in the Htp.).*

2) he was enraptured ...

3) he dedicated himself to sacred music and singing ...

One might hesitate after reading definition 1) as to whether or not it makes any difference that the prophet is true or false, and this might appear at first to be more of a theological than a semantic difference. Sometimes in Hebrew, however, as in other languages, there do seem to be different terms for positive and negative figures: a Biblical Hebrew and Rabbinic Hebrew example is the distinction between נִבֵּא and נִבְּאָר. There might therefore be some justification for this clause. The following two definitions seem to reflect more specialized usages: 2) *ecstasi abreptus est* and 3) *sacrae musicae et cantui operam dedit*. The reason for the initial gloss at the head of the entry (*prophetavit*) could be explained in different ways. It might be some sort of a “prime meaning,” from which the development of the word is indicated by the subsequent definitions. This is a practice favoured by some lexicographers, although it can have the danger of implying a core meaning, or of dominating the reader’s perception of the word without allowing him or her to consider in depth the definitions. The initial gloss might alternatively serve as a recommended translation equivalent that could be applied in most contexts despite the connotations listed in the definitions. If this were the case, it would not seem to be a suitable translation equivalent for definition 3). The relationship between the initial gloss and the sub-definitions is, therefore, imprecise or at least ill-defined.

What is striking about Zorell’s arrangement is that the evidence from etymology (or, more strictly, “comparative material”) in other languages is given at the end of each entry, and then only sparingly. This was also a practice adopted occasionally in nineteenth-century European dictionaries,<sup>30</sup> and more recently has been advocated by Barr, allowing for the semantics to inform the etymology and not vice versa.<sup>31</sup> There can be a tendency, if the comparative evidence is given first, for it to dominate the understanding of the semantics, sometimes imposing a simplistic *Grundbedeutung*. The semantics of the Hebrew evidence, rather, should lead to determining what is valid comparative and etymological material. Zorell, nonetheless, is still influenced by etymological and comparative considerations, even where it might be to the detriment of a proper semantic analysis.<sup>32</sup> Bibliographic references are supplied sporadically in his *Lexicon*.

The publication in 1994 of Alonso Schoekel’s *Diccionario bíblico hebreo-español* marked the appearance of the first major dictionary since the 1950s.<sup>33</sup> Alonso Schoekel was a member of

<sup>30</sup> This point is made by O’Connor, “Semitic Lexicography,” 201, who gives as an example Tregelles, *Gesenius’ Hebrew and Chaldee Lexicon to the Old Testament Scripture*.

<sup>31</sup> Barr, “Hebrew Lexicography: Informal Thoughts,” 141.

<sup>32</sup> See O’Connor, “Biblical Hebrew Lexicography,” 32.

<sup>33</sup> Alonso Schoekel’s own discussion of his lexicon can be found in “El *diccionario bíblico hebreo-*

the Society of Jesus and of the Pontifical Biblical Institute. The publication of his dictionary followed from (and this is no coincidence) that of the *Nueva Biblia Española*.<sup>34</sup> The typography of Alonso Schoekel's dictionary is clearer than Zorell's, with greater spacing between lines and wider margins. As a dictionary into Spanish it has provided a tool for the speakers of the second most important language of Christianity worldwide, and its importance should not therefore be underestimated. As both Clines and O'Connor have noted, it is based upon linguistic theory,<sup>35</sup> although all other dictionaries in some way are dependent on the linguistic theory of the time, even if that theory is not what we would subscribe to today. Attention is drawn to the polysemous nature of words, and syntactic and collocational relations are regularly noted. In similar manner to Clines' *Dictionary*, no comparative Semitic evidence is provided. Alonso Schoekel, after listing any peculiar morphological or syntactic features, begins each entry with a preliminary list of correspondences to indicate the polysemous nature of the words. Note the example of the noun **נִאֲצָה** (page 447):

**נִאֲצָה** / **הִאֲצָהוּ** [Pl. **תִּאֲצָוּהוּ**, c. suf. **תִּאֲצָוּהוּ** Ez 35,12]

*Ultraje, insulto, ofensa, contumelia, injuria,*

*humillación* 2 Re 19,3 Is 37,3 + **צָרָה**, **תּוֹכַחָה**

*angustia, castigo; Ez 35,12 Neh 9.18.26.*

**נִאֲצָה**, in its two forms, is only attested four times in the OT,<sup>36</sup> but this does not prevent Alonso Schoekel listing as many as six possible correspondences. **הִאֲצָהוּ** (2 Kings 19:3 = Isa 37:3) appears in a series of construct nouns to describe the situation upon hearing the words of Rabshakeh (compare 2 Kings 18). It is **צָרָה**, "distress," and **תּוֹכַחָה**, "rebuke," and therefore justifiably has been rendered as "contempt, contumely, disgrace," and in German "Schmach."<sup>37</sup> Zorell (page 491), as most of his predecessors, placed the different vocalized forms under separate entries, defining one as "*contemptus Dei per verba blasphemia*" and the other as "*verba vel opera in Deum contemptuosa*." Alonso Schoekel's merging of the two forms avoids making any subtle distinctions in meaning, which Zorell attempts despite any clear distinctions in usage.<sup>38</sup>

The correspondences given by Alonso Schoekel ("*Ultraje, insulto, ofensa, contumelia, injuria, humillación*") do in part serve the needs of a translator looking for the *mot juste* in a particular

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*español*," and "The *diccionario bíblico hebreo-español (DBHE)*," 76–84. His lexicographic principles are also revealed in "Sobre diccionarios bilingües."

<sup>34</sup> Alonso Schoekel–Mateos, *Nueva Biblia Española*.

<sup>35</sup> Cf. O'Connor, "Semitic Lexicography," 190–91.

<sup>36</sup> Neh 9.18.26 in Alonso Schoekel should be corrected to Neh 9,18.26.

<sup>37</sup> These glosses are taken from BDB, 611, and Merrill, "נִאֲצָה," 6, respectively.

<sup>38</sup> Zorell might have a point in his definitions, although for the most part both forms seem to denote an abstract such as "disgrace." However, in the context, Rabshakeh's action in 2 Kings 19:4 is described as "mocking" (**פָּרַח** Piel) God, and it is possible that **הִאֲצָהוּ** (2 Kings 19:3) denotes contempt expressed towards God (cf. Vulgate: *blasphemia*).

passage, and derive from Alonso Schoekel's own experiences of translating the Bible into Spanish. They also raise an important question in the debate over gloss versus definition. Alonso Schoekel does not always provide definitions, but by giving a long list of words, indeed more than the number of occurrences of the word in some instances, he is providing an indication of the meaning and range. The problems of single glosses are avoided by displaying the extent of the meaning. There is still some guesswork involved on the part of the reader to identify the limits of the meaning, but this is not an unhelpful method. For frequently occurring words, the meanings are then often subdivided and different uses noted, although sometimes these are reduced to a single gloss, and the precise relationship between the preliminary list and the subdivisions is not always clear. Alonso Schoekel's work does therefore contribute to the debate regarding the gloss. Thompson has drawn attention to the fact that a gloss in apposition to a headword serves more as a dictionary definition (as Zorell's glosses seem to be), and is to be distinguished from glosses to be used in a translation for a particular passage.<sup>39</sup> She also suggests that interaction between a gloss and a definition, where both are found, is aimed at bringing the reader's perception of meaning into a sharper focus. Thus, the reading of a lexicon is a creative activity in which the user is invited to understand the meaning through analysis of the glosses and definitions combined. Zorell's *Lexicon* provides that opportunity, whilst Alonso Schoekel's *Diccionario* offers multiple glosses that encourage a similar creative activity. Nevertheless, the lack of distinction by Alonso Schoekel between a gloss as definition and a gloss as a translation equivalent, and the irregular inclusion of a definition, render the *Diccionario* a frustrating and misleading lexicon to consult.

Alonso Schoekel aims at usability and manageability, and in order to produce a one-volume dictionary many elements are excluded, which are noted by him in his "Introduction". Given the uncertainty of the dates of most biblical books, diachronic information is excluded, except where there seem to be clear indications from late books such as Esther, Ecclesiastes, and Chronicles. Likewise, bibliographic information is excluded, given the vast secondary literature that now exists and its ready availability in other sources. Decisions over polysemes and homophones are made in the light of comparative Semitic evidence, and no doubt the meaning of rare words is also in part determined by such evidence. Nevertheless, the comparative evidence is not included with one exception. Where the Semitic root is found in Spanish, then a note is made indicating this. This would seem to be a slightly peculiar practice, but is perhaps aimed at a Spanish lay audience, both for assisting them to remember the word and for their entertainment; perhaps a little education in sensitivity to the Jewish history of Spain is also intended. Thus, Hebrew חִלַּק Hiphil (page 234) is compared with Spanish *falagar*, "to flatter," and פְּבִיר "big, important," to the Spanish name *Guad-al-quivir* (page 323). Of course, it is likely that most of these roots entered Spanish through Arabic rather than Hebrew (clearly in the case of *Guad-al-quivir*), and for the non-

<sup>39</sup> Thompson, Review of Lee, *History of New Testament Lexicography*, 118–19.

specialist this might be misleading information. Another example, the Spanish *macabro*, “macabre,” is also said “probably” to be from a Semitic root (under *מַכְבֵּר*, page 623: “De esta raíz semítica deriva probablemente el castellano «macabro»”). “Macabre” is a word also attested in Old French *macabré* from which derives the English, and it is far from certain that the real origins of the word are Semitic. Perhaps it is a corruption of the name Maccabaeus (Old French: *macabê*), but no one is sure.<sup>40</sup> If it is a derivation of Maccabaeus, then it is indeed a Semitic word but not comparative to *מַכְבֵּר*: more probably it should be compared with the Aramaic word denoting “mallet” (*מַכְבֵּר*).<sup>41</sup> This feature of the dictionary is entertaining, but a little dubious.

Concerning the scope of the Hebrew that is included in each, the first thing to note is that whilst Zorell, as his predecessors, includes personal names and proper nouns, Alonso Schoekel relegates these to an appendix. This is an important indicator that he considered these not to have semantic range, but to be denotations/signifiers for people and places. In a semantic-based dictionary they should not be included, but in a listing of words in Hebrew they should. By still providing this information in an appendix he is at least guiding the user as to the best “translation” of names, and in particular to the common Spanish equivalents for the names. Both works concentrate on Biblical Hebrew primarily. For Zorell the Dead Sea Scrolls appeared too late to be included, but Sirach (part of the Catholic Bible) is incorporated by him, although inconsistently. Sirach is consistently recorded by Alonso Schoekel. Occasionally inscriptions are cited by Zorell for illustration of the Biblical Hebrew usage, while Alonso Schoekel cites no inscriptions or Dead Sea Scrolls. There are positive and negative reasons for the inclusion of such material. Many users will only be interested in the Bible, and from a Catholic perspective this should include Sirach. However, if one wished to cover historically the Hebrew of the time of the Bible, then both the inscriptions and Qumran evidence ought to be included. O’Connor makes the valid point that Sirach is a highly problematic source to incorporate, given the great divergences between the manuscripts, and that both inscriptions and Dead Sea Scrolls are difficult to evaluate.<sup>42</sup> He admits that this is a temporary problem that further research will overcome, but it should not be taken as a reason to exclude. Both sets of material overlap with portions of the biblical material and there are connections that might have been drawn out. The Scrolls and Sirach

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<sup>40</sup> *The Oxford English Dictionary*, IX 148. The origin would then lie in the Danse Macabre, a misreading of Middle French Dance Macabré, itself deriving from a link between the cult of the Maccabees and the dance of the dead tradition in art and literature. The OED tellingly notes: “There is no evidence to support the theory that the word derives from Arabic *maqābir*, plural of *maqbara* cemetery (Moroccan colloq. Arabic *m<sup>q</sup>qāber*, plural of *m<sup>q</sup>qebra* tomb), or from Syriac *meqabberēy* gravediggers.”

<sup>41</sup> For example, Goldstein, *1 Maccabees*, 231; Jastrow, *A Dictionary of the Targumim, the Talmud Babli and Yerushalmi, and the Midrashic Literature*, 829.

<sup>42</sup> O’Connor, “Semitic Lexicography,” 195; cf. Qimron, “The Biblical Lexicon in Light of the Dead Sea Scrolls,” 313–14, who draws attention to the primary need still of evaluating the Hebrew in the Scrolls.

do indicate to us some of the developments in Biblical Hebrew, and contribute to our understanding of the later biblical books.<sup>43</sup> They can serve a scholarly purpose in being included even if without full evaluation, since their very juxtaposition to the biblical material in a lexicon can be informative. It is one of the great values of Clines' *Dictionary of Classical Hebrew* that they are so presented. No lexicon is ever the final word on the semantics of the language, and should be seen as reflections of our current state of knowledge, however imperfect. They can by their nature even assist in clarifying the material for future editions.

### 3. ILLUSTRATIVE EXAMPLES

Let us turn now to examples to see the lexica working in practice, and note the different perspectives that might be gained from them. The choice is arbitrary, and therefore reflects a real-case scenario of consulting the lexica for particular words. The examples are words that could all be included in the semantic field of derogatory speech.<sup>44</sup>

#### 3.1 **עז** Verb

We begin with a verb that only occurs a few times in the biblical text, but which nonetheless appears in a variety of contexts that raise issues for the semantics. The comparative evidence of other Semitic languages provides little evidence for determining the meaning in Hebrew of the verb **עז**, since the cognates in other languages might mean little more than “to utter.” The verb may have God or humans as its subject, while the object is mostly collective people, and rarely God (the exception being Sir 3:16). The evidence from the ancient versions is striking in the variety of equivalents chosen. Whilst the Targum favours the meaning “to curse” in a few of the cases (that is לוא, Isa 66:14), other versions tend towards the meaning “to be angry” (for example LXX: ὀργίζομαι, Dan 11:30), but there is little consistency and all versions display variation in their choices.

From contextual evidence it seems that the verb **עז** may be divided into three meanings. In the first place it means the calling down of something evil upon someone, “to utter a curse” (Num 23:7, 8; Sir 3:16), although this sense appears rarely. A second meaning is that of speaking ill of someone, “to denounce, revile,” a meaning that is sometimes difficult to distinguish from “to curse.” A third intransitive sense of “to be angry” is found. The three meanings of **עז** are, therefore, closely related, and one might derive a diachronic development (moving from the sense of displaying anger to expressing it in cursing), but there is little evidence to prove such a development. BDB (page 276) gives two meanings: 1) “be indignant, have indignation”; 2) “express indignation in speech, denounce, curse,” whilst

<sup>43</sup> Muraoka and Elwolde in particular have drawn attention to their value: see Muraoka–Elwolde (eds.), *Diggers at the Well: Proceedings of a Third International Symposium on the Hebrew of the Dead Sea Scrolls and Ben Sira*, which includes a number of essays discussing the nature of the Hebrew attested.

<sup>44</sup> Further discussion of all these words is to be found in Aitken, *The Semantics of Blessing and Cursing in Ancient Hebrew*.

HALAT (page 265) provides two glosses: “to curse” and “to scold.” Zorell (page 213) follows suit:

**קעז**,... 1) *verbis iracundis allocutus est, increpuit, maledixit ...* 2) *ira sua persequitur ... Ni ad iram concitatus ... Hi increpuit*

Turning to Alonso Schoekel (page 200), however, we find, according to his practice, an array of glosses, some verging on definitions, for the Qal stem:

**Q.** *Estar irritado; descargar la cólera ... a) Actitud de ruptura, enemistad ... b) Manifestar la indignación contra alguien ... c) Un juez: sentenciar, condenar, fulminar la sentencia* Sal 7:12.

English translation:

**Q.** *to be irritated; to vent rage ... a) anti-social disposition, enmity ... b) to show indignation towards someone ... c) a judge: to sentence, condemn, to threaten judgement* Ps 7:12.

Alonso Schoekel first identifies two meanings known from the previous lexica: the stative “venting anger,” and “showing indignation toward someone.” It is slightly awkward in his presentation to offer nouns for the Hebrew verb in sub-definition a), although the intention is clear. Here, especially in meaning b), we see him, in distinction from other examples noted, providing what amount to definitions. This allows him to cover the sense of “to be angry” and “to curse” under the one definition, and both to avoid the ambiguity and connotations of “to curse,” and to leave open the possibility that the verbal expression of rage is never manifested in actual cursing. In contrast to his predecessors, he also supplies a third definition of “judge,” but only in the case of Ps 7:12. This definition seems to be derived from Scharbert, who compares the meaning of the Arabic *taḥāggama* (glossed by him as “erschrecken”) with the participle of **קעז** in Ps 7:12, which he translates as “schrecken-einflössender.”<sup>45</sup> Scharbert is apparently following Delitzsch in this, although he does not cite him.<sup>46</sup> Whilst Ps 7:12 does present a picture of a fierce God, conveyed in its metaphor of God as a judge and a warrior, the intransitive of **קעז** at Ps 7:12 probably denotes being in a state of indignation (used of God), as the transitive seems to denote the expressing of indignation at Isa 66:14 and Dan 11:30. Whilst we may not agree with Alonso Schoekel’s third definition, he has alerted the reader to a difficult passage, as well as providing cautious definitions for the other usages.

### 3.2 **קעז** Noun

The meaning of the noun **קעז** is as ambiguous as the cognate verb. The noun has been glossed by BDB (page 276) as “indignation,” and in similar fashion Zorell glosses it as simply “*ira*” (page 213). The ancient versions, too, with only a few exceptions, support this sense. Alonso Schoekel (page 201) once more provides a full list of equivalents:

**קעז** ... *Cólera, indignación, irritación, ira, furor, furia, rabia ...* Significa la pasión y especialmente su manifestación activa.

<sup>45</sup> Scharbert, “‘Fluchen’ und ‘Segnen’ im Alten Testament,” 15.

<sup>46</sup> Delitzsch, *Biblischer Commentar über die Psalmen*.

Alonso Schoekel's multiple glosses merely attest to the one sense given in the other lexica, but he offers the reader an array of translation options from which one may select the specific nuance. Once more we see him adding a definition, or what might be more properly be described as a qualification of the meaning (in non-italic type). This is not really surprising in either Zorell or Alonso Schoekel, given their usual methods. In the evidence for this word, nonetheless, there is room for alternative proposals, but neither lexicon takes it, despite Alonso Schoekel offering multiple equivalents. Ges<sup>18</sup> (page 308), for example, identifies two meanings: 1. Zorn, Grimm; 2. Verwünschung. For the latter meaning of "curse" Ges<sup>18</sup> finds support at Isa 30:27.<sup>47</sup> There God's lips are said to be full of זַעַם, and it is perhaps this connection with the lips that encourages the meaning "curse," as a spoken expression of anger. Zorell and Alonso Schoekel, therefore, both remain conventional in their entries for this word, although the latter once more provides numerous glosses reflecting a variety of connotations if little change in general sense.

### 3.3 זַקַּב Verb

It is unclear whether in the three cases of זַקַּב in Leviticus 24 we have forms derived from the verb זַקַּב "to pierce," or from a root belonging to the same semantic field as קַבַּב, or even a secondary formation of קַבַּב. The lexica differ accordingly in their understanding of the lexeme. BDB (page 866), for example, sees it as an alternative form of קַבַּב, and hence renders it as "curse." Zorell (page 530), in view of its context, translates זַקַּב as "*blasphemavit*," perhaps implying the same understanding as BDB, although adding a religious connotation. There is, nevertheless, some ambiguity in Zorell's gloss. The Latin verb *blasphemo* can mean merely "to revile," and only later developed the sense of religious reviling, i.e., the meaning "to blaspheme" as we understand it. Hence it is not clear what connotation Zorell is intending here, and he perhaps enjoyed the ambiguity, although it is a further example of the limitation of glosses without definitions.

In addition, Zorell's translation alerts us to a possible influence in his interpretation. In all three instances of the verb זַקַּב (Lev 24:11, 16a, 16b), the Vulgate renders it by *blasphemo*, the same rendering that Zorell chooses. For the other words considered so far, the Vulgate has a variety of translations in each case and therefore it would not have been possible for Zorell to select one in correspondence with the Vulgate. Nonetheless, often his choice is one of the translations to be found in the Vulgate. Thus, the noun זַעַם is translated by him as *ira* as does the Vulgate in a few cases (Jer 50:25; Sir 5:7[9]; 39:23[28]), although admittedly the most common rendering in the Vulgate is *indignatio* (for example, Isa 10:5, 25; 26:20). The most common Vulgate rendering of the verb זַעַם is *irascor* (Zech 1:12; Mal 1:4; Ps 7:12; Prov 22:14) and this too is the root used in Zorell's definition: *verbis iracundis allocutus est, increpuit, maledixit*. This evidence, however, is not conclusive, and a systematic analysis of his glosses would be required to determine how far he is influenced by the Vulgate. In particular, the

<sup>47</sup> Following Wildberger, *Jesaja 28–39: Das Buch, der Prophet und seine Botschaft*, 1218.

limited number of words in the Latin lexicon will inevitably give rise to some correspondences, but it is striking that in a problematic case such as Leviticus 24, a gloss is given that is ambiguous but corresponds nonetheless to the Vulgate.

Alonso Schoekel (page 484) seems to be aware of the alternative possible meanings of the verb **נָקַב** in Leviticus 24, but does not offer a solution. Seeing the verb as a by-form (“Alomorfo”) of **קָבַב**, he combines both possibilities of cursing and blaspheming in his rendering “maldecir, blasfemar.”

### 3.4 **חָרַף** Verb

The two related meanings of **חָרַף** II can be neatly divided between the contexts in which the verb is attested. It is most frequently found in historical prose, especially of armies opposing each other, where it appears in a speech-act denoting the defying of the enemy. As the typical verb of the enemy’s “taunting” it is found in the depictions of Goliath and the Philistines facing Israel (1 Sam 17:10, 25, 26, 36, 45; 2 Sam 21:21; 23:9; 1 Chr 20:7), and in Sennacherib facing Hezekiah (2 Kings 19:4, 16, 22, 23; Isa 37:4, 17, 23, 24; 2 Chr 32:17).<sup>48</sup> In Sirach **חָרַף** II continues to denote some form of spoken act of rebuking, but its usage seems to have shifted moderately. In earlier sapiential literature **חָרַף** II is used of the unrighteous person “insulting” the Maker (Prov 14:31; 17:5), and thus is applied to sapiential language, but still in a similar sense of an opponent of God. Turning to the lexica under discussion, Zorell (page 270), assigning Root I to this usage of the verb, offers the following definitions:

**חָרַף** ... *acribus verbis impetivit, increpuit* ... **Pi.** . . . etc. ... 1) *verbis vel actibus lacessivit, carpsit, exprobravit* ... 2) *verbis acribus ad pugnandum lacessivit* ... 3) *vilipendit, vilipendens exposuit vitam suam ad mortem* Jdc 5 18 (Vg).

Here we see Zorell at his best, providing precise definitions for the word. There is particular clarity in his definition 2) *verbis acribus ad pugnandum lacessivit*, “to provoke by bitter words for a fight,” which conveys precisely the sense to “to taunt” without the ambiguity of a gloss. Alonso Schoekel (page 256), meanwhile, classifying the verb under root III, provides an extensive list of translation equivalents:

**חָרַף**... **Q.** a) *Afrentar, injuriar, insultar, ultrajar, offender* ... b) *Reprochar, acusar* ... n b  
**Pi.** *Afrentar, injuriar insultar, ultrajar, offender, zaberir, infamar, vilipendiar, deshonrar; burlarse, mofarse, reirse, escarnecer.*

Of the two dictionaries under discussion, the clarity of Zorell’s presentation, and the precision of his definitions in this case, is an advance on Alonso Schoekel’s list of correspondences.

## 4. CONCLUSION

The lexica of Zorell and of Alonso Schoekel both can be said to have their strengths and

<sup>48</sup> The verb is also attested in an inscription, possibly with a similar connotation, see Davies, *Ancient Hebrew Inscriptions: Corpus and Concordance*, no. 15.003.1.

weaknesses. Zorell's use of definitions is a major advance over Alonso Schoekel's lists of glosses, although such glosses can be a useful indicator of meaning. Nevertheless, sometimes Zorell has provided his own interpretation that does not always seem to be the best choice. O'Connor has made the important observation that the lexica of Clines and Alonso Schoekel are alike, in a similar way that Zorell's lexicon and the first edition of KBL are.<sup>49</sup> Each are a product of their time, seen especially in those produced in the 1990s (Clines and Alonso Schoekel) with their removal of data such as etymology or comparative material, and their focus upon contextual and syntactic evidence. No doubt the lexica of the twenty-first century will also be products of their time, but reflect a happy balance between all these recent lexica. A sign of this is the current revision of the comparative material in BDB: an improvement rather than an abandonment. The positive and negative aspects of each of these lexica are a reminder that no such tool is without flaws but that each has value. Accordingly, consultation of all available lexical tools will prove beneficial to the researcher.

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<sup>49</sup> O'Connor, "Semitic Lexicography," 203.

# CHAPTER 15

## SEMANTIC DOMAINS FOR BIBLICAL GREEK: LOUW AND NIDA'S FRAMEWORK EVALUATED FROM A COGNITIVE PERSPECTIVE

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This paper focuses on semantic domain theory and its use in biblical lexicography. The first biblical lexicon making use of this theory was Louw and Nida's *Greek-English Lexicon of the New Testament Based on Semantic Domains*, first published by the United Bible Societies in 1989. The theoretical framework of this lexicon is based on the semantic model that is usually referred to as *componential analysis of meaning*. Over the past decennia new linguistic insights have emerged, which have a significant impact on semantic domain theory. This paper looks at semantic domain theory from the perspective of *cognitive linguistics* and shows how this new approach may serve to improve Louw and Nida's framework.

### 1. INTRODUCTION

The theoretical framework of Louw and Nida's *Greek-English Lexicon of the New Testament Based on Semantic Domains* is a result of the application of componential analysis of meaning. Nida laid the theoretical foundation for this dictionary in his book on this methodology (1975), in which he states that words "have meaning only in terms of systematic contrasts with other words which share certain features with them but contrast with them in respect to other features."<sup>1</sup>

The term "semantic domain" or "semantic field" has always been closely linked to componential analysis. A semantic domain is defined by Nida as a group of meanings which share a number of semantic features or components.<sup>2</sup> Hartmann and James define a semantic domain as a "lexical set with related meanings, which form a conceptual network or mosaic, ... which can be analysed in terms of componential analysis into distinctive features."<sup>3</sup>

In my research, I have tried to redefine semantic domains from a different theoretical perspective—cognitive linguistics. The latter approach to language is, according to

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<sup>1</sup> Nida, *Componential Analysis of Meaning*, 32.

<sup>2</sup> Nida, *Componential Analysis of Meaning*, 174.

<sup>3</sup> Hartmann-James, *Dictionary of Lexicography*, 124.

Langacker, “fundamentally at odds”<sup>4</sup> with most other existing trends in linguistic theory. It is “a theory that is based on the capacities of the human mind rather than the capacities of the mathematical systems that happen to be used by logicians,”<sup>5</sup> “an approach to language that is based on people’s experience of the world and the way they perceive and conceptualize it.”<sup>6</sup> Where traditional linguistic theory claims that words have meanings, the cognitive linguist would say that meanings have words.

This is a significant difference in perspective. From the viewpoint of cognitive linguistics meaning comes before the word, and that makes sense, because language is a product of a group of people who observe the world they live in, reflect on it, and try to make sense of it. They perceive patterns, try to comprehend them, and, more than anything else, want to communicate about these things to their fellow human beings. It is for that purpose that they create words.

I believe that the cognitive approach is important for biblical lexicography. When looking up a word in a lexicon, I want to know more than one translation equivalent in English. I want to understand the concept behind that word and what it meant within the system of experiences, beliefs, and practices of the original speakers of the language. Especially for a Bible translator it is essential that he or she understands the ins and outs of the meaning of a word when looking for an equivalent in the target language.

Though I am still of the opinion that the Louw–Nida dictionary is a masterpiece, and represents a great step forward in the application of contemporary linguistic theory to biblical lexicography, there is still room for improvement, especially from a cognitive linguistic perspective. My main criticism revolves around the term “coherence.” My opinion is that Louw–Nida lacks coherence at two levels: (1) the level of the theoretical framework with its 93 semantic domains, and (2) the entry level, especially those entries that span different semantic domains. These two levels will be dealt with in separate sub-sections.

## 2. COHERENCE WITHIN THE LOUW–NIDA FRAMEWORK

Semantic domains are not universal, but differ from language to language and from culture to culture. Different cultures reflect different worldviews, different systems of experiences, beliefs, and practices. This is also true for New Testament Greek. Ideally, the theoretical framework behind a semantic domain dictionary like Louw–Nida gives insight into the world behind the language. Since language is a product of the human mind, it reflects patterns and structures that speakers perceive in observing the reality around them. This reality is usually rather complex. Efforts to reduce this reality to a systematic framework of semantic domains will always result in an over-simplification. The goal, however, is a system that reflects the cognitive reality behind a language as closely as possible.

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<sup>4</sup> Langacker, *Foundations of Cognitive Grammar*, vol. I: *Theoretical Prerequisites*, 1.

<sup>5</sup> Fauconnier, *Mental Spaces*, ix.

<sup>6</sup> Ungerer–Schmid, *An Introduction to Cognitive Linguistics*, x.

One drawback with the Louw–Nida semantic framework is its lack of internal coherence. Can a simple list of 93 semantic domains, that do not seem to be interrelated, adequately reflect the cognitive reality behind New Testament Greek? To paraphrase a well-known proverb: we cannot see the forest because of the way the trees have been lined up—in one long row. The world behind New Testament Greek certainly is much more complicated than what we see reflected in the Louw–Nida dictionary.

To what extent are the postulated 93 semantic domains interrelated? How can we turn these trees back into a forest? Is there overlap between different domains? In search of answers, I found a total of 919 cases in the Louw–Nida lexicon of a single word being listed under more than one semantic domain.

This is in itself not surprising. Phenomena such as homonymy and polysemy are found in languages all over the world. If a word has more than one meaning, it is obvious that it may have to be classified under more than one domain. If, however, there are cases where two domains have a number of words in common, we need to be more alert. A closer look at the 919 cases mentioned above yielded 90 cases where at least 5 words listed under domain A were also found under domain B. There is even one case where 23 words were found to be shared by one single pair of domains! Table 1 lists these 90 cases. The first column contains the number of words shared by the domains found in the second and third columns, and the number within the second and third columns refers to the semantic domain in Louw–Nida.

23	13: Be, Become, Exist, Happen	15: Linear Movement
18	89: Relations	90: Case
16	67: Time	89: Relations
15	25: Attitudes and Emotions	33: Communication
15	13: Be, Become, Exist, Happen	85: Existence in Space
14	33: Communication	88: Moral and Ethical Qualities and Related Behavior
13	13: Be, Become, Exist, Happen	57: Possess, Transfer, Exchange
12	79: Features of Objects	88: Moral and Ethical Qualities and Related Behavior
12	59: Quantity	78: Degree
12	57: Possess, Transfer, Exchange	90: Case
12	13: Be, Become, Exist, Happen	68: Aspect
12	37: Control, Rule	57: Possess, Transfer, Exchange
12	33: Communication	57: Possess, Transfer, Exchange
11	25: Attitudes and Emotions	88: Moral and Ethical Qualities and Related Behavior
11	15: Linear Movement	90: Case
11	15: Linear Movement	57: Possess, Transfer, Exchange
11	13: Be, Become, Exist, Happen	90: Case
10	83: Spatial Positions	84: Spatial Extensions
10	57: Possess, Transfer, Exchange	88: Moral and Ethical Qualities and Related Behavior

10	57: Possess, Transfer, Exchange	85: Existence in Space
10	25: Attitudes and Emotions	30: Think
10	15: Linear Movement	85: Existence in Space
9	84: Spatial Extensions	89: Relations
9	83: Spatial Positions	90: Case
9	83: Spatial Positions	89: Relations
9	79: Features of Objects	87: Status
9	67: Time	90: Case
9	53: Religious Activities	88: Moral and Ethical Qualities and Related Behavior
9	15: Linear Movement	31: Hold a View, Believe, Trust
8	84: Spatial Extensions	90: Case
8	67: Time	84: Spatial Extensions
8	65: Value	88: Moral and Ethical Qualities and Related Behavior
8	57: Possess, Transfer, Exchange	89: Relations
8	13: Be, Become, Exist, Happen	23: Physiological Processes and States
7	68: Aspect	85: Existence in Space
7	67: Time	83: Spatial Positions
7	57: Possess, Transfer, Exchange	59: Quantity
7	36: Guide, Discipline, Follow	37: Control, Rule
7	31: Hold a View, Believe, Trust	88: Moral and Ethical Qualities and Related Behavior
7	28: Know	33: Communication
7	28: Know	32: Understand
7	20: Violence, Harm, Destroy, Kill	88: Moral and Ethical Qualities and Related Behavior
7	13: Be, Become, Exist, Happen	37: Control, Rule
7	10: Kinship Terms	11: Groups and Classes of Persons and Members
7	8: Body, Body Parts, and Body Products	9: People
7	6: Artifacts	57: Possess, Transfer, Exchange
6	85: Existence in Space	90: Case
6	65: Value	87: Status
6	57: Possess, Transfer, Exchange	68: Aspect
6	57: Possess, Transfer, Exchange	65: Value
6	42: Perform, Do	57: Possess, Transfer, Exchange
6	34: Association	57: Possess, Transfer, Exchange
6	31: Hold a View, Believe, Trust	33: Communication
6	30: Think	33: Communication
6	30: Think	31: Hold a View, Believe, Trust
6	27: Learn	33: Communication
6	25: Attitudes and Emotions	31: Hold a View, Believe, Trust

6	24: Sensory Events and States	32: Understand
6	23: Physiological Processes and States	88: Moral and Ethical Qualities and Related Behavior
6	23: Physiological Processes and States	74: Able, Capable
6	23: Physiological Processes and States	25: Attitudes and Emotions
6	20: Violence, Harm, Destroy, Kill	23: Physiological Processes and States
6	15: Linear Movement	68: Aspect
6	15: Linear Movement	34: Association
6	13: Be, Become, Exist, Happen	34: Association
6	13: Be, Become, Exist, Happen	33: Communication
6	9: People	10: Kinship Terms
5	87: Status	88: Moral and Ethical Qualities and Related Behavior
5	78: Degree	79: Features of Objects
5	57: Possess, Transfer, Exchange	87: Status
5	57: Possess, Transfer, Exchange	71: Mode
5	35: Help, Care For	53: Religious Activities
5	33: Communication	56: Courts and Legal Procedures
5	33: Communication	37: Control, Rule
5	31: Hold a View, Believe, Trust	34: Association
5	30: Think	56: Courts and Legal Procedures
5	30: Think	35: Help, Care For
5	25: Attitudes and Emotions	87: Status
5	25: Attitudes and Emotions	68: Aspect
5	24: Sensory Events and States	33: Communication
5	24: Sensory Events and States	28: Know
5	24: Sensory Events and States	27: Learn
5	23: Physiological Processes and States	79: Features of Objects
5	23: Physiological Processes and States	57: Possess, Transfer, Exchange
5	19: Physical Impact	20: Violence, Harm, Destroy, Kill
5	15: Linear Movement	33: Communication
5	15: Linear Movement	20: Violence, Harm, Destroy, Kill
5	13: Be, Become, Exist, Happen	17: Stances and Events Related to Stances
5	6: Artifacts	37: Control, Rule
5	6: Artifacts	8: Body, Body Parts, and Body Products

**Table 1. Overlap in Semantic Domains**

The existence of so many patterns cannot be without significance. Yet the Louw–Nida dictionary does not point out that these patterns exist, and therefore also gives no indication as to what they may signify. Before jumping to conclusions, let us examine some of the patterns in detail.

	<b>Features of Objects (79)</b>	<b>Moral and Ethical Qualities (88)</b>
ἀκαθαρσία	<i>filth, dirt, rubbish</i> (Mt 23:27)	<i>impurity, immorality, filthiness</i> (Rom 1:24)
ἄμωμος	<i>without defect, blemish</i> (1 Pet 1:19)	<i>blameless, without fault, perfect</i> (Eph 1:4)
ἄσθενής	<i>physically weak</i> (1 Pet 3:7)	<i>morally weak</i> (Rom 5:6)
ἄσπιλος	<i>spotless, without stain</i> (1 Pet 1:19)	<i>morally spotless, pure</i> (2 Pet 3:14)
καλός	<i>physically attractive</i> (Lk 21:5)	<i>good, fine, praiseworthy</i> (Jn 10:11)
πικρία	<i>bitterness, bitter</i> (Acts 8:23)	<i>spite, bitterness</i> (Rom 3:14)
ῥυπαρός	<i>dirty, filthy</i> (Jas 2:2)	<i>morally impure, filthy, perverted</i> (Rev 22:11)
σκολιός	<i>winding, crooked</i> (Lk 3:5)	<i>crooked, dishonest</i> (Acts 2:40)
ταπεινός	<i>to make level, smooth</i> (Lk 3:5)	<i>to make humble</i> (Mt 18:4)
τέλειος	<i>perfect</i> (Heb 9:11)	<i>perfect</i> (Jas 3:2)

**Table 2. Domains 79 and 88**

Table 2 shows that there is apparently a link between physical features of (mostly inanimate) objects and moral features of humans. This is common in languages worldwide. Unfortunately, the Louw–Nida semantic framework does not deal with this important cognitive semantic relationship. Although the distinction between these two domains is justified, the framework fails to do justice to an important semantic relationship that could contribute to an understanding of the world behind the language.

	<b>Control, Rule (37)</b>	<b>Possess, Transfer, Exchange (57)</b>
ἀγοράζω	<i>to redeem, set free</i> (1 Cor 6:20)	<i>to buy, to purchase</i> (Mt 25:10)
ἄρπάζω	<i>to seize, to snatch away (people from other people's control</i> (Jn 10:28)	<i>to rob, to plunder</i> (Mt 12:29)
δεσπότης	<i>master, ruler, lord</i> (1 Tim 6:1)	<i>owner, master, lord</i> (2 Tim 2:21)
δίδωμι	<i>to appoint, assign</i> (people; Acts 13:20)	<i>to give</i> (Mt 14:19)
καταλαμβάνω	<i>to catch, seize, arrest</i> (John 8:3)	<i>to acquire, obtain, take</i> (1 Cor 9:24)
κύριος	<i>ruler, master, lord</i> (Mt 6:24)	<i>owner, master, lord</i> (Gal 4:1)
παραδίδωμι	<i>to hand over, turn over, betray</i> (people; Mt 5:25)	<i>to give over, to hand over</i> (Lk 4:6)
χαρίζομαι	<i>to hand over</i> (people; Acts 25:16)	<i>to give, grant, bestow generously</i> (Phil 2:9)
κλήρος	<i>ministry, task</i> (Acts 1:17)	<i>possession, what is possessed</i> (Col. 1:12)
μερίζω	<i>to assign a particular responsibility, to give a particular task to</i> (2 Cor 10:13)	<i>to give, to give a part of</i> (Heb 7:2)

**Table 3. Domains 37 and 57**

Table 3 shows another set of semantically related entries across two different domains. In what way do the two sets of meanings of the ten words in table 3 differ from each other? The meanings in the right column deal exclusively with relationships between humans and inanimate objects. The first eight items in the column on the left denote relations between humans and other humans, whereas the remaining two refer to relations between humans and activities. In other words, one could say that the two domains in this table are related. The Louw–Nida framework, however, does not bring out this relationship, which is unfortunate, as patterns like this give insight into the manner in which the speakers of NT Greek thought.

	<b>Existence in Space (85)</b>	<b>Be, Become, Exist, Happen (13)</b>
ἀναπαύομαι	<i>to remain in a location</i>	<i>to remain on someone</i> (e.g. Spirit of God)
ἀφήμι	<i>to leave something behind somewhere</i>	<i>to stop, leave</i> (of a state, e.g. fever)
βάλλω	<i>to put an object in a location</i> (e.g. bit in mouth of horse, Jas 3:3)	<i>to cause to happen</i> (Mt 10:34)
γίνομαι	<i>to come to be, to appear, to be in a place</i> (e.g. angels, Lk 2:13)	<i>to come to exist</i> (Jn 1:3)
δίδωμι	<i>to put</i> (e.g. a ring on someone's finger, Lk 15:22)	<i>to cause to happen</i> (Jas 5:18)
εἰμί	<i>to be</i> (somewhere, Lk 2:49)	<i>to be</i> (quality, Mt 11:29; identity, Mk 3:11; exist, Heb 11:6; happen, Mk 14:2)
ἦκω	<i>to be here, there</i> (Jn 8:42)	<i>to happen</i> (Mt 24:14)
ἵσταμαι	<i>to be</i> (standing) <i>somewhere</i> (Mt 16:28)	<i>to continue, to continue to be, to keep on existing</i> (e.g. city, Mt 12:25)
κατέχω	<i>to come to be in a place, to occupy</i> (e.g. the last place, Lk 14:9)	<i>to prevent, to hinder, to keep from</i> (the truth from being known, Rom 1:18)
κεῖμαι	<i>to be, to lie</i> (e.g. a bowl, Jn 19:29)	<i>to exist, to exist for, to be set</i> (e.g. laws, 1 Tim 1:9)
μένω	<i>to remain, to stay somewhere</i> (e.g. of people, Mk 6:10)	<i>to continue to exist</i> (e.g. a town, Mt 11:23)
παρίστημι, παριστάνω	<i>to present (oneself) somewhere</i> (e.g. Acts 1:3)	<i>to cause to be</i> (e.g. holy, Col 1:22)
περίκειμαι	<i>to be located around something</i> (e.g. Heb 12:1)	<i>to be</i> (quality) <i>in many ways</i> , (e.g. Heb 5:2)
περιτίθημι	<i>to put around, to surround</i> (e.g. Mt 21:33)	<i>to cause to have, to assign to</i> (e.g. 1 Cor 12:23)
φέρω	<i>to put, to place</i> (Jn 20:27)	<i>to keep in existence</i> (e.g. Heb 1:3)

**Table 4. Domains 85 and 13**

Table 4 deals with fifteen verbs that are shared by the Louw–Nida domains *Existence in Space* (85) and *Be, Become, Exist, Happen* (13). In English, there is an obvious semantic difference between “to be in a location” and other functions of the verb “to be.” Greek, as a fellow Indo-European language of English, seems to resemble English in that its equivalent εἰμί

covers quite a number of different (sub)domains. Semantically, we should distinguish between the following usages:

- to be (location), Louw–Nida 85.1, for example, Lk 2:49
- to be (quality), Louw–Nida 13.1, for example, Mt 11:29
- to be (identity), Louw–Nida 13.4, for example, Mk 3:11
- to be (existence), Louw–Nida 13.69, for example, Heb 11:6
- to be (existence of events > to happen), Louw–Nida 13.104, for example, Mk 14:2

There may be additional distinctions possible, but let us restrict ourselves to the five instances mentioned above. Louw and Nida identify four of the five items, but fail to distinguish between quality and identity. Furthermore, they assign the first item to a separate domain (Louw–Nida 85) whereas the three remaining items are considered subdomains of another domain (Louw–Nida 13).

Eiṣí is the only verb that actually covers all five usages. If we observe the other verbs in table 4, however, the overlap between these domains becomes apparent. This raises the question whether Louw–Nida 13 and Louw–Nida 85 should not be considered more closely related than the Louw–Nida framework allows them to be. The only place where Louw–Nida alludes to a possible relation between Louw–Nida 85 and other domains is a footnote in which they say that “in view of the focus upon spatial relations, it has seemed preferable to place them together with other spatial domains, namely, Domains 80–84.”<sup>7</sup> Though there is some logic to that remark, especially from a Western, scholarly perspective, it is doubtful whether that logic would reflect the intuition of the native speakers of Biblical Greek. It could, therefore, merely serve to obscure the patterns manifested by the language itself.

The data in the tables discussed above show that from a cognitive perspective the Louw–Nida framework of semantic domains may have some weaknesses. It fails to show a number of patterns of thinking that existed in the minds of the speakers of the language, and it seems to lack internal coherence to a certain degree. This in itself does not necessarily mean that their framework is wrong, but bringing out some of the semantic relationships between the different domains would be a significant improvement.

### 3. COHERENCE WITHIN THE LOUW–NIDA ENTRIES

In this section I would like us to consider a number of the Louw–Nida entries in detail. We have already mentioned that this dictionary contains 919 words that are found in more than one semantic domain. As a result of the layout, these entries are scattered throughout the dictionary, and an index with an alphabetical listing of words is necessary in order to find them. This can make it somewhat cumbersome to look up a word, but a printed dictionary that is based on semantic domains does not have many other options. An electronic publication does not suffer from these restrictions, and one could toggle between different layouts—both alphabetical and according to semantic domains.

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<sup>7</sup> Louw–Nida, *Greek-English Lexicon*, 734.

Now what would some of the Louw–Nida entries look like if their dictionary were arranged alphabetically? Let us have a look at some of these entries and ask ourselves the question whether their internal coherence could be improved or not.

Let us take the verb *διακονέω*:

- (a) 35.37—*Help, Care For—Serve, Take Care Of*

to take care of, by rendering humble service to—to *take care of*

πότε σε εἶδομεν πεινῶντα ἢ διψῶντα .. ἢ ἐν φυλακῇ καὶ οὐ διηκονήσαμεν σοι; when did we see you hungry or thirsty .. or in prison, and we did not take care of you? (Mt 25:44)

- (b) 46.13—*Household Activities—Household Activities*

to serve food and drink to those who are eating—to *serve, to wait upon*

ἀφήκεν αὐτὴν ὁ πυρετός, καὶ διηκόνει αὐτοῖς the fever left her and she began to serve them (Mk 1:31)

- (c) 53.66—*Religious Activities—Roles and Functions*

to serve God in some special way, such as a deacon—to *be a deacon, to minister to*

οὗτοι δὲ δοκιμαζέσθωσαν πρῶτον, εἶτα διακονεῖτωσαν ἀνέγκλητοι ὄντες they should be tested first, and then, if they prove blameless, they should serve as deacons (1 Tim 3:10)

In spite of the different definitions and glosses in English, the lexical meaning of *διακονέω* is practically identical in all cases: “to serve, to render service.” The fact that (b) is located in a household context does not alter this, nor does the religious context found in (c). The only difference between these three different entries is one of context.

Another interesting example is the verb *ἀρπάζω*:

- (a) 18.4—*Attachment—Grasp, Hold*

to grab or seize by force, with the purpose of removing and/or controlling—to *seize, to snatch away, to take away*

ἐκέλευσεν τὸ στράτευμα καταβὰν ἀρπάσαι αὐτὸν ἐκ μέσου αὐτῶν he ordered soldiers to go down (into the group) and snatch him away from them (Acts 23:10)

- (b) 39.49—*Hostility, Strife—Attack*

to attack, with the implication of seizing—to *attack, to seize*

ὁ λύκος ἀρπάζει αὐτὰ καὶ σκορπίζει so the wolf attacks (the sheep) and scatters them (Jn 10:12)

- (c) 57.235—*Possess, Transfer, Exchange—Steal, Rob*

to forcefully take something away from someone else, often with the implication of a sudden attack—to *rob, to carry off, to plunder, to forcefully seize*

πῶς δύναται τις εἰσελθεῖν εἰς τὴν οἰκίαν τοῦ ἰσχυροῦ καὶ τὰ σκεύη αὐτοῦ ἀρπάσαι no one can break into a strong man’s house and carry off his belongings (Mt 12:29).

- (d) 37.28—*Control, Rule—Control, Restrain*

to gain control over by force—to *gain control over, to seize, to snatch away*

οὐχ ἀρπάσει τις αὐτὰ ἐκ τῆς χειρός μου no one will seize them from my hand, meaning no one will be able to take them away from my control (Jn 10:28). Though in

Jn 10:28 ἀρπάζω would appear to be in a literal context in view of the expression ἐκ τῆς χειρὸς μου out of my hand, nevertheless ἀρπάζω is certainly figurative in meaning and so is χεῖρ hand.

These four subentries have much in common. In my opinion, the first three have one common basic lexical meaning, though the context differs. In (a) a soldier seizes a man, whereas in (b) a wolf seizes a sheep, and in (c) a human seizes an inanimate object and runs off with it. Subentry (d) is somewhat different, because it is a figurative extension of meaning. Its literal meaning is similar to (a), (b), and (c), but its figurative significance belongs somewhere else.

Before going on to another example it is essential that we have recognized the problem. In the two examples, διακονέω and ἀρπάζω, there is what I consider to be a lack of coherence at the entry level: the entries with subentries that belong closely together semantically are scattered throughout the dictionary.

I propose that cognitive semantics can help bring more unity to these entries because it makes it possible to look at meanings from both *paradigmatic* and *syntagmatic* perspectives.

Let us start with the *paradigmatic* perspective. Each concept we have in our language, and to which we refer with the help of words, is automatically assigned to a *cognitive category*, a set of concepts that to our mind are somehow related. Most of the categorization process that takes place in our minds occurs in our subconscious. Only once in a while we may become aware of this process, for instance, when asking ourselves whether a tomato is a fruit or a vegetable. Cognitive categories have typical and atypical members. An apple, for example, will—at least for many of us—be a more typical member of the category FRUITS than a pickle is. An automobile is a more typical member of the category VEHICLES than, for instance, a ski is. We must realize, however, that every language and culture categorizes concepts differently. In my research, cognitive categories are usually referred to as *lexical semantic domains*.

In NT Greek ἀρπάζω probably belongs to the same category as λαμβάνω, δέχομαι, πιάζω, κρατέω, and so on. The verb διακονέω would possibly share a category with θάλλω, ἐπισκοπέω, ἐπιμελέομαι, and so on.

However, we can also look at a concept from a more *syntagmatic* point of view. In our experience, concepts are usually linked with other concepts that interrelate with them, and these other concepts may belong to different cognitive categories. The concept “apple,” for example, may function in different settings or *cognitive frames*, each of which evokes a different image in our minds and involves different interrelating concepts, for example.

- HORTICULTURE frame: apple, tree, ripe/unripe, color, picking, and so on
- COMMERCE frame: apple, booth, seller, buyer, money, and so on
- FOOD frame: apple, plate, knife, peeling, cutting, eating, mouth, seeds, and so on

In my research, the term *contextual semantic domain* is used to indicate cognitive frames.

A biblical example that illustrates the distinction between cognitive categories and cognitive frames is the one of DOMESTIC ANIMALS. “Sheep,” for example, belong to the same category as “cows,” “goats,” “donkeys,” “camels,” and so on. The lexical meaning of

“sheep” is to be described in such a way that it distinguishes a sheep clearly from the other animals.

The same sheep, however, can function in more than one cognitive frame, and each frame gives the word “sheep” a slightly different contextual meaning and groups it with different related terms, for example,

- SHEPHERD frame: sheep, pasture, grass, staff, sling, and so on
- SACRIFICE frame: sheep, priest, altar, temple, knife, blood, and so on

This distinction is not recognized by Louw and Nida and therefore it is not surprising that their framework shows a mixture of paradigmatic and syntagmatic relationships. Some of their semantic domains, such as *Household Activities*, *Religious Activities*, *Building, Constructing*, and so on, should be considered contextual domains rather than lexical domains. Actually, with a few changes and additions, some of the Louw–Nida entries could be easily converted to more closely reflect the cognitive approach.

Instead of three entries found in three different locations, *διακονέω* could be one single entry with three subentries. This one entry would belong to the lexical semantic domain *Help, Care for*, together with other words, such as *θάλλω*, *ἐπισκοπέω*, *ἐπιμελέομαι*, and so on. *Household Activities* and *Religious Activities* will from now on be considered contextual semantic domains. An additional contextual domain *Interpersonal Relationships* would help us deal with Mt 25:44.

<i>διακονέω</i>	<b>Help, Care For</b> “to render humble service to God and other people”
Interpersonal Relationships	<i>to help, take care of other people when they are in need</i> , e.g., Mt 25:44
Household Activities	<i>to serve food and drink to people when they are eating</i> , e.g., Mk 1:31
Religious Activities	<i>to serve God as a deacon</i> , e.g., 1 Tim 3:10

**Table 5. New Analysis of *διακονέω***

Something similar could be done with *ἄρπάζω*. The contextual semantic domains require some adjustment. Please note that the third subentry belongs to at least two contextual domains: *Possession* and *Crime*. Another strength of the cognitive approach is that subentries can belong to several semantic domains at a time. Even though the idiom *ἄρπάζω ἐκ τῆς χειρὸς* belongs to another lexical domain, a link is necessary because of the fact that the literal meaning of the expression belongs here.

<i>ἄρπάζω</i>	<b>Attachment</b> —“to take hold of an object with force”
Animal Husbandry	(a wolf) <i>seizes</i> (a sheep), e.g., Jn 10:12
Military Activities	(a soldier) <i>seizes</i> (a man), e.g., Acts 23:10
Possession; Crime	(a thief) <i>seizes</i> (someone else’s belongings), e.g., Mt 12:29
Derived idioms:	<i>ἄρπάζω ἐκ τῆς χειρὸς</i>
	See: Control, Rule

**Table 6. New Analysis of *ἄρπάζω***

Since we now have been introduced to this new approach, let us have a look at another of the Louw–Nida entries: φεύγω. This verb is found 29 times in the New Testament. Louw and Nida place it under five different domains, namely:

- a. *Linear Movement* (Louw–Nida 15.61), to move quickly from a point or area in order to avoid presumed danger or difficulty—to run away, to flee, flight  
 τότε οἱ ἐν τῇ Ἰουδαίᾳ φευγέτωσαν εἰς τὰ ὄρη *then those who are in Judea must run away to the hills* (Mt 24:16)
- b. *Danger, Risk, Safe, Save* (Louw–Nida 21.14): to become safe from danger by avoiding or escaping—to escape, to avoid  
 ἔφυγον στόματα μαχαίρης they escaped being killed (literally they escaped the mouths of the sword) (Heb. 11:34); πῶς φύγητε ἀπὸ τῆς κρίσεως τῆς γεέννης; *how can you escape being condemned to Gehenna?* (Mt 23:33).
- c. *Be, Become, Exist, Happen* (Louw–Nida 13.95): to cease rapidly to exist—to cease quickly, to disappear rapidly  
 καὶ πάντα νῆσος ἔφυγεν and every island quickly disappeared (Rev 16:20).
- d. *Be, Become, Exist, Happen* (Louw–Nida 13.161): (a figurative extension of meaning of 15.61) to avoid doing something, with the evident purpose of attempting to avoid danger—to avoid  
 τὰς δὲ νεωτερικὰς ἐπιθυμίας φεύγε avoid the evil desires of youth (2 Tim 2:22); φεύγετε τὴν πορνείαν avoid immoral sexual behavior (1 Cor 6:18).
- e. *Sensory Events and States* (Louw–Nida 24.6): (a figurative extension of meaning of 15.61) to disappear quickly from sight—to disappear, to become invisible  
 See 13.95

We will disregard item (e) for it is merely an alternative for item (c).

In relation to the issue of coherence, meaning (b), for instance, is clearly an extension of meaning of (a). Let us not get confused by the difference between the glosses “to flee” and “to escape.” The difference is that in (b) the linear movement itself is no longer in focus, but rather the outcome. I think it would be fair to reformulate the definitions of (a) and (b) in such a way that this relationship becomes clear, as I have tried to do below (changes are in bold):

- a. *Linear Movement* (Louw–Nida 15.61), to move quickly from a point or area in order to avoid presumed danger or difficulty **and find a place of safety**—to run away, to flee, flight  
 τότε οἱ ἐν τῇ Ἰουδαίᾳ φευγέτωσαν εἰς τὰ ὄρη *then those who are in Judea must run away to the hills* (Mt 24:16)
- b. *Danger, Risk, Safe, Save* (Louw–Nida 21.14): **(extension of meaning of (15.61) with focus on the outcome)** to become safe from danger by avoiding or escaping—to escape, to avoid  
 ἔφυγον στόματα μαχαίρης they escaped being killed (literally they escaped the mouths of the sword) (Heb 11:34); πῶς φύγητε ἀπὸ τῆς κρίσεως τῆς γεέννης; *how can you escape being condemned to Gehenna?* (Mt 23:33).

This is not enough, however. Even though (a) and (b) are different from a lexical point of view, from a contextual perspective they are related. Both (a) and (b) are part of one single contextual semantic domain: *Danger*. Assigning contextual domains like this to entries gives us the advantage of being able to do searches on the basis of contextual criteria.

Let us now have a look at meaning (c). The problem here is that Louw and Nida fail to take note of the fact that we have a figurative extension of meaning here. This may have been caused by the fact that Rev 16:20 may not be the best example. Rev 20:11 gives a better picture: οὗ ἄπὸ τοῦ προσώπου ἐφυγεν ἡ γῆ καὶ ὁ οὐρανὸς καὶ τόπος οὐχ εὑρέθη αὐτοῖς, “the earth and the heaven fled from his presence, and no place was found for them” (NRSV). In other words: earth and sky want to run from the presence of God but they have nowhere to go. It is quite possible that the meaning in Rev 16:20 is to be understood in a similar way.

Even if (c) is a figure of speech, it is only its literal meaning that belongs under (a). Louw and Nida are correct in their classification of this usage of φεύγω under 13: *Be, Become, Exist, Happen*. If they are right, what is then the advantage of the cognitive approach here? The advantage lies in the contextual meaning: even though the lexical meaning of (c) differs from (a) and (b), its contextual meaning is similar. All three are found in the same context: *Danger*.

Item (d) raises a number of questions as well. Here Louw–Nida rightly indicates that it is a figure of speech. As to the lexical meaning of φεύγω in this case, I think their classification is correct. At the same time, however, we could ask ourselves why it has not been classified under domain 88: *Moral and Ethical Qualities and Related Behavior*. All instances in the NT where φεύγω has lexical meaning (d) have something to do with morals and ethics. The solution that I would suggest here is the cognitive approach: distinguish between lexical and contextual meaning. To the Louw–Nida classification of lexical meaning should be added a contextual dimension, such as *Moral and Ethical Qualities and Related Behavior*. Another very appropriate contextual domain for (d) would be: *Danger*.

In a case like φεύγω, even though the Louw–Nida semantic analysis is largely correct, by focusing on shared contextual meaning the internal coherence could be improved. Even though φεύγω has four different lexical meanings, the contextual meanings all share the element of *Danger*.

#### 4. CONCLUSION

In the previous sections I have tried to show that the Louw–Nida dictionary lacks a certain degree of internal coherence at two different levels:

- The Louw–Nida theoretical framework of semantic domains does not account for quite a number of semantic patterns that can be found in the language data. There is considerable overlap between different domains that is not adequately reflected in the framework.
- Lexical meanings of certain entries are scattered over different domains in spite of being closely related semantically. As a result a number of important semantic relationships become obscured. Many cases of extension of meaning, both figurative and non-figurative, are not sufficiently indicated in the Louw–Nida lexicon.

Both problems are interrelated and could be remedied by application of insights from cognitive linguistics. Especially the distinction between cognitive categories, or lexico-semantic domains, and cognitive frames, or contextual-semantic domains, could enhance the Louw–Nida framework in such a way that it will be able to deal with some of the internal semantic relationships that exist in NT Greek in a more satisfactory way. As a result, the dictionary will represent the NT Greek world view more adequately and give the user a deeper insight into the world behind the language. Bible translators and other students of the NT will undoubtedly benefit from that. In this way, this dictionary could become an even more powerful tool than it is today.

## BIBLIOGRAPHY

- Aarts, B., David Denison, Evelien Keizer, and Gergana Popova, eds. *Fuzzy Grammar*. Oxford: Oxford University Press, 2004.
- Adrados, Francisco R., and E.L. Facal Gangutia et al. *Diccionario griego-español*. Madrid: Instituto Antonio de Nebrija, 1980–.
- Aitken, J.K. “Lexical Semantics and the Cultural Context of Knowledge in Job 28, Illustrated by the Meaning of קָרַן.” Pages 119–38 in *Job 28: Cognition in Context*. Edited by E. van Wolde. Biblical Interpretation Series, 64. Leiden: Brill, 2003.
- \_\_\_\_\_. *The Semantics of Blessing and Cursing in Ancient Hebrew*. Ancient Near Eastern Studies Supplement Series 23. Leuven: Peeters, 2007.
- Akmajian, Adrian, Richard A. Demers, Ann K. Farmer, and Robert M. Harnish. *Linguistics. An Introduction to Language and Communication*. 4<sup>th</sup> ed. Cambridge, Mass.: MIT Press, 1995.
- Aland, Barbara, and Andreas Juckel. *Das Neue Testament in syrischer Überlieferung. I Die grossen katholischen Briefe. II.1–3 Die Paulinischen Briefe*. Berlin: De Gruyter, 1995–2002.
- Albright, William Foxwell. “The Old Testament and Canaanite Language and Literature.” *Catholic Biblical Quarterly* 7 (1945): 5–31.
- Alonso Schoekel, Luis, and Juan Mateos. *Nueva Biblia Española*. Madrid: Ediciones Cristiandad, 1975.
- \_\_\_\_\_. “El diccionario bíblico hebreo-español.” *Seferad* 48 (1988): 373–89.
- \_\_\_\_\_. “Sobre diccionarios bilingües.” Pages 1–10 in *Text, Methode und Grammatik: Wolfgang Richter zum 65 Geburtstag*. Edited by W. Gross et al. St. Ottilien: EOS Verlag, 1991.
- \_\_\_\_\_. “The diccionario bíblico hebreo-español (DBHE).” *Zeitschrift für Altbraistik* 4 (1991): 76–84.
- \_\_\_\_\_. *Diccionario bíblico hebreo-español*. Madrid: Trotta, 1994. Portuguese version: *Dicionário Bíblico Hebraico-Português*. São Paulo: Paulus, 1997.
- Andersen, Francis I. Review Article of *The Dictionary of Classical Hebrew* Vol. 1. *Australian Biblical Review* 43 (1995): 50–71.
- \_\_\_\_\_. “Lo and Behold! Taxonomy and Translation of Biblical Hebrew לִבְיָהוּ.” Pages 25–56 in *Hamlet on a Hill: Semitic and Greek Studies Presented to Professor T. Muraoka on the Occasion of his Sixty-Fifth Birthday*. Edited by M.F.J. Baasten and W.Th. van Peursen. Leuven: Peeters, 2003.
- Andersen, Francis I., and A. Dean Forbes. *The Computer Bible*. Vol. 10: *Eight Minor Prophets: A Linguistic Concordance*. Wooster, Ohio: Biblical Research Associates, 1976.
- \_\_\_\_\_. “Problems in Taxonomy and Lemmatization.” Pages 37–50 in *Bible and the Computer: The Text. Proceedings of the First International Colloquium*, Louvain-la-Neuve (Belgique) 2–4 September 1985. Paris: Champion; Genève: Slatkine, 1986.
- \_\_\_\_\_. *The Vocabulary of the Old Testament*. Rome: Pontificio Istituto Biblico, 1989.



- \_\_\_\_\_. "Hebrew Lexicography: Informal Thoughts." Pages 137–51 in *Linguistics and Biblical Hebrew*. Edited by W.R. Bodine. Winona Lake, Ind.: Eisenbrauns, 1992.
- \_\_\_\_\_. "Three Interrelated Factors in the Semantic Study of Ancient Hebrew." *Zeitschrift für Althebraistik* 7 (1994): 33–44.
- Barth, Jakob. *Etymologische Studien zum semitischen insbesondere zum hebräischen Lexicon*. Leipzig: Hinrichs, 1893.
- \_\_\_\_\_. *Die Nominalbildung in den semitischen Sprachen*. 2<sup>nd</sup> ed. Leipzig: Hinrichs, 1894.
- Bauer, Hans. *Das Alphabet von Ras Schamra: seine Entzifferung und seine Gestalt*. Halle and Saale: Niemeyer, 1932.
- Bauer, Hans, and Pontus Leander. *Historische Grammatik der hebräischen Sprache des Alten Testaments*. Halle: Max Niemeyer, 1922.
- \_\_\_\_\_. *Grammatik des biblisch Aramäisch*. Halle: Max Niemeyer, 1927.
- Bauer, Laurie. "Productivity." Pages 3354–57 in Vol. 6 of *The Encyclopedia of Language and Linguistics*. Edited by R.E. Asher and J.M.Y. Simpson. 10 vols. Oxford: Pergamon, 1994.
- \_\_\_\_\_. *Introducing Linguistic Morphology*. 2<sup>nd</sup> ed. Edinburgh: Edinburgh University Press, 2003.
- Beck, E., ed. *Des Heiligen Ephraem des Syrers Hymnen de Ecclesia*. Corpus Scriptorum Christianorum Orientalium 322–33; Scriptorum Syri 198–99. Leuven: Peeters, 1960.
- Beeston, A.F.L., M.A. Ghul, W.W. Müller, and J. Ryckmans. *Sabaic Dictionary (English-French-Arabic)/Dictionnaire sabéen (anglais-français-arabe) / al-Mu'gam as-saba'i (bi-al-ingliziyya wa-al-fransiyya wa al-'arabiyya)*. Leuven: Peeters; Beirut: Librarie du Liban, 1982.
- Beyer, Klaus. "Der Reichsaramäische Einschlag in der ältesten syrischen Literatur." *Zeitschrift der Deutschen Morgenländischen Gesellschaft* 116 (1966): 242–54.
- \_\_\_\_\_. *Die aramäischen Texte vom Toten Meer samt den Inschriften aus Palästina, dem Testament Levis aus der Kairoer Genisa, der Fastenrolle und den alten talmudischen Zitaten*. Göttingen: Vandenhoeck & Ruprecht, 1984–2004.
- Bickell, Gustav, ed. *S. Ephraemi Syri Carmina Nisibena*. Leipzig: Brockhaus, 1866.
- Biella, Joan Copeland. *Dictionary of Old South Arabic Sabaean Dialect*. Harvard Semitic Studies 25. Cambridge, Mass: Harvard Semitic Museum Publications, 1982.
- Black, Jeremy, Andrew George, and Nicholas Postgate, eds. *Concise Dictionary of Akkadian*. Wiesbaden: Harrassowitz, 2000.
- Blass, F., and A. Debrunner. *A Greek Grammar of the New Testament and Other Early Christian Literature*. A revision of F. Blass and A. Debrunner, *Grammatik der neutestamentlichen Griechisch*, incorporating supplementary notes by A. Debrunner. Translated and edited by Robert W. Funk. Chicago, Ill.: University of Chicago Press, 1961.
- Blois, Reinier de. *Towards a New Dictionary of Biblical Hebrew Based on Semantic Domains*. Ph.D. diss., Vrije Universiteit Amsterdam, 2000.
- \_\_\_\_\_. "A Semantic Dictionary of Biblical Hebrew." Pages 275–95 in *Current Trends in Scripture Translation*. Edited by P.A. Noss. New York: United Bible Societies, 2001.
- \_\_\_\_\_. "Semantic Domains for Biblical Hebrew." Pages 97–116 in *Bible and Computer: The Stellenbosch AIBI-6 Conference*. Edited by J. Cook. Leiden: Brill, 2002.
- \_\_\_\_\_. "Lexicography and Cognitive Linguistics: Hebrew Metaphors from a Cognitive Perspective." Online: <http://www.sdbh.org/framework>.
- \_\_\_\_\_. "A Semantic Dictionary of Semitic Hebrew." Online: <http://www.sdbh.org>.
- \_\_\_\_\_. "Towards a New Dictionary of Biblical Hebrew Based on Semantic Domains." Online: <http://www.sdbh.org/framework>.

- Bod, Rens, Jennifer Hay, and Stefanie Jannedy, eds. *Probabilistic Linguistics*. Cambridge, Mass.: MIT Press, 2003.
- Borbone, P.G. “Correspondance lexicales entre Peshitta et TM du Pentateuque. Les racines verbales.” Pages 1–16 in *The Peshitta as a Transaltion: Papers Read at the II Peshitta Symposium held at Leiden 19–21 August 1993*. Edited by P.B. Dirksen and A. van der Kooij. Monographs of the Peshitta Institute Leiden 8. Leiden: Brill, 1995.
- Borbone, P.G., and K.D. Jenner, eds. *The Old Testament in Syriac according to the Peshitta Version, Part V Concordance*. Vol. 1 *The Penteteuch*. Leiden: Brill, 1997.
- Bosman, Hendrik Jan, and Constantijn J. Sikkel. “Reading Authors and Reading Documents.” Pages 113–34 in *Bible and Computer: The Stellenbosch AIBI-6 Conference. Proceedings of the Association Internationale Bible et Informatique “From Alpha to Byte.” University of Stellenbosch, 17–21 July 2000*. Edited by Johann Cook. Leiden: Brill, 2002.
- Boyd-Taylor, C. “Linguistic Register and Septuagintal Lexicography.” Pages 149–66 in *Biblical Greek Language and Lexicography: Essays in Honor of Frederick W. Danker*. Edited by B.A. Taylor, J.A.L. Lee, P.R. Burton, and R. Whitaker. Grand Rapids, Mich. and Cambridge: Eerdmans, 2004.
- Bravmann, M.M. *Studies in Semitic Philology*. Studies in Semitic Languages and Linguistics 6. Leiden: Brill, 1977.
- Breuer, Mordechai, et al., eds. *כתר ירושלים (Jerusalem Crown. The Bible of the Hebrew University of Jerusalem. Pentateuch, Prophets and Writings, According to the Text and Masorah of the Aleppo Codex and Related Manuscripts, Following the Methods of Rabbi Mordechai Breuer)*. Basel: Karger, 2000.
- Brier, B., and R.S. Wade. “Surgical Procedures During Ancient Egyptian Mummification.” *Zeitschrift für ägyptische Sprache und Altertumskunde* 126 (1999): 89–97.
- Brock, Sebastian P. “Foreword.” Page v in in Emmanuel Thelley, *Syriac-English-Malayalam Lexicon*. Kottayam: Deepika, 1999.
- \_\_\_\_\_. “Syriac Lexicography: Reflections on Resources and Sources.” Pages 195–97 in *Foundations for Syriac Lexicography I*. Edited by A. Dean Forbes and David G.K. Taylor. Perspectives on Syriac Linguistics 1. Piscataway, N.J.: Gorgias, 2005.
- Brockelmann, Carl. *Grundriss der vergleichenden Grammatik der semitischen Sprachen*. 2 vols. Berlin: Reuther & Reichard, 1908–1913.
- \_\_\_\_\_. *Lexicon Syriacum*. Berlin: Reuther & Reichard; Edinburgh: Clark, 1895. 2<sup>nd</sup> ed. Halle: Max Niemeyer, 1928. Repr. Hildesheim: Olms, 1966.
- \_\_\_\_\_. *Syrische Grammatik mit Paradigmen, Literatur, Chrestbomathie und Glossar*. 8<sup>th</sup> ed. Leipzig: VEB Verlag Enzyklopädie, 1960. 11<sup>th</sup> ed. 1968. 12<sup>th</sup> ed. 1976.
- Brown, Francis, S.R. Driver, and Charles A. Briggs. *A Hebrew and English Lexicon of the Old Testament with an appendix containing the Biblical Aramaic*, based on the lexicon of William Gesenius as translated by Edward Robinson. Oxford: Clarendon, 1907.
- Brun, J. *Dictionarium Syriaco-Latinum*. Beirut: Typographia PP. Soc. Jesu, 1895; 2<sup>nd</sup> ed. 1911.
- Bruns, P.J., ed. *Appendix ad Bar Hebraeus* Chr. Syr. et Lat. Vol. 1. Des Neuen Repertoriums für Bibl. und Morgenländ. Litteratur herausg. von H.E.G. Paulus. Jena: 1790.
- Bruns, P.J., and G.G. Kirsch, eds. *The Chronicon Syriacum of Bar Hebraeus*. 2 vols. Leipzig, 1879.
- Burkitt, F. Crawford. *Evangelion da-Mepharreshe: The Curetonian Version of the Four Gospels, with the readings of the Sinai Palimpsest and the early Syriac Patristic evidence*. 2 vols. Cambridge: Cambridge University Press, 1904.

- Bussmann, Hadumod. *Routledge Dictionary of Language and Linguistics*. Translated and edited by Gregory P. Trauth and Kerstin Kazzazi. London and New York: Routledge, 1996.
- Cahill, Lynne J., and Gerald Gazdar. "Multilingual Lexicons for Related Languages." *Proceedings of the 2<sup>nd</sup> DTI Language Engineering Conference*, 1995.
- Cary, E. *Dio's Roman History* 8. Loeb Classical Library, 176. Cambridge, Mass.: Harvard University Press, 1925.
- Catalogue de l'École Biblique et Archéologique Française de Jérusalem / Catalogue of the French Biblical and Archaeological School of Jerusalem on CD-ROM*. Leiden: Brill, 2005.
- Catastini, A. "Note di epigrafia ebraica I–II." *Henoch* 6 (1984): 129–38.
- Cavalli-Sforza, Luigi Luca. *Genes, Peoples and Languages*. Translated from the French by Mark Seielstad. London: Allen Lane, 2000.
- Chadwick, J. *Lexicographica Graeca. Contributions to the Lexicography of Ancient Greek*. Oxford: Clarendon, 1996.
- Clines, David J.A., and John F. Elwolde, eds. *The Dictionary of Classical Hebrew*. Sheffield: Sheffield Academic Press, 1993–.
- Coakley, J.F. *Robinson's Paradigms and Exercises in Syriac Grammar*. Oxford: Oxford University Press, 2002.
- Cogan, M., and H. Tadmor. *II Kings: A New Translation with Introduction and Commentary*. Anchor Bible 11. Garden City, N.Y.: Doubleday, 1988.
- Cohen, David. *Dictionnaire des racines sémitiques ou attestées dans les langues sémitiques*. Leuven: Peeters, 1994–.
- Concordance to the Peshitta Version of the Aramaic New Testament, The*. New Knoxville, Ohio: American Christian Press, 1985.
- Costaz, Louis. *Grammaire syriaque*. Beirut: Librairie Orientale, 1955. 2<sup>nd</sup> ed. Beirut: Imprimerie Catholique, 1964.
- \_\_\_\_\_. *Dictionnaire syriaque–français, Syriac–English Dictionary, qāmūs suryānī–‘arabī*. Beirut: Imprimerie Catholique, 1963; 2<sup>nd</sup> ed. Beirut: Dar el-Machreq, 1986.
- Cruse, D.A. *Lexical Semantics*. Cambridge: Cambridge University Press, 1986.
- Crystal, David. *A Dictionary of Linguistics and Phonetics*. 5<sup>th</sup> ed. Oxford: Blackwell, 2003.
- Cureton, William, ed. *The Third Part of the Ecclesiastical History of John of Ephesus*. Oxford: Oxford University Press, 1853.
- \_\_\_\_\_, ed. *Spicilegium Syriacum*. London: London & Rivington, 1855.
- Dahood, M., K. Deller, and R. Köbert. "Comparative Semitics. Some Remarks on a Recent Publication" (= Review of Sabatino Moscati et al., *An Introduction to the Comparative Grammar of the Semitic Languages. Phonology and Morphology*). *Orientalia* New Series 34 (1965): 35–44.
- Dalman, Gustaf. H. *Grammatik des jüdisch-palästinischen Aramäisch nach den Idiomen des Palästinischen Talmud, des Onkelostargum und Prophetentargum und der Jerusalemischen Targume*. 2<sup>nd</sup> ed. Leipzig: Hinrichs, 1905. Reprint Darmstadt: Wissenschaftliche Buchgesellschaft, 1960.
- \_\_\_\_\_. *Aramäisch-neuhebräisches Handwörterbuch zu Targum, Talmud und Midrasch*. 3<sup>rd</sup> ed. Göttingen: Eduard Pfeiffer, 1938.

- Danker, Frederick William. *A Greek-English Lexicon of the New Testament and Other Early Christian Literature*. Revised and edited by William F. Arndt, F. Wilbur Gingrich, and Frederick William Danker, based on Walter Bauer's *Griechisch-deutsches Wörterbuch zu den Schriften des Neuen Testaments und der frühchristlichen Literatur*. 2<sup>nd</sup> ed. Chicago: University of Chicago Press, 1979.
- \_\_\_\_\_. *Multipurpose Tools for Bible Study*. Rev. and enl. ed. Minneapolis, Minn.: Fortress, 1993.
- \_\_\_\_\_. *A Greek-English Lexicon of the New Testament and Other Early Christian Literature*. 3<sup>rd</sup> ed. based on Walter Bauer's *Griechisch-deutsches Wörterbuch zu den Schriften des Neuen Testaments und der frühchristlichen Literatur*, 6<sup>th</sup> ed. by Kurt Aland and Barbara Aland, with Viktor Reichmann, and on previous English editions by William F. Arndt, F. Wilbur Gingrich, and Frederick William Danker. Chicago: University of Chicago Press, 2000.
- Davies, G.I. *Ancient Hebrew Inscriptions: Corpus and Concordance*. Assisted by M.N.A. Bockmuehl, D.R. de Lacey, and A.J. Poulter. Cambridge: Cambridge University Press, 1991.
- \_\_\_\_\_. *Ancient Hebrew Inscriptions, Volume 2: Corpus and Concordance*. Assisted by J.K. Aitken, D.R. de Lacey, P.A. Smith, and J. Squirrel. Cambridge: Cambridge University Press, 2004.
- Deissmann, A. *Bible Studies: Contributions, Chiefly from Papyri and Inscriptions, to the History of the Language, the Literature, and the Religion of Hellenistic Judaism and Primitive Christianity*. Edinburgh: T&T Clark, 1901.
- Del Olmo Lete, Gregorio, and Joaquín Sanmartín. *A Dictionary of the Ugaritic Language in the Alphabetic Tradition* 2 vols. 2<sup>nd</sup> ed. Revised and translated by Wilfred G.E. Watson. *Handbuch der Orientalistik* 1/67. Leiden: Brill, 2004.
- Delitzsch, F. *Biblischer Commentar über die Psalmen*. *Biblischer Commentar über das Alte Testament*, 4/1; Leipzig: Dörffling und Franke, 1859–1860.
- Dietrich, Walter, Regine Hunziker-Rodewald, and Samuel Amet. *Kurze Ausgabe des Hebräischen und aramäischen Lexikons zum Alten Testament von Ludwig Koehler und Walter Baumgartner*. New Rev. Translated into English by M.E.J. Richardson. Leiden: Brill, i.p.
- Dogan, Hatune. *Wörterbuch: Syrisch (Aramäisch)-Deutsch, Deutsch-Syrisch (Aramäisch)*. 2<sup>nd</sup> ed. Warburg: Hatune Dogan, 1998.
- Drijvers, H.J.W., and J.F. Healey. *The Old Syriac Inscriptions of Edessa and Osroene: Texts, Translations, and Commentary*. Leiden: Brill, 1999.
- Driver, S.R. *The Book of Genesis*. 5<sup>th</sup> ed. London: Methuen, 1906.
- Dubois, Jean, Mathée Giacomo, Louis Guespin, Christiane et Jean Baptiste Marcellesi, Jean Pierre Mével. *Dictionnaire de linguistique*. Paris: Larousse, 1973.
- Duval, Rubens. *Traité de grammaire syriaque*. Paris: F. Vieweg, 1881.
- Dyk, Janet W. "Desiderata for the Lexicon from a Syntactic Point of View." Pages 141–56 in *Foundations for Syriac Lexicography I*. Edited by A. Dean Forbes and David G.K. Taylor. *Perspectives on Syriac Linguistics* 1. Piscataway, N.J.: Gorgias, 2005.
- \_\_\_\_\_. "Data Preparation: What are we Doing and why Should we?" Pages 133–54 in *Corpus Linguistics and Textual History. A Computer-Assisted Interdisciplinary Approach to the Peshitta*. Edited by P.S.F. van Keulen and W.Th. van Peursen. *Studia Semitica Neerlandica* 48. Assen: Van Gorcum, 2006.
- \_\_\_\_\_. "Lexical Correspondence and Translation Equivalents: Building an Electronic Concordance." Pages 311–26 in *Corpus Linguistics and Textual History: A Computer-Assisted Interdisciplinary Approach to the Peshitta*. Edited by P.S.F. van Keulen and W.Th. van Peursen. Assen: Van Gorcum, 2006.

- \_\_\_\_\_. "Considerations of Form and Function in the Treatment of the Passive Participle." Forthcoming in *Foundations for Syriac Lexicography II*. Edited by Peter J. Williams. Perspectives on Syriac Linguistics 3. Piscataway, N.J.: Gorgias.
- Dyk, Janet W., and Percy S.F. van Keulen. "Of Words and Phrases: Syriac Versions of 2 Kings 24:14." Pages 39–56 in *Text, Translation, and Tradition: Studies on the Peshitta and its Use in the Syriac Tradition Presented to Konrad D. Jenner on the Occasion of Sixty-Fifth Birthday*. Edited by W.Th. van Peursen and R.B. ter Haar Romeny. Leiden: Brill, 2006.
- \_\_\_\_\_. *Language System, Translation Technique, and Textual Tradition in the Peshitta of Kings*. Monographs of the Peshitta Institute Leiden. Leiden: Brill, i.p.
- Eco, Umberto. *Kant and the Platypus: Essays on Language and Cognition*. London: Secker & Warburg, 1999.
- \_\_\_\_\_. *Serendipities: Language and Lunacy*. Translated by W. Weaver. London: Weidenfeld & Nicolson, 1999.
- \_\_\_\_\_. *Mouse or Rat: Translation as Negotiation*. London: Weidenfeld & Nicolson, 2003.
- Elenchus Bibliographicus of the Ephemerides Theologicae Lovanienses*. Edited by the Faculteit Godgeleerdheid, K.U. Leuven and the Faculté de théologie UCL (Louvain-la-Neuve). Leuven: Peeters. <http://pob.peeters-leuven.be/content.php?bib=ETL>.
- Elliger, K., and W. Rudolf. *Biblia Hebraica Stuttgartensia*. Stuttgart: German Bible Society, 1977.
- Emerton, J.A. Review of Koehler et al., *Hebräisches und aramäisches Lexikon zum Alten Testament*, vol. 1. *Vetus Testamentum* 22 (1972): 502–11.
- \_\_\_\_\_. Review of Koehler et al., *Hebräisches und aramäisches Lexikon zum Alten Testament*, vol. 2. *Vetus Testamentum* 25 (1975): 810–16.
- \_\_\_\_\_. Review of Koehler et al., *Hebräisches und aramäisches Lexikon zum Alten Testament*, vol. 3. *Vetus Testamentum* 34 (1984): 500–506.
- \_\_\_\_\_. Review of Koehler et al., *Hebräisches und aramäisches Lexikon zum Alten Testament*, vol. 4. *Vetus Testamentum* 48 (1998): 111–17.
- Eynikel, Erik. "A Syntactic and Semantic Analysis of Biblical Texts in a Cognitive Frame." Pages 23–31 in *A Biblia értelmzése. Nemzetközi Bibliikus Konferencia Szeged 2004. augusztus 29. – szeptember 1.* Edited by György Benyik. Szeged: JAT Press, 2005.
- Falla, Terry C. *A Key to the Peshitta Gospels*. Vol. 1. *Alaph–Dalath*. New Testament Tools and Studies 14. Leiden: Brill, 1991. Vol. 2. *Hē–Yōdh*, 2000.
- \_\_\_\_\_. "The Lexicon for Which We Long? Some Primary Issues Regarding the Future of Classical Syriac Lexicography." Pages 257–82 in *The Harp* 11–12 (1998).
- \_\_\_\_\_. "A New Methodology for Grammatical Classification in Hebrew and Syriac Lexicography." Pages 165–90 in *Hamlet on a Hill: Semitic and Greek Studies Presented to Professor T. Muraoka on the Occasion of his Sixty-Fifth Birthday*. Edited by M.F.J. Baasten and W.Th. van Peursen. Leuven: Peeters, 2003.
- \_\_\_\_\_. "Problems in Syriac Taxonomy and Parts of Speech from the Nineteenth Century to the Present." *The Journal of Eastern Christian Studies* 56 (2004): 225–43.
- \_\_\_\_\_. "A Conceptual Framework for a New Comprehensive Syriac-English Lexicon." Pages 1–79 in *Foundations for Syriac Lexicography I*. Edited by A. Dean Forbes and David G.K. Taylor. Perspectives on Syriac Linguistics 1. Piscataway, N.J.: Gorgias, 2005.
- \_\_\_\_\_. "Translation, Genre, and Lexicography: A Study of the Syriac Versions of the New Testament." Pages 7–54 in *The Harp* 21. *Festschrift: Rev. Fr. Emmanuel Thelley*. Kerala: St Ephrem Ecumenical Research Institute, 2006.

- Fauconnier, G. *Mental Spaces*. Cambridge: Cambridge University Press, 1994.
- Ferrer, Joan, and Maria Antònia Noguera. *Breve diccionari siríaco. Siríaco–castellano–catalán*. Estudios de Filología Semítica 1. Barcelona: University of Barcelona, 1999.
- \_\_\_\_\_. *Manual de gramática siríaca*. Estudios de Filología Semítica 2. Barcelona: University of Barcelona, 1999.
- Fillmore, Ch.J., and B.T. Atkins. "Toward a Frame-Based Lexicon: The Semantics of RISK and its Neighbors." Pages 75–102 in *Frames, Fields, and Contrasts—New Essays in Semantic and Lexical Organization*. Edited by E.F. Kittay and A. Lehrer. Hillsdale: Lawrence Erlbaum Associates, 1992.
- Fohrer, Georg. *Hebräischer und aramäisches Wörterbuch zum Alten Testament*. In Gemeinschaft mit Hans Werner Hoffmann, Friedrich Huber, Jochen Vollmer, and Gunther Wanke. Berlin and New York: De Gruyter, 1971.
- \_\_\_\_\_. *Hebrew and Aramaic Dictionary of the Old Testament*. In cooperation with Hans W. Hoffmann, Friedrich Huber, Jochen Vollmer, and Gunther Wanke. Translated by W. Johnstone. Berlin: De Gruyter, 1973.
- Forbes, A. Dean. "Mutagens in the Syntactic Forest: Discontinuity, Multidominance, and Ambiguity in Biblical Hebrew." Unpublished paper read at the SBL Congress, 1998.
- \_\_\_\_\_. "Squishes, Clines, and Fuzzy Signs: Mixed and Gradient Categories in the Biblical Hebrew Lexicon." Pages 105–39 in *Foundations for Syriac Lexicography I*. Edited by A. Dean Forbes and David G.K. Taylor. Piscataway, N.J.: Gorgias, 2005.
- \_\_\_\_\_. "Distributionally-Inferred Word and Form Classes in the Hebrew Lexicon: Known by the Company They Keep." Forthcoming in *Foundations for Syriac Lexicography II*. Edited by Peter J. Williams. Perspectives on Syriac Linguistics 3. Piscataway, N.J.: Gorgias.
- Frey, Albert. *Petite grammaire syriaque*. Orbis Biblicus et Orientalis Subsidia Didactica 3. Göttingen: Vandenhoeck & Ruprecht, 1984.
- Gangutia Elícegui, E. "Los compuestos de ὄρχι." Pages 83–90 in *Apophoreta Philologica: Emmanuelli Fernández-Galiano a sodalibus oblata*, part 1. Edited by L. Gil and R.M. Aguilar. Estudios clásicos 87. Madrid: Sociedad Española de Estudios Clásicos, 1984.
- Garr, W.R. *Dialect Geography of Syria–Palestine, 1000–586 BCE*. Philadelphia: University of Pennsylvania Press, 1985.
- Gazdar, G., G. K. Pullum, R. Carpenter, Ewan Klein, T. E. Hukari, and R. D. Levine. "Category Structures." *Computational Linguistics* 14 (1988): 1–19.
- Geffcken, J. *Oracula Sybyllina*. Griechische christlichen Schriftsteller der ersten Jahrhunderte 8. Leipzig: Hinrichs, 1902.
- Gelb, I.J., et al. *The Assyrian Dictionary of the Oriental Institute of the University of Chicago*. Chicago, Ill.: Oriental Institute, 1955–.
- Gesenius, W. *Hebrew Grammar*. As edited and enlarged by E. Kautzsch. 2<sup>nd</sup> English ed. Revised in accordance with the 28<sup>th</sup> German edition (1909) by A.E. Cowley. Oxford: Clarendon, 1910.
- \_\_\_\_\_. *Hebräisches und aramäisches Handwörterbuch über das Alte Testament*. In Verbindung mit H. Zimmern, W. Max Müller, und O. Weber bearbeitet von Frants Buhl. 17<sup>th</sup> ed. Berlin: Springer, 1915.
- \_\_\_\_\_. *Hebräisches und aramäisches Handwörterbuch über das Alte Testament*. Unter verantwortlicher Mitarbeit von Udo Rütterswörden bearbeitet und herausgegeben von R. Meyer und H. Donner. 18<sup>th</sup> ed. Berlin: Springer, 1987–.
- Glare, P.G.W. et al. *The Oxford Latin Dictionary*. Oxford: Clarendon, 1968–1982.

- \_\_\_\_\_. "Liddell & Scott: Its Background and Present State." Pages 1–18 in *Studies in Lexicography*. Edited by R. Burchfield. Oxford: Clarendon, 1987.
- Goldenberg, Gideon. "On Syriac Sentence Structure." Pages 97–140 in *Arameans, Aramaic and the Aramaic Literary Tradition*. Edited by Michael Sokoloff. Ramat-Gan: Bar Ilan University Press, 1983.
- \_\_\_\_\_. "Principles of Semitic Word Structure." Pages 29–64 in *Semitic and Cushitic Studies*. Edited by Gideon Goldenberg and Shlomo Raz. Wiesbaden: Harrassowitz, 1994.
- \_\_\_\_\_. "Comments on 'Three Approaches to the Tripartite Nominal Clause in Syriac' by Wido van Peursen." Pages 175–84 in *Corpus Linguistics and Textual History: A Computer-Assisted Interdisciplinary Approach to the Peshitta*. Edited by P.S.F. van Keulen and W.Th. van Peursen. *Studia Semitica Neerlandica* 48. Assen: Van Gorcum, 2006.
- Goldstein, J.A. *1 Maccabees*. The Anchor Bible 41; Garden City, N.Y.: Doubleday, 1976.
- Goodrick, Edward W., and John R. Kohlenberger III, eds. *Exhaustive Concordance of the NIV*. Grand Rapids, Mich.: Zondervan, 1990.
- Goshen-Gottstein, M.H. *A Syriac-English Glossary with Etymological Notes, based on Brockelmann's Syriac Chrestomathy*. Wiesbaden: Harrassowitz, 1970.
- Goshen-Gottstein, M.H., and Mordechai Breuer et al., eds. *The Aleppo Codex*. Jerusalem: Hebrew University Bible Project, 1976.
- Gray, L.H. *Introduction to Semitic Comparative Linguistics*. New York: Columbia University Press, 1934.
- Gzella, H. "Das Aramäische in den Römischen Ostprovinzen: Sprachsituationen in Arabien, Syrien und Mesopotamien zur Kaiserzeit." *Bibliotheca Orientalis* 63 (2006): 15–39.
- Hadas, M., ed. *Aristeas to Philocrates (Letter of Aristeas)*. Edited and translated. Dropsie College for Hebrew and Cognate Learning. New York: Harper & Brothers, 1951.
- \_\_\_\_\_. *The Third and Fourth Books of Maccabees*. Dropsie College Ed. New York: Harper & Brothers, 1953.
- Haegeman, L. *Introduction to Government and Binding*. Oxford: Blackwell, 1991.
- Halliday, M.A.K. "Language as System and Language as Instance: The Corpus as a Theoretical Construct." Pages 61–77 in *Directions in Corpus Linguistics*. Edited by Jan Svartik. Berlin: Mouton de Gruyter, 1992.
- Hanna, Sabo, and Aziz Bulut. *Wörterbuch Deutsch-Aramäisch, Aramäisch-Deutsch*. Heilbronn: 2000.
- Harl, M. *La Bible d'Alexandrie 1. La Genèse. Traduction du texte grec de la Septante, introduction et notes; avec la collaboration de Monique Alexandre*. Paris: Cerf, 1986.
- Harmon, A.M. *Lucian 1*. Loeb Classical Library. London: W. Heinemann, 1961.
- Harris, Zellig S. "Expression of the Causative in Ugaritic." *Journal of the American Oriental Society* 58 (1938): 103–11.
- Hartmann, R.R.K., and Gregory James. *Dictionary of Lexicography*. London: Routledge, 1998.
- Haupt, Paul. "Die semitischen Wurzeln QR, KR, XR." *The American Journal of Semitic Languages* 23 (1906–1907): 241–52.
- Healey, John F. *Lesbono Suryoyo: First Studies in Syriac*. Piscataway, N.J.: Gorgias, 2005.
- Heckel, W. "*Somatophylakia*: a Macedonian *Cursus Honorum*." *Phoenix* (1986): 279–94.
- Henrichs, A., and K. Preisendanz, eds. *Papyri Graecae magicae. Die griechischen Zauberpapyri 1*. 2<sup>nd</sup> ed. Stuttgart: Teubner, 1973.
- Hockett, C.F. *A Course in Modern Linguistics*. New York: Macmillan, 1958.
- Hoffmann, Johann George Ernst, ed. *Julianos der Abtrünnige*. Leiden, 1880.

- . *Auszüge aus syrischen Akten persischer Märtyrer*. Abhandlungen für die Kunde des Morgenlandes 8/3. Leipzig: Brockhaus, 1880.
- Hoftijzer, J. *Een kwestie van vraagstelling*. Valedictory lecture, Leiden University, 1991.
- . “The History of the Data-Base Project.” Pages 65–85 in *Studies in Ancient Hebrew Semantics*. Edited by T. Muraoka. Abr-Nahrain Supplement Series 4; Leuven: Peeters, 1995.
- Hoftijzer, J., and K. Jongeling. *Dictionary of North-west Semitic Inscriptions*. Leiden: Brill, 1995.
- Holladay, William L. *A Concise Hebrew and Aramaic Lexicon of the Old Testament*. Based upon the lexical work of Ludwig Koehler and Walter Baumgartner. Leiden: Brill, 1971.
- Honeyman, A.M. Review of Koehler–Baumgartner, *Lexicon in Veteris Testamenti Libros*. *Vetus Testamentum* 5 (1955): 214–23.
- Horsley, G.H.R. *New Documents Illustrating Early Christianity 2: A Review of the Greek Inscriptions and Papyri Published in 1977*. North Ryde: Ancient History Documentary Research Centre, Macquarie University, 1982.
- Ibn Manzur. *Lisan al-‘Arab*. 15 vols. Beirut: Dar Bayrut lil-Tiba`a wal-Našr, 1968.
- Jastrow, Marcus. *A Dictionary of the Targumim, the Talmud Babli and Yerushalmi, and the Midrashic Literature*. London: Luzac; New York: Putnam’s Sons, 1903.
- Jenner, Konrad D., Wido van Peursen, and Eep Talstra. “CALAP: An Interdisciplinary Debate between Textual Criticism, Textual History and Computer-Assisted Linguistic Analysis.” Pages 13–44 in *Corpus Linguistics and Textual History. A Computer-Assisted Interdisciplinary Approach to the Peshitta*. Edited by P.S.F. van Keulen and W.Th. van Peursen. *Studia Semitica Neerlandica* 48. Assen: Van Gorcum, 2006.
- Jennings, William. *Lexicon to the Syriac New Testament*. Revised by Ulric Gantillon. Oxford: Clarendon, 1926.
- Johnson, J. de M., V. Martin, and A.S. Hung. *Catalogue of the Greek and Latin Papyri in the John Rylands Library, Manchester*. II: *Documents of the Ptolemaic and Roman Periods*. Manchester: Manchester University Press, 1915.
- Johnstone, T.M. *Harsūsi Lexicon and English-Harsūsi Word-List*. London: Oxford University Press, 1977.
- . *Jibbāli Lexicon*. Oxford: Oxford University Press, 1981.
- . *Mebri Lexicon and English-Mebri Word-List*. New York: Taylor & Francis, 2002.
- Joosten, Jan. *The Syriac Language of the Peshitta and Old Syriac Versions of Matthew: Syntactic Structure, Inner-Syriac Developments and Translation Technique*. *Studies in Semitic Languages and Linguistics* 22. Leiden: Brill, 1996.
- . “Materials for a Linguistic Approach to the Old Testament Peshitta.” *Journal for the Aramaic Bible* 1 (1999): 203–18.
- Jouion, Paul, and Takamitsu Muraoka. *A Grammar of Biblical Hebrew*. *Subsidia Biblica* 27. Rev. ed. Rome: Pontificio Istituto Biblico, 2006.
- Juckel, Andreas. Review of Terry C. Falla, *A Key to the Peshitta Gospels*, vols. 1–2. *Hugoye: Journal of Syriac Studies* 4/1 (2002).
- . “Should the Harklean Version Be Included in a Future Lexicon of the Syriac New Testament?” Pages 167–194 in *Foundations for Syriac Lexicography I*. Edited by A. Dean Forbes and David G.K. Taylor. *Perspectives on Syriac Linguistics* 1. Piscataway, N.J.: Gorgias, 2005.

- \_\_\_\_\_. "Towards an Analytical Concordance of the Harklean Version." Forthcoming in *Foundations for Syriac Lexicography II*. Edited by Peter J. Williams. Perspectives on Syriac Linguistics 3. Piscataway, N.J.: Gorgias.
- Kaddari, Menachem Zevi. מילון העברית המקראית: אוצר לשון המקרא מא' ל' עד תי' ל'. (A Dictionary of Biblical Hebrew). Bar-Ilan: Bar-Ilan University Press, 2006.
- Kalappura, Andrews. *Syriac-Malayalam Dictionary*. Revised by Mathew Vadakkal. Mangalappuzha, Alwaye, Kerala: Mar Thoma Sliha Press, 1940.
- Kaltner, John. "Arabic." Pages 61–92 in *Beyond Babel: A Handbook for Biblical Hebrew and Related Languages*. Edited by J. Kaltner and S.L. McKenzie. Atlanta, Ga.: Society of Biblical Literature, 2002.
- Kane, Thomas Leiper. *Amharic Dictionary*. Wiesbaden: Harrassowitz, 1990.
- \_\_\_\_\_. *Tigrinya-English Dictionary*. 2 vols. Kensington, Md.: Dunwoody, 2000.
- Kaufman, Stephen A. *The Akkadian Influences on Aramaic*. Chicago and London: University of Chicago Press, 1974.
- \_\_\_\_\_. "Reflections on the Assyrian–Aramaic Biligual from Tell Fakhariyeh." *Maarav* 3 (1982): 146–47.
- Kiessling, E., ed. *Sammelbuch griechischer Urkunden aus Aegypten* 8. Wiesbaden: Harrassowitz, 1965–1967.
- Kiraz, George Anton. *A Computer-Generated Concordance to the Syriac New Testament*. 6 vols. Leiden: Brill, 1993.
- \_\_\_\_\_. "Automatic Concordance Generation of Syriac Texts." Pages 461–75 in *VI Symposium Syriacum 1992*. Edited by R. Lavenant. *Orientalia Christiana Analecta* 247. Rome: Pontificio Istituto Orientale, 1994.
- \_\_\_\_\_. *Comparative Edition of the Syriac Gospels Aligning the Sinaiticus, Curetonianus, Peshîttâ and Harklean Versions*. 4 vols. *New Testament Tools and Studies* 21/1–4. Leiden: Brill, 1996.
- Kittay, E.F., and A. Lehrer. *Frames, Fields, and Contrasts—New Essays in Semantic and Lexical Organization*. Hillsdale: Lawrence Erlbaum Associates, 1992.
- Klein, Otto. *Syrisch-Griechisches Wörterbuch*. Giessen: Albert Töpelmann, 1916.
- Köbert, R. *Vocabularium Syriacum*. Rome: Pontificio Istituto Biblico, 1956.
- \_\_\_\_\_. "Addenda ad Vocabularium Syriacum, Romae 1956." *Orientalia* 39 (1970): 315–19.
- Koehler, Ludwig, and Walter Baumgartner. *Lexicon in Veteris Testamenti libros*. Wörterbuch zum Hebräischen Alten Testament in Deutscher und Englischer Sprache. Leiden: Brill, 1953. 2<sup>nd</sup> corrected and augmented ed. 1958.
- Koehler, Ludwig, Walter Baumgartner, Johann Jakob Stamm et al. *Hebräisches und aramäisches Lexikon zum Alten Testament*, 5 vols. 3<sup>rd</sup> ed. Leiden: Brill, 1967–1996.
- Koehler, Ludwig, Walter Baumgartner et al. *The Hebrew and Aramaic Lexicon of the Old Testament*. Translated and edited under the supervision of M.E.J. Richardson. 5 vols. Leiden: Brill, 1994–2000.
- Kreuzer, Siegfried. "Lexicography and Translation: Experiences, Examples, and Expectations in the Context of the Septuaginta-Deutsch Project." *Bulletin of the International Organization for Septuagint and Cognate Studies* 37 (2004): 107–18.
- Labov, William. "The Boundaries of Words and their Meanings." Pages 340–73 in *New Ways of Analyzing Variation in English*. Edited by C.-J. Bailey and R.W. Shuy. Washington, D.C.: Georgetown University Press, 1973. Reprinted on pages 67–89 in *Fuẓzy Grammar*. Edited by B. Aarts et al. Oxford: Oxford University Press, 2004.

- Lakoff, George, and Mark Johnson. *Metaphors We Live By*. Chicago: University of Chicago Press, 1980.
- Landau, Sidney. *Dictionaries: The Art and Craft of Lexicography*. 2<sup>nd</sup> ed. Cambridge: Cambridge University Press, 2001.
- Lane, Edward W. *Arabic-English Lexicon*. 8 vols. London: Williams & Norgate, 1863–1893. Reprint Beirut: Librairie du Liban, 1980.
- Langacker, R.W. *Foundations of Cognitive Grammar*. Vol. I: *Theoretical Prerequisites*. Stanford: Stanford University Press, 1987.
- Latte, K. *Hesychii Alexandrini lexicon* 2. Copenhagen: Munksgaard, 1966.
- Lee, J.A.L. “The United Bible Societies’ Lexicon and its Analysis of Meanings.” *Filologia Neotestamentaria* 5 (1992): 167–89.
- . *A History of New Testament Lexicography*. Studies in Biblical Greek 8. New York: Peter Lang, 2003.
- Lee, Samuel, ed. *Vetus Testamentum Syriacè*. London: Impensis Ejusdem Societas, 1823.
- , ed. *Eusebius, Bishop of Caesarea, on the Theophania, or Divine Manifestation of our Lord and Saviour Jesus Christ. A Syriac Version. Edited from an ancient manuscript recently discovered by S. Lee*. London: Society for the Publication of Oriental Texts, 1842.
- Leech, Geoffrey. “Corpora and Theories of Linguistic Performance.” Pages 105–22 in *Directions in Corpus Linguistics*. Edited by Jan Svartik. Berlin: Mouton de Gruyter, 1992.
- Lentz, A. *Grammatici Graeci* 3.1. Leipzig: Teubner, 1967. Repr. Hildesheim: Olms, 1965.
- Leslau, Wolf. *Comparative Dictionary of Ge’ez (Classical Ethiopic)*. Wiesbaden: Harrassowitz, 1991.
- . *Etymological Dictionary of Gurage (Ethiopic)*. Wiesbaden: Harrassowitz, 1994.
- Lettinga, J.P. *Grammatica van het Bijbels Hebreeuws*. 11<sup>th</sup> revised ed. by T. Muraoka, with the assistance of W.Th. van Peursen. Leiden: Brill, 2000.
- Levias, Caspar. *A Grammar of the Aramaic Idiom Contained in the Babylonian Talmud with Constant Reference to Gaonic Literature*. Cincinnati: Block, 1900.
- Levy, Jakob. *Chaldäisches Wörterbuch über die Targumim und einen grossen Theil des rabbinischen Schriftthums*. Leipzig: Baumgärtner, 1867–1868.
- Lewis, Agnes Smith. *The Old Syriac Gospel, or Evangelion da-Mepharreshê; being the Text of the Sinai or Syro-Antiochian Palimpsest, including the Latest Additions and Emendations, with the Variants of the Curetonian text . . .* London: Williams & Norgate, 1910.
- Lewis, Charlton T., and Charles Short. *A Latin Dictionary*. Oxford: Clarendon, 1879.
- Liddell, H.G., and R. Scott. *A Greek-English Lexicon*, 9th ed. Revised and augmented throughout by Sir Henry Stuart Jones with the assistance of Roderick McKenzie. Oxford: Clarendon, 1940. *Revised Supplement*. Edited by P.G.W. Glare with the assistance of A.A. Thompson. Oxford: Clarendon, 1996.
- Lightfoot, J.L., ed. *Lucian: On the Syrian Goddess*. Edited with introduction, translation, and commentary. Oxford: Oxford University Press, 2003.
- Lipiński, E. *Semitic Languages: Outline of a Comparative Grammar*. Orientalia Lovaniensia Analecta 80. Leuven: Uitgeverij Peeters and Departement Oosterse Studies, 1997.
- Littmann, Enno, and Maria Höfner. *Wörterbuch der Tigre-Sprache. Tigre-Deutsch-Englisch*. Wiesbaden: Harrassowitz, 1962.
- Louw, Johannes P. “The Analysis of Meaning in Lexicography.” *Filologia Neotestamentaria* 6 (1993): 139–48.
- Louw, Johannes P., and Eugene A. Nida. *Greek-English Lexicon of the New Testament based on Semantic Domains*. 2 vols. New York: United Bible Societies, 1988.

- Lübbe, J.C. "Hebrew Lexicography: A New Approach." *Journal for Semitics* 2 (1990): 1–15.
- \_\_\_\_\_. "Old Testament Translation and Lexicographical Practice." *Journal for Semitics* 6.2 (1994): 170–79.
- \_\_\_\_\_. "An Old Testament Dictionary of Semantic Domains." *Zeitschrift für Althebraistik* 9 (1996): 52–57.
- \_\_\_\_\_. "Semantic Domains and the Difficulties of a Paradigm Shift in Old Testament Lexicography." *Journal of Semitics* 11.2 (2002): 245–55.
- \_\_\_\_\_. "Semantic Domains. Associative Fields, and Hebrew Lexicography." *Journal of Semitics* 12.1 (2003): 128–42.
- Lund, Jerome. *The Old Syriac Gospel of the Distinct Evangelist: A Key-Word-in-Context Concordance*. 3 vols. Piscataway, N.J.: Gorgias, 2004.
- Lust, J., E. Eynikel, and K. Hauspie. *A Greek-English Lexicon of the Septuagint*. Rev. ed. Stuttgart: Deutsche Bibelgesellschaft, 2003.
- Lyons, John. *Introduction to Theoretical Linguistics*. Cambridge: Cambridge University Press, 1968.
- Ma'agarim. The Online Database of the Historical Dictionary of the Hebrew Language. Online: <http://hebrew-treasures.huji.ac.il/>.
- MacDonald, Maryellen C., Neal J. Pearlmutter, and Mark S. Seidenberg. "Lexical Nature of Syntactic Ambiguity Resolution." *Psychological Review* 101 (1994): 676–703.
- \_\_\_\_\_. "Syntactic Ambiguity Resolution as Lexical Ambiguity Resolution." Pages 123–53 in *Perspectives on Sentence Processing*. Edited by Charles Clifton, Jr., Lyn Frazier, and Keith Rayner. Hillsdale, N.J.: Erlbaum, 1994.
- Macuch, Rudolf. *Grammatik des samaritanischen Aramäisch*. Studia Samaritana 4. Berlin and New York: De Gruyter, 1982.
- Malinowski, B. "The Problem of Meaning in Primitive Languages." Pages 296–336 in *The Meaning of Meaning: A Study of the Influence of Language upon Thought and of the Science of Symbolism*. By C.K. Ogden and I.A. Richards. London: K. Paul, Trench, Trubner, 1923.
- Malouf, Robert P. *Mixed Categories in the Hierarchical Lexicon*. Stanford: CSLI, 2000.
- Manna, Awgen. *ܘܫܘܠܐ ܘܚܡܐ ܘܝܘܫܘܠܐ / Vocabulaire chaldéen-arabe / Dall al-rāgībīn: fī luḡat al-ārāmīyīn*. Mosul: Dominican Press, 1900 ; 2<sup>nd</sup> ed., repr. with a new appendix under the title *ܘܫܘܠܐ ܘܚܡܐ ܘܝܘܫܘܠܐ / Chaldean-Arabic Dictionary / qāmūs kaldānī-‘arabī*. Beirut: Babel Center Publications, 1975.
- Manning, Christopher. "Probabilistic Syntax." Pages 289–341 in *Probabilistic Linguistics*. Edited by Rens Bod et al. Cambridge, Mass.: MIT Press, 2003.
- Marchand, Hans. *The Categories and Types of Present-Day English Word-Formation. A Synchronic-Diachronic Approach*. 2<sup>nd</sup> ed. München: Beck, 1969.
- Marlowe, W. Creighton. "A Summary Evaluation of Old Testament Hebrew Lexica, Translations, and Philology in Light of Key Developments in Hebrew Lexicographic and Semitic Linguistic History." *Grace Theological Journal* 12 (Spring 1991): 3–20.
- Mason, H.J. *Greek Terms for Roman Institutions. A Lexicon and Analysis*. Toronto: Hakkert, 1974.
- Matthews, P.H. *Morphology: An Introduction to the Theory of Word-Structure*. Cambridge Textbooks in Linguistics. Cambridge: Cambridge University Press, 1974.
- \_\_\_\_\_. *The Concise Oxford Dictionary of Linguistics*. Oxford: Oxford University Press, 1997.
- McAfee Brown, Robert. *Creative Dislocation—The Movement of Grace*. Journeys in Faith. Nashville, Tenn.: Abingdon, 1980.

- Merrill, E.H. “𐤀𐤁𐤅” Pages 5–6 in *The New International Dictionary of Old Testament Theology and Exegesis*, Vol. 3. Edited by W.A. Van Gemeren. Carlisle: Paternoster, 1997.
- Merwe, Christo H.J. van der. “Towards a Principled Working Model for Biblical Hebrew Lexicology.” *Journal of Northwest Semitic Languages* 30/1 (2004): 119–37.
- \_\_\_\_\_. “Lexical Meaning in Biblical Hebrew and Cognitive Semantics: A Case Study.” *Biblica* 87 (2006): 85–95.
- Merwe, Christo H.J. van der, Jackie A. Naudé, and Jan H. Kroeze. *A Biblical Hebrew Reference Grammar*. Sheffield: Sheffield Academic Press, 1999.
- Mingana, Alphonse. *Clef de la langue araméenne ou grammaire complète et pratique des deux dialectes syriaques occidental et oriental*. Mosul: Dominican Fathers Press, 1905.
- Montanari, F. *Vocabolario della lingua greca. Con la collaborazione di Ivan Garofalo e Daniela Manetti; fondato su un progetto di Nino Marinone*. Torino: Loescher, 1995.
- Montevocchi, O. “Quaedam de graecitate Psalmorum cum papyris comparata.” Pages 293–310 in *Proceedings of the IX International Congress of Papyrology (Oslo, 1958)*. Oslo: Norwegian Universities Press, 1961.
- Montgomery, J.A., and H.S. Gehman. *A Critical and Exegetical Commentary on the Books of Kings*. International Critical Commentary. Edinburgh: T&T Clark, 1951.
- Moor, Johannes C. de, ed. *A Bilingual Concordance to the Targum of the Prophets*. Vol. 1: *Joshua*. Leiden: Brill, 1995.
- Mooren, L. *The Aulic Titulature in Ptolemaic Egypt: Introduction and Prosopography*. Verhandelingen van de Koninklijke Academie voor Wetenschappen, Letteren en Schone Kunsten van België, Klasse der Letteren, XXXVII, 78. Brussels: Paleis der Academiën, 1975.
- \_\_\_\_\_. *La hiérarchie de cour ptolémaïque. Contribution à l'étude des institutions et des classes dirigeantes à l'époque hellénistique*. Studia Hellenistica 23. Leuven: Leuven University Press, 1977.
- Morenz, S. “Aegyptische Spuren in der Septuaginta.” Pages 250–58 in *Mullus. Festschrift Theodor Klauser*. Edited by Alfred Stuiber and Alfred Hermann. Jahrbuch für Antike und Christentum. Ergänzungsband 1. Münster: Aschendorff, 1964.
- Moscatti, S. *An Introduction to the Comparative Grammar of Semitic Languages: Phonology and Morphology*. Wiesbaden: Harrassowitz, 1964.
- Moulton, J.H., and G. Milligan. *The Vocabulary of the Greek Testament Illustrated from the Papyri and Other Non-Literary Sources*. London: Hodder & Stoughton, 1914–1929.
- Moulton, James Hope, and Nigel Turner. *A Grammar of New Testament Greek*. Vol. 3 *Syntax*. Edinburgh: T&T Clark, 1963.
- Muraoka, Takamitsu. *Classical Syriac for Hebraists*. Wiesbaden: Harrassowitz, 1987.
- \_\_\_\_\_. “Response to J. Barr.” *Zeitschrift für Althebraistik* 7 (1994): 44–50.
- \_\_\_\_\_. *Classical Syriac: A Basic Grammar with a Chrestomathy*. With a select bibliography compiled by S.P. Brock. Porta Linguarum Orientalium New Series 19. Wiesbaden: Harrassowitz, 1997; 2<sup>nd</sup> ed. 2005.
- \_\_\_\_\_. *A Greek-English Lexicon of the Septuagint: Chiefly of the Pentateuch and the Twelve Prophets*. Leuven: Peeters, 2002.
- \_\_\_\_\_, ed. *Semantics of Ancient Hebrew*. Abr-Nahrain Supplement Series 4. Leuven: Peeters, 1998.
- Muraoka, T., and J.F. Elwolde, eds. *Diggers at the Well: Proceedings of a Third International Symposium on the Hebrew of the Dead Sea Scrolls and Ben Sira*. Studies on the Texts of the Desert of Judah 36. Leiden: Brill, 2000.
- Muraoka, Takamitsu, and Bezael Porten. *A Grammar of Egyptian Aramaic*. Handbuch der Orientalistik 1/32. Leiden: Brill, 1998.

- Murtonen, A. *Hebrew in its West Semitic Setting: A Comparative Survey of non-Masoretic Hebrew Dialects and Traditions*. Part One: *A Comparative Lexicon*. Section A: *Proper Names*. Leiden: Brill, 1986.
- . *Hebrew in its West Semitic Setting: A Comparative Survey of non-Masoretic Hebrew Dialects and Traditions*. Part Two: *Phonetics and Phonology*. Part Three: *Morphosyntactics*. Leiden: Brill, 1990.
- Naveh, J. "Hebrew Graffiti from the First Temple Period." *Israel Exploration Journal* 51 (2001): 194–207.
- Nestle, Eberhard. *Brevis linguae Syriacae grammatica, litteratura, chrestomathia cum glossario*. Karlsruhe and Leipzig: Reuther, 1881.
- . *Syrische Grammatik mit Litteratur, Chrestomathie und Glossar*. Porta Linguarum Orientalium 5. Berlin: Reuther, 1888.
- . *Syriac Grammar with Bibliography, Chrestomathy and Glossary*. Translated from the German by R.S. Kennedy. Berlin: Reuther, 1889.
- Nestle, Eberhard, Erwin Nestle, Barbara Aland, and Kurt Aland. *Novum Testamentum Graece*. 27<sup>th</sup> ed. Stuttgart: Deutsche Bibelanstalt, 1993.
- New Testament in Syriac, The*. London: British and Foreign Bible Society, 1905–1920.
- Nida, Eugene A. *Componential Analysis of Meanings*. The Hague: Mouton, 1975.
- . *Exploring Semantic Structures*. Munich: Fink, 1975.
- Nöldeke, Theodor. *Kurzgefasste syrische Grammatik*. Leipzig: Weigel, 1880; 2<sup>nd</sup> ed. Leipzig: Tauchnitz, 1898. Repr. with additional materials: Darmstadt: Wissenschaftliche Buchgesellschaft, 1966.
- . *Compendious Syriac Grammar*. Translated from the second and improved German edition by James A. Crichton; with an Appendix: The handwritten additions in Theodor Nöldeke's personal copy edited by Anton Schall, translated by Peter T. Daniels. London: Williams & Norgate, 1904. Repr. Winona Lake, Ind.: Eisenbrauns, 2001.
- Nyberg, H.S. "Wortbildung mit Präfixen in den semitischen Sprachen." *Monde Oriental* 14 (1920): 177–289.
- O'Connor, Michael P. "Biblical Hebrew Lexicography: ܦܠܕ 'Children, Dependents' in Biblical and Qumranic Hebrew." *Journal of North-West Semitic Languages* 25 (1999): 25–40.
- . "Semitic Lexicography: European Dictionaries of Biblical Hebrew in the Twentieth Century." *Israel Oriental Studies* 20 (2002): 173–212.
- O'Grady, William, Michael Dobrovolsky, and Francis Katamba, eds. *Contemporary Linguistics. An Introduction*. London and New York: Longman, 1997.
- Old Testament in Syriac according to the Peshitta Version, The*. Leiden: Brill, 1976–.
- Olofsson, S. *God is My Rock: A Study of Translation Technique and Theological Exegesis in the Septuagint*. Coniectanea biblica. Old Testament Series 31. Stockholm: Almqvist & Wiksell International, 1990.
- Overbeck, J.J., ed. *S. Ephraemi Syri, Rabulae Episcopi Edesseni, Balaei Aliorumque Opera Selecta*. Oxford: Clarendon, 1865.
- Palacios, L. *Grammatica Syriaca*. Rome: Desclée, 1954.
- Palmer, F.R. *Semantics*. 2<sup>nd</sup> ed. Cambridge: Cambridge University Press, 1981.
- Parisot, J. *Aphraatis Sapientis Persae demonstrationes*. Patrologia Syriaca I/1–2. Paris: Firmin-Didot, 1894–1907.
- Passoni Dell'Acqua, A. "La metafora biblica di Dio come roccia e la sua soppressione nelle antiche versioni." *Ephemerides Liturgicae* 91 (1977): 417–53.

- Payne Smith, Jessie (Mrs. Margoliouth). *A Compendious Syriac Dictionary. Founded upon the Thesaurus Syriacus of R. Payne Smith*. Oxford: Clarendon, 1903.
- Payne Smith, Robert, ed. *Cyrilli Commentarius in Lucam*. Oxford, 1858.
- \_\_\_\_\_. *Thesaurus Syriacus*. 2 vols. Oxford: Clarendon, 1897–1901. With *Supplement* by J.P. Margoliouth. Oxford: Clarendon, 1927. Reprinted Hildesheim: Olms, 1981.
- Pazzini, Massimo. *Lessico Concordanziale del Nuovo Testamento Siriaco*. Jerusalem: Franciscan Printing Press, 2004.
- Peursen, W.Th. van. “Clause Hierarchy and Discourse Structure in the Syriac Text of Sirach 14:20–27.” Pages 135–48 in *Text, Translation, and Tradition: Studies on the Peshitta and its Use in the Syriac Tradition. Presented to Konrad D. Jenner on the Occasion of his Sixty-Fifth Birthday*. Edited by W.Th. van Peursen and R.B. ter Haar Romeny. Monographs of the Peshitta Institute Leiden 14. Leiden: Brill, 2006.
- \_\_\_\_\_. “Three Approaches to the Tripartite Nominal Clause in Syriac.” Pages 157–73 in *Corpus Linguistics and Textual History: A Computer-Assisted Interdisciplinary Approach to the Peshitta*. Edited by P.S.F. van Keulen and W.Th. van Peursen. Studia Semitica Neerlandica 48. Assen: Van Gorcum, 2006.
- \_\_\_\_\_. *Language and Interpretation in the Syriac Text of Ben Sira: A Comparative Linguistic and Literary Study*. Monographs of the Peshitta Institute Leiden 16. Leiden: Brill, 2007.
- \_\_\_\_\_. “Language Variation, Language Development and the Textual History of the Peshitta.” Forthcoming in the Proceedings of the congress *Aramaic in Its Historical and Linguistic Setting* (Leiden, August 2006). Edited by Holger Gzella in the series Veröffentlichungen der Orientalischen Kommission.
- Peursen, W.Th. van, and Terry C. Falla. “The Particles ܐܘܢܐ and ܐܘܢܐ in Classical Syriac: Syntactic and Semantic Aspects.” Forthcoming in *Foundations for Syriac Lexicography II*. Edited by Peter J. Williams. Perspectives on Syriac Linguistics 3. Piscataway, N.J.: Gorgias.
- Phillips, George. *The Elements of Syriac Grammar*. Cambridge: J. & J.J. Deighton and John W. Parker, 1837.
- \_\_\_\_\_, ed. *The Doctrine of Addai, the Apostle*. Ludgate Hill, London: Trübner & Co, 1876.
- Pitra, J.B. *Analecta sacra spicilegio Solesmensi parata* 2, 3. Paris: Tusculum, 1888. Reprinted Venice: St. Lazarus Monastery, 1966.
- Pleket, H.W. “Religious History as the History of Mentality: The ‘Believer’ as Servant of the Deity in the Greek World.” Pages 152–92 in *Faith, Hope and Worship: Aspects of Religious Mentality in the Ancient World*. Edited by H.S. Versnel. Leiden: Brill, 1981.
- Poythress, V.S. “Greek Lexicography and Translation: Comparing Bauer’s and Louw–Nida’s Lexicons.” *Journal of the Evangelical Theological Society* 44 (2001): 285–96.
- Preisigke, F., ed. *Sammelbuch griechischer Urkunden aus Aegypten*. Strassburg: Trübner, 1913–1915.
- Pusey, Philip E., and George H. Gwilliam. *Tetraeuangelium Sanctum juxta simplicem Syrorum versionem ad fidem codicum, Massorae, editionum denuo recognitum*. Oxford: Clarendon, 1901.
- Qimron, E. “The Biblical Lexicon in Light of the Dead Sea Scrolls.” *Dead Sea Discoveries* 2 (1995): 295–329.
- Rabin, Chaim. “השפעל בעברית ובארמית—מדותו ומוצאו” (“The Nature and Origin of the Shaphel in Hebrew and Aramaic”). *Eretz-Israel* 9 (1969): Hebrew Section 148–58.
- Radford, A. *Syntax: A Minimalist Introduction*. Cambridge: Cambridge University Press, 1997.
- Rechenmacher, Hans. “Kognitive Linguistik und althebräische Lexikographie.” *Journal of Northwest Semitic Languages* 30/2 (2004): 43–59.

- Regt, Lénart J. de. "Multiple Meaning and Semantic Domains in Some Biblical Hebrew Lexicographical Projects: The Description of Zera." *Zeitschrift für Althebraistik* 10 (1997): 63–75.
- Reider, Joseph. Review Koehler–Baumgartner, *Lexicon in Veteris Testamenti Libros. The Jewish Quarterly Review* 46 (1955): 69–72.
- Reymond, Philippe. "Vers la publication d'un *Dictionnaire d'hébreu et d'araméen*." *Zeitschrift für Althebraistik* 3 (1990): 81–83.
- \_\_\_\_\_. *Dictionnaire d'hébreu et d'araméen, Bibliques*. Paris: Cerf, 1991.
- Richter, Wolfgang. *Grundlagen einer althebräischen Grammatik* 1. Arbeiten zu Text und Sprache im Alten Testament 8. St. Ottilien: EOS Verlag, 1978.
- Ricks, Stephen D. *Lexicon of inscripational Qatabanian*. Studia Pohl, 14. Rome: Pontificio Istituto Biblico, 1989.
- Ritschl, F. *Thomae Magistri sive Theoduli monachi ecloga vocam Atticarum*. Halle: Orphanotropheus, 1832. Reprinted Hildesheim: Olms, 1970.
- Roberts, J.J.M. "The Princeton Classical Hebrew Dictionary Project." *Zeitschrift für Althebraistik* 3 (1990): 84–89.
- Robertson, A.T. *A Grammar of the Greek New Testament in the Light of Historical Research*. 4th ed. Nashville, Tenn.: Broadman, 1934.
- Robinson, Edward. *A Hebrew and English Lexicon of the Old Testament*. 5th ed. Boston: Crocker & Brewster, 1854.
- Robinson, Theodore H. *Paradigms and Exercisers in Syriac Grammar*. 4th ed. Revised by L. H. Brockington. Oxford: Clarendon, 1962.
- Roget, Peter M. *Roget's International Thesaurus*. 4th ed. Revised by R.L. Chapman. New York: Thomas Y. Crowell, 1977.
- Rosenthal, Franz. *Die aramaistische Forschung seit Th. Nöldeke's Veröffentlichungen*. Leiden: Brill, 1939.
- \_\_\_\_\_. *A Grammar of Biblical Aramaic*. 6th ed. Wiesbaden: Harassowitz, 1995.
- Sag, I.A., and T. Wasow. *Syntactic Theory: A Formal Introduction*. 1st ed. Stanford: CSLI, 1999.
- Sag, I.A., T. Wasow, and E.M. Bender. *Syntactic Theory: A Formal Introduction*. 2nd ed. Stanford: CSLI, 2003.
- Salvesen, Alison. "The User versus the Lexicographer: Practical and Scientific Issues in Creating Entries." Pages 81–92 in *Foundations for Syriac Lexicography I*. Edited by A.D. Forbes and D.G.K. Taylor. Perspectives on Syriac Linguistics 1. Piscataway, N.J.: Gorgias, 2005.
- Sawyer, J.F.A. *Semantics in Biblical Research: New Methods of Defining Hebrew Words for Salvation*. Studies in Biblical Theology, Second Series, 24. London: SCM Press, 1972.
- Scharbert, J. "'Fluchen' und 'Segnen' im Alten Testament." *Biblica* 39 (1958): 1–26.
- Schenker, Adrian, et al., eds. *Biblia Hebraica Quinta: Fascicle 18: General Introduction and Megilloth*. Stuttgart: German Bible Society, 2004.
- Schlesusner, J.F. *Novum Lexicon Graeco-Latinum in Novum Testamentum*. Leipzig: Weidman; London: Payne, Mackinlay & Lunn, 1808.
- \_\_\_\_\_. *Novus Thesaurus Philologico-Criticus: sive, Lexicon in LXX. et reliquos interpretes graecos, ac scriptores apocryphos Veteris Testamenti*. Glasgow: Duncan, 1822.
- Schönefeld, Doris. *Where Lexicon and Syntax Meet*. Berlin: Mouton de Gruyter, 2001.
- Schubart, W., and E. Kühn, eds. *Papyri und Ostraka der Ptolemäerzeit. Aegyptische Urkunden aus den Königlichen Museen zu Berlin*. Griechische Urkunden 6. Berlin: Weidmann, 1922.

- Schulthess, Friedrich. *Homonyme Wurzeln im Syrischen: ein Beitrag zur semitischen Lexicographie*. Berlin: Reuther & Reichard, 1900.
- Schütze, Hinrich. *Ambiguity Resolution in Language Learning: Computational and Cognitive Models*. Stanford: CSLI, 1997.
- Schwarzwald, Ora R. *עוד בעניין יחסי שורש ודגם מילון העברי* (“Comments on Root-Pattern Relations in the Hebrew Lexicon”). *Hebrew Computational Linguistics* 9 (1975): 47–59.
- \_\_\_\_\_. “Lexical Weight in Hebrew Inflectional Feminine Formation.” Pages 1409–25 in *Semitic Studies: in Honor of Wolf Leslau. On the Occasion of his Eighty-Fifth Birthday*. Edited by A.S. Kaye. Wiesbaden: Harrassowitz, 1991.
- \_\_\_\_\_. *שפעל עברי* (“Hebrew *Šafel*”). *Lešonenu* 58 (1994–1995): 145–52.
- Segert, Stanislav. *Altaramaische Grammatik mit Bibliographie, Chrestomathie und Glossar*. Leipzig: Verlag Enzyklopadie, VEB, 1975.
- \_\_\_\_\_. Review of Koehler et al., *The Hebrew and Aramaic Lexicon of the Old Testament*. The Catholic Biblical Quarterly 58 (1996): 106–18.
- Shipp, G.P. “Notes on the Language of *Vita Aesopi* G.” *Antichthon* 17 (1983): 96–106.
- Silva, M. *Biblical Words and their Meaning: An Introduction to Lexical Semantics*. Rev. and enl. ed. Grand Rapids, Mich.: Zondervan, 1994.
- Simpson, J.A., and E.S.C. Weiner, eds. *The Oxford English Dictionary*. 2<sup>nd</sup> ed. Oxford: Clarendon, 1989.
- Smend, Rudolf. “Wilhelm Gesenius 1786–1842.” Pages 53–70 in *Deutsche Alttestamentler in drei Jahrhunderten*. Edited by Rudolf Smend. Göttingen: Vandenhoeck & Ruprecht, 1989.
- Soden, Wolfram von, *Akkadisches Handwörterbuch*. 3 vols. Wiesbaden: Harrassowitz 1981.
- \_\_\_\_\_. *Grundriss der akkadischen Grammatik*. 3<sup>rd</sup> ed. Analecta Orientalia 33. Rome: Pontificio Istituto Biblico, 1995.
- Soggin, J. Alberto. “Tracce di antichi causativi in 𐤊-realizzati come radici autonome in ebraico biblico.” *Annali, Istituto Universitario Orientale di Napoli* 15 (1965): 17–30.
- Sokoloff, Michael. *A Dictionary of Jewish Palestinian Aramaic of the Byzantine Period*. Ramat Gan: Bar Ilan University Press, 1990.
- \_\_\_\_\_. Review of Koehler et al., *Hebräisches und aramäisches Lexikon zum Alten Testament*. Dead Sea Discoveries 7 (2000): 74–109.
- \_\_\_\_\_. *A Dictionary of Jewish Babylonian Aramaic of the Talmudic and Geonic Periods*. Ramat-Gan: Bar-Ilan University Press; Baltimore, London: Johns Hopkins University Press, 2002.
- \_\_\_\_\_. *A Dictionary of Jewish Palestinian Aramaic of the Byzantine Period*. 2<sup>nd</sup> ed. Ramat-Gan: Bar-Ilan University Press, 2002.
- \_\_\_\_\_. *A Dictionary of Judean Aramaic*. Ramat-Gan: Bar Ilan University Press; Baltimore and London: John Hopkins University Press, 2003.
- \_\_\_\_\_. “A New Dictionary of Samaritan Aramaic.” *Aramaic Studies* 1 (2003): 67–107.
- Steenbergen, Gerrit J. van. “Hebrew Lexicography and Worldview: A Survey of Some Lexicons.” *Journal of Semitics* 12 (2003): 268–313.
- Steiner, George. *Real Presences*. Chicago, Ill.: University of Chicago Press, 1989.
- Stevenson, William B. *Grammar of Palestinian Jewish Aramaic*. Oxford: Clarendon, 1924.
- Strong, James, John R. Kohlenberger, III, and James A. Swanson. *The Strongest Strong's Exhaustive Concordance of the Bible*. Grand Rapids, Mich.: Zondervan, 2001.

- Strothmann, Werner, Kurt Johannes, and Manfred Zumpe. *Konkordanz zur syrischen Bibel*. Göttinger Orientforschungen Reihe 1, Syriaca (= GOFS). Wiesbaden: Harrassowitz. *Der Pentateuch* (4 vols; GOFS 26; 1986). *Die Propheten*, (4 vols.; GOFS 25; 1984). *Die Maithē*. (6 vols.; GOFS 33; 1995).
- Szabó, Zoltán Gendler, ed. *Semantics vs. Pragmatics*. Oxford: Clarendon, 2005.
- Sznol, S. “«Jefe» o «supremo»: estudio lexicográfico de compuestos con אָרָךְ en fuentes judías y en la ‘koine’ oriental.” *Miscelánea de Estudios árabes y hebraicos* 40 (1991): 55–70.
- Tal, Abraham. *מילון הארמית של השומרונים* (*A Dictionary of Samaritan Aramaic*). Leiden: Brill, 2000.
- Talstra, Eep, and Ferenc Postma. “On Texts and Tools. A Short History of the ‘Werkgroep Informatica’ (1977–1987).” Pages 9–27 in *Computer Assisted Analysis of Biblical Texts. Papers read at the Workshop on the Occasion of the Tenth Anniversary of the “Werkgroep Informatica,” Faculty of Theology, Vrije Universiteit, Amsterdam. November, 5–6, 1987*. Edited by E. Talstra. Applicatio 7. Amsterdam: Free University Press, 1989.
- Targarona Borrás, J. *Diccionario hebreo-español. Bíblico–Rabínico–Medieval–Moderno*. Barcelona: Riopiedras Ediciones, 1995.
- Tene, D., and J. Barr. “Linguistic Literature, Hebrew.” Pages 1352–1401 in *Encyclopaedia Judaica*, vol. 16. Jerusalem: Keter, 1972.
- Thackston, Wheeler M. *Introduction to Syriac: An Elementary Grammar with Readings from Syriac Literature*. Bethesda, Md.: Ibex, 1999.
- Thelly, Emmanuel. *Syriac-English-Malayalam Lexicon*. Kottayam: Deepika, 1999.
- Thompson, A.A. Review of Lee, *A History of New Testament Lexicography*. *Bulletin of the International Organization for Septuagint and Cognate Studies* 36 (2003): 113–27.
- Tillich, Paul. *Systematic Theology*. 3 vols. Digswell Place, Welwyn, Herts: James Nisbet, 1953–1963.
- Tov, E. “Compound Words in the LXX Representing Two or More Hebrew Words.” *Biblica* 58 (1977): 189–212.
- Trask, R.L. “Parts of Speech.” Pages 278–84 in *Concise Encyclopedia of Grammatical Categories*. Edited by K. Brown and J. Miller. Oxford: Elsevier, 1999.
- \_\_\_\_\_. *A Dictionary of Grammatical Terms in Linguistics*. London: Routledge, 1993.
- Treffry, Diana, et al. eds. *Collins English Dictionary*. 4<sup>th</sup> ed. Glasgow: Harper Collins, 1998.
- Tregelles, S.P. *Gesenius’ Hebrew and Chaldee Lexicon to the Old Testament Scripture*. New York: Wiley & Sons, 1887.
- Tsohatzidis, Savas L., ed. *Meanings and Prototypes: Studies in Linguistic Categorization*. London: Routledge, 1990.
- Tubul, Meirav. “Nouns with Double Plural Forms in Biblical Hebrew.” *Journal of Semitic Studies* 52/2 (Autumn 2007): 189–210.
- Ullmann, M. *Wörterbuch der klassischen arabischen Sprache*. Wiesbaden: Harrassowitz, 1970–.
- Ungerer, F., and H.J. Schmid. *An Introduction to Cognitive Linguistics*. London: Longman, 1996.
- Ungnad, Arthur. *Syrische Grammatik*. 2<sup>nd</sup> ed. Munich: Beck, 1932.
- Van Rompay, Lucas. “Some Reflections on the Use of Post-Predicative *hwā* in Classical Syriac.” Pages 210–19 in *Studies in Hebrew and Aramaic Syntax Presented to Professor Hofstijzer on the Occasion of his Sixty-fifth Birthday*. Edited by K. Jongeling, H.L. Murre-van den Berg, and L. van Rompay. *Studies in Semitic Languages and Linguistics* 17. Leiden: Brill, 1991.

- . “Some Preliminary Remarks on the Origins of Classical Syriac as a Standard Language. The Syriac Version of Eusebius of Caesarea’s Ecclesiastical History.” Pages 70–89 in *Semitic and Cushitic Studies*. Edited by Gideon Goldenberg and Shlomo Raz. Wiesbaden: Harrassowitz, 1994.
- Verheij, A.J.C. *Bits, Bytes, and Binyanim. A Quantitative Study of Verbal Lexeme Formations in the Hebrew Bible*. Orientalia Lovaniensia Analecta 93. Leuven: Peeters, 2000.
- Vogt, Ernst. *Lexicon linguae aramaicae Veteris Testamenti*. Rome: Pontificio Istituto Biblico, 1971.
- Wächter, Ludwig. “Reste von Šaf’el-Bildungen im Hebräischen.” *Zeitschrift für die alttestamentliche Wissenschaft* 83 (1971): 380–89.
- Walke, Bruce K., and Michael P. O’Connor. *An Introduction to Biblical Hebrew Syntax*. Winona Lake, Ind.: Eisenbrauns, 1990.
- Wessely, C., ed. *Studien zur Palaeographie und Papyruskunde*. 8: *Griechische Papyrusurkunden kleineren Formats*. Leipzig: E. Avenarius, 1908.
- Whish, H.F. *Clavis Syriaca*. London: Deighton, Bell & Co, 1883; Repr. Oxford: Oxford University Press, 1926.
- Wierzbicka, Anna. Review of I. Mel’čuk and A. Žolkovskij, *Tolkovo-kombinatornyj slovar’ sovremennogo russkogo jazyka*. *Language* 62 (1986): 684–87.
- . “‘Prototypes Save’: On the Uses and Abuses of the Notion of ‘Prototype’ in Linguistics and Related Fields.” Pages 347–67 in *Meanings and Prototypes: Studies in Linguistic Categorization*. Edited by Savas L. Tsohatzidis. London: Routledge, 1990. Repr. on pages 461–78 in *Fuży Grammar*. Edited by B. Aarts et al. Oxford: Oxford University Press, 2004.
- Wilcken, U., eds. *Urkunden der Prolemäerzeit (ältere Funde) I. Papyri aus Unterägypten*. Berlin and Leipzig: De Gruyter, 1927.
- Wildberger, H. *Jesaja 28–39: Das Buch, der Prophet und seine Botschaft*. Biblischer Kommentar Altes Testament X/3; Neukirchen-Vluyn: Neukirchener Verlag, 1982.
- Williams, Peter J. “On Matching Syriac Words with Their Greek Vorlage.” Pages 157–66 in *Foundations for Syriac Lexicography I*. Edited by A. Dean Forbes and David G.K. Taylor. Perspectives on Syriac Linguistics 1. Piscataway, N.J.: Gorgias, 2005.
- . “The Semantics of the Epistles of the Peshitta and Its Implications for Syriac Lexicography.” Forthcoming in *Foundations in Syriac Lexicography II*. Edited by Peter J. Williams. Perspectives on Syriac Linguistics 3. Piscataway, N.J.: Gorgias.
- Wright, W., ed. *The Homilies of Aphraates the Persian Sage*. London: Williams & Norgate, 1869.
- , ed. *Apocryphal Acts of the Apostles*. 2 vols. London: Williams & Norgate, 1871.
- , ed. *The Chronicle of Joshua the Stylite*. Cambridge: Cambridge University Press, 1882. Repr. Piscataway, N.J.: Gorgias, 2003.
- , ed. *The Book of Kalilah and Dimnah*. Oxford: Clarendon; London: Trübner, 1884.
- Ziliacus, Henrik, ed. *Vierzehn Berliner griechische Papyri*. Societas Scientiarum Fennica, Commentationes Humanarum Litterarum XI, 4. Helsinki: Societas Scientiarum Fennica, 1941.
- Zorell, Franz. *Lexicon graecum Novi Testamenti*. Paris: Lethielleux, 1911. 2<sup>nd</sup> ed. 1931.
- . *Lexicon Hebraicum et Aramaicum Veteris Testamenti*. Rome: Pontificio Istituto Biblico, 1947–1954.

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