Perspectives on Syriac Linguistics

Volume 1

Series Editor
Terry C. Falla

Foundations for Syriac Lexicography I

FOUNDATIONS FOR SYRIAC LEXICOGRAPHY I

Colloquia of the International Syriac Language Project

Edited By
A. DEAN FORBES
AND
DAVID G.K. TAYLOR

Managing Editor
BERYL TURNER

GORGIAS PRESS
2005

First Gorgias Press Edition, 2005.

ISBN 1-59333-138-X

GORGIAS PRESS
46 Orris Ave., Piscataway, NJ 08854 USA
www.gorgiaspress.com

Printed in the United States of America

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SERIES PREFACE

> When I took the first survey of my undertaking, I found our speech copious without order and energetik without rules: wherever I turned my view, there was perplexity to be disentangled, and confusion to be regulated; choice was to be made out of boundless variety, without a settled test of purity; and modes of expression to be rejected or received, without the suffrages of any writers of classical reputation or acknowledged authority.
>
> Samuel Johnson, 'Preface' to *A Dictionary of the English Language*

Perspectives on Syriac Linguistics contains peer-reviewed essay collections, monographs and reference works that have relevance to Classical Syriac lexicography. It is a publication of the International Syriac Language Project (ISLP), an interdisciplinary group which meets annually to reconsider the theory and practice of Classical Syriac lexicography and to lay the foundations for a future comprehensive Syriac-English lexicon.

Lexicography, the art and science of dictionary making, became a serious discipline about four centuries ago. Compared to the evolution of human language which may go back as far as 100,000 years, it began only yesterday. Modern linguistics, the science of the study of language, is even more recent, beginning in the 1830s and experiencing rapid growth in the latter half of the twentieth century. Today, lexicography may be viewed as a sub-discipline of linguistics: sound lexicography requires sound linguistic theory. The aim of this series is therefore to address issues of linguistics as they relate to a contemporary approach to lexicography.

It is also the aim of the ISLP, and thus of this series, to be collaborative and interdisciplinary. There are three primary reasons. The first is that many linguistic disciplines meet in the making of a modern lexicon. The second is that developments in the study of one language, theoretical and applied, are often pertinent to another. The third is that the emergence of electronic lexica requires attention to be paid 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.

Terry Falla

BEGINNINGS

The idea of a new kind of Syriac-English lexicon finds its origins in 2001 in a mid-summer morning in Atlanta and in Chicago nights in the flat of a Syriac-speaking family. In Atlanta, Beryl Turner and I were hosted by Kent Richards, Executive Director of SBL. At his prompting, I outlined the birth and progress of my lexical work *A Key to the Peshitta Gospels* and the methodologies it employs. I described how the conceptual framework begins with the idea of a new kind of lexical work that is able to collate within the compass of a single entry a wide range of essential, interrelated, but previously unpublished, information in a succinct and accessible form. The discussion also turned to the significance for modern lexicography of subjecting every detail to thorough investigation, and of eschewing the recycling of untested information. It was at the end of this conversation that Richards proposed that I coordinate sessions on Syriac lexicography on an annual basis at SBL international meetings.

Two days after our Atlanta meeting my colleague and I were introduced to the wonderful hospitality of the Saadi family. After evening meals and late into more than one night we discussed with Abdul-Massih Saadi, who has been cataloguing the Arthur Vööbus collection (in Syriac) at the Lutheran School of Theology, how the SBL invitation might become a reality. Three months later, after a further visit to the Saadi home, I took a tentative idea to Dean Forbes in Palo Alto and a few days later to England, where I chatted it over with Alison Salvesen, Sebastian Brock, and David Taylor. I will always be grateful to them all for their taking an emerging but tender proposal seriously. An exploratory interdisciplinary Syriac lexicography group was formed and grew. The intention was to meet at the 2002 SBL Berlin meeting, but that proved too soon for the schedules of those who were now involved: Janet Dyk, Dean Forbes, Andreas Juckel, George Kiraz, Abdul-Massih Saadi, Alison Salvesen, David Taylor, Peter Williams, and my colleague Beryl Turner and myself, to be joined in 2003 by Bas ter Haar Romeny and Wido van Peursen, and in 2004 by Michael Sokoloff.

The first full-day meeting was at the International SBL Meeting in Cambridge in 2003. Subsequently, we decided on the International Syriac Language Project (ISLP) as a title for the group's endeavours. We met again in 2004, and will continue to convene at SBL Meetings until SBL and ISLP feel ISLP has fulfilled its tasks. I record here my profound thanks to all those who helped bring the first meeting to fruition, and to those who have since expressed their support by encouraging us to continue.

Terry Falla

VOLUME PREFACE

The authors of this first volume in the International Syriac Language Project (ISLP) series represent a wide range of disciplines. Their work explores new horizons in lexical thinking. Their papers are the result of the first meeting of the ISLP in Cambridge, England, at the SBL International Meeting, 20–25 August 2003. They focus on issues pertinent to Syriac lexicography and the lexicography of ancient languages with special attention to the optimal content of a Classical Syriac lexicon.

In a substantial introductory essay, Terry Falla outlines a conceptual framework for a new comprehensive Syriac-English lexicon. His essay draws on the insights of ancient Greek and Hebrew lexicography. Alison Salvesen's contribution is closely related in that it looks at the range of users that the lexicographer should speak to.

One of the aims of the ISLP is to create a multifunctional modular database for the project. For this reason, George Kiraz presents the history of Syriac computational lexicography and points to the future of computing the Syriac lexicon. Dean Forbes, also a computational linguist, has long worked on computational analysis of the syntax of the Hebrew scriptures. His essay introduces a distributional approach to computational taxonomic analysis.

Janet Dyk, aware of the importance of syntax for the making of a lexicon, outlines desiderata for the lexicon from a syntactic point of view.

Many Syriac corpora are translations, a feature that the lexicographer must take into account. Peter Williams discusses how to match Syriac words with their Greek *Vorlage*. Andreas Juckel raises the question of whether the Harklean version should be included in a future lexicon of the Syriac New Testament.

In a final essay that provides a fitting inclusio to Falla's and Salvesen's presentations, Sebastian Brock reflects on resources and sources of Syriac lexica.

This book is at the forefront of Syriac lexical studies. It has much to offer those studying dialects of Aramaic other than Syriac and other ancient languages such as Hebrew and Greek.

Initially, the volume was to include a major essay by David Taylor. The essay became a book which will be published as the second volume in this series: *An Annotated Bibliography of Printed Syriac Lexica.*

Our huge gratitude goes to Managing Editor Beryl Turner, coordinator *par excellence*, and to Ellen Forbes, amazingly vigilant copy editor.

We thank George Kiraz of Gorgias Press for publishing these proceedings.

A. Dean Forbes & David Taylor

ACKNOWLEDGEMENTS

The authors of this volume are grateful for the support of:

Beth Mardutho: The Syriac Institute;

Institute for New Testament Textual Research, University of Münster;

Oxford Centre for Hebrew and Jewish Studies;

The Oriental Institute, University of Oxford

University of California, Berkeley;

University of Cambridge;

Vrije Universiteit, Amsterdam;

Whitley College, University of Melbourne, and the supporters of its Syriac Language Research Centre.

ABBREVIATIONS

For abbreviations of books of the Bible, refer to the Abbreviations section of the New Revised Standard Version. For abbreviations of journals and series, refer to the Bibliography section of each paper. Abbreviations of lexical works cited only in Terry Falla's essay are cited on pages 3–7.

>	deriving from
†	died
◌̱ ◌̄	obelos and metobelos, indicating words absent from the Greek *Vorlage* used by Thomas of Harqel, but helpful for an intelligible rendering of the Greek.
//	parallel
act.	active
adj.	adjective
adv.	adverb
AEINT	The Way International Research Team, eds., *Aramaic-English Interlinear New Testament*
attrib.	attribute, attributive
Audo	*Audo's Syriac-Syriac Lexicon: Simta d-leshana suryaya*
BAAR	Bauer, Aland, Aland, Reichmann, *Griechisch-deutsches Wörterbuch*, 6th ed.
BAGD	Bauer, Arndt, Gingrich, Danker
Barn	The Letter of Barnabas
BDAG	Bauer, Danker, Arndt, Gingrich
BFBS	British and Foreign Bible Society edition of the Syriac New Testament
Brockelmann	*Lexicon Syriacum*, 2nd ed.
Brun	*Dictionarium Syriaco-Latinum*, 2nd ed.
c. st.	construct state
ca.	circa
CE	Common Era
cent.	century
chap(s).	chapter(s)
compl.	complement
conj.	conjunction
Costaz	*Dictionnaire syriaque-français*
cp., cf.	compare, frequently in reference to citation from ancient texts
crit. ap.	critical apparatus
ed.	edited, editor, edition

emph.	emphatic
enl.	enlarged
esp.	especially
fasc.	fascicle, fascicule
fig.	figurative(ly)
fs.	feminine singular
Goshen-Gottstein	*A Syriac-English Glossary with Etymological Notes*
Gr.	Greek
id.	idem, the same
imp.	imperative
impf.	imperfect
inf.	infinitive
interrog.	interrogative
interj.	interjection
intr.	intransitive
ISLP	International Syriac Language Project
Jennings	*Lexicon to the Syriac New Testament (Peshiṭta)*
JPA	Jewish Palestinian Aramaic
J. Payne Smith	*A Compendious Syriac Dictionary*
J. Payne Smith, *Supplement*	*Supplement to the Thesaurus Syriacus of R. Payne Smith*
Kiraz, *Concordance*	Kiraz, *A Computer-Generated Concordance to the Syriac New Testament*
KJV	King James Version
KPG	Falla, *A Key to the Peshitta Gospels*
Lampe	*A Patristic Greek Lexicon*
lit.	literally
LSJM	Liddell, Scott, Jones and McKenzie, *A Greek- English Lexicon*
LSJM Suppl.	Barber *et al.*, eds., *A Greek-English Lexicon*, Supplement
LXX	Septuagint
metaph.	metaphorical
meton.	metonymy
mpl.	masculine plural
ms.	masculine singular
Ms	manuscript
MT	Masoretic Text
n.	noun
NA^{27}	Nestle-Aland, 27th edition of the Greek NT
n. com.	common noun
NEB	New English Bible
neg.	negation, negative
n.f.	noun feminine
NIV	New International Version
n.m.	masculine noun
no c.	no correspondence
NP	noun phrase
NT	New Testament
opp.	opposite
OT	Old Testament

perh.	perhaps
pers.	person
pf.	perfect
pl.	plural
pred.	predicate, predicative
prep.	preposition
pron.	pronoun
pt.	participle
pass.	passive
ref.	reference(s)
rel. pron.	relative pronoun
repr.	reprinted
rev.	revised
RSV	Revised Standard Version
RV	Revised Version
s.	singular
SBL	Society of Biblical Literature
sub.	subordinate
subs.	subsidia
subst.	substantive
Suppl.	Supplement and Supplementum
Syr^{c}	Old Syriac Curetonian Version of the Gospels
Syr^{h}	Harklean Version of the NT
Syr^{p}	Peshitta Version of the NT
Syr^{s}	Old Syriac Sinaitic Version of the Gospels
Thelly	*Syriac-English-Malayalam Lexicon*
Thesaurus Syriacus	R. Payne Smith, ed., *Thesaurus Syriacus*
trans.	translated
var. lec.	varia lectio (variant reading)
vol.	volume

1. A CONCEPTUAL FRAMEWORK FOR A NEW COMPREHENSIVE SYRIAC-ENGLISH LEXICON

Terry C. Falla
Whitley College, University of Melbourne

For many reasons the time has come to reassess the theory and practice of Classical Syriac lexicography and discuss what kind of Syriac-English lexicon would best serve the requirements of the twenty-first century. This essay begins by outlining the need for a new Syriac-English lexicon. It then proposes a conceptual framework, initially for a comprehensive lexicon to the Syriac New Testament, and in the long-term as a basis for the lexicalizing of other Syriac literature.

The essay addresses five basic questions: for whom is the work intended (audience), what Syriac literature would it cover and would it present that literature in a single work or a corpus-by-corpus series (scope), what sort of and how much information should be included (content), how is that information to be ascertained (methodology), and how can it be organized in a user-friendly manner that is methodologically compatible with its contents and is aesthetically pleasing (arrangement and presentation)? A concluding section considers issues of implementation and then comments on the need for a collaborative approach that draws on the insights of various specialist disciplines to complement the expertise of the lexicographer. The essay ends with a tribute marking the centenary of Jessie Payne Smith's *A Compendious Syriac Dictionary founded upon the Thesaurus of R. Payne Smith.*

1. ABBREVIATIONS FOR LEXICAL WORKS

The following abbreviations are for lexical works cited in this article. All other abbreviations are listed at the beginning of the volume.

Syriac

Audo	*Syriac-Syriac Lexicon: Simta d-leshana suryaya*
Brockelmann	*Lexicon Syriacum*
Brun	*Dictionarium Syriaco-Latinum*
Costaz	*Dictionnaire Syriaque-Français*
Dogan	*Wörterbuch: Syrisch (Aramäisch)-Deutsch, Deutsch-Syrisch (Aramäisch)*
Ferrer and Nogueras	*Breve Diccionario Siríaco: Siríaco-Castellano-Catalán*
Goshen-Gottstein	*A Syriac-English Glossary with Etymological Notes*
Hanna and Bulut	*Wörterbuch: Deutsch-Aramäisch, Aramäisch-Deutsch*
J. Payne Smith	*A Compendious Syriac Dictionary*
J. Payne Smith, *Supplement*	*Supplement to the Thesaurus Syriacus of R. Payne Smith*
Jennings	*Lexicon to the Syriac New Testament*

Kiraz, *Concordance*	Kiraz, *Concordance to the Syriac New Testament*
Klein	*Syrisch-Griechisches Wörterbuch zu den Vier Kanonischen Evangelien*
Köbert	*Vocabularium Syriacum*
Köbert's "Addenda"	Köbert's "Addenda ad Vocabularium Syriacum, Romae 1956."
KPG	Falla, *A Key to the Peshitta Gospels*
Manna	ܡܢܐ ܕܟܠܕܝܐ ܥܡ ܥܪܒܝ / *Vocabulaire chaldéen-arabe*
Pazzini	*Lessico Concordanziale del Nuovo Testamento Siriaco*
Schaaf	*Lexicon Syriacum Concordantiale*
Schulthess	*Homonyme Wurzeln im Syrischen*
Thelly	*Syriac-English-Malayalam Lexicon*
Thesaurus Syriacus	R. Payne Smith, ed., *Thesaurus Syriacus*
Whish	*Clavis Syriaca*

Aramaic other than Syriac

Dalman	*Aramäisch-neuhebräisches Handwörterbuch*
DJA	Sokoloff, *A Dictionary of Judean Aramiac*
DJBA	Sokoloff, *A Dictionary of Jewish Babylonian Aramaic of the Talmudic and Geonic Period*
DJPA	Sokoloff, *A Dictionary of Jewish Palestinian Aramaic of the Byzantine Period*, 2nd ed.
DNWSI	Hoftijzer and Jongeling, *Dictionary of the North West Semitic Inscriptions*
Jastrow	*A Dictionary of the Targumim, the Talmud Babli and Yerushalmi, and the Midrashic Literature*
Levy's CWTRS	Levy, *Chaldäisches Wörterbuch über die Targumim und einen grossen Theil des rabbinischen Schrifthums*
Levy's NCWTM	Levy, *Neuhebräisches und chaldäisches Wörterbuch über die Talmudim und Midraschim*, 1876–1889
Levy's WTM	Levy, *Wörterbuch über die Talmudim und Midraschim*, 1924
Swanson	*Dictionary of Biblical Languages with Semantic Domains : Aramaic (Old Testament).*
Tal	מילון הארמית של השומרונים (A Dictionary of Samaritan Aramaic)
(Zorell)-Vogt	*Lexicon linguae aramaicae Veteris Testamenti*

English

AOD	Moore, ed., *The Australian Oxford Dictionary*
CED	Beatty and Spooner, eds., *Concise English Dictionary*
Chambers	Brookes *et al.*, eds., *The Chambers Dictionary,* 9th ed.
Fowler and Fowler	*The Concise Oxford Dictionary of Current English*
Johnson's *Dictionary*	Johnson, *Dictionary of the English Language*
Macquarie	Delbridge, ed., *The Macquarie Dictionary*, 3rd ed.
New SOED	Brown *et al.*, eds., *The New Shorter Oxford English Dictionary*
OED	Simpson and Weiner *et al.*, eds., *The Oxford English Dictionary*, 2nd ed.

Random House	Flexner and Hauck *et al.*, eds., *The Random House Dictionary of the English Language*
SOED	Brown *et al.*, eds., *The Shorter Oxford English Dictionary*, 5th ed.
Webster's TNID	Gove, ed., *Webster's Third New International Dictionary of the English Language*

French

DEL	Dubois *et al.*, eds., *Dictionnaire encyclopédique Larousse*
DHO	Corréard and Grundy, eds., *Le Dictionnaire Hachette-Oxford*
DLF	Littré, *Dictionnaire de la langue française*
DLF (*abrégé*)	Beaujean, ed., *Dictionnaire de la langue française abrégé du Dictionnaire de E Littré*
LDLF	Dubois *et al.*, eds., *Lexis: Dictionnaire de la langue française*
PLI	*Petit Larousse illustré*

German

CNGED	Betteridge, ed., *Cassell's New German and English Dictionary*
MEL	*Meyers Enzyklopädisches Lexikon*
NCGD	Messinger, *New College German Dictionary*
ODGD	Scholze-Stubenrecht and Sykes, eds., *Oxford-Duden German Dictionary*
WDW	Wahrig, *Deutsches Wörterbuch*

Greek

Abbott-Smith	*A Manual Greek Lexicon of the New Testament*
BAAR	BAAR, *Griechisch-deutsches Wörterbuch zu den Schriften des Neuen Testaments und der frühchristlichen Literatur*
BAG	BAG, *A Greek-English Lexicon of the New Testament and Other Early Christian Literature*
BAGD	BAGD, *A Greek-English Lexicon of the New Testament and Other Early Christian Literature*
BDAG	BDAG, *A Greek-English Lexicon of the New Testament and Other Early Christian Literature*
DGENT	Mateos, ed., *Diccionario Griego-Español del Nuevo Testamento*
Lampe	*A Patristic Greek Lexicon*
LEH 1992-1996	Lust-Eynikel-Hauspie, *A Greek-English Lexicon of the Septuagint*
LEH 2003	Lust-Eynikel-Hauspie, *Greek-English Lexicon of the Septuagint*
Louw and Nida	*Greek-English Lexicon of the New Testament: Based on Semantic Domains*
LS	Liddell and Scott, *A Greek-English Lexicon*
LSJM	Liddell, Scott, Jones and McKenzie, *A Greek-English Lexicon*, 9th ed.
LSJM Suppl.	Barber *et al.*, eds., *A Greek-English Lexicon, Supplement*
LSJM Rev. Suppl.	Glare, ed., assisted by Thompson, *A Greek-English Lexicon,*

	Revised Supplement
Muraoka 1993	*A Greek-English Lexicon of the Septuagint (Twelve Prophets)*
Muraoka 2002	*A Greek-English Lexicon of the Septuagint—Chiefly of the Pentateuch and the Twelve Prophets*
Woodhouse	*English-Greek Dictionary: A Vocabulary of the Attic Language*

Hebrew

BDB	Brown, Driver, and Briggs, *A Hebrew and English Lexicon of the Old Testament*
Ben-Hayyim	*Historical Dictionary of the Hebrew Language*
Ben Yehuda	*A Complete Dictionary of Ancient and Modern Hebrew*
DBHE	Alonso Schökel *et al.*, *El diccionario bíblico hebreo-español*
DCH	Clines, ed., *The Dictionary of Classical Hebrew*
(Gesenius)-Buhl	*Hebräisches und aramäisches Handwörterbuch*
Gesenius-Rüterswörden-Donner	*Gesenius' hebräisches und aramäisches Handwörterbuch über das Alten Testament*
HALAT	Koehler-Baumgartner, *Hebräische und aramäische Lexikon zum Alten Testament*
HALOT	Koehler-Baumgartner, *Hebrew and Aramaic Lexicon of the Old Testament*
KB	Koehler-Baumgartner, *Lexicon in veteris testamenti Libros*
KB Supplementum	Koehler-Baumgartner, *Supplementum ad Lexicon in veteris testamenti Libros*
Megiddo	Sivan and Levenston, eds., *The Megiddo Modern Dictionary: Hebrew-English*
Reymond	*Dictionnaire d'hébreu et d'araméen bibliques*
SDBH	De Blois, ed., *A Semitic Dictionary of Biblical Hebrew*
Swanson	*Dictionary of Biblical Languages with Semantic Domains: Hebrew (Old Testament).*
Zorell's LHAVT	*Lexicon hebraicum et aramaicum veteris testamenti*
Zorell's LHVT	*Lexicon Hebraicum Veteris Testamenti*

Italian

Bulle and Rigatini	*Nuovo Dizionario Italiano-Tedescoe, Tedescoe-Italiano*
CID	Reynolds, ed., *The Cambridge Italian Dictionary*
Macchi	*Inglese-Italiano, Italiano-Inglese*

Latin

Burgers	*Mediae Latinitatis Lexicon Minus*
CLD	Marchant and Charles, eds., *Cassell's Latin Dictionary*
CNLD	Simpson, rev., *Cassell's New Latin Dictionary*
Lewis	*A Latin Dictionary for Schools*
Lewis and Short	*A Latin Dictionary*
OLD	Glare, ed., *Oxford Latin Dictionary*

Russian

Smirnitsky-Akhmanova	*Russian-English Dictionary*
ORD	Thompson *et al.*, *Oxford Russian Dictionary*

Sanskrit

Apte	*The Practical Sanskrit-English Dictionary*

Spanish

CDEIIE	Smith, ed., *Collins Diccionario Español-Inglés, Inglés-Español*
Cuyas	*Diccionario revisado Inglés-Español y Español-Inglés de Appleton*
DLC	Zerolo *et al.*, eds., *Diccionario de la lengua Castellana extractado del Diccionario Enciclopédico*

Tagalog

English	*English-Tagalog Dictionary*

2. INTRODUCTION

For many reasons the time has come to reassess Classical Syriac lexicography, by critiquing its theory and practice and discussing what kind of Syriac-English lexicon would best serve the needs of the twenty-first century. As detailed in the preface "Beginnings," a group meets annually under the rubric International Syriac Language Project (ISLP) to address these issues. Initially, we canvassed the idea of a lexicon for all Classical Syriac literature. But as David Taylor pointed out, such a project would quickly be overwhelmed by the sheer volume of material that has survived. In a preliminary planning session in 2002 in Kottayam, India, those present[1] therefore concluded that, to quote Alison Salvesen, "it would be wise at this stage to limit ourselves to a manageable corpus," but one that will form a foundation for the later inclusion of other corpora. The Syriac New Testament seemed an obvious starting point. Sebastian Brock noted several advantages of beginning there. For Classical Syriac it would (a) be a logical place to begin because "few texts are of such central importance to Syriac literature as the versions of the New Testament,"[2] (b) serve a wide readership, (c) include both the Old Syriac Gospels and the Peshitta, and—as Andreas Juckel proposes in his article in this volume—perhaps also the Harklean

[1] Sebastian Brock, Terry Falla, Alison Salvesen, and Beryl Turner contributed to the preliminary planning at the 5th Syriac Conference, September 2002, at St. Ephrem Ecumenical Research Institute (SEERI), Kottayam, Kerala, India.

[2] The reason was Brock's; the words in quotation marks are from Jan Joosten, *The Syriac Language of the Peshitta & Old Syriac Versions of Matthew* (SSLL 22; Leiden: E. J. Brill, 1996), 3. "The Gospels especially," continues Joosten, "were read, studied, learnt by heart and taught throughout the Syriac-speaking world and throughout the age of dominant Syrophony in the East. We may submit, therefore, that the language of the New Testament had a strong influence on Classical Syriac. It may have been one of the factors leading to the stabilization of a 'classical' dialect."

Version, and (d) allow us to progress naturally to the Peshitta Old Testament. In addition, we felt it would provide an excellent base for the inclusion of other Syriac corpora.

Another benefit of beginning with the Syriac New Testament would be the relatively large number of resources for it that are already available. For the Gospels we have the critical edition of Pusey and Gwilliam.[3] For Romans–Hebrews Juckel is preparing a critical edition at the Institute of New Testament Textual Research (Münster, Westphalia).[4] From George Kiraz we have an exhaustive six-volume concordance, and his *Comparative Edition of the Syriac Gospels*,[5] and from Jerome Lund a concordance to the Old Syriac Gospels.[6]

For selections of referenced New Testament citations and other relevant information we have a number of lexical works: Brockelmann, Jennings' small but useful New Testament lexicon, R. Payne Smith's *Thesaurus Syriacus*, Whish, and Pazzini's newly published *Lessico Concordanziale del Nuovo Testamento Siriaco*. We also have my lexicon *A Key to the Peshitta Gospels* (KPG), which gives a detailed analysis of every word in the Peshitta Gospels, including exhaustive meanings, syntactic information pertinent to the meanings of a word, Syriac words of similar meaning, the Greek word behind each occurrence of every Syriac word, and a complete analytical concordance of references. We can also look forward to Michael Sokoloff's English translation of Brockelmann. Sokoloff introduces this formidable undertaking in the second volume of this *Perspectives on Syriac Linguistics* series. Sokoloff will correct and update Brockelmann's etymologies and cognates and references to outdated text editions.

While the lexicographer must use translations of Syriac texts circumspectly, they can be helpful resources, both positively and negatively, in the making of a Syriac lexicon (see §8.2.4 Limitations of Translations as Resources for Meanings). For the Syriac Gospels and/or New Testament, in addition to Gwilliam's Latin translation in his and Pusey's critical edition cited above, there are the following English translations: AEINT, Burkitt, Cureton, Etheridge, Lewis, Murdock, and Wilson.[7]

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[3] Philip E. Pusey, and George H. Gwilliam, *Tetraeuangelium Sanctum juxta simplicem Syrorum versionem ad fidem codicum, Massorae, editionum denuo recognitum* (Oxford: Clarendon Press, 1901).

[4] The edition will be presented in three volumes: Rom–1 Cor, 2 Cor–Col, 1 Thess–Heb. It will provide a majority text that will include the variant readings of fifteen manuscripts.

[5] George Anton Kiraz, *Comparative Edition of the Syriac Gospels Aligning the Sinaiticus, Curetonianus, Peshîttâ & Harklean Versions* (4 vols.; NTTS 21; Leiden: E. J. Brill, 1996; 2nd ed., Piscataway, NJ: Gorgias Press, 2003).

[6] Jerome Lund, *The Old Syriac Gospel of the Distinct Evangelists: A Key-Word-in-Context Concordance* (3 vols.; Piscataway, NJ: Gorgias Press, 2004).

[7] The Way International Research Team, eds., *Aramaic-English Interlinear New Testament* (3 vols.; New Knoxville: American Christian Press, 1988–1989). While this interlinear has proved popular, it must be used with caution because of its many translation errors.

F. Crawford Burkitt, *Evangelion da-Mepharreshe: the Curetonian Version of the Four Gospels, with the readings of the Sinai Palimpsest and the Early Syriac Patristic Evidence* (vol. 1.; Cambridge: Cambridge University Press, 1904).

To these resources should be added the lexical insights that result from Jeffrey Lyon's *Syriac Gospel Translations: A Comparison of the Language and Translation Method Used in the Old Syriac, the Diatessaron, and the Peshitto*.[8]

In summary, the aim of this essay is to offer for discussion options for a conceptual framework for a future comprehensive Syriac-English lexicon, initially as a basis for the lexicalizing of the Syriac versions of the New Testament and thereafter for other Syriac corpora. I should, however, emphasize that this discussion is not a signal that work on such a lexicon will begin in the near future. The intention rather is to take a step towards that probably still distant day by seeking to visualize what that lexicon might look like and how it might be achieved, and by anticipating some of the theoretical and practical issues that would be involved.

But where does one begin? A perusal of recent ancient-language lexica, published and in preparation,[9] alerts us to the reality that a Classical Syriac language dictionary will no longer necessarily consist of the same combinations of information that it did formerly. Changes are also being called for by modern linguistics, which convincingly insists that "sound lexicography can only be based on sound linguistic theory," and "recent theoretical developments are of paramount importance for the practical skills of compiling a dictionary."[10] These days lexicography, says Louw in a 1993 article, "requires a new attitude towards dictionaries involving the recognition of different

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William Cureton, *Remains of a very Antient Recension of the Four Gospels in Syriac* (London: John Murray, 1858).

J. W. Etheridge, *The Syrian Churches: Their Early History, Liturgies, and Literature, With a Literal Translation of the Four Gospels from the Peschito* (London: Longman, Green, Brown & Longmans, 1846); *The Apostolical Acts and Epistles, from the Peschito, or Ancient Syriac: to which are added, the Remaining Epistles, and the Book of Revelation, after a Later Syrian Text* (London: Longman, Green, Brown & Longmans, 1849).

Agnes Smith Lewis, *A Translation of the Four Gospels from the Syriac of the Sinaitic Palimpsest* (London: Macmillan, 1894).

James Murdock, *Murdock's Translation of the Syriac New Testament from the Peschito Version* (Boston: Scriptural Tract Repository, 1892).

E. Jan Wilson, *The Old Syriac Gospels: Studies and Comparative Translations* (2 vols.; ECS 1-2; Piscataway, NJ: Gorgias Press, 2002). For the serious flaws that limit the usefulness of this translation see the review by P. J. Williams, *Hugoye: Journal of Syriac Studies,* 5/2 (Online: http://syrcom.cua .edu/Hugoye/Vol5No2/).

[8] Jeffrey P. Lyon, *Syriac Gospel Translations: A Comparison of the Language and Translation Method Used in the Old Syriac, the Diatessaron, and the Peshitto* (CSCO 88; Louvain: Peeters, 1994).

[9] Terry C. Falla, "A New Methodology for Grammatical Classification in Hebrew and Syriac Lexicography," in *Hamlet on a Hill: Semitic and Greek Studies Presented to Professor T. Muraoka on the Occasion of his Sixty-fifth Birthday* (ed. M. F. J. Baasten and W. Th. van Peursen; OLA 118; Leuven: Peeters, 2003), 165–66; "The Lexicon for Which We Long? Some Primary Issues Regarding the Future of Classical Syriac Lexicography," *The Harp* 11–12 (1998): 255–82.

[10] Juri Apresjan, *Systematic Lexicography* (trans. Kevin Windle; Oxford: Oxford University Press, 2000), xi. A forthcoming major work that will undoubtedly contribute to the subject of this essay is Reinhard R. K. Hartmann, *Lexicography: Critical Concepts* (3 vols.; London: Routledge).

kinds of dictionaries."[11] In an earlier essay Louw qualified this affirmation:

> Each type of dictionary, however, should clearly define its scope and purpose. The reader, on the other hand, should not assume that each and every book called a dictionary is a source of information on the meaning of words. The latter type of dictionary is one dealing with the lexical meaning of words. It may be called a semantic dictionary. Similarly one could have a dictionary of usages (for example, contextual and/or grammatical usages), a pronunciation dictionary, an etymological dictionary, a dictionary of set phrases, a dictionary of concepts (such as, for example, theological concepts), a dictionary of social customs, etc.[12]

The kind of comprehensive lexicon we have in mind would be a semantic dictionary as defined by Louw, but like some of its predecessors, it would not be limited to information on the lexical meaning of words. Furthermore, to accommodate the insights and requirements of contemporary lexicography, the lexicon would need to define clearly not only its scope and purpose, but also its methodology. To achieve these goals the conceptual framework for its database would have to address at least five basic questions: for whom is the work intended, what Syriac literature would it cover and would it present that literature in a single work or in a corpus-by-corpus series, what sort of and how much information should be included in each entry and in the work as a whole, how is that information to be ascertained, and how can it be presented in an accessible and user-friendly manner?[13] For the sake of convenience, I have dealt with these questions under five headings: audience, scope, content, methodology, and arrangement and presentation. A further section addresses the issue of implementation.

3. AUDIENCE

At this stage I would like to promote the ideal of a lexicon designed to meet the needs of both scholar and non-specialist. On this matter I must admit to being influenced by the reception that KPG has received in its aim to meet the needs of both beginner and researcher. Without circumscribing the project's specialist purposes, it presents material in such a way that the person still new to the language can readily access the most basic information, which is usually placed at the beginning of an entry.[14] Scholars also find this feature useful as a summary of the research detailed in the rest of an extensive entry. Commercially, the viability of a future lexicon would be enhanced if it were able to meet the needs of a wide audience, which, as Alison Salvesen discusses in chapter 2, would be very different from the readership of a hundred years ago.

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[11] J. P. Louw, "The Analysis of Meaning in Lexicography," *FN* 6 (1993): 140.

[12] J. P. Louw, "The Present State of New Testament Lexicography," in *Lexicography and Translation, with special reference to Bible Translation* (ed. J. P. Louw; Cape Town: Bible Society of South Africa, 1985), 116.

[13] Falla, "The Lexicon for Which We Long?" 254.

[14] See the section entitled "Notes for the person new to the Syriac language" in KPG, 2:XVII–XVIII.

In an article on Biblical Hebrew lexicography, M. O'Connor reminds us that "the amount of material to be sifted and incorporated into a given dictionary has to remain within bounds set down by the work's users, linguistically trained, linguistically eager, and linguistically naïve."[15] But establishing those "bounds" will require much thought, for differences in specialization, interest, need, and even personality, will ensure that different scholars, no less than different students at different stages of their study, will want different things from the one lexicon. For one scholar the primary purpose of a lexicon is to provide a guide to a word's meaning, which he or she either cannot recall or has not come across before. For another lexicon-user the need is to have at hand a detailed and accurate resource for translation, so that the more information there is regarding the definition and nuances of a word's meaning the better. For some, again because of their interests and perspective, it seems unforgivable if, for instance, a comprehensive lexicon fails to provide comparative philology. For others the lexicon is more than any or all of the above in that it is turned to as a tool for research.

For Semitists, says O'Connor, as he looks to the twenty-first century, the sifting process "will develop across the field of Semitic linguistics, as it interacts with the disciplines it seeks to serve and shape, readers of texts, students of history and culture."[16] To this observation I would add that we have reached the era in which it is imperative for Semitic lexicography to consider the endeavours and needs of other ancient-language linguistics and lexicography such as Classical, Septuagint, and New Testament Greek. Increasingly, the audience at one end of the spectrum would seem to want no more than specific and often basic information, and at the other, a resource that can bring together information that can serve both specialist and interdisciplinary scholarship. As we begin our discussions, it would therefore seem wise to see if it is possible to conceive of a work that meets as many interests as possible, presents information in such a way that the user can easily find what is sought, and beckons us beyond our immediate requirements and interests.

4. SCOPE

Although we are proposing a project that initially limits itself to the Syriac New Testament, and then to the rest of the Bible and one or two other early major Syriac writers such as Aphrahat and Ephrem, it is important to ask what scope we would envisage for the completed publication. Let me propose two options.

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[15] M. O'Connor, "Semitic Lexicography: European Dictionaries of Biblical Hebrew in the Twentieth Century," in *Semitic Linguistics: The State of the Art at the Turn of the 21st Century* (ed. S. Izre'el; *IOS XX*; Winona Lake: Eisenbrauns, 2002), 204.

[16] O'Connor, "Semitic Lexicography," 204.

4.1 A Complete Lexicon of Classical Syriac

One option would be a work that covers selections of Classical Syriac from the earliest period to about the middle of the last millennium:[17] a contemporary Syriac-English version of *Thesaurus Syriacus* cum Brockelmann, or a work comparable to the Greek lexicon of Liddell-Scott-Jones-McKenzie (LSJM), or *The Shorter Oxford English Dictionary* (SOED). Whatever the size, it would be substantial. Such size would be inevitable if, on the one hand, it were to do justice to Classical Syriac, and on the other, to the requirements of a contemporary comprehensive lexicon.

This option would have three major benefits. First, it would be a complete work. Secondly, collections of Syriac terms, published and unpublished,[18] and existing major Syriac lexica, would be immediate sources for a great number of lexemes. The lexica include *Thesaurus Syriacus*, J. Payne Smith's *Supplement*, Audo, Brockelmann, Manna, Thelly, and the many word indexes in Werner Strothmann's various editions of Syriac texts (for example, John the Solitary, Jacob of Serugh, and Moshe bar Kepha).[19]

The third benefit is that a good deal of detailed information essential to the contents of lexical entries could be adapted, or cited for the view that it represents, from existing Syriac lexical works both large and small: the lexica cited in the preceding paragraph, Brun, Costaz, Goshen-Gottstein, Jennings, Kiraz, *Concordance* as a source for paradigmatic information, Köbert, Köbert's "Addenda," KPG, J. Payne Smith, and Sokoloff's planned translation and revision of Brockelmann.

The primary disadvantage of this option is that the project may not be achievable within the authors' lifetimes. It would be an enormous undertaking. A wide selection of Syriac texts not represented in existing lexica would have to be studied to locate words that have not been listed in a lexicon. Furthermore, in my preparation of KPG I have found that one cannot assume that even biblical material has been adequately covered. Thus, both lexicalized[20] and unlexicalized texts would require examination to verify the meanings of words and to ascertain unrecorded senses and grammatical classifications.

But as I intimated earlier in this section, Syriacists have not been idle as far as the collecting of unrecorded words is concerned. In chapter 8 of this volume, Brock notes

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[17] On the *terminus ad quem* see Brock's comments in the penultimate paragraph of his essay reproduced in this volume.

[18] Brock notes some of these in the final chapter of this volume.

[19] Listed by Brock in his "Select Bibliography" in Takamitsu Muraoka, *Classical Syriac: A Basic Grammar with a Chrestomathy* (PLO n.s. 19; Wiesbaden: Harrassowitz, 1997).

[20] The term "lexicalize" is used in this essay to refer to the listing and analyzing of words (lexemes) in a lexicon (dictionary), and thus to the creating of a lexical entry or entries in a lexicon. The entry may contain no more than a gloss or it may cover a whole range of lexical data. Accordingly, "unlexicalized" refers to a word for which a lexical entry in a lexicon (dictionary) has not yet been created, or to a corpus or corpora for which a lexicon has not yet been made. This usage differs from for the way "lexicalize" is used in modern linguistics and defined by David Crystal, *A Dictionary of Linguistics & Phonetics* (5th ed.; Oxford: Blackwell, 2003), under "lexis," 268.

some work done in this area, some by himself (page 203). David Taylor tells me that he has listed vocables not cited in existing lexica, and it might be surprising how many other scholars have been doing the same. It would not be too difficult to establish a databank comparable to that initially set up by James Murray, the first editor of the *Oxford English Dictionary* (OED),[21] to which an acknowledged network of interested Syriacists could contribute. While this would not replace the task of systematically searching Syriac writings and sifting the results, it might prove a valuable means of gathering lexemes that might otherwise go unnoticed because of the amount of material to be perused. In the final paragraphs of chapter 8, Brock outlines an approach to preparing a lexicon that seeks to serve Syriac literature generally. His conclusion is that "although formidable, it would be a manageable undertaking—provided, of course, the resources, financial and of suitably qualified personnel, could be found."

4.2 A Corpus-by-Corpus Series

The second option would be straightforward to implement and more immediately achievable, and in the long term would provide an ideal foundation for a complete lexicon. It would consist of a series in which each volume is limited to a defined corpus of Syriac literature. For instance, the Syriac Old Testament would constitute one volume, and the Syriac versions of the New Testament another. Because most Syriac literature is dateable, the series could proceed diachronically, without encountering the problems inherent in lexicalizing the Hebrew Bible.[22] Philologically, the fourth century would be an appropriate demarcation for the first stage outside the biblical corpus. One volume could be devoted to the *Odes of Solomon*, the *Acts of Thomas*, Bardaisan, and Aphrahat, and another to Ephrem. The series would not need to be strictly diachronic. Early publications could include a late important author or selections of writings from various periods. For our present discussion, it is not the provenance, date, and amount of material that would be incorporated in a particular volume that is important, but the nature, feasibility, and advantages of the concept.

The amount of Syriac literature still to be lexicalized would probably favour this option, for the project could be tackled in manageable corpora. It would permit prioritizing. People new to the Syriac language often begin with the biblical text. But before long other writings, especially those of the fabled Ephrem, begin to beckon. For

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[21] Murray was editor from 1879 until his death in 1915. The first part of OED was published in 1884 and completed in 1928. For a fascinating and intriguing account of the making of OED see Simon Winchester, *The Surgeon of Crowthorne: A Tale of Murder, Madness and the Love of Words* (London: Viking, 1998), and Winchester's more recent book *The Meaning of Everything: The Story of the Oxford English Dictionary* (Oxford: Oxford University Press, 2003).

[22] Sebastian P. Brock, "Some Diachronic Features of Classical Syriac," in *Hamlet on a Hill: Semitic and Greek Studies Presented to Professor T. Muraoka on the Occasion of his Sixty-fifth Birthday* (ed. M. F. J. Baasten and W. Th. van Peursen; OLA 118; Leuven: Peeters, 2003), 95–112, esp. 107–8.

such people a lexical window into a celebrated poem would be a welcome gift. The project might therefore aid the study of Syriac if it were to begin with the New Testament and Ephrem, either sequentially or concurrently. As Brock says, "lexically, virtually all Ephrem is unexploited, and he is the major author who needs a major lexicon."[23] At the same time, other Syriacists with special interest and expertise in, for instance, a particular book of the Syriac Old Testament, a writing such as the *Acts of Thomas*, or author such as Isho'dad of Merv or Barhebraeus, might prepare their own lexica within the editorial guidelines worked out for the overall project. This corpus-by-corpus option would also permit the project to be open-ended. If time and funding so dictated, one generation could continue where another left off.

There are other advantages. A series could encompass a greater range of lexical and semantic information than could be accommodated by a single work. A particular volume could be designed to meet specific requirements of its corpus without abrogating the principles of cohesion and consistency. For example, each entry in the biblical volumes and other Syriac translations could include a section that provided the correspondences of the source text. In a lexicon on Ephrem, the student might welcome a wider than normal range of judicious Syriac-English referenced citations of semantically challenging words and phrases.

We know that the senses of a lexeme can be laid out accurately only by ascertaining the meaning of a particular occurrence in a particular text at a particular stage in the history of the language. In this regard, a corpus-by-corpus approach might advance our knowledge of diachronic description for Classical Syriac, and might prove useful for the preparation of a comprehensive Syriac lexicon.

To compensate for the "incompleteness" of a corpus-by-corpus series, the computerized database that would be essential for both options could be designed (a) to produce smaller supplementary lexical works, such as a glossary of collected lexemes that are still to be collated in the one work, and (b) to incorporate information for a concise edition either of a particular corpus or of Syriac literature generally.

5. CONTENT OF A TYPICAL ENTRY: PART ONE

5.1 Non-Contentious Issues

The centre point of a lexicon's content is its entries, though recently the substance, or lack of it, of the introduction and indexes has increasingly come under review. Two obvious resources to consider when determining the conceptual framework of an entry's content are existing Syriac lexica and other lexical information that has been introduced to non-Syriac ancient-language dictionaries that does not yet have an established place in Syriac lexicography. Several features are non-contentious and warrant a permanent place in a future comprehensive Syriac lexicon.

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[23] From conversation with Sebastian Brock at the Oriental Institute, Oxford (27 November 2001).

5.1.1 Various Types of Lexemes

"Lexemes are the units which are conventionally listed in dictionaries as separate entries."[24] As the headwords of entries, lexemes are the foundation of a lexicon. Some types of lexemes deserve special comment: variant readings; homonyms (which necessitate consideration of polysemy), loanwords; and nomenclature, idioms, and other terms given the status of separate listings in existing major Syriac lexica.

Variant Readings: A Syriac word that occurs only as a variant reading in a critical edition of the corpus being lexicalized (see §4.2) may deserve inclusion as a lexeme. The term ܒܨܢܐ *pit*, which occurs only as a variant reading in the Peshitta New Testament, is an example. In Pusey and Gwilliam's critical edition of the Peshitta Gospels it is a variant of ܒܚܢܐ *pit* in Mt 12:11, which was probably intended as a play on ܥܢܐ *sheep* four words earlier.

Occasionally, a Syriac variant reading may be worthy of inclusion as a contextual citation in a regular entry (that is, an entry that does not have a variant reading as its headword) because the variant reading illustrates a semantic usage that is not to be found elsewhere in the lexicalized corpus. Or there may be a good reason to follow an illustrative quotation in a regular entry with a distinctive variant of that quotation. An example of the latter is KPG's contextual citation of both the Peal ܫܚܐ *err*, *be deceived* in Mt 24:5 and its Aphel variant *deceive*, which has a parallel in Mt 24:11 as well as a Marcan synoptic parallel. The illustrative example reads: *"many will err* (ܢܫܚܘܢ)*"* Mt 24:5 (*for var. Aph* ܐܫܚܐ = πλανήσουσιν *they will deceive see Pusey & Gwilliam's crit. ap., p. 149; cf. Mk 13:6; Mt 24:11*).[25]

Homonyms: In a recent book on polysemy, Brigitte Nerlich and David Clarke comment that "the precise relationship between polysemy, homonymy, ambiguity and vagueness is still an unresolved issue in lexical semantics."[26] For the lexicographer this means that homonymy and polysemy cannot always be clearly distinguished from one another and lexically can result in instances of uncertainty, ambiguity, and in differences of opinion. As John Lyons observed almost three decades ago, "the difference between homonymy and polysemy is easier to explain in general terms than it is to define in terms of objective and operationally satisfactory criteria."[27] Hence the comment of David Crystal that "in semantic analysis the theoretical distinction between homonymy and polysemy provides a problem which has attracted a great deal of attention."[28] In a discussion of homonymy and polysemy as it affects ancient Hebrew, James Barr concludes that "there is no absolute distinction between polysemy of one item and

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[24] Crystal, *A Dictionary*, 266.

[25] KPG, 2:114.

[26] Brigitte Nerlich and David D. Clarke, "Polysemy and Flexibility: Introduction and Overview," in *Polysemy: Flexible Patterns of Meaning in Mind and Language* (ed. Brigitte Nerlich *et al.*; TLSM 142; Berlin: Mouton de Gruyter, 2003), 4.

[27] John Lyons, *Semantics*, vol. 2 (Cambridge: Cambridge University Press, 1977), 550.

[28] Crystal, *A Dictionary*, 220.

recognition of several homonyms. Polysemy … is one of the causes which can produce later homonymy."[29] As features of lexicon making, homonymy and polysemy remind us that, as in other areas of historical research, we must seek not only to learn what can be known but also to become aware of what cannot be known.[30] Nevertheless, homonymy and polysemy are necessary lexical features and to that extent are not contentious.

Polysemy refers to "a lexical item that has a range of different meanings."[31] As defined by Johannes Hospers, "it involves semantic variants that go back to the same root and can be derived from one principal or basic meaning and can also often be predicated according to the rules of semantic change."[32] "Most lexemes," says Hospers, "are in principle polysemous, or they can easily become polysemous."[33] An example of polysemy in Classical Syriac that is free of ambiguity is the lexeme ܒܪܬܐ *daughter*; *egg*, *seed, fruit*; *small town*, *village*, *suburb*.

In contrast to polysemy, which always "concerns one word with several semantic variants,"[34] homonymy always involves two or more lexical items (homonyms) that have the same form and/or spelling but differ in meaning. Or, to put it another way, homonymy is "the existence of different but unrelated meanings for a single word form."[35] As demonstrated by Brockelmannn and by Schulthess, homonyms are not uncommon in Classical Syriac.[36] The four following examples are homonyms that share the same root consonants but differing Semitic roots:

(a) ܫܚܝܐ n. *sword*, *blade*; fig. *war*, *fighting*, *conflict*; *violence*, *strife*, *discord*; ܫܚܝܐ adj. and n.: adj. *desolate*, *waste*, *uninhabited*, *deserted*; *waterless*, *arid*; fig. *forlorn*, *destitute*; *empty*, *vain*; n. *devastation*.

(b) Two Pael verbs with the same root consonants ܙ–ܫ–ܚ but with different meanings from differing Semitic roots: *blacken*, *make black* and *compel*, *press someone into service*.

(c) Two Peal verbs with the same root consonants ܫ–ܠ–ܚ but with different meanings from differing Semitic roots: *take off*, *strip*, and *send*; *throw*.

(d) From the second of these roots we have the noun homonyms ܓܙܐ *fleece* and ܓܙܐ *swarm* (*of flies or bees*).

In Syriac lexicography there is general recognition that a homonymic distinction should be made between the two different sets of meanings that are to be assigned to

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[29] James Barr, "Three Interrelated Factors in the Semantic Study of Ancient Hebrew," *ZAH* 7 (1994): 40–41.

[30] Adapted from Bruce M. Metzger, *The Text of the New Testament: Its Transmission, Corruption, and Restoration* (3rd ed., Oxford: Oxford University Press, 1992), 246.

[31] Crystal, *A Dictionary*, 359.

[32] Johannes Hendrik Hospers, "Polysemy and Homonymy," *ZAH* 6 (1993): 115.

[33] Hospers, "Polysemy and Homonymy," 116.

[34] Hospers, "Polysemy and Homonymy," 115.

[35] Nerlich and Clarke, "Polysemy and Flexibility,"4.

[36] On the etymological superiority of Brockelmann and Schulthess over lexica in the tradition of *Thesaurus Syriacus*, see §6.1.3, p. 30.

the form ܫܢܝܛܐ cited above. Thus the noun homonym ܫܢܝܛܐ *sword*, *blade*; fig. *war*, *fighting*, *conflict*; *violence*, *strife*, *discord* is to be distinguished from the noun homonym ܫܢܝܛܐ *devastation* and the adjective homonym ܫܢܝܛܐ *desolate*, *waste*, *uninhabited*, *deserted*; *waterless*, *arid*; fig. *forlorn*, *destitute*; *empty*, *vain*.

However, the verbs of the ܫ–ܗ–ܐ and ܫ–ܬ–ܗ roots, and the form ܡܫܬܐ, illustrate a familiar dichotomy of opinion in Syriac lexica on issues of etymology. Both verbs are treated homonymously by Brockelmann (1895; 1928) and those who adopt his position: Köbert (1956), Costaz (1963; 1986), Goshen-Gottstein (1970), KPG (1991–), and Kiraz, *Concordance* (1993). But they are regarded as polysemous, and therefore as belonging to one root only, by Whish (1883), Brun (1895; 1911), *Thesaurus Syriacus* (fascicule 10, part 1, ܐ–ܗ; 1897), and thereafter by J. Payne Smith (1903), Klein (1916), and Jennings (1926). The two meanings of ܡܫܬܐ, neither of which occurs in the New Testament and therefore neither of which is cited by Jennings or KPG, are classified as homonyms by Brockelmann, Köbert and Costaz, but under the one root by Brun, *Thesaurus Syriacus* and J. Payne Smith.

Two comments may be made by way of conclusion to these observations on the place of homonymy in the Syriac lexicographical enterprise. The first is that the discipline of etymology can sometimes help to validate the lexical presentation of a Syriac word with two markedly different meanings as two different lexemes (homonyms). This is the case if a dialectical or other Semitic cognate not only has the same root as the Syriac homonyms but also has two comparable meanings. The Syriac verbs with the root consonants ܫ–ܬ–ܗ cited above are an example. One only has to turn to Sokoloff's *A Dictionary of Jewish Babylonian Aramaic* (DJBA, pages 1147–48) and *A Dictionary of Jewish Palestinian Aramaic* (DJPA, pages 551–52) to find that these Syriac homonyms have a parallel in Jewish Babylonian and Jewish Palestinian Aramaic. Brown-Driver-Briggs (BDB), Brockelmann, Goshen-Gottstein, and other works also attest to two roots in some other Semitic languages. Etymological information of this kind would have a justifiable place in the lexicon (see also §6.1.2, 8.2.2, 9.3).

The second concluding comment is Barr's observation that the incidence of polysemy, and of homonymy of lexemes, might be substantially reduced if one adopted J. Hoftijzer's suggestion for Classical Hebrew that each verbal stem of any particular root should be treated as a separate lexeme.[37] In a Syriac lexicon this could be achieved by treating each conjugation as a separate entry under its root, as is done in KPG.[38]

Loanwords: One aspect of etymology that has proved its worth for Syriac lexicography is the citation of loan words, words adopted into Classical Syriac from another language. In chapter 8 Brock cites work accomplished on Greek words in Syriac and their significance for Syriac studies. On loanwords generally, Sokoloff's DJBA and DJPA

[37] Barr, "Three Interrelated Factors," 41.

[38] For a more detailed discussion see below §9.4, esp. the fifth paragraph.

may serve as models, for they give the sources of loanwords from Akkadian, Hebrew, Persian, and Greek.

Nomenclature, Idioms, and Other Terms: A perusal of Brockelmann, Brun, Costaz, KPG, J. Payne Smith, Jennings, Pazzini, and *Thesaurus Syriacus* quickly reveals the useful place that the separate listing of significant terms and phrases occupies in Syriac lexica. Costaz, for instance, has 7 listings under the noun ܟܬܒ, ܟܬܒܐ, Köbert 12, Pazzini 26, Jennings 28, KPG 85, J. Payne Smith 104, Brockelmann 196, and *Thesaurus Syriacus* almost 400. Under ܫܡ Brockelmann lists 17 analytical categories and terms, *Thesaurus Syriacus* 37, and KPG 42.

5.1.2 Notations of Parts of Speech (see also §8.1.1)

Some lexica (Brockelmann, Brun, Goshen-Gottstein, Klein, Köbert) do not provide notations of parts of speech but leave it to the reader to infer from the lemmatization (and from the beginner's point of view, often from the translation), frequently without success,[39] whether a lexeme is, for instance, a noun, adjective, or adverb. One should, however, note that occasionally Brun and Costaz depart from their policy of allowing the grammatical classification of their lexemes to be self-identifying in order to specify a particular function. An instance of this is when they inform the user that ܣܦܝܩܐ (see next paragraph), which their glosses introduce as a noun, is also employed as an adjective.

Lexica that do provide part-of-speech notation (Jennings,[40] KPG, Pazzini, J. Payne Smith, Thelly, *Thesaurus Syriacus*) cite it immediately after the headword(s) (for example, ܟܬܒ, ܟܬܒܐ *n.m.*; ܣܦܪܬܐ *n. com.*). Usually, these lexica provide more than one part of speech for words that have more than one syntactic function. Substantivized and adverbialized adjectives come into this category. An example is ܫܦܝܪ, ܫܦܝܪܐ, which functions as an adjective and a noun, and in its absolute state as an adverb. Another example is ܣܓܝ, ܣܓܝܐ, which functions as an adjectival quantifier and substantive, and in its absolute state as an adverb. Substantives serving as adjectives also require more than one part of speech. ܣܦܝܩܐ (*empty*, *uninhabited*, *solitary*; *wilderness*, *desert*; *ruin*, *desolation*, *devastation*) is a good example of a term that functions as both an adjective and a noun. Its treatment in lexica also illustrates how often they are less than precise in their provision of part-of-speech notations, for only Brun, Costaz, and KPG name this term as an adjective as well as a noun.

Words with the form of a passive participle deserve special mention. They also often have more than one syntactic function (for example, verb, adjective and substantive).[41] But the task of grammatically classifying these passive participial forms

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[39] Falla, "A New Methodology," 166, note 7.

[40] Jennings does not use the conventional abbreviations "n.m.," "n.f." and "adj." to distinguish between nouns and adjectives, but identifies nouns by identifying their gender only; e.g., ܣܥܘܕܬܐ f. *a supper*. Adjectives are unmarked.

[41] KPG, 2:XX-XXIII.

and assigning them satisfactory notations of parts of speech has caused seemingly endless problems for the Syriac lexicographer, with the result that lexica differ greatly in their treatment of them. What one lexicon calls a passive participle another will call an adjective, or participial adjective, and yet another a substantive, and so on.[42] From volume two onwards, KPG seeks to overcome these lexical inconsistencies by applying a new principle of grammatical classification to all Syriac words. In an introductory section for the person new to the Syriac language, KPG describes this new methodology as follows:

> [W]hat a word is called always corresponds to how it is actually used in the text that is cited. Thus a word in the lexicalized text that has the *form* of a passive participle but the *function* of an adjective is listed as and called an adjective. In contrast to previous and conventional procedures, the application of this new principle brings simplicity and consistency to the notations of the parts of speech.[43]

Syriac lexicography has reached the stage where it is no longer acceptable to avoid the provision of notations of parts of speech or the problems associated with establishing them. In a contemporary grammatically-classified comprehensive Syriac lexicon notations of parts of speech would be an asset in their own right. They are also essential to the interpretation and evaluation of other lexical information such as meanings, words of similar meaning, syntactic data, and correspondences where they exist.

5.1.3 Paradigmatic Information

Paradigmatic information is usually given at the beginning of an entry following the headword (Jennings, KPG, J. Payne Smith, *Thesaurus Syriacus*). An exception is Pazzini in which referenced paradigmatic data are a primary focus and are integrated with other information. For a new comprehensive Syriac-English lexicon, my inclination would be to include the primary forms of a verb for each conjugation (for example, pf., impf., imp., inf., and act. pt. where they exist) and nominal and other forms where they are irregular or might be thought to constitute a difficulty for the reader. Thus the Peal ܣܡܟ, Peal ܫܒܩ, Aphel of the geminate root ܢܓܕ, and the noun ܠܠܐ, ܠܚܫܐ would be respectively introduced as:

> PEAL ܣܡܟ *pf. 3ms.*, ܢܣܡܟ *impf. 3ms.*, ܣܡܟ *imp.*, ܣܡܟ *act. pt. ms.*
>
> PEAL ܫܒܩ *and* ܐܫܒܩ *pf. 3ms.*, ܢܫܒܩ *impf. 3ms.*, ܫܒܩ *and* ܐܫܒܩ *pf. 3mpl.*, *occasionally* ܐܘܟ *for* ܐܘܟ *impf. 2mpl.*, ܫܒܩ *inf.*, ܫܒܩ *act. pt. ms.*, ܫܒܩܐ *act. pt. fs.*

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[42] KPG, 2:XXIII–XXXVII; Falla, "Problems in Syriac Taxonomy and Parts of Speech from the Nineteenth Century to the Present" *JEastCS* 56, 1–4 (2004): 225–43.

[43] KPG, 2:XVII; see also KPG, 2:XX–XXVII; Falla, "A New Methodology," 171–90.

APHEL ܐܰܫܠܶܡ *pf. 3ms.*, ܐܰܫܠܶܡܘ *pf. 3mpl.*, ܢܰܫܠܶܡ *impf. 3ms.*, ܐܶܫܬܰܠܳܡܳܐ *inf.*, ܡܰܫܠܶܡ *act. pt. ms.*

ܫܠܳܡ, ܫܠܡܳܐ *n.m.*, ܫܠܡܶܐ *emph. pl.*

In Pazzini each paradigmatic item is followed by a chapter and verse reference or references. To incorporate references in the above model would require considerable space and time, but as Pazzini demonstrates, it is a most helpful addition. To include this feature would not, however, replace the need for an index comparable to the "Index of Tricky Syriac Forms" in the second volume of KPG, which enables the user to locate irregular and troublesome forms (§7.1.9).

If we adopt the option of a corpus-by-corpus series (§4.2), then certain terms could be complemented by information that is appropriate to the corpus in question, and that may also come within the categories of syntax and semantics, as is the case with ܣܘܡܟܳܐ as it is used in the Syriac New Testament:

ܣܘܡܟܳܐ *n.f.*, *in NT usually pl.* ܣܰܩܘܡܟܶܐ *with s. signification.*

5.1.4 Meanings of Words

Locating and listing lexemes is only the first step in the making of a lexicon. This seemingly obvious fact cannot be taken for granted, especially with regard to "the lexical meaning of each word (or meanings, suitably classified)," which is the "heart of the lexicon."[44] As Barr says:

> Lexicography has a semantic component. People expect the dictionary to say something about meanings, to classify or explicate meanings in some way or other. This semantic responsibility can be avoided only if we once again allow lexicography to degenerate into a mere listing of the forms that occur, without any semantic statements at all. It is one of the differences between a dictionary and a concordance that its semantic component is greater: even if it lists all the occurrences of a word, it does not list them automatically in the sequence of their appearance in a text, but it orders and classifies them according to contexts and meanings. Even a concordance has a substantial semantic component; if it does not, it will have to accept absurdities like the listing of homonyms as if they were the same word;[45] but the semantic element in the dictionary is the greater.[46]

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[44] John A. L. Lee, *A History of New Testament Lexicography* (New York: Peter Lang, 2003), 184. Lee's new work is referred to a number of times in this essay, so that it is worth noting that his history concerns only *Greek* New Testament lexicography and does not venture into versional New Testament lexicography or into the lexicography of other ancient languages.

[45] This author's added footnote: Examples of such "absurdities" in Syriac are to be found in The Way International Research Team, eds., *The Concordance to the Peshitta Version of the Aramaic New Testament* (New Knoxville: American Christian Press, 1985). No distinction is made between the two different functions of the form ܐܰ, disjunctive particle *or*, *either* and comparative particle *than*, *rather than*. New Testament references to these two functions are conflated and glossed only as "or," "either …, or." Similarly, all the New Testament references for ܐܶܠܳܐ are

Seven aspects regarding the provision and presentation of the lexical meanings of words are discussed in later sections: definition of meanings (§7.1.1), the relationship between definitions and glosses in a Syriac lexicon (§7.1.1), the exhaustive treatment of the senses of a word (§7.1.2), grading new senses (§7.1.3), ascertaining the meanings of words (§8.2.3), ordering the meanings of a word, (§8.2.3), and the limitations of translations as resources for meanings (§8.2.4).

5.1.5 Illustrative Examples (see also §8.2.5)

For many beginners and more experienced readers, illustrative examples (contextual citations) that complement a Syriac word are a most helpful lexical aid to the reading, learning, and understanding of the language. Illustrative citations are one of the most attractive features of J. Payne Smith's lexicon and are, I suspect, one of the reasons for its justifiable popularity. They are an integral part of KPG,[47] Greek lexica such as BDAG and Muraoka 1993 and 2002, and a valuable asset in the recent Aramaic dictionaries of Sokoloff (DJA, DJBA, and DJPA).

5.1.6 References

References are an essential element for a comprehensive lexicon in that they inform the reader where a lexeme or quotation from a Syriac text can be found. In this respect, the larger lexicon differs from the purpose of the work that seeks to do no more than identify the existence of a lexeme and provide a rough guide to its meaning. The provision of sources would therefore be a significant part of the making of a typical entry in the kind of lexicon this essay envisages. This task will be made easier by concordances, and by referenced data and/or illustrative quotations in Brockelmann, Jennings, KPG, Pazzini and *Thesaurus Syriacus*, even though some of these resources treat only a very limited corpus. From such citations the lexicographer can select examples that serve the purpose of the new entry and that complement the introduction of new quotations. Existing references are all the more important when they qualify uncommon lexemes or quotations, for the task of having to retrace some rare instantiation would be both difficult and time-consuming.

Earlier (§4.1), we identified existing major Syriac lexica that would be useful sources for a great number of lexemes: *Thesaurus Syriacus*, J. Payne Smith's *Supplement*, Audo, Brockelmann, and Thelly. However, neither Audo, nor Thelly who bases his lexicon on Audo,[48] give sources for their lexemes. Audo does cite the source for some

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cited under ܐ̰ (the concordance is unvocalized) as if a concordance did not need to distinguish the compound from the separate form.

[46] James Barr, "Hebrew Lexicography," in *Studies on Semitic Lexicography* (ed. Pelio Fronzaroli; Quaderni di Semitistica 2; Florence: Istituto di Linguistica e di Lingue Orientali, Università di Firenze, 1973), 118.

[47] In KPG citations within an entry are in English only, but numerous analytical categories, which constitute sub-entries, are in Syriac. All are translated into English.

[48] I record here my thanks to Fr. Thelly for the following information about his lexicon:

of his citations from Syriac literature, but not for all. To make the most of these two invaluable resources it will therefore be necessary to find a way of locating the sources of their lexicalized information.

5.1.7 Acknowledgement of Philological Proposals (see also §9.9)

New philological proposals regarding a new Syriac word or a new meaning for a known Syriac word warrant acknowledgement in a contemporary comprehensive lexicon. DCH's acknowledgement from the second volume onwards of new philological proposals and citations of studies on the semantics of individual Hebrew words, apparently in response to reviewer requests, demonstrates the value of such information.

6. CONTENT OF A TYPICAL ENTRY: PART TWO

6.1 Features Requiring Debate

Other features that have a prominent place in existing Syriac lexica will probably require more extensive discussion. Let me begin by offering here some observations and suggestions regarding five features: root-versus-alphabetical arrangement, comparative and etymological material, figurative speech, correspondences where the lexicalized text is a translation, and concordantial information.

6.1.1 Root-versus-Alphabetical Arrangement (see also §9.1)

Implications and Current Trends: A basic issue is whether a future Syriac lexicon would be best organized according to root or alphabetical order. Alphabetical order is primarily a matter of convenience and philosophy, what is thought to be the simplest and, for some, the best way to present an array of complex material. A root-based system, however, provides substantial lexico-philological content, which is the reason for my discussing the matter at this point rather than under the heading "Arrangement." The choice is not unimportant, for it will affect the basic arrangement of the lexicon, the location of all words that can be assigned a root or a stem,[49] and, to a significant

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"My lexicon is mainly from Audo. I utilized three other dictionaries: Margoliouth (J. Payne Smith), Costaz, to which I sometimes referred, and Andrews Kalappura's Syriac-Malayalam Dictionary revised by Mathew Vadakkel (Mangalappuzha, Alwaye, Kerala: Mar Thoma Sliha Press, 1940). My lexicon corrects some errors in Vadakkel's revision and in Margoliouth. For understanding errors in Margoliouth I referred to *Thesaurus Syriacus*. Kalappura's dictionary was first published in 1907 (Puthempally: Mar Thoma Sliha Press). It has 698 pages, an introduction by Bishop John Menachettil, Trichur, and letters by the other Syro-Malabar bishops. It has a supplement of 37 pages and a corrigenda of 44 pages. My lexicon lacks ܚܒܫܐ, ܚܒܝܒܐ, which is not listed by Audo."

[49] It is perhaps worth noting that while the term "stem," like "root," may refer to a single root morpheme within the structure of a word (i.e., a simple stem, as ܣܥܪ in the noun ܣܥܪܐ *envy*, *jealousy*), some linguists reserve it to refer to two or more root morphemes within the structure of a word (i.e., a "compound" stem, as in the Syriac demonstrative pronouns, the

degree, how the lexicon is used and how words are perceived in relation to each other. Both systems have been employed for Syriac (as distinct from other dialects of Aramaic), Aramaic, and Hebrew lexica. Each system has its disadvantages. For this reason, each approach has been modified with a view to improvement. Organization by root often employs a system of internal cross-referencing or external indexing. The alphabetical approach now often includes under the given lexeme a list of other words of the same root, and internal cross-referencing where variations in the spelling of a word create a problem for its citation in alphabetical sequence.

At present, the trend among Classical Hebrew dictionary makers is towards using the alphabetical arrangement.[50] The primary reason would seem to be the difficulty of the root-based system for the user. Indeed, for DCH it is the only reason.[51] There is no mention of the merits of the alternative. In his review of A. Tal's new dictionary of Samaritan Aramaic (מילון הארמית של השומרונים), Sokoloff notes that alphabetical arrangement is employed by Rabbinic Hebrew, Canaanite, Ugaritic, and Akkadian.[52]

Until the publication of Tal's מילון הארמית של השומרונים,[53] alphabetical arrangement has also been the predominant approach of Aramaic lexica other than Syriac.[54] In his review, Sokoloff, who sees the root-based system as a nineteenth-

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adverbs ܟܠܗܝ and ܡܚܝ, and numerals such as ܫܒܥܡܐ), or of a root morpheme plus a derivational affix (i.e., a "complex" stem, as in adverbs such as ܟܡܥܠܐ). However, "roots" are sometimes also classified as "simple" (i.e., compositionally unanalyzable in terms of morphemes) or "complex"/"compound" (i.e., certain combinations of simple root forms).

[50] An alphabetical arrangement was common in Hebrew lexica prior to BDB (see BDB, p. viii) and was adopted by the Hebrew dictionaries of Ben Yehuda (1908–1959; Centennial Edition, 1960), Zorell's LHAVT (1940–1954; repr. 1968; the Aramaic part was published separately by Ernst Vogt in 1971; 2nd ed. 1994), KB (1953), and KB Supplementum (1958). Alphabetical arrangement has also been adopted in the revised editions of Zorell's LHVT (1960; repr. 1984, 1989), HALAT (1967–1996) and HALOT (1994–2000), and the dictionaries of Gesenius-Rüterswörden (1987), Reymond (1991), DCH (1993–), DBHE (1994), Swanson (based on semantic domains for Hebrew and Aramaic Old Testament, 1997), and SDBH, which was commenced in 2000 (§6.1.4, p. 34). Before it was abandoned, The Princeton Classical Hebrew Dictionary Project also intended to employ alphabetical order—see J. J. M. Roberts, "The Princeton Classical Hebrew Dictionary Project," *ZAH* 3 (1990): 84–89.

A major exception is BDB (1907), which "decided … to follow the *Thesaurus* (of Gesenius), and the principal dictionaries of other Semitic languages" (BDB, p. viii). Another exception is the international joint research project Semantics of Ancient Hebrew Database, which gives detailed attention to "Root and Comparative Material," as is evident in the project's lexical entries published in Takamitsu Muraoka, ed., *Semantics of Ancient Hebrew,* AbrNSup 6 (1998). A root system is also adopted by Ze'ev Ben-Hayyim's forth-coming *Historical Dictionary of the Hebrew Language*—see Ben-Hayyim, "Specimen Pamphlet: The Root ערב," *Lešonénu* 46 (1982): 165–67.

[51] DCH, preface, 15.

[52] Michael Sokoloff, "A New Dictionary of Samaritan Aramaic," *AS* 1.1 (2003): 71.

[53] A. Tal's Dictionary of Samaritan Aramaic (2 vols.; Leiden: E. J. Brill, 2000).

[54] Jacob Levy's CWTRS (1867–1868; reissued 1876 and 1881; repr. in one vol. 1959 and 1966), Levy's NCWTM (1876–1889), WTM (2nd rev. and enl. ed. of NCWTM, 1924), Dalman (1922), Sokoloff's DJBA (2002) and DJPA (2nd ed. 2003), and Hoftijzer and Jongeling's DNWSI (1995), which includes dialects other than Aramaic (for a brief description of this work see

century phenomenon and is strongly committed to the alphabetical system, expresses regret that Tal has chosen a root model: "while not stating it, Tal has followed the lead of his teacher, Ben-Hayyim, who has opted for an arrangement by roots for the Hebrew Language Academy's forthcoming *Historical Dictionary of the Hebrew Language*."[55] One of Sokoloff's reasons pertains to Samaritan Aramaic and not to Semitic languages generally: "for a dialect such as SA in which there have taken place many phonological changes from the classical Semitic state, the problem of determining the correct root is not always simple, since it often differs from the historically attested one."[56] Sokoloff's other reasons are among those discussed by James Barr and Takamitsu Muraoka in their assessment (1994) of the respective applicability of the root and alphabetical systems to ancient Hebrew. We will turn to their assessment, which applies to Classical Syriac, after the following brief historical perspective.

The Influence Attributed to J. Payne Smith: For M. O'Connor, the move away from the root model begins with J. Payne Smith, whom he honours as "a pioneer of Semitic lexicography"[57] because of her use in *A Compendious Syriac Dictionary* "of only one level of analysis, the word." "Buhl,[58] and Brown, Driver, and Briggs," says O'Connor, "resisted her innovation," but "the dictionaries of Biblical Hebrew from the 1950s and later have followed her lead."[59] When O'Connor speaks of major lexicographers resisting J. Payne Smith's alphabetical system he implies that it was her intention to displace the root-based order with her own innovation. But the evidence is otherwise. While J. Payne Smith is to be credited for a Syriac-English alphabetically organized system that was welcomed and influential, she devised it for a specific readership. "As this abridgement," she says in her preface, "is meant chiefly for beginners I thought alphabetical rather than scientific order to be preferred, all the more because ideas of scientific arrangement vary." As we know, her abridgement is founded upon her father's *Thesaurus Syriacus*. She had hoped that her compendium, the first part of which had been revised by her father, "would have appeared together with or earlier than" the last part of his monumental work. But this was not possible, she tells us, "due chiefly to the death of my father in 1895, and to the consequent necessity of laying aside my own papers, in order to labour, in conjunction with D. S. Margoliouth, at the completion of the greater work." Father and daughter recognized the need for both

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Theodore Kwasman, "'Look it up in …'? Aramaic Lexicography: Some General Observations," *AS* 1.2 (2003): 200–201). Marcus Jastrow's dictionary is arranged alphabetically, but incorporates a partial root-based system; frequently a word is listed alphabetically where the user is directed to its treatment under its root.

[55] Sokoloff, "A New Dictionary," 71.

[56] Sokoloff, "A New Dictionary," 71.

[57] O'Connor, "Semitic Lexicography," 192.

[58] The edition of Buhl cited by O'Connor in his bibliography is (Gesenius, Wilhelm) Frants Buhl, *Hebräisches und aramäisches Handwörterbuch über das Alte Testament* (16th ed.; Leipzig: Vogel, 1915).

[59] O'Connor, "Semitic Lexicography," 192.

works, each designed for a different audience. We are fortunate to inherit both models. We are also fortunate that in their turn Brockelmann (whose first edition of *Lexicon Syriacum* was published in the year of R. Payne Smith's death) and Costaz, whose lexicon is based on Brockelmann's, chose root-arrangement, for without it we would not have benefited from Brockelmann's superior skills and insights as a comparative philologist and etymologist.

One would not want to mistakenly remove the honorific "pioneer" from J. Payne Smith, but the question remains as to why O'Connor assigns this role to her and not, say, to J. Levy who completed the first of his renowned alphabetically-arranged Aramaic dictionaries (CWTM, 2 vols.) thirty-five years earlier, and his second (NCWTM, 4 vols.) only fourteen years earlier.[60]

Syriac Lexica's Preference for Root Arrangement: Setting aside for the moment the issue of ease of use, are we able to say that one model is preferable to the other from a lexico-philological perspective? Though we should not equate majority practice with right practice, the significance that Syriac lexicographers have assigned to organization by root since J. Payne Smith's alphabetically arranged abridgement would seem to indicate a theoretical and applied prelation for the ordering of lexemes under their roots. Besides J. Payne Smith, only Jennings' small lexicon and Pazzini's recent Syriac-Italian lexicon to the Syriac New Testament, and Ferrer and Nogueras' recent Syriac-Spanish lexicon have alphabetical arrangement. All other post-*Thesaurus Syriacus* Syriac lexica with which I am familiar are root-based.[61] Recent dictionaries such as the substantial glossaries of Dogan[62] and of Hanna and Bulut[63] must be considered separately, as they include numerous neologisms as well as Classical Syriac terms. It is therefore worth noting that Syriac, Aramaic, and Hebrew lexicography each has a different history with regard to their use of root and alphabetical arrangement.

Barr and Muraoka's Estimate of the Two Systems: The root-based system also gains support from Barr and Muraoka. In articles applicable to Syriac they discuss the practical and scientific advantages and disadvantages of both approaches for ancient Hebrew, and on balance favour the organization of the lexicon by roots.[64] In his article, Barr notes two difficulties with the root-based approach:

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[60] See note 54.

[61] The following Syriac lexical works, which are listed according to date of publication, employ a root-based system: *Thesaurus Syriacus* (1879–1891); Brockelmann (1895; 2nd ed. 1928); Brun (1895; 2nd ed. 1911); Audo (1897); Klein (1916); Costaz (1963; 2nd ed. 1986); Goshen-Gottstein (1970); KPG, vol. 1 (1991), vol. 2 (2000); Kiraz, *Concordance* (1993), Thelly (1999).

[62] Hatune Dogan, *Wörterbuch: Syrisch (Aramäisch)-Deutsch, Deutsch-Syrisch (Aramäisch)* (2nd ed.; Warburg: published by the author, 1998).

[63] Sabo Hanna and Aziz Bulut, *Wörterbuch: Deutsch-Aramäisch, Aramäisch-Deutsch* (Heilbronn: published by the authors, 2000).

[64] Barr, "Three Interrelated Factors," 33–43, followed by Muraoka, "Response to J. Barr," 44–50. See also Kurt Beyer's review of Sokoloff's DJPA in *AbrN* 30 (1992): 196–97.

> (a) Many words become difficult to find, because it is not obvious what the root of the word is.
>
> (b) The system does not work with words that do not have a real root within Hebrew, e.g., loanwords like *melṣār*, where one would be lost in looking for a root l-ṣ-r. In a case like this BDB abandons its own principle and lists alphabetically (p. 576).[65]

In weighing up the disadvantages of alphabetical organization, Barr notes a further potential disadvantage of the root-based system, namely:

> the possibility … that for many lexemes of Hebrew the idea of "root" is semantically ineffective, so that research into root meanings may be without value or indeed actually distorting. And this leads on to what may be the real "root-lexeme problem" that requires discussion. I suggest that "roots" can be identified either in formal terms or in semantic terms … unless they can be identified in semantic terms, "roots" are not necessarily significant or relevant for semantic study.[66]

Roots are not however always semantically ineffective, for a root can have some semantic significance "where we can see some degree of compatible semantic component running through the series of words we attach to this root. As we most commonly use it, the term 'root' implies this sort of semantic community."[67]

Against the disadvantages of the root-based approach, Barr lists three primary advantages, which are affirmed by Muraoka:

> (a) It may be thought that an understanding of the importance of the roots is vital for the appreciation of the Semitic language-type: organization of the dictionary in this form guides the user, and especially the student user, to understand this.
>
> (b) The organization of the lexicon by roots may be thought to fit with the fact that identification of roots is an essential element in morphological analysis and thus in the way in which we teach Hebrew to language learners: to understand *way-yakkū* they have to know that it contains an *n*, i.e., that the root is *n-k-h*.
>
> (c) Organization by root brings together in contiguity the various lexemes that belong to the same root, and this makes it easier to see at a glance the spread of the root through the variety of lexemes in which it appears.[68]

Muraoka contributes a further observation:

> As an argument for the root-based approach one might add that it occasionally makes for transparency of lexicographical description. A meaning of a Piel verb with factitive force or a denominative verb may be defined as, for instance, *kibbēd* Pi. "to make *kābēd*" or *kihēn* Pi. "to serve as *kōhēn*." This approach is applicable to other parts of speech, too: *kᵉhunnāh*

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[65] Barr, "Three Interrelated Factors," 33.
[66] Barr, "Three Interrelated Factors," 34.
[67] Barr, "Three Interrelated Factors," 36.
[68] Barr, "Three Interrelated Factors," 33.

> "office of *kōhēn*" or *mizbēaḥ* "a built structure where *zäbaḥ* is placed and offered to a divine being or beings."[69]

From Barr's and Muraoka's study we can conclude that there are sound scientific reasons for retaining organization by root for ancient Hebrew and, by implication, for Classical Syriac. This leaves us with the two practical problems Barr has cited, and that Sokoloff reiterates in his review of Tal's Samaritan Aramaic Dictionary:[70] the difficulty that root-order poses for the lexicon user, and the issue of words that do not have a "real root" or for which root assignment remains a matter of conjecture. But these are difficulties that can be overcome. In a modern Syriac dictionary a root system can quite easily be made user-friendly. We now have precedents. Although it does not employ a root-system, Louw and Nida's *Greek-English Lexicon of the New Testament: Based on Semantic Domains* (Louw and Nida) is a superb example of facilitative design.[71] Because it is based on semantic domains rather than the alphabetical listing of words, it depends solely on indexing for the location of a word. A slim volume contains the index, which makes all information easily and quickly accessible. As a constant user I find the separate index volume to be most effective, for it can sit open on the desk ready for instant reference while one is using the lexicon.

KPG is designed for the person new to the Syriac language as well as for the specialist. When it is completed it will consist of approximately eleven hundred pages. Like Louw and Nida, it has an alphabetical index. Yet simplicity—combined with enough information to direct the user to the relevant page, column, root, and word—facilitates access to any lexeme within a few seconds. Examples of typical index entries are:

1.113a	garden	ܓܢܳܐ
2.39a	remain	Ethpa ܐܬܝܬܪ
2.108b	goodness	ܛܝܒܽܘܬܳܐ
2.122a	recognize	Eshta ܐܫܬܥ

Kiraz, *Concordance* extends to six volumes and four thousand six hundred and thirty-nine pages. It is not intended for the novice. But the "Alphabetical Key" at the end of the work guides the beginner as well as the researcher to the root of each lexeme. (I might add that locating a word would be made even speedier were Kiraz to complement each index entry with a page number.) In a multi-volume Syriac lexicon it would take only a few ext=]

ra pages to provide each volume with its own index as well as a complete index at the end of the work. In this way the user would have a choice of index according to the task in hand. Even a large lexicon can be designed to combine the best of both the root and alphabetical approaches: retain the advantages of the root-based system and

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[69] Muraoka, "Response to J. Barr," 44–45.

[70] Sokoloff, "A New Dictionary," 71.

[71] Johannes P. Louw and Eugene A. Nida *et al.*, eds., *Greek-English Lexicon of the New Testament: Based on Semantic Domains* (2 vols.; New York: United Bible Societies, 1988).

make it easy for the user to find the required word without delay.

With regard to Barr's observation concerning words that "do not have a real root," I would comment that, for Syriac at least, this does not present a particularly difficult methodological or arrangement problem. In more than one respect, lexicography has to deal with—and acknowledge as clearly and concisely as possible—exceptions, ambiguities, and uncertainties. Greek loanwords, for instance, which are common in Syriac, can be cited under the full form in which they appear in the Syriac text and identified by an appropriate abbreviation; for example, ܠܦܣܛܐ (<Gr.), which may be qualified by the Greek word itself and other relevant information.[72] Like loanwords, names of persons and places can also be listed alphabetically, which is the approach of KPG. Alternatively, they can be cited separately in an appendix as in Costaz, and as in Louw and Nida where they constitute the lexicon's final semantic domain. But in a comprehensive lexicon there is no good reason to treat them as other than legitimate lexemes in the main body of the work.

In principle, the alphabetical accommodation of some words in a root-based system is parallel to an alphabetically-arranged work that must list words that have more than one spelling when those spellings determine alphabetical position. With many words in Classical Hebrew, for instance, this disadvantage of organization by lexemes creates, as Barr demonstrates, "a problem of the spelling adopted, since the choice between plene and defective spelling affects the alphabetical position and the ease of finding the word."[73] As an example, Barr cites HALAT in which שַׁעַר *gate* is on page 1491 following (HALOT, page 1614 following), but שׁוֹעֵר *door-keeper*, because it is spelt plene, is on page 1342 (HALOT, page 1446). The following comments by Barr make it obvious that this problem cannot be resolved any more easily than words "without a real root" in a lexicon with a root arrangement:

> One can of course say: follow the numerically dominant spelling for each case. But that does not solve the problem: firstly, the user usually does not know in advance what the dominant spelling is, and, secondly, there are problems because the dominant spelling as found when the word is (say) in the absolute singular commonly ceases to be dominant when it is plural or with suffixes.[74]

In addition to words that do not have a "real" Syriac root, there are roots about which there is uncertainty or credible dispute. But again, these do not need to be viewed as a problem prohibiting arrangement by root. On the contrary, their proper acknowledgement can be seen as an asset.

In Support of the Root System in Syriac Lexica: In summary, we have seen that different views can be held about the right form of the organization of words in Hebrew, Aramaic (excluding Syriac), and Syriac lexica. My own perspective is that for a

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[72] For example, see ܐ̈ܝ̈ܕ̈ܐ in KPG, 2:3, and ܠܦܣܛܐ in KPG, 2:115.

[73] Barr, "Three Interrelated Factors," 34.

[74] Barr, "Three Interrelated Factors," 34.

comprehensive lexicon, it would be regrettable if Classical Syriac followed the current trend in Hebrew lexicography, relinquishing the tradition it has maintained, and losing a basic feature that has proved its worth for student and scholar. The same might also be said for an abridged lexicon. In her compendium J. Payne Smith compensates for the absence of roots with a list of derivatives at the end of an entry. But the evidence suggests that the Payne Smiths would have maintained the root system in both lexica if J. Payne Smith had seen a way to present her root information in a manner that did not distance or disadvantage the beginner.

6.1.2 Comparative and Etymological Material (see also §8.2.2)

In a discussion that sets out the various options for Hebrew, Barr demonstrates how difficult it is to decide what place should be accorded to comparative philological material, and if it is included, to what extent it should be quoted.[75] Nevertheless, Andersen, Van Wyk, and Barr himself, to name but three scholars, argue that cognates are indispensable to a proper estimate of Classical Hebrew lexicography in the present state of its scholarship, and should be included in a comprehensive lexicon.[76] Sokoloff sees a place for such data in Aramaic also, for he has provided extensive "comparative and etymological data" in DJBA (preface, page 20) and DJPA (preface, page 6).

This leaves us with the question as to whether we want to argue that Semitic roots and cognates also have an important place in Classical Syriac lexicography so that the tradition established by *Thesaurus Syriacus*, Brockelmann, and Goshen-Gottstein might be continued, and if so in what way and to what degree. To include extensive etymological data would have limited value. As Barr has observed of Hebrew and Alison Salvesen of Syriac,[77] much of the etymological data cited in existing lexica simply confirm that a word or a root has a precedent or parallel in a cognate language, but that information adds nothing to our understanding of the word in question. Nor is it necessarily intended to do so, for, in the words of Peter Williams,

> The primary purpose of providing etymological data is usually merely to help people's language acquisition (an Arabist or Hebraist approaching Syriac may find comparison useful). Sometimes, however, a secondary purpose comes to

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[75] James Barr, "Hebrew Lexicography: Informal Thoughts," in *Linguistics and Biblical Hebrew* (ed. Walter R. Bodine; Winona Lake: Eisenbrauns, 1992), 140–43. See also Barr, "Hebrew Lexicography," *Studies on Semitic Lexicography*, 103–26; "Etymology and the Old Testament," OtSt 19 (1974): 1–28; "Limitations of Etymology as a Lexicographic Instrument in Biblical Hebrew," *Transactions of the Philological Society* (1983): 41–65.

[76] F. I. Andersen, "Review Article and Responses: The Dictionary of Classical Hebrew, vol. 1 א, David J. A. Clines (ed.)," *ABR* 43 (1995): 55–57; W. C. van Wyk, "The Present State of OT Lexicography," in Louw, ed., *Lexicography and Translation*, 82–96; Barr, "Hebrew Lexicography: Informal Thoughts," 142.

[77] Barr, "Hebrew Lexicography: Informal Thoughts," 142; Salvesen, in discussion with colleagues at the International Syriac Language Project at the SBL International Meeting, Cambridge, July 2003.

> the fore, namely in the cases where etymology has played a key role in the lexicographer's decision about meaning.[78]

What some may have considered as a secondary purpose may therefore be a primary one, for where the etymology has played a key lexical role it is on the one hand "not honest to hide it" (Williams) and on the other helpful to display it. A compromise decision between extensive data and no data would be a possibility. Historical-philological and comparative-philological information could be restricted to those instances where our knowledge of the meaning of a word in Classical Syriac is insufficient, so that informed lexical judgements are not a purely intra-Syriac matter that can be made "in total indifference to other Semitic languages."[79]

6.1.3 Denominative Verbs

Most Syriac lexica acknowledge denominative verbs. But it is rare that all Syriac lexica distinguish a particular verb as denominative. In most instances, some list a verb as denominative and the rest remain silent. Pazzini does not mark verbs as denominative. Jennings and Whish have only the occasional reference. Both, for instance, mention the Taphel ܬܠܡܕ *make disciples*, *instruct* as the denominative of ܬܲܠܡܺܝܕܳܐ *disciple*, but Jennings does so only as a cross reference (page 112). Another example is Jennings' comment under ܚܰܫܺܝܠ, ܚܰܫܺܝܠܳܐ *weak*, "whence denom. ܐܶܬܚܰܫܰܠ *became weak*, *was infirm*, Hexaplar O.T."

Thesaurus Syriacus and J. Payne Smith have fewer denominative verbs than the smaller lexicon of Brun. Brun has fewer than the slim glossaries of Goshen-Gottstein and Klein. Köbert's small lexicon cites more denominative verbs than each of the resources just mentioned, more than Audo, and more than Thelly, who is indebted to Audo. Köbert, despite its diminutive size and because it adheres to Brockelmann more closely than Costaz does, has almost the same number of listings as Costaz in the sample produced below. Brockelmann, on which Costaz and Köbert are based, has the most citations. Audo and Thelly often agree with Brockelmann, Costaz, and Köbert.

Thesaurus Syriacus, J. Payne Smith, and Brun are often etymologically inferior to Brockelmann and Goshen-Gottstein regarding comparative philology, and to Audo, Brockelmann, Costaz, Goshen-Gottstein, Klein, Köbert, Schulthess, and Thelly concerning roots and homonymy. The etymological inferiority of *Thesaurus Syriacus*, J. Payne Smith, and Brun to other lexica may explain the relatively small number of verbs that they credit with denominative status. The denominative verbs that these three works do register are usually also acknowledged by the majority of the other lexica. There is, therefore, a minority of cases where the distinguishing of a verb as denominative has the support of most, if not all, Syriac lexica.

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[78] P. J. Williams in correspondence with me on the ISLP, 6 November 2003.

[79] The quoted phrase is taken from Barr, "Hebrew Lexicography: Informal Thoughts," 142, though the term "intra-Syriac" replaces "intra-Hebraic." See also Andersen, "Review Article," 55–56.

With the exception of J. Payne Smith and KPG, all lexica list a denominative verb under the form from which it is thought to derive.[80] Thus Audo, Brockelmann, Costaz, Goshen-Gottstein, Köbert, and Thelly cite the noun ܫܘܼܒܚܳܐ *praise*, *glory* ahead of the Pael verb ܫܒܚ *praise*. Klein (the only lexical work to do so) lists ܨܠܝܼܒܳܐ *cross* as the primary form and the Peal ܨܠܒ *crucify* as a denominative under it. However, beyond listing a denominative verb under the noun, adjective, or particle from which it is considered to derive, lexica vary in their principles of arrangement, so that the user must adapt to the peculiarities of each work.

In comparison to other Syriac lexica, Audo, Brockelmann, Costaz, Köbert, and Thelly's treatment of denominative verbs is very detailed and complex, though Köbert less than the other four because of its smaller size. In all five resources, every lexeme is assigned a place in an exhaustive etymological hierarchy (see §9.4 for examples). In Brockelmann, for instance, all words of the root ܚܢܪ follow the noun ܚܲܢܘܼܬܳܐ *the knee*. As would be expected, verbs are cited in order of their conjugation: the Peal, Pael, Ethpaal and Aphel. These are respectively followed by derivative lexemes arranged according to either their morphology or their meaning. Costaz also has the noun ܚܲܢܘܼܬܳܐ as the primary word, but groups the verbal conjugations and their derivative terms differently from Brockelmann. Köbert accepts ܚܲܢܘܼܬܳܐ as the primary word but has another, briefer, selection of lexemes. Audo and Thelly have the Peal verb, and not the noun ܚܲܢܘܼܬܳܐ, as the primary word. They list more lexemes than Costaz and Köbert, including words not recorded by Brockelmann, and a different order from the other three. In many instances, the details of Audo, Brockelmann, Costaz, Köbert, and Thelly's lemmatization, and the differences between the five, would be of interest only to the specialist.

Because J. Payne Smith employs an alphabetical rather than root arrangement, she cannot employ derivation to distinguish a verb as denominative. Instead, she uses the abbreviation "denom." followed by the noun from which the verb in question is derived. The first statement in the entry on the Peal ܣܥܪ is an example: "ܣܥܪ denom. verb from ܣܥܪܳܐ. PE. *to burn with anger*." With the odd exception, such as the notation that the Peal ܚܡܐ *lodge*, *spend the night* is "probably denom. from ܚܶܡܳܐ," J. Payne Smith follows *Thesaurus Syriacus*. Like J. Payne Smith, Brun and *Thesaurus Syriacus* distinguish their denominative verbs with an explicit label ("den." Brun; "denom." *Thesaurus Syriacus*). In addition, *Thesaurus Syriacus* repeats the primary form after the abbreviation.

KPG does not add to existing viewpoints. Instead, it registers the opinions of other lexica by citing the lexical sources that identify a verb as denominative; for example, the geminate root ܫܫ is followed by the entry "APHEL *(denom. in Brockelmann, Costaz, Klein, Köbert).*" KPG does not include the form from which a

[80] There are exceptions. For instance, Brocklemann and Costaz lemmatize the verb ܚܡ (Peal ܚܡܐ *lodge*, *spend the night*) under the root ܚܡܐ where the former notes that it is a "denom." of ܚܶܡܳܐ, and the latter that its "R" (=root) is ܚܶܡܳܐ.

denominative verb is said to derive. To do so would be too complex and of minimal value, especially as the lexica represented in KPG often differ from each other with regard to the form that they propose as the one from which a particular verb is derived. But KPG's information does give an indication of the more substantial differences of opinion in Syriac lexica. Indeed, the Peshitta Gospels offer a good sample of these differences because, with the exception of Goshen-Gottstein and Klein whose lexemes are selective, all of their vocabulary is lexicalized by all Syriac lexica.

The following table lists all verbs that (a) occur in the Peshitta Gospels, (b) begin with a letter of the first half of the Syriac alphabet, and (c) are listed as denominatives in Syriac lexica. The table's repetitive presentation reveals patterns of agreement and divergence and the predominance of denominative verbs in certain lexica: Brockelmann 38 (absent from the following list in only one instance), Köbert 34, Costaz 33, and Audo and Thelly 19. Kiraz's *Concordance* has 13. Understandably, the two glossaries register fewer than the aforementioned resources: Goshen-Gottstein 10, and Klein 7. But it is noticeable that Brun has only 3, J. Payne Smith also 3, and *Thesaurus Syriacus*, by far the largest of all the lexica, only 1.

Goshen-Gottstein	Peal ܒܪܟ
Brockelmann, Costaz	Pael ܒܪܟ (ܒܪܟ)
Brockelmann, Köbert Brockelmann, Köbert	Peal ܓܒܪ Peal ܓܕܫ
Brockelmann, Costaz, Kiraz	Ethpa ܐܬܒܪܟ
Brockelmann, Costaz, Köbert Brockelmann, Costaz, Köbert Brockelmann, Costaz, Köbert Brockelmann, Costaz, Köbert	Aphel ܐܡܢ Peal ܕܢܚ Ethpa ܐܬܕܟܝ Pael ܒܪܟ
Audo, Brockelmann, Köbert, Thelly Audo, Brockelmann, Köbert, Thelly Audo, Brockelmann, Köbert, Thelly	Ethpeel ܐܬܚܙܝ Ethpeel ܐܬܢܚ Ethpeel ܐܬܩܕܫ
Brockelmann, Costaz, Kiraz, Köbert Brockelmann, Costaz, Kiraz, Köbert Brockelmann, Costaz, Kiraz, Köbert Brockelmann, Costaz, Kiraz, Köbert	Aphel ܐܓܒܪ Peal ܐܡܪ Pael ܐܬܟܪ Pael ܫܒܚ
Brockelmann, Costaz, Kiraz; J. Payne Smith "probably"	Peal ܚܛܐ
Brockelmann, Costaz, Klein, Köbert	Aphel ܐܫܡܥ
Audo, Brockelmann, Costaz, Köbert, Thelly Audo, Brockelmann, Costaz, Köbert, Thelly Audo, Brockelmann, Costaz, Köbert, Thelly Audo, Brockelmann, Costaz, Köbert, Thelly Audo, Brockelmann, Costaz, Köbert, Thelly Audo, Brockelmann, Costaz, Köbert, Thelly	Aphel ܐܟܠ Aphel, Ettaphal ܐܫܟ Pael, Ethpaal ܐܬܦ Ethpeel, Aphel ܐܬܬܚ Ethpaal ܐܬܐ Ethpaal ܐܬܬ

Audo, Brockelmann, Costaz, Klein, Köbert, Thelly	Pael, Ethpaal ܡܗܠ
Audo, Brockelmann, Costaz, Klein, Köbert, Thelly	Aphel ܐܫܠ
Brockelmann, Costaz, Goshen-Gottstein, Kiraz, Köbert	Pael ܕܪܫ
Brockelmann, Costaz, Goshen-Gottstein, Klein, Köbert	Pael ܫܢܐ
Brockelmann, Costaz, Goshen-Gottstein, Klein, Köbert	Pael ܒܗܬ
Brockelmann, Brun, Costaz, Goshen-Gottstein, Köbert	Pael ܩܲܛ̈
Brockelmann, Costaz, Kiraz, Klein, Köbert	Pael ܐܫܠ
Audo, Brockelmann, Costaz, Kiraz, Köbert, Thelly	Pael, Ethpaal, Aphel ܫܐ
Audo, Brockelmann, Costaz, Klein, Köbert, Thelly	Aphel ܐܬܐ
Audo, Brockelmann, Brun, Costaz, Goshen-Gottstein (cites only Ethpeel), Köbert, Thelly	Ethpeel, Aphel ܐܥܠ
Audo, Brockelmann, Costaz, Goshen-Gottstein, Kiraz, Köbert, Thelly	Eshtaphal ܐܬܦ
Audo, Brockelmann, Costaz, Goshen-Gottstein, Kiraz, Köbert, Thelly	Pael ܫܥܪ
Audo, Brockelmann, Costaz, Kiraz, Köbert, Thelly	Pael, Ethpaal, Aphel ܫܐ
Audo, Brockelmann, Costaz, Goshen-Gottstein, Köbert, J. Payne Smith (for the meaning "speak the truth"), Thelly	Pael ܫܪ
Audo, Brockelmann, Brun, Costaz, Goshen-Gottstein, Kiraz, J. Payne Smith, Thelly, *Thesaurus Syriacus*	Ethpaal ܐܬܚ

There is no doubt that, as a feature of Syriac lexica, denominative verbs must be subjected to critical review if they are to be considered as candidates for inclusion in a new comprehensive Syriac-English lexicon. The lexical purpose and benefits of denominative verbs require re-examination and clarification. Furthermore, we need a method that can present the user with results that are etymologically *and* lexically judicious: the etymology of denominative verbs must be matched by a lexical presentation that is able to do justice to the information while being simple enough to be user-friendly.

6.1.4 Metaphor and Other Forms of Figurative Speech

Since the publication in 1755 of Samuel Johnson's *Dictionary of the English Language*, figurative speech has been an accepted category of meaning in numerous dictionaries of both ancient and modern languages. Five Syriac lexica feature figurative speech as a category of meaning: Brun, J. Payne Smith, Jennings, KPG, and *Thesaurus Syriacus*. Usually, this form of speech is marked by the abbreviations "fig." (figurative) and "metaph." (metaphorical), or their equivalent in the language of the dictionary. Some dictionaries employ both terms, apparently to distinguish metaphor from other forms of figurative speech.[81] Louw and Nida prefer the formula "a figurative extension of

[81] Examples of *fig., metaph.,* and of both *fig.* and *metaph.:* (a) *fig.* (i) in ancient-language lexica: Greek: Louw and Nida, which uses the formula "a figurative extension of meaning" instead of "fig." or "metaph."; see also Horst Balz and Gerhard Schneider, *Exegetical Dictionary of the New*

meaning," which has been adopted to a limited extent by Reinier de Blois in the provisionally entitled *A Semantic Dictionary of Biblical Hebrew* (SDBH).[82] Some dictionaries also use the abbreviation "meton." to refer to the specific category of metonymy.[83] David Aaron's definition of "figurative," which includes both metaphor and metonymy, corresponds to its use by conventional dictionaries:

> The term "figurative" is a general designation for nonliteral speech acts, including many standard rhetorical devices such as irony, sarcasm and cynicism, allegory, hyperbole, metonymy, and of course, metaphor."[84]

The entry "morning" in the SOED includes an example of metaphorical use of the word:

Testament (3 vols.; Grand Rapids: Eerdmans, 1990); William D. Mounce, *The Analytical Lexicon to the Greek New Testament* (Grand Rapids: Zondervan, 1993); Fritz Rienecker and Cleon Rogers, *Linguistic Key to the Greek New Testament* (Grand Rapids: Zondervan, 1980); Cleon L. Rogers Jr., and Cleon L. Rogers III, *The New Linguistic and Exegetical Key to the Greek New Testament* (Grand Rapids: Zondervan, 1998); Hebrew lexica: BDB, SDBH (see note 82), which follows Louw and Nida by using the formula "a figurative extension of meaning" instead of "fig." or "metaph."; Latin lexicon: Lewis.

(ii) in modern language dictionaries: English dictionaries: AOD, CED, Fowler and Fowler, Macquarie, New SOED, OED, Random House, SOED 5th, Webster's TNID; see also R. W. Burchfield, ed., *The New Fowler's Modern English Usage* (3rd ed.; Oxford: Oxford University Press, 1996); French dictionaries: DEL, DHO, DLF, DLF (*abrégé*), LDLF, PLI; German dictionaries: MEL (*bildl* = bildlich), NCGD, ODGD, WDW (*fig.* = "figürlich, im übertragenen Sinne); Hebrew dictionary: Megiddo; Italian dictionaries: Bulle and Rigatini, CID, Macchi; Russian dictionary: ORD, Smirnitsky-Akhmanova; Sanskrit dictionary: Apte; Spanish dictionaries: CDEIIE, Cuyas; Tagalog dictionary: English.

(b) *metaph.* (i) in ancient-language lexica: Greek lexica: LEH 1992–1996, LEH 2003, Woodhouse; see also Max Zerwick and Mary Grosvenor, *A Grammatical Analysis of the Greek New Testament* (5th ed.; Rome: Pontifical Biblical Institute, 1996); Hebrew lexica: HALAT, HALOT; Syriac lexica: Brun, Jennings, J. Payne Smith, *Thesaurus Syriacus.*

(ii) in modern language dictionaries: French dictionary: DLF, German dictionary: MEL (*übertr* = übertragen).

(c) *fig.* and *metaph*: (i) in ancient-language lexica: Greek lexica: Abbott-Smith, BAAR, BAG, BAGD, BDAG, Lampe, LS (1st ed. 1843, 8th ed. 1897), LSJM (1925–1940), LSJM Suppl. (1968), LSJM Rev. Suppl. (1996), Muraoka 1993, Muraoka 2002; Latin lexica: Burgers, CLD, CNLD, Lewis and Short, OLD; Syriac lexicon: KPG (*metaph.* where it quotes another lexicon); (ii) in modern language dictionaries: English dictionary: Johnson's *Dictionary* (Johnson does not list abbreviations, but refers to both figurative and metaphorical speech); French dictionary: DLF; German dictionary: CNGED; Spanish dictionary: DLC.

[82] SDHB website, Reinier de Blois, "Towards a New Dictionary of Biblical Hebrew Based on Semantic Domains," http://www.sdbh.org.

[83] *meton.* (= by metonym, or metonymical) in ancient-language lexica: Greek lexica: Abbott-Smith, Lampe, LEH 1992–1996, LEH 2003; see also William D. Mounce, *The Analytical Lexicon to the Greek New Testament* (Grand Rapids: Zondervan, 1993); Latin lexica: CNLD, Lewis, Lewis and Short. Metonymy is used in semantics and stylistics to refer to a figure of speech in which the name of an attribute of an entity is used in place of the entity itself. Examples of it in English are the substitution of an author for the author's work—*to read Tolstoy, the bottle* for the drinking of alcohol, or *the bench* for judiciary.

[84] David H. Aaron, *Biblical Ambiguities: Metaphor, Semantics, and Divine Imagery* (Leiden: Brill, 2002), 1.

> *fig.* The beginning or early part of anything compared to a day; the early part *of* one's life etc.

Four examples of metaphorical speech in ancient-language lexica are:

> Qal הלך lit. *go*, *proceed*, *move*, *walk*; fig. *pass away*, *die* Josh 23:14; 1 Kings 2:2 *et al.* (BDB, p. 234).
>
> φωστήρ lit. that which gives out light, 'luminary;' fig. of a source of hope 1 Esd 8:76 (Muraoka 2002, p. 592).
>
> ἀνατέλλω lit. *rise*, *spring up*; fig. *spring forth*, of horns Barn 4:5 (BDAG, p. 73).
>
> אָח lit. *a brother*, fig. of a relationship with Jesus Mk 3:35; with the Son of Man Mt 25:40 (KPG, 1:8).

However, figurative speech is not controversy free. Over the past three decades "cognitive linguistics" has become increasingly influential,[85] and with it George Lakoff, Mark Johnson and Mark Turner's theory of "cognitive metaphor." This approach views metaphors in literature and poetry ("poetic metaphors") as "extensions or novel combinations of everyday metaphors."[86] Thus it "contrasts with the traditional account of metaphor (with its distinction between literal and figurative meaning, and its focus on rhetorical and literary contexts), which is felt to be of limited relevance to a full linguistic account of grammatical and semantic structure."[87] At the core of this theory is the insistence that all metaphor is a mental event. In the words of Lakoff and Johnson:

> The most important claim we have made so far is that metaphor is not just a matter of language, that is, of mere words … on the contrary, human *thought processes* are largely metaphorical. This is what we mean when we say that the human conceptual system is metaphorically structured and defined. Metaphors as linguistic expressions are possible precisely because there are metaphors in a person's conceptual system.[88]

The implications for the lexical and semantic analysis of metaphor are profound. "[I]t could be the case," say Lakoff and Turner, that "every word or phrase in a language is defined at least in part metaphorically."[89] Furthermore, add Lakoff and Johnson:

> If conceptual metaphors are real, then all literalist and objectivist views of meaning and knowledge are false. We can no longer pretend to build an account of concepts and knowledge on objective, literal foundations.[90]

Many support and many oppose this understanding of metaphor. As editor of DCH, David Clines apparently accepts it as belonging to the "commonly accepted

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[85] Bart Peeters, *Setting the Scene: Some Recent Milestones in the Lexicon-Encyclopedia Debate*, http://www.utas.edu.au/french/people/peeters/Setting_scene.pdf, 2–3.

[86] Crystal, *A Dictionary*, 80.

[87] Crystal, *A Dictionary*, 80.

[88] George Lakoff and Mark Johnson, *Metaphors We Live By* (Chicago: University of Chicago Press, 1980; with a new afterword, 2003), 6.

[89] George Lakoff and Mark Turner, *More than Cool Reason: A Field Guide to Poetic Metaphor* (Chicago: University of Chicago Press, 1989), 119.

[90] Lakoff and Johnson, *Metaphors*, Afterword, 273.

principles of modern linguistic theory,"[91] and interprets it to mean that it is incorrect to mark "certain usages" in a lexicon as "'figurative' or 'metaphorical'."[92] As a result, DCH—a major dictionary that does not shy away from lexical detail and that deals with the metaphor-rich Hebrew Bible—does not recognize either metaphor or other forms of figurative speech.

At the other end of the spectrum is SDBH. Its editor, Reinier de Blois, is a cognitive linguist who accepts the thesis that metaphor is a mental event. But instead of rejecting the place of figurative speech in lexicography, he is making it a primary feature of his work, which, like DCH, is a Hebrew-English lexicon. Moreover, De Blois' methodology borrows directly from the work of Lakoff and Johnson, and is "heavily indebted"[93] to Ungerer and Schmid, *An Introduction to Cognitive Linguistics*.[94]

Between Clines and De Blois are the majority of dictionaries that have been prepared or revised since the advent of the cognitive theory of metaphor. Whatever their reasons, these dictionaries have maintained a conventional approach to figurative speech as an aspect of their semantic analysis. They include: New SOED (1993), DHO (1994), CED (1998), AOD (1999), ODGD (1999), BDAG (2000), ORD (2000), Macquarie (2001), Burgers (2002), Muraoka (2002), Chambers (2003), WDW 2002), and SOED (2002). To these can be added *The New Fowler's Modern English Usage* (1996).

For our quest, the important question is whether Syriac and other ancient-language lexica should continue to include figurative speech, or whether it no longer has a place in contemporary lexica. It is a complex issue that I address in my essay "Metaphor, Lexicography and Modern Linguistics: should figurative speech figure in future ancient-language lexica?"[95] The essay explores the implications of the cognitive metaphor theory for lexicography. It examines opposition to that theory as represented by Janet Soskice (primarily philosophy),[96] David Aaron (linguistics), and Gregory Murphy (psychology),[97] and converses with De Blois. It discusses the problems that proponents of figurative speech would face if they decide to include it in future lexica, and as part of that discussion offers definitions of metaphor, and considers the issue of live and dead metaphor. A final section revisits the question of whether or not ancient-language lexica would be justified in retaining some form of figurative speech as a category of meaning.

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[91] DCH, 15.

[92] DCH, 15.

[93] Reinier de Blois, "Lexicography and Cognitive Linguistics: Hebrew Metaphors from a Cognitive Perspective," http://www.sdbh.org/framework/Paper_SBL_2002.pdf.

[94] Friedrich Ungerer and Hans-Jörg Schmid, *An Introduction to Cognitive Linguistics* (London: Longman, 1996), 8.

[95] Terry Falla, "Metaphor, Lexicography and Modern Linguistics: should figurative speech figure in future ancient-language lexica?," in *Texts and Cultures: Essays in Honour of Rifaat Ebied* (provisional title), Peter A. L. Hill, ed. (Piscataway NJ: Gorgias Press, forthcoming).

[96] Janet Martin Soskice, *Metaphor and Religious Language* (Oxford: Clarendon Press, 1985).

[97] Gregory L. Murphy, "Metaphoric Representation" *Cognition* 60 (1996): 173–204.

6.1.5 Correspondences

A third and perhaps less complicated question is whether a typical entry should include the corresponding term(s) for a Syriac term when the lexicalized corpus is, or includes, a translation of a text for which we have a witness or witnesses.[98] That properly researched and presented correspondences are an asset in ancient-language lexical works has been vindicated time and again. When a lexicalized work is a translation, the corresponding term for each term in the target language is essential to any proper text-critical, linguistic, literary, or historical analysis of the translation and of the techniques employed by the translators. The question is how and to what extent these correspondences should be presented if the decision were made to include them.

There are several possibilities, from minimal to exhaustive analysis. Take, for example, a New Testament Syriac word that has between two and thirty Greek correspondences. A minimalist approach would be to provide one judicious example for each correspondence. The disadvantage is that unless word-frequency data are given, one would not be able to discriminate between a correspondence that occurs only once and a correspondence that occurs frequently, though the examples would at least give an idea of the range of terms in the source text rendered by the one term in the target text. This is not to say that a minority correspondence is of less significance than a common and expected one. Often it is a sole or infrequent occurrence of a correspondence that for a variety of reasons may hold particular interest for the lexicographer, linguist, and versional researcher. An apt example is the three instances in the Peshitta Gospels where the Peal ܚܙܐ, which occurs 386 times, translates ἴδε as "a stereotyped particle"[99] and would seem also to be used to prompt attention or summon attention, while perhaps retaining a visual element: "*see* (ܚܙܝ *imp. ms.*) *how much they testify against you*" (Mk 15:4, cf. Jn 11:36); "*look* (ܚܙܝ *imp. ms.*), *why are they doing what is not lawful on the Sabbath?"* Mk 2:24.

The other end of the spectrum would be to provide—with a few exceptions such as common prepositions, pronouns, and the verb *to be*—the Greek word for every occurrence of every Syriac word, as I am doing in KPG. In-between options would be a selection of examples, or full information for most Syriac words but only a selection for words with a high occurrence.

In Syriac lexicography we are indebted to Brockelmann, Klein, *Thesaurus Syriacus*, and Whish, who did not have complete concordances at their disposal, for recognizing the lexical importance of the Greek underlying a Syriac translation. But for all their usefulness, the referenced Greek citations in these resources must be used with great caution. In these works, a Greek citation is relevant only to the particular occurrence of

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[98] Lexical works that recognize the significance of source texts include Brockelmann, KPG, Klein, *Thesaurus Syriacus,* Whish, and S. P. Brock, "Greek Words in the Syriac Gospels (*Vet* and *Pe*)," *Le Muséon* 80 (1967): 389–426.

[99] BDAG, 466; Nigel Turner, *Syntax* (vol. 3 of *A Grammar of New Testament Greek*; ed. James Hope Moulton; Edinburgh: T&T Clark, 1963), 231.

the Syriac word to which it corresponds. It is not necessarily a guide to the Greek behind other occurrences of that word.

A typical example is the aforementioned Peal ܫܕܪ, which renders fourteen Greek terms in the Peshitta Gospels alone.[100] But Klein, whose work is limited to the Gospels, and *Thesaurus Syriacus*, which represents Syriac literature generally, give only five of those fourteen Peshitta Gospel Greek correspondences. In accordance with his methodology, Whish cites one. None includes the intriguing ἴδε cited above. Brockelmann, as is often the case, does not give any Greek.

In innumerable instances, nothing less than a full analysis reveals the complex relationship between the source and target texts. Whish well illustrates the inadequacy of partial information. For the purpose of his grammatical analysis in *Clavis Syriaca*, it is sufficient for him to cite as the head term of an entry only one occurrence of a Peshitta Syriac term. Each head term is provided with its corresponding Greek term. The term τοῦ χωρίον in Jn 4:5 is cited as the Greek corresponding to ܚܩܠܐ. But that is the only place in the Peshitta Gospels where the noun ܚܩܠܐ, which occurs fifty-four times, finds its corresponding Greek term in χωρίον. It is also the only verse where χωρίον, which is employed three times, is rendered by the polysemous ܚܩܠܐ (*field*, *piece of land – a plot of ground used mainly for agricultural purposes*; *land*, pl. *estates or lands*; *farm*, *hamlet*, *country place*; *country – as opposed to city*, *countryside*, pl. *country places – as opposed to town[s] and/or village[s]*).[101] While Whish does inform us that ܚܩܠܐ has multiple meanings, his information regarding the Greek behind the Syriac could be misleading. For a proper estimate of the source and target texts one needs to know that ܚܩܠܐ has six corresponding Greek terms, two of them primary ones, and that four of these six terms, including a primary one, are translated by Syriac words other than ܚܩܠܐ.

6.1.6 Concordantial Information

A concordance is an invaluable aid to the making of an ancient-language lexicon. But relatively little Syriac literature is served by a complete concordance. It is therefore in the interests of Syriac lexicography to make the compiling of concordances a basic preliminary endeavour.

Here however the concern is not with concordances *per se*. Rather, it is the place of concordantial information as part of a lexical entry as distinct from references that distinguish citations. To offer such information is not the norm. Carl Schaaf's *Lexicon Syriacum Concordantiale* (Schaaf), published in 1709, was still widely used a few decades ago for its New Testament concordance data, but that was because there was not as yet a concordance to the Syriac New Testament.

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[100] KPG, 2:80–81.

[101] These meanings are based on the author's research into a set of terms that function within the same semantic subdomain. The findings will be published in a forthcoming article. The meanings cited above differ from the meanings given by Whish, which are: "*city*, *town*, *village*, also *field*, *district*."

The one feature for which concordantial information is an indispensable complement is the provision of the correspondences of the source text when the lexicalized text is a translation. Without such information the correspondences cannot be properly evaluated or employed in applied research. If an entry limits itself to samples of correspondences it will accordingly offer no more than references. But an exhaustive analysis is possible only if it is complemented by a complete concordance of references. For this reason the second and third sections of an entry in KPG are designed to serve each other. The second indented section consists of an exhaustive analysis of the Greek correspondences, and the third section consists of a complete concordance of references to every occurrence of the headword in the Peshitta Gospels. A brief and simple example is the entry for the Peal ܚܫܩ:

> PEAL ܢܚܫܩ *impf. 2mpl.*, ܚܫܩ *act. pt. mpl.* laugh, "blessed are you who weep now, for you shall laugh" Lk 6:21; with ܒ laugh at, derisively Mt; deride, jest, *of the chief priests and scribes about Jesus* Mk 15:31, `cf. Pael` ܚܪܫ.
>
> ▪γελάω Lk 6:21, 25. ▪ἐμπαίζω Mk 15:31. ▪καταγελάω = *Peal* ܚܫܩ *with* ܒ *ref. in italics.*
>
> Mt *9:24*. Mk *5:40*; 15:31. Lk 6:21, 25; *8:53*.

The duality of information provided by the second and third sections of the entry allows the user to employ it for many purposes. These include: the text-critical investigation of the Syriac Gospels, the use of the Peshitta for text-critical editions of the Greek New Testament, and the analysis of the senses of a Syriac word, Syriac words of similar meaning, syntax, and translation technique. It is an approach that could, for instance, be extended to the Old Syriac and Harklean texts and to the whole of the Syriac New Testament. In KPG, concordantial information also serves as a concise concordance in the conventional sense. Such data would not, however, be applicable to other than a specific and reasonably sized corpus. It could be used on a selective basis in the corpus-by-corpus series proposed in §4.2, but not in the kind of lexicon discussed in §4.1.

7. CONTENT OF A TYPICAL ENTRY: PART THREE

7.1 Evaluating the Need for New Information

The lexical information we have discussed thus far is not new and is often a basic part of the content of a typical entry in a comprehensive lexicon. However, contemporary lexicography has also turned its attention to other categories of information, which have been included in some recent biblical and ancient-language dictionaries. These include definitions of the senses of a word, complementary glosses with illustrative

citations that cover every meaning and shade of meaning of a lexeme, grading new senses, words of similar meaning, words of opposite meaning, syntactic information essential to the understanding of a word's meaning, syntagmatic information, statistical data, and indexes.

Although Syriac words of similar meaning are a major feature of KPG, I discuss them here as "new information" because they do not have a place in other Syriac lexica. Syriac words of opposite meaning appear in some lexica (*Thesaurus Syriacus*, J. Payne Smith, and KPG), but as an incidental item rather than as the result of a formally recognized and methodologically researched lexical discipline.

7.1.1 Definition of Meanings

Definitions in Ancient-language Lexicography: In English lexicography the definition of meanings, as against glosses only, has been normative since the mid-eighteenth century publication of Johnson's *Dictionary of the English Language* (Johnson's Dictionary) and OED.[102] These dictionaries, like the more recent *Oxford Latin Dictionary* (OLD), recognize that the meaning of a headword cannot be defined properly by another word, that is, by a gloss. Of necessity, a bilingual dictionary such as OLD requires a very different approach to the provision of definitions from that used for a monolingual dictionary such as the OED. Furthermore, definitions in recent dictionaries of the same genre are also treated differently from one work to another, but the fact remains that all such dictionaries share in common their commitment to definitions as opposed to glosses only.

So far, no Syriac lexicon by policy or practice has provided definitions, though KPG does provide some definitions, different levels of English translation, and carefully researched glosses that seek to be exhaustive in their presentation of a Peshitta Gospel word's meanings, and that go significantly beyond unqualified translational equivalents. Until recently, Syriac was not alone in lacking definitions of meaning, for definitions did not have a place in any ancient-language lexicon. Indeed, in 1985 Louw was able to write:

> Semantics as a linguistic discipline has been neglected for many centuries and perhaps one could be justified in saying that only during the past two or three decades has semantics been placed on a fully scientific footing … Until about three decades ago it would have been quite unusual to find in any linguistic publication a comprehensive study of semantics especially one with emphasis on methodology. Presently, however, about a quarter or more of such publications is concerned with semantics in one way or another. It is therefore no wonder that lexicography has now been directed into new paths. [103]

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[102] See note 21.

[103] Louw, "The Present State of New Testament Lexicography," 109. For a recent comprehensive work on semantics that contains a selection of the most important contributions to semantic theory, ranging from Gottlob Frege's essay "On Sense and

The change came in 1988 with Louw and Nida's pioneering lexicon, which is based on the principle of providing definitions, and which, for that reason, Greek lexicographer John Lee sees as "an event as significant as any" in the history of Greek New Testament lexicography "since 1514"[104] when the first New Testament lexicon (Greek-Latin) was printed:[105]

> The benefits of Louw and Nida's treatment are immediately apparent. Take αὐχμηρός. Its definition (14.58) is: pertaining to being not only dark, but also dirty and miserable. Whether we agree that this is really the meaning, the advantage is that it is stated clearly and unambiguously.[106]

For Lee the superiority of the definition method over glosses is demonstrated "once and for all" by the following example:

> At Lk 11:5 we have the man who goes to his neighbour in the middle of the night and asks: "Friend, lend me three loaves of bread, for a friend of mine has arrived" (Φίλε, χρῆσόν μοι τρεῖς ἄρτους …). What sort of lending is implied by the verb κίχρημι? BAGD simply glossed as lend, offering no clue, nor indicating how it differs from δανείζω, glossed similarly as lend (money). Louw and Nida's definition of κίχρημι (57.214) provides what is needed:
>
> *to give something to someone for use, with the expectation that the same or its equivalent will be returned.*
>
> And δανείζω (57.209) is:
>
> *to lend money, normally with the expectation of receiving the same amount in return plus interest.*
>
> The force of χρῆσόν is now clear, and how it differs from the other word of similar meaning. The English gloss *lend* covers both meanings, and gloss lexicons and English translations rely on the English speaker to understand the word in the appropriate way for the context. But the difference in meaning between the two Greek words can easily become obscured and be lost to sight.[107]

In 1986, one year after the publication of *Lexicography and Translation* in which Louw discusses a semantic domain and definitional approach to lexicography,[108] and two years prior to the advent of Louw and Nida's lexicon, Muraoka indicated his belief that "a lexicon (to the Septuagint) is not complete without describing as fully as possible the usage of words, which must include aspects of their morphology, syntax and style as well as senses or *definitions* of their meaning" (emphasis added).[109]

Reference" written in 1892 to present-day thinkers in the field, see Javier Gutiérrez-Rexach, ed., *Critical Concepts in Linguistics* (6 vols.; London: Routledge, 2003).

[104] Lee, *A History*, 155.

[105] Lee, *A History*, 329.

[106] Lee, *A History*, 157.

[107] Lee, *A History*, 157–58.

[108] Louw, "A Semantic Domain Approach to Lexicography," in Louw, ed., *Lexicography and Translation*, 157–97.

[109] Takamitsu Muraoka, "Towards a Septuagint Lexicon," in *VI Congress of the International*

Conviction became reality with Muraoka's *A Greek-English Lexicon of the Septuagint (Twelve Prophets)* in 1993[110] and its 2002 sequel *A Greek-English Lexicon of the Septuagint—Chiefly of the Pentateuch and the Twelve Prophets.*[111]

While Muraoka was preparing his work, Luís Alonso Schökel, in cooperation with Victor Morla and Vicente Collado, introduced a form of definition ("descriptive phrases instead of [a series of] glosses")[112] to Semitic lexicography in his *Diccionario bíblico hebreo-español* (DBHE), published between 1990 and 1993. DBHE does not attempt a systematic application of definitions, but does demonstrate their worth in the entries in which they are employed.

At least three other Greek lexica and one Hebrew lexicon have followed the lead of Louw and Nida by introducing definitions, though like Muraoka's lexicon they are arranged alphabetically and not according to semantic domain. Two of the Greek lexica were published in 2000. One is the first fascicle of *Diccionario Griego-Español del Nuevo Testamento* (DGENT).[113] Lee reports that though this work acknowledges a debt to Louw and Nida, its definitions are independently formulated, and that "it has been preceded by a thorough exploration of method in preliminary publications."[114] The other is the third edition of *A Greek-English Lexicon of the New Testament and Other Early Christian Literature* (BDAG), revised and edited by Frederick Danker. Inevitably, Danker's definitions "have been generated out of and grafted on to the existing glosses."[115] Nevertheless, reviewers have especially welcomed this innovation in the Greek New Testament's most celebrated lexicon. Terry Roberts, for instance, in his review article which focuses exclusively on Danker's definitions and glosses (what Danker calls "extended definitions" and "formal equivalents"),[116] says that:

> It is a credit to Danker that he has adopted this process: difficult, frustrating and time-consuming as it is. … Immediately, it seems to me, all NT lexicons, including Bauer's sixth edition (BAAR[117]), are put in the shade … Generally,

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Organization for Septuagint and Cognate Studies, Jerusalem 1986 (SBLSCS 23; Atlanta: Scholars Press, 1986), 263.

110 Takamitsu Muraoka, *A Greek-English Lexicon of the Septuagint (Twelve Prophets)* (Louvain: Peeters, 1993).

111 Takamitsu Muraoka, *A Greek-English Lexicon of the Septuagint—Chiefly of the Pentateuch and the Twelve Prophets* (Louvain: Peeters, 2002).

112 De Blois, "Towards a New Dictionary of Biblical Hebrew," §2.5.

113 Juan Mateos, ed., *Diccionario Griego-Español del Nuevo Testamento: Análisis semántico de los vocables*, dirigido por Juan Mateos, con la colaboración de Jesús Peláez y el Grupo de Análisis Semántico de la Universidad de Córdoba. Fasc. 1, Ααρων–αιματεκχυσια (Córdoba: Ediciones El Almendro, 2000).

114 Lee, *A History*, 165–66.

115 Lee, *A History*, 166.

116 BDAG, viii.

117 BAAR, *Griechisch-deutsches Wörterbuch zu den Schriften des Neuen Testaments und der frühchristlichen Literatur,* 6th ed., völlig neu bearbeitete Auflage by Kurt Aland and Barbara Aland, with substantial assistance from Viktor Reichmann (therefore known as BAAR) (Berlin: de Gruyter, 1988).

> I think there is no doubt that the glosses of BAGD have been sharpened and clarified by the definitions of BDAG.[118]

Definitions are also employed by Lee and Horsley in *A Lexicon of the New Testament with Documentary Parallels*. When it is published it will replace Moulton and Milligan's *The Vocabulary of the Greek New Testament.*[119] Anne Thompson, editor of the provisionally entitled *Cambridge Greek Lexicon Project* (UK)—an Ancient Greek-English lexicon for students to be published by Cambridge University Press—has also investigated the use of definitions. For reasons of space she will not be able to use them formally, but will be able to utilize insights gained for a refined and qualified approach to translation equivalents.[120]

As we have seen (§6.1.4), the SDBH project is also employing definitions based on a methodology that utilizes insights from both Louw and Nida and cognitive linguistics. But despite the preparatory work of De Blois' team on SDBH and DBHE's selective use of a form of definition (see above, page 42), the situation for current Classical Hebrew and Aramaic lexicography remains very different from that of ancient Greek. As recently as 1992, two years after the publication of DBHE, Barr considered the provision of definitions for Classical Hebrew to be impracticable:

> In a case like ancient Hebrew the dictionary provides not definitions (for who could "define" what a śār or a šaḥal was, or the action indicated by the verb kḥd?), but glosses, that is, English words that sufficiently indicate the sort of area in which the Hebrew meaning must lie. The meaning itself, for the user of the dictionary, must remain within the Hebrew. One does not suppose that these glosses are perfect translations, or even the best renderings that can be produced; in this respect the lexicographer does not have to worry about the renderings as much as one has to worry about them when a translation of the Bible is being made. The dictionary says: this word belongs in the area approximately indicated by the English gloss "cattle" or "lion" or "hide" or whatever it may be; and, if the user wants to know more exactly what it means, he or she must study the Hebrew of the passages as quoted.[121]

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[118] Terry Roberts, review of Frederick Danker, ed., *A Greek-English Lexicon of the New Testament and Other Early Christian Literature. Third Edition*, *RBL* (2002): 1, 2, 8. Cited 21 October 2002. Online: http://www.bookreviews.org/pdf/1376_3109.pdf.

[119] For discussion of the work see G. H. R. Horsley, *New Documents Illustrating Early Christianity* (5 vols.; North Ryde, N.S.W.: Macquarie University, 1981–1989); John A. L. Lee and G. H. R. Horsley, "A Lexicon of the New Testament with Documentary Parallels: Some Interim Entries, 2," *FN* 11 (1998): 55–84. See also J. A. L. Lee, "συνιστημι: A Sample Lexical Entry," in *Melbourne Symposium on Septuagint Lexicography* (SCSS 28; Atlanta: Scholars Press, 1990), 1–15.

[120] Thompson discusses the issue of definitions in "A Wordbook for Ancient Greek," in Bruce Fraser and Anne Thompson, eds., *Proceedings of the July 2002 Cambridge Colloquium on Ancient Greek Lexicography* (provisional title; forthcoming). The proceedings include a paper by Lee: "Releasing *LSJ* from its Past."

[121] Barr, "Hebrew Lexicography: Informal Thoughts," 145. See also Barr, "Scope and Problems in the Semantics of Classical Hebrew," *ZAH* 6 (1993): 3–14.

As far as I can see, the issue of definitions of meaning is not even mentioned in *Semitic Linguistics: The State of the Art at the Turn of the 21st Century*.[122] The difference between ancient Greek and Semitic lexicography on the matter of definitions leaves us with a number of questions. Why are definitions possible for ancient Greek but, with the exception of SDBH and their selective use in DBHE, have not as yet been seriously considered and debated for Classical Hebrew? Is it because Hebrew and other Semitic languages have been thought to be more resistant to the provision of definitions than Septuagint, Classical and Koine Greek, perhaps because the information necessary for definitions is too often inaccessible in Classical Hebrew? Or is it because the task was assumed to be too great—greater, for instance, than providing definitions for the Septuagint or for BDAG? Or is it because Greek lexicographers, despite serious debates and the admission that a satisfactory method has yet to be worked out,[123] have experimented and succeeded in an area that scholars of Hebrew and other Semitic languages have yet to investigate?

More to the point, would definitions, irrespective of their limited application in the lexica of other Semitic languages, be useful and feasible for a Syriac lexicon? That their provision would be a major and difficult undertaking is not in doubt. But despite the difficulties, providing definitions would furnish a future Syriac lexicon with an exceedingly valuable feature that has been greeted in Greek lexicography as the established method of the future, and has now been introduced to Hebrew lexicography.

The Relationship between Definitions and Glosses: In recent times the humble gloss has often seemed to receive bad press. Certainly, contemporary lexicography has had to face the limitations of the gloss method of stating the lexical meaning(s) of each word.[124] The fact is, however, that the gloss has an indispensable place in the lexicon, be it concise or comprehensive. As Thompson (see above, page 43) has observed in her weighing-up of the relative merits of definitions and glosses in the preparation of her Greek-English lexicon, glosses and contextual citations, as carefully selected as they may be, for the most part may not achieve the precision of a definition, but they can supply vital information about the meaning(s) of a lexeme, and are often regarded by the reader as a path towards a lexeme's translational possibilities.[125] Moreover, a discerning

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[122] Shlomo Izre'el *et al.*, eds., *Semitic Linguistics: The State of the Art at the Turn of the 21st Century* (*IOS XX*; Winona Lake: Eisenbrauns, 2002). M. O'Connor does use the term "definitions" in his chapter on "Semitic Lexicography," p. 200, but to refer to the meanings, i.e., glosses, in the Hebrew dictionaries of (Gesenius)-Buhl (see note 58), BDB, KB, and Zorell.

[123] Lee, *A History*, 184. See also Lee's critique of Louw and Nida in *A History*, 158–66, and of BDAG, 166–71, and Roberts' review of BDAG, RBL 2002.

[124] Lee, *A History*, 184. See also Werner Hüllen, "In the Beginning Was the Gloss: Remarks on the Historical Emergence of Lexicographical Paradigms," in *Lexicographers and Their Works* (ed. Gregory James; Exeter Linguistic Studies 14; Exeter: University of Exeter, 1989), 100–16.

[125] Cited, with permission, from a discussion with Thompson at the SBL International Meeting, Cambridge, 2003.

and fully researched definition requires a mastery of all relevant material, and this can include the insights that come from the provision of judicious glosses. At best, definitions and glosses are complementary and not alternatives. Sometimes a definition and gloss merge into one self-sufficient sense. For instance, Louw and Nida's definition of καρδία (§26.3) would hardly make sense to the user were it not complemented by glosses:

> (a figurative extension of meaning of καρδία 'heart,' not occurring in the NT in its literal sense) the causative source of a person's psychological life in its various aspects, but with special emphasis upon thoughts – 'heart, inner self, mind.'

The same can be said for Louw and Nida's entry on ψυχή (§26.4):

> the essence of life in terms of thinking, willing, and feeling – 'inner self, mind, thoughts, feelings, heart, being.'

In BDAG there are entries, says Roberts in his *RBL* review, where "the definition seems not so much to sharpen the gloss as to be sharpened by it." It could be argued that in such cases the fault is not in the definition method, but in the inadequacy of particular definitions that require reworking. But in Syriac I am not convinced that a satisfactory definition would always be achievable, simply because we do not always have available all the information necessary to arrive at an acceptable conclusion. Syriac language research still lacks the kind of philological studies that are so readily available to ancient Greek and Hebrew lexicography. Thus, despite the lexicographer's best efforts, there may well be instances where a few carefully chosen glosses would be as helpful as or even more helpful to the reader than a definition.

In some textual contexts there is the problem of Syriac words that can be assigned a range of conceivable meanings, none of which can be ruled out with certainty—at least at the present stage of our research—and therefore require citation if the reader is to have genuine access to the lexicographer's investigations. In consequence, that word cannot be assigned a definition that has authentic semantic value, because "definitions are based upon the distinctive features of meaning of a particular term."[126] In such cases the tentative or conjectural meaning or meanings arrived at by the lexicographer are best represented by glosses, for a gloss can indicate an approximate or possible sense without prejudicing the integrity of the entry. Two examples of Peshitta Gospel words of uncertain meaning are the adverb ܐܶܫܬܳܐܠܳܐ in Mk 14:44, glossed in KPG as *cautiously*, *prudently*, *circumspectly*, *carefully*, *safely*, *securely*, and the Peal verb ܣܚܩ in Mk 9:18, 20, glossed as *beat*, *batter*, *beat down*; *throw down in convulsions*, *shake violently in convulsions*, *throw into convulsions*. The ambiguity of these instances may of course be clarified by further research outside the context of the Syriac New Testament. But the need for such extensive research helps to highlight the extent of the task that Syriac lexicography faces.

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[126] Louw and Nida, *Greek-English Lexicon*, 1:vii.

A comparable problem arises where there is more than one option regarding the meaning of a word, and a source text must be taken into consideration. One meaning of the Syriac rendering may prove to be closer than the others to that of the source text. This may indicate the meaning intended by the Syriac translator. But other meanings, even though they differ from the meaning of the text behind the Syriac, may actually have as much claim to the intent of the target version. What should the lexicographer do in such situations? To supply a tentative definition for each meaning that requires legitimate consideration would not be impossible, but for the reader it may confuse rather than clarify. Again, perhaps for Syriac at this stage of its lexical evolution, the preferable approach would be to present the reader with a judicious list of glosses, with an explanation if necessary that reveals the reason(s) for their selection.[127]

Syriac Definitions of Meaning as an Issue of Value versus Feasibility: The experience of Greek lexicography demonstrates beyond reasonable doubt the lexical value of the definition of meanings, and encourages us to test their feasibility for a Syriac lexicon. However, the time-requirements of this feature (which Greek lexicographers have found to be as demanding as if not more demanding than any other), combined with the fact that Syriac does not have access to a storehouse of semantic and philological studies, may make it wise to begin with a policy of providing definitions on a selective rather than universal basis, and exhaustive meanings in the form of glosses complemented by illustrative Syriac-English quotations in all other instances. In this regard, it would be a matter of "making the road as we walk on it." In anticipation of the day when an informed decision would need to be made, Greek lexicographers who have implemented definitions could be consulted, a few relatively simple and complex specimen entries produced, and the results entered into the database. Whatever approach is adopted, it would be important to avoid the pitfalls of basing definitions on glosses, whether the glosses are in existing Syriac lexica or have been established for the new project, for such an approach would replicate the very problem that Danker faced in his definitional task for BDAG.[128]

7.1.2 Exhaustive Treatment of the Senses of a Word

There is nothing new about providing exhaustive meanings in dictionaries, but it would be new for a Syriac lexicon. In the past, not even the most ambitious Syriac lexical works have been able to achieve this, even for the biblical corpus. With the exception of *Thesaurus Syriacus*, J. Payne Smith, and KPG, glosses tend to be no more than a generalized guide to the primary senses of words, and frequently to only some of them. The usefulness and often practical necessity of having glossaries and brief lexical guides

[127] For the treatment of words of uncertain meaning in KPG, and examples of such meanings, see 2:XXX–XXXIII, esp. XXXII.

[128] Lee, *A History*, 166–67, 185.

at hand is not in question. But they will never be a substitute for a work that seeks to encompass all the senses of a word in the literature that is covered, including any ambiguities, and the acknowledgement of meanings that remain uncertain or cannot be ascertained. For a future comprehensive Syriac lexicon, the exhaustive treatment of the meanings of a word would be an invaluable asset for student and scholar alike, and in my view should be a foundational goal whether or not definitions were included. If definitions were provided then it follows—as in the lexica that have them—that every semantically differentiated meaning would require its own definition.

7.1.3 Grading New Senses

In seeking to address the problem of listing senses that previously had not been entered in a lexicon, Barr advocates for Hebrew that "new suggestions should be graded."[129] His gradients are: "assured," "good," "deserving to be mentioned," and "another opinion exists." It is a suggestion that might be worth considering in some form for some troublesome Syriac lexemes.

7.1.4 Syriac Words of Similar Meaning

It would be helpful before proceeding with a discussion of this feature to clarify why the term "words of similar meaning" is employed rather than "synonyms," for the choice of term does have significant implications for the lexicographical endeavour. "Words of similar meaning" are words that can be shown to have in the designated corpus a meaning similar to that of the word under analysis. While the term "synonyms" continues to be used (for example, by DCH), many linguists consider it to be inappropriate.[130] Louw and Nida, for instance, state in the introduction to their lexicon that:

> The first principle of semantic analysis of lexical items is that there are "no synonyms," in the sense that no two lexical items ever have completely the same meanings in all of the contexts in which they might occur. Even if two lexical items seem not to be distinguishable in their designative or denotative meanings, they do differ in terms of their connotative or associative meanings. This principle of "no synonyms" may also be stated in terms of the fact that no two closely related meanings ever occur with exactly the same range of referents, much less the same set of connotative or associative features.[131]

The provision of words of similar meaning is a lexical item that has proved its worth in recent decades. Modern linguistics emphasizes that a lexical item is but one

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[129] Barr, "Hebrew Lexicography," in *Studies on Semitic Lexicography*, 117.

[130] For a definition of "synonym(-y, -ous)" in modern linguistics, see Crystal, *A Dictionary*; Hadumod Bussmann, *Routledge Dictionary of Language and Linguistics*, (trans. and ed. G. P. Trauth and K. Kazzazi; London: Routledge, 1996); and Peter H. Matthews, *The Concise Oxford Dictionary of Linguistics* (Oxford: Oxford University Press, 1998).

[131] Louw and Nida, *Greek-English Lexicon*, 1:xv.

part of a whole, and that in order to appreciate its relationship to other lexical items it is necessary to have access to words that function at least in the same semantic subdomain.[132] Again, the lexicon of Louw and Nida is pioneering in this field of biblical lexicography. However, there is a vast difference in conception and arrangement between Louw and Nida's lexicon based on semantic domains and one that lists words alphabetically or under their root, which, because of the range of information it would offer, would be the case with the lexicon we have in view. For this reason, each entry as in KPG would need to be able to accommodate words of similar meaning. Furthermore, each meaning of a word that has two or more senses would require, where it exists, its own list of Syriac words of similar meaning. Such a list can be provided in a concise, consistent, and systematic manner so that at one level this feature can function as an inbuilt thesaurus and at another as a departure point for semantic, literary, text-critical, and translation-technique research.

7.1.5 Syriac Semantic Opposites

In lexicography, the use of the term "antonym" can be misleading and, as in linguistics, "its use must always be viewed with caution."[133] It would be incorrect for the user of a lexicon to assume that a word cited in a lexical entry as an "antonym" is intrinsically and exclusively opposite in meaning to the headword. The sense relations between opposites conventionally called "antonyms" is often complex. For lexicography, the term "semantic opposites," or perhaps "semantic counterpoints," would probably be more indicative of the kind of data that is being offered, less open to misunderstanding, and a more appropriate match for "words of similar meaning."

A word in a lexicalized corpus may have more than one semantic opposite, which in its turn may have two or more opposites. In Syriac literature, ܝܰܒܫܳܐ *dry land* is the semantic opposite of both ܝܰܡܳܐ *sea* and ܡܰܝܳܐ *water*. ܝܰܡܳܐ *sea* is the semantic opposite of ܐܰܪܥܳܐ *land* as well as of ܝܰܒܫܳܐ *dry land*. For its part, ܐܰܪܥܳܐ where it means *earth*, is often paired with ܫܡܰܝܳܐ *sky* (*"you know how to interpret the earth and the sky,"* Lk 12:56), or ܫܡܰܝܳܐ *heaven* (*Lord of heaven and earth*, Mt 11:25). The sense relations between words such as ܙܥܽܘܪܳܐ (*little*, *small*, *short*, *brief*, *least important*, *younger*, *few*), ܣܓܺܝܐ (*much*, *abundant*, *great*, *large*, *many*, *long*, *late*), their respective Syriac words of similar meaning, and their various semantic opposites, are even more intricate.

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[132] As Louw and Nida define them (vol. 1:vi), semantic domains and subdomains consist of three major classes of semantic features: "shared, distinctive, and supplementary." "The shared features," they say, "are those elements of the meaning of lexical items which are held in common by a set of lexical items. The distinctive features are those which separate meanings one from another, and the supplementary features are those which may be relevant in certain contexts or may play primarily a connotative or associative role."

Crystal, *A Dictionary* (148), defines "domain" as it is used here as a term "sometimes used in semantics to refer to the area of experience covered by the set of terms in a particular semantic field, e.g. colour terms, kinship terms." See also Crystal's explanation of the "semantic field theory," 344.

[133] Crystal, *A Dictionary*, 27.

Syriac words of similar meaning (§7.1.4) are new to Syriac lexicography. Only KPG features them. By contrast, semantic opposites are a familiar part of *Thesaurus Syriacus*, and consequently of J. Payne Smith. They are also a feature of KPG. But their treatment in these lexica is neither consistent nor thorough and lacks the foundation of a sound methodology. For example, a random check reveals that *Thesaurus Syriacus* and J. Payne Smith cite ܐܝܟ *yes* as the opposite of ܠܐ *no*, but not KPG. KPG cites ܛܒܐ *good* as the opposite of ܒܝܫܐ *bad*, and vice versa, but the comparison is lacking in *Thesaurus Syriacus* and J. Payne Smith. All three lexica record ܝܡܐ *sea* as an opposite of ܝܒܫܐ *dry land*, but neither *Thesaurus Syriacus* nor J. Payne Smith repeat the comparison in the entry ܝܡܐ. Moreover, only KPG includes ܡܝܐ *water* as well as ܝܡܐ *sea* as an opposite of ܝܒܫܐ. Under ܙܥܘܪܐ *Thesaurus Syriacus* offers ܟܬܝܢܐ ܘܣܥܝܪܐ ܕܓܒܪܐ as opposite to ܙܥܘܪ ܡܩܛܢ *pusilli*, and ܪܒܐ *senior* as opposite to ܙܥܘܪܐ *junior*. J. Payne Smith omits these terms, but lists the more obvious ܪܒܐ as opposite to ܙܥܘܪܐ, and the plural ܣܓܝܐܐ *many* as opposite to ܙܥܘܪܐ *few*. However, ܪܒܐ is not qualified with a gloss, so it is not possible to tell whether the author intended it as an opposite to all, some, or only one of the meanings provided for ܙܥܘܪܐ. Furthermore, ܙܥܘܪܐ is not cited as an opposite under ܪܒܐ. In KPG, ܣܓܝܐܐ, ܩܛܝܢܐ, and ܪܒܐ are listed as opposites of ܙܥܘܪܐ. Each is complemented with a chapter and verse reference.

Thesaurus Syriacus and J. Payne Smith occasionally also supply an opposite for a particular meaning of a verb. The entry on the Peal ܐܬܪ includes the meaning "rise as the sun, moon or stars" and the Peal ܥܪܒ "set" as its opposite. The Peal "ܡܠܐ and ܢܩܨ" lists the meaning "wax of the moon" and the Peal ܚܣܪ as an opposite. KPG does not extend its opposites to verbs.

The recognition of lexical semantic opposites over more than a century of Syriac scholarship has not been misplaced. The significance of antonymy and the study of oppositeness of meaning in semantic analysis[134] point to the value of semantic opposites as a standard lexical item. In semantic analysis it is a matter of controversy as to how many types of opposites one should usefully recognize. For a Syriac lexicon there would also be the pragmatic question as to what limited extent opposites should be included, and whether in a corpus-by-corpus work it would be useful and sufficient to list in lexical entries only terms that actually appear as opposites in the lexicalized literature. What is not in doubt is that the value of a citation would be greatly increased by reference to its location as is done in *Thesaurus Syriacus*, KPG, and Greek lexica such as BDAG and Muraoka 2002.

The value of context is also an important issue. In his highly disciplined lexicon, Muraoka does not restrict his citation of semantic opposites to the one word when context provides an example of the use of both the lexeme and its opposite. Under φῶς, for example, he has the citation:

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[134] For definitions see Bussmann, *A Dictionary*, 26–27, and Crystal, *A Dictionary*, 27.

> opp. darkness, διεχώρισεν .. ἀνὰ μέσον τοῦ ~ὸς καὶ ἀνὰ μέσον τοῦ σκότους '.. divided between the light and the darkness' Ge 1:4, σκότος καὶ οὐκ φ. Am 5:18.

7.1.6 Syntactic Information

A strong case can also be argued for the inclusion of discrete syntactic information.[135] In many instances, a syntactical annotation can help to identify and elucidate the function(s) and meaning(s) of a lexeme, and provide a point of entry into other related and wider areas of exploration such as exegesis, translation, and translation technique. Five apt examples are (a) the several functions of the particle ܕ, (b) the primary syntactically-determined functions of ܡܸܢ, ܚܰܕ (that is, numeral *one* and indefinite article), (c) the various functions of ܐ, (d) the demonstrative pronouns before or after a noun already mentioned in the same context to indicate that a noun is definite (for example, *the* child) and not indefinite (for example, *a* child), and (e) the three principal functions of words with the form of a passive participle.[136]

7.1.7 Syntagmatic Data

The fifth feature to be mentioned is syntagmatic data. No lexical resource has been as meticulous in its treatment of this feature as DCH. As Muraoka notes in his review article of the first volume, "the DCH is extremely rich, even exhaustive by intention and design, on syntagmatic and paradigmatic information, reporting, for instance, 'all the subjects and objects that are attested for every verb, and for nouns, all the verbs and all the other nouns with which they are connected' (page 15)." "This is in principle," continues Muraoka, "an undoubtedly right approach. In fact, such information is already available in some previous dictionaries of Biblical Hebrew, notably BDB, with the important difference, though, that the DCH does it systematically and exhaustively."[137] Previous Syriac lexica have seen the practical necessity to cite at least basic paradigmatic information. But unlike BDB, they have not cited syntagmatic data.

That the semanticist especially would benefit from having access to such data in a Syriac lexicon is not in doubt. As Muraoka says:

> After all, one of the principal aims of systematic collection of syntagmatic and paradigmatic data on a given lexeme must surely be for them to serve as

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[135] For a more detailed discussion of this feature, see Falla, "A New Methodology," 182–85; J. A. L. Lee, "The United Bible Societies' Lexicon and Its Analysis of Meanings," *FN* 5 (1992): 167–89.

[136] For examples in KPG, see the particle ܕ, 1:115–18; ܡܸܢ, ܚܰܕ, 2:68–73; the demonstrative pronouns, 2:4–5, 10, 12–15; the functions of words with the form of a passive participle 2:XXI–XXII. For ܐ see Joosten, *The Syriac Language*; Peter J. Williams, *Studies in the Syntax of the Peshitta of 1 Kings* (MPIL 12; Leiden: E. J. Brill, 2001), esp. chaps. 4 and 9.

[137] Takamitsu Muraoka, "A New Dictionary of Classical Hebrew" (review of D. J. A. Clines, ed., *The Dictionary of Classical Hebrew*, vol. 1 א) *Studies in Ancient Hebrew Semantics*, AbrNSup 4 (1995): 89–90.

> an essential basis for the establishment of senses on one hand and studying them in relation to other associated lexemes within the language on the other, a linguistic exercise which alone deserves the name of "semantic analysis."[138]

However, Syriac syntagmatic data would not have a place in a printed Syriac lexicon, at least not in the form in which it is supplied by DCH. A cursory glance at the Hebrew lexicon, which will extend to eight volumes when it is completed, reveals that this item probably claims more print space than any other feature. Yet the volume of Syriac literature requiring lexicalization makes the corpus of Classical Hebrew look small. The space required by this data in a Syriac lexicon would therefore be enormous. Were it included, it would almost certainly have to be at the expense of other equally if not more important features. While they also demand a good deal of space, the sacrifice of other items such as the definition of senses (were they to be included), Syriac-English citations, and words of similar meaning would be obviously unacceptable.

George Kiraz, however, says that it would be both feasible and desirable to provide syntagmatic data in an electronic Syriac lexicon. However, the data could not be presented as it is in DCH, as it would be too voluminous to be useful.

In this regard, we might learn something from the form in which DCH presents its syntagmatic data. Like Muraoka, I appreciate the significance of this data, but as a user I look to the day when it could be presented in a more accessible and digestible form. I find it helpful to scan a DCH column for a particular instantiation of a particular vocable, but have difficulty in moving beyond an instance-by-instance use of the data in entries that are of substantial size. To do so requires a great deal of time and effort. In its present form, DCH's syntagmatic data is comparable to what a complex column of correspondences would look like if they were cited without the lexicographer's ordering and text-critical interpretation of the material at hand. It is, however, now within the realm of possibility to employ computational linguistics to distil the raw syntagmatic data into a structured form that would make it easier to use and evaluate, and this should be kept in mind for any electronic presentation of Syriac syntagmatic data.

7.1.8 Statistical Data

Computer technology has made the provision of statistical data feasible, and one only has to turn to the "Word Frequency Tables" in DCH and to the statistical data in each entry in Kiraz, *Concordance* to gain an idea of the potential value that such data has for the average lexicon user. The advent of quantitative and statistical linguistics[139] is a further reason for consideration to be given to the inclusion of statistical data.

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[138] Muraoka, "A New Dictionary," 91–92.

[139] For definitions see Crystal, *A Dictionary*, 383 and 433.

7.1.9 Indexes

An index can transform the utility of a lexicon. Earlier in this essay (§6.1.1, p. 27) I proposed an alphabetical index to make a root-based lexicon user-friendly. However, neither the root-ordered nor alphabetically arranged lexicon can solve (for the beginner or more advanced student) the problem of locating irregular and troublesome forms. An index of such forms can therefore be a blessing. In KPG each form is provided with a page number, root for verbs, catchword for nouns and adjectives, grammatical analysis (pronominal suffixes are in italics), and textual references, so the user can locate an example in both the lexicon entry and the lexicalized text; for example: [140]

ܐܚܒ *Aph. impf. 3mpl. sf. 3ms.* Mk 11:18 ܢܐܚܒܘܗܝ

Other indexes could also add immeasurably to the usability of the lexicon. Two that I suggest are (a) an English-Syriac index that lists all glosses, and (b) an index of syntactical information otherwise difficult or impossible either to relocate or to access because it is embedded in lexical entries. The two following specimens from KPG's "Index of Grammatical and General Information" represent (a) syntactic information in lexical entries that is essential to the analysis of a word's meaning and (b) definitions of parts of speech in the lexicon's introduction:

Adjective
- absolute state 2.XIX, XXVIII–XXIX, 19a, 20a
- adverbialized 2.XX–XXI
- attribute 2.XXVIII
- construct state
  - followed by preposition 2.20b, 131b
  - qualified by noun 2.142a
- definition 2.XXVII–XXX
- emphatic state 2.XXX, 19b, 20a–b
- in clauses
  - in a ܗܘ clause 2.XXVIII–XXIX, XXX, 19a–b, 20a–b
  - in adnominal clause introduced by ܕ 2.XXX, XXIX–n.1, XXX
  - in clause introduced by ܟܕ XXIX–XXX
  - in nominal/non-verbal clause 2.XXVIII–XXIX, XXX

Pronouns
- demonstrative adjective 2.4a–15a, 28b–38a

[140] KPG, 1:3.

8. METHODOLOGY

One may safely say that there is no area of Syriac lexicography that has been more in need of revision than methodology. With a new project would come the opportunity of devising well-thought-through methodologies for all elements of the lexicon. By doing so it would be possible to achieve the consistency and thoroughness that is essential for the investigation and presentation of disparate types of information without being a slave to uniformity.

8.1 Methodologies Devised for KPG

I have sought to address some methodological issues in the preparation of KPG and have been grateful for the insights and assistance of others, especially Francis Andersen, Jan Joosten, David Lane, and Takamitsu Muraoka. Some of these methodologies could be utilized for a comprehensive lexicon. One is KPG's approach to grammatical classification.

8.1.1 Grammatical Classification (see also §5.1.2)

According to traditional linguistic theory, the grammatical classification of a word (taxonomy and parts of speech) should be determined by both its morphology and syntactic function. As Dean Forbes shows in his contribution to this volume, this is still the dominant view.

But when this hypothesis is applied to the making of a lexicon it inevitably results in inconsistency and confusion. In KPG the problem is resolved by classifying vocabulary items strictly in accordance with their syntactic function(s) in the lexicalized text. The premise for this approach is that, just as linguists and lexicographers accept

that meaning is determined by a word's use in its textual contexts, so a word's classification is to be determined by its syntactic function in the lexicalized text, and not by its morphology.

The method is dependent on two prerequisites. The first is instance-by-instance syntactic diagnosis; the lexicographer must be able to diagnose the syntactic function of each occurrence of a particular vocabulary item in its textual context in the prescribed corpus. Only in this way can one determine the part or parts of speech of a given Syriac (or Aramaic, or Hebrew) word. The second is that "it requires the lexicographer to define with some degree of exactness the various parts of speech that are employed in the lexicon, especially the more problematic parts of speech" such as the adjective and words with the form of a passive participle.[141] Without the first prerequisite the second could not be achieved. Without the second the lexicographer would be unable to classify on a consistent basis. It is a demanding and time-consuming task, but no more so than the intrinsically flawed traditional approach to which Semitic lexicography has been tied. Furthermore, its advantages are many. For instance, it allows for a coherent and systematic analysis of complex morphological, syntactic, and semantic information; it resolves a longstanding confusion in lexicography between morphology (form) and syntax (function); and is able to employ uniform criteria that overcome previous inconsistencies in lemmatization and parts of speech and their consequent difficulties for the lexicon user.[142] It is an area of research that inevitably calls upon the interdisciplinary research and collaboration of lexicographers, grammarians, and computational linguists as made evident in the contributions to this volume by Janet Dyk and Dean Forbes.

8.1.2 Other Methodologies Devised for KPG

Other methodologies in KPG could also be considered: its detailed methodology for (a) ascertaining the meanings of Syriac words (though not definitions),[143] (b) tracing, evaluating, and citing Syriac New Testament words of similar meaning in a consistent and thorough manner,[144] and (c) ascertaining correspondences in the source text and their presentation and evaluation. KPG also has a methodology for evaluating variant readings in the source text. This is necessary, for often a term in the Syriac New Testament is conceivably in agreement with one or more variant Greek readings in the

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[141] Falla, "A New Methodology," 172.

[142] For a full discussion of this methodology, see KPG, 2:XX–XXX; Falla, "A New Methodology"; "Problems." Cf. also Andersen's and Forbes' comments on this methodology and its applicability to Classical Hebrew in F. I. Andersen and A. D. Forbes, "What Kind of Taxonomy is Best for Feeding into Computer-Assisted Research into the Syntax of a Natural Language?" *Bible and Computer* (ed. J. Cook; Leiden: Brill, 2002), 23–25, and the concluding section "Problems to be Solved," 37.

[143] KPG, 2:XXX–XXXIV; Terry C. Falla, "Questions Concerning the Content and Implications of the Lexical Work *A Key to the Peshitta Gospels*," in R. Lavenant (ed.), *VI Symposium Syriacum 1992* (OrChrAn 247, 1994): 90–96.

[144] KPG, 2:XXXIV–XXXV.

underlying text. When that is the case, the variant Greek readings in question are cited as correspondences.[145]

The principles of KPG's methodology for the provision of Greek correspondences could be applied without too much difficulty to other Syriac corpora that have been translated from texts for which there are existing witnesses. Another KPG method that would have potential applicability is its lexical recognition and citation of occasional plays on the meanings of polysemous Syriac New Testament words.[146] There is also the related issue of a methodology for the critical evaluation of wordplays.[147]

8.2 Future Methodologies

Some features will require methodologies specifically designed to meet the requirements of both the project and current research.

8.2.1 Orthography

Orthography can differ from one writing to another, and often within the one corpus and within the transmission of a particular text. "Israel" in the Peshitta Gospels illustrates the latter. It is spelt in three different ways in Pusey and Gwilliam's text of Matthew (ܐܝܣܪܥܝܠ, ܐܝܣܪܥܝܠ, ܐܝܣܪܥܝܠ), and two in John (ܐܝܣܪܥܝܠ, ܐܝܣܪܥܝܠ). In KPG all three spellings are listed in their alphabetical sequence (as well as in the alphabetical index), but the second and third refer the user to the first where each receives its full and individual treatment.

In his Aramaic dictionaries, Sokoloff has sought to be sensitive to the apparently differing requirements of his material. In the introduction to DJPA (page 6) he writes:

> Because of the fluid state of the orthographic practice in the manuscript tradition over the centuries, identical words are commonly spelled in a variety of ways. While quotations in the entries themselves give the spelling exactly as it appears in the source, the entry header itself is spelled in accordance with what has been shown to have been the original JPA practice.

In the introduction to DJBA (page 21) he writes:

> … an eclectic approach, conforming more or less to the traditional orthography was felt to be more appropriate for the headwords of the entries, in order to make the use of the dictionary easier for the reader.

8.2.2 Etymology (see also §6.1.2)

Etymology is another feature that will require a methodology. Existing Syriac and other lexica would be helpful, but the fact that etymological information in *Thesaurus Syriacus*

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[145] KPG, 1:XXVI–XXXVII; see also Andreas Juckel's review, "*A Key to the Peshitta Gospels*, vol. 1, *Alaph–Dalath*; vol. 2, *He–Yodh*," *Hugoye: Journal of Syriac Studies*, 4/1 (syrcom.cua.edu/Hugoye/Vol4No1/HV-4N1PRJuckel.htm, 2002 §[9]–§[11).

[146] KPG, 2:XXXIII–XXXIV.

[147] Falla, "Questions," 96–98.

is inferior to that of Brockelmann, and to Costaz based on Brockelmann, demonstrates the importance of weighing the respective merits of the policies and approaches adopted by various lexica before utilizing them as resources.

8.2.3 Meanings of Words (see also §5.1.4, 7.1.1, 7.1.2, 7.1.3)

Ascertaining the Meanings of Words: In recent decades much has been written about ascertaining and presenting the lexical meaning(s) of each individual lexeme: the pitfalls and the methods that have been or should be employed. Unquestionably, it is a subject that will require serious attention in compiling a new Syriac-English lexicon.[148]

Ordering the Meanings of a Word: How the meanings of a word are ordered has been a concern since Samuel Johnson's "The Plan of an English Dictionary (1747)."[149] For a multi-authored lexicon it is neither a subjective nor purely pragmatic matter. It is a semantic and syntactic issue that deserves its own methodology, which on the one hand can help avoid a superficial arrangement, and on the other contribute to the content of an entry. In a forthcoming paper, Michael Clarke includes discussion on the arrangement of senses in an ancient Greek lexicon.[150]

8.2.4 Limitations of Translations as Resources for Meanings

Translations should not be used as an authoritative basis for establishing the lexical meanings of words,[151] though as John Lee demonstrates, Greek biblical lexicography has a history of simply taking renderings in English and Latin versions and placing them in the lexicon as statements of meaning.[152] Thus far translations of Syriac texts have not had the influence on Syriac lexicography that English and Latin translations have had on Greek lexica, though it is not difficult to show that Syriac lexicographers have sometimes been unduly attracted to translations of biblical Greek and Hebrew texts. The creation of a new English-Syriac lexicon would present the opportunity of avoiding the temptations of translation dependency. At the same time, there is no denying that for a number of reasons, a translation can be one among several helpful

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[148] E.g., KPG, 2:XXX–XXXIV; Falla, "Questions," 85–99; Lee, "The United Bible Societies' Lexicon," 167–89; *A History*, 15–44, 155–75, 184–88; Louw, "The Present State of New Testament Lexicography," 97–117; *Semantics of New Testament Greek* (SBL Semeia Studies; Philadelphia: Fortress, 1982); "Meaning and Translation in Lexicography," *SATT* 7 (1989): 112–15; "How Do Words Mean—If They Do?" *FN* 4 (1991): 125–42; "The Analysis of Meaning," 139–48; Muraoka 1993, X–XII.

[149] "The Plan of an English Dictionary (1747). By Samuel Johnson." Edited by Jack Lynch, http://andromeda.rutgers.edu/~jlynch/Texts/ plan.html.

[150] Michael Clarke, "'What Does τυγχάνω Mean?' An Essay in Semantic Reconstruction," in Fraser and Thompson, *Proceedings of … Cambridge Colloquium on Ancient Greek Lexicography*.

[151] For a discussion of some of the difficulties and decisions facing the translator of a Syriac text, which would have implications for the lexicographer using such a text, see K. D. Jenner, A. Salvesen, R. B. ter Haar Romeny, W. Th. van Peursen, "The New English Annotated Translation of the Syriac Bible (NEATSB): Retrospect and Prospect," *AS* 1.1 (2003), 83–106.

[152] Lee, *A History*, 31–44.

resources for the investigation of the meaning of a word in a particular context in a particular text. This I have discovered in my use, for instance, of Gwilliam's Latin translation of the Peshitta Gospels and of insightful and apparently carefully researched renderings in Murdock's translation of the Peshitta New Testament. Conversely, an erroneous rendering can alert the lexicographer to the need for a particular lexical clarification. Sometimes a comparison of translations reveals divergent understandings of a Syriac word or phrase and immediately brings to the notice of the lexicographer issues that require investigation.[153]

8.2.5 Illustrative Examples (see also §5.1.5)

The history of illustrative examples in English lexicography is pertinent to Semitic lexicography. In their 1911 first edition of the *Concise Oxford Dictionary of Current English* (page v), H. W. Fowler and his brother F. G. Fowler describe their illustrative examples as "copious for so small a dictionary" and "a necessary supplement to definition when a word has different senses between which the distinction is fine, or when a definition is obscure and unconvincing unless exemplified."[154] In his discussion of "the language of examples in English dictionaries for foreign learners," A. P. Cowie sees the Fowlers as providing

> a salutary starting-point, since their work suggests powerfully that the distinction between the learning difficulties of native speakers and foreign learners (and consequently dictionaries intended for the two categories of user) is one of degree, not of kind (cf. Ilson, 1985…). [155]

Of particular interest to a methodology for a Syriac lexicon is Cowie's reference to a 1987 paper by P. Drysdale. As Cowie says, Drysdale "spells out a number of key functions:"[156]

> (a) to supplement the information in a definition;
>
> (b) to show the entry word in context;
>
> (c) to distinguish one meaning from another;
>
> (d) to illustrate grammatical patterns;
>
> (e) to show other typical collocations;
>
> (f) to indicate appropriate registers or stylistic levels.[157]

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[153] See note 7 for translations of the Syriac Gospels and New Testament cited in this essay.

[154] Johnson's *Dictionary* (1755) was the first major English dictionary to use illustrative historical quotations.

[155] A. P. Cowie, "The Language of Examples in English Learners' Dictionaries," in *Lexicographers and Their Works* (Exeter Linguistic Studies 14; Exeter: University of Exeter, 1989), 55–56.

[156] Cowie, "The Language of Examples," 57. See also A. P. Cowie, "The Place of Illustrative Material and Collocations in the Design of a Learners' Dictionary," in *In Honour of A. S. Hornby* (ed. P. Strevens; Oxford: Oxford University Press, 1978), 127–39. Cowie also recommends an analysis by J. Sinclair in J. Sinclair, ed., *Looking Up* (London: Collins, 1987).

[157] P. Drysdale, "The Role of Examples in a Learner's Dictionary," in *The Dictionary and the*

These functions pertain to a Syriac-English lexicon and provide a basis for a systematic approach that is both theoretical and applied.

8.2.6 Other Features

Some other features that will require a methodology are homonymy and polysemy, paradigmatic data, denominative verbs, definitions (if they were employed), idioms, the treatment of words of ambiguous or uncertain meaning, the evaluation and form of presentation of divergent views and interpretations, Syriac semantic opposites and the extent to which they might be cited, syntactic information, and the nature and extent of statistical information such as word frequency if it is included.

8.3 Methodologies in the Public Place

Another question that will demand attention is to what extent methodologies that determine the nature and content of the lexicon should be shared with the user. Introductions to dictionaries will continue to be ignored by the average user. But there are readers, and their numbers seem to be increasing, who want to know, and feel they have the right to know, how reliable the information is, and how the lexicographers gained it and arrived at their conclusions, so that, if desired, the information can be checked and evaluated. The three obvious and potentially complementary ways of publishing methodological procedures are (a) in the introduction to the lexicon, (b) in books and journals, and (c) online. Whatever form or forms are decided upon, there would almost certainly be a core of constant users who would welcome and probably expect the introduction to the lexicon to contain an explanation of methodology as well as arrangement. It is an extra demand but not without its benefits, for by clarifying what might otherwise be put aside or remain ambiguous, the lexicographer creates a methodological template that is invaluable for the preparation of the whole work.

9. ARRANGEMENT AND PRESENTATION

Thus far we have looked at the questions of audience, scope, content, and methodology. These are inseparable from arrangement (how content is organized) and presentation (aesthetic dimension), which for any writing—be it a novel, volume of poetry, or textbook—will be intimately connected with reader response.

Making our future lexicon user-friendly for both student and specialist will be an issue of design and experimentation. Some decisions will affect the arrangement of the entire work. One is whether lexemes are presented under their root or in alphabetical sequence. Another, if root order is adopted, is whether compound words are listed only once under the root of their first component part or under the root of each of their component parts. Most decisions will have to do with the design of typical nominal and verbal entries, and with the specificities of their various elements. And

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Language Learner (ed. A. P. Cowie; Tübingen: Niemeyer, 1987), 213–23.

there will always be room for the surprise—the initially unplanned. By way of analogy we might mention the box that surrounds key words in each citation of Kiraz's *Concordance*. It is a small innovation that enhances the usability of the entire work.

For our future lexicon, it would be essential to adhere to the principle of placing first the material that would be of immediate or most interest to the student. The question of where to locate etymological information would come into this category. Traditionally, it is given at the beginning of an entry, but perhaps it would come better at the end, where alphabetically arranged dictionaries such as J. Payne Smith and DCH cite words belonging to the same root as the headword.

Another necessary principle is the need to distinguish clearly between various categories of information. To overcome the prospect of the reader's having to work through a dauntingly continuous column to locate what was sought, in KPG I divided each entry into three genre-specific sections, with the middle section indented. It is an adaptable option that could combine with the use of aesthetically compatible fonts to distinguish between different types of information in the one section, and perhaps the use of shading, which the SOED (2002) has employed to good effect for quotations.

9.1 Root-versus-Alphabetical Arrangement (See also §6.1.1)

The respective merits of the root and alphabetical arrangement are discussed under "Content of a Typical Entry: Part Two" (§6.1.1), because lexica that employ roots regard them as a constitutive part of the information they provide. This is in contrast to alphabetical sequence which is purely a matter of "arrangement."

9.2 Geminate Roots

Traditionally, geminate roots (that is, roots that have identical second and third consonants) can be a dilemma for the student, who may not know where to locate them. It was a question I discussed with Muraoka in my preparation of KPG. He came up with a novel solution that works well. To quote from KPG:

> Geminate roots … are listed as if they are bi-radical in accordance with the convention followed by lexicographers such as Brockelmann and Costaz. At the same time, geminate roots are also treated as tri-radical. This dual method of citation is achieved (a) by listing geminate roots in their bi-radical sequence (e.g., ܚܒ under ܒ and not under ܚܒ) and (b) by citing in angle brackets the full rather than the bi-radical form. An example is the geminate root ܫܫ. It is listed as if the root were ܫ, so that in [KPG] it comes between the roots ܨ and ܠ. However, the form cited in brackets is ܫܫ, not ܫ; e.g., ‹ ܫܫ › (see p. 132). Both forms are listed in the Alphabetical Directory of Syriac Terms, the shorter bi-radical forms acting as cross-references to the tri-radical roots.[158]

This procedure would be an option if a root-based system were adopted.

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[158] KPG, 1:XXI–XXII.

9.3 Homonymic Roots

A perusal of Syriac lexica will quickly reveal that the user's task is not made easy when it comes to identifying roots that have the same consonants in the same order but differing Semitic roots. One way of clearly distinguishing such entities is to present the root in the centre of the column and follow the common practice of Hebrew lexicography by distinguishing the root with a roman numeral. Thus the respective homonymic roots for ܣܢܝܐ n. com. *sword* and ܣܢܝܐ adj. *desolate*[159] would be respectively cited in the centre of the column as I. ܣܢܐ and II. ܣܢܐ.

9.4 Order of Lexemes under their Root

If a root-based system is employed, the question arises as to what arrangement should be adopted for the listing of lexemes under the root to which they belong. Several Syriac lexica order their lexemes according to a presumed etymological derivation. Thus, if the words of a particular root are thought to derive from a particular noun, then that noun will be cited as the primary headword, and the derived forms, including verbal conjugations, listed under it according to their assumed place in the etymological hierarchy.

An example is the noun ܟܗܢܐ *priest*, under which Brockelmann lists ten derivatives: ܟܗܢܘܬܐ, ܟܗܢܝܐ, ܟܗܢܐ, ܟܗܢܬܐ, ܟܗܢܢܐ, Pael ܟܗܢ, ܟܗܢܐ, ܡܟܗܢܬܐ, Ethpaal ܐܬܟܗܢ and ܡܬܟܗܢܢܐ. Costaz lists all but the last of Brockelmann's lexemes, but his order is different: ܟܗܢܘܬܐ, ܟܗܢܐ, ܟܗܢܢܐ, ܟܗܢܝܐ, ܟܗܢܬܐ, Pael and Ethpaal ܟܗܢ, ܡܟܗܢܬܐ and ܟܗܢܐ. Köbert has only three of Brockelmann and Costaz's lexemes under ܟܗܢܐ: ܟܗܢܝܐ, ܟܗܢܢܐ and Pael ܟܗܢ. His lists ends with ܥܬܝܪܐ *having abundance*, *prosperous*, *opulent*, and ܥܬܝܪܬܐ *abundance*, *well-being*, *prosperity*, *opulence*, which Brockelmann and Costaz view as belonging to a different Semitic root with the same root consonants. Audo and Thelly have fourteen derivatives, including three verbal conjugations, and have a different order from Brockelmann, Costaz and Köbert. In addition, Audo and Thelly list six words of the ܥܬܝܪܐ/ܥܬܝܪܬܐ semantic family, which, like Köbert, they assign to the same root as ܟܗܢܐ *priest*.

Another example is ܢܘܪܐ *fire*. It is the primary word in Brockelmann, Costaz and Köbert. Brockelmann lists nine secondary forms. Costaz and Köbert, who follow Brockelmann's order for the forms they list, both have five, though they differ from one another in that Köbert has the Pael verb which Costaz omits, and Costaz includes an adjectival form which Köbert omits.

Three obvious drawbacks of this derivational arrangement are that it is complex to implement, can be confusing and inevitably very difficult to use, and is often speculative. If a future comprehensive lexicon employed comparable principles of arrangement, its authors would encounter the kind of methodological quandaries with which past lexicographers have had to wrestle, and its readers would be faced with the

[159] See §5.1.1 for further details.

same kind of user-disadvantages.

A second option assumes the retaining of denominative verbs as a lexical feature (see §6.1.3). In this model, a greatly simplified derivational hierarchy is determined by, and limited to, the citation of the denominative verbs. As in the first option, a denominative verb is cited under the primary form from which it is derived. But neither secondary verbal conjugations nor other parts of speech are given separate denominative status. Instead, all verbs are listed together according to their conventional paradigmatic order; that is, the Peal first, followed by Ethpeel, Pael, Ethpaal, and so on. Other parts of speech follow the verb. For these parts of speech precedence is given to words that are identical to the root, or the first consonants of which are identical to the root. Thereafter all other words are cited in strict alphabetical sequence.

A third option would be to dispense altogether with a hierarchical arrangement. In this model, all verbs would immediately follow their root. Denominative verbs, if they were retained as a lexical item, would be marked with an abbreviation and the form from which they are considered to derive in a manner akin to J. Payne Smith and KPG (see §6.1.3). Other parts of speech would follow the verbs in the manner described for the second option.

Though KPG's approach is closest to the third of these options, I would now be inclined toward the second for three reasons: it would combine an informative primary etymological hierarchy with the overall simplicity of alphabetical sequence; it would immediately identify the nominal form from which the lexeme(s) cited below it is/are derived; and it would avoid making unnecessarily complex and sometimes unavoidably dubious diachronic judgements as would be the case with the first option. As discussed in §6.1.3, this option would require a methodology for the ascertaining of denominative verbs.

9.5 Guides to the Contents of an Entry

A guide to the contents of an entry that enables the reader to see at a glance what a multiplex entry contains is worth every centimetre of the space it requires. DCH employs it for entries such as לְ, which has twenty-three sections and six subsections, and לֹא, which has twelve sections and thirty-four subsections.

Guides to the contents of an entry are a basic part of the organizational structure of KPG. An example are the guides to the contents of the twenty columns for the Peal ܗܘܐ. The entry, which lists the more than 1900 occurrences of Peal ܗܘܐ in the Peshitta Gospels, has five primary contents' guides, each of which has its own subsections. The division into sections and subsections allows the reader to scan the manner in which each occurrence of the verb *to be* has been classified according to its primary syntactic function and listed under that function according to person, number, and gender. Another example is ܒ and the compounds in which it is employed. For this entry there are ten sections and thirty-nine subsections.

By employing this feature, the lexicon is able to transform long and complex columns of sectionalized information into entries that are simple to follow and analyses that are easy to find.

9.6 Absolute and Emphatic States

In her essay in this volume, Alison Salvesen proposes that the usual lexical order of the absolute and emphatic states should be reversed so that the emphatic is placed first. Her recommendation is based on the syntactic and semantic realities of the use of the absolute and emphatic in Classical Syriac. It is lexically sensible and would be simple to implement.

9.7 Lemmatization of Words with More Than One Part of Speech (see also §5.1.2, 8.1.1)

As mentioned earlier, a word that has more than one syntactic function in the lexicalized corpus will require more than one part-of-speech notation in the lexicon (§5.1.2, 8.1.1). This raises the question of how to lemmatize words that have more than one syntactic function. Should each function have a separate lemma? In principle, this approach would be linguistically and lexicographically credible for a lexicon that adopts syntactic function as the basis of its grammatical classification (§8.1.1). A lemma would be determined by its function. According to this model, ܠܘܿܚ, ܠܘܿܚܳܐ, which was used as an example in §5.1.2, would have three separate lemmas corresponding to its functions of adjective, noun and adverb. Likewise, a word with the form of a passive participle that functions as both an adjective and a noun would have two separate lemmas. If this form of lemmatization were to be entirely consistent it would also apply to verbs that have more than one syntactic function. The passive participle followed by ܠ with the pronominal suffix to form the ܡܸܝܼܬ ܠܵܗ syntagm, and words with the form of a passive participle that have an active meaning would therefore have a claim to separate lemmatization.[160]

When I experimented with this approach I found that it was not too difficult to implement. But it is not at all conducive to ease of use. A good principle of lexicon-making is that information should be presented as succinctly, clearly, and simply as the material allows. But this approach is neither concise nor user-friendly. To the contrary, it is more inconvenient than helpful, potentially confusing and unnecessarily time-consuming, for the user may have to peruse up to three lexemes with the same form in order to locate the information that is sought.

For this reason, I would advocate the traditional method of citing all functions under the one lexeme. At the same time, I would suggest an alternative to the convention that tends to present different functions as a continuous flow of information. Instead, each function could be treated as a separate entity within the one

[160] For further discussion of the ܡܸܝܼܬ ܠܵܗ syntagm and of words with the form of a passive participle that have an active meaning see KPG 2:XXI-XXII.

entry. An unambiguous way of doing this is to follow the headword(s) with a summary of the functions and then introduce each function *as if* it were a separate entry. In KPG the summary of functions is complemented by a summary of glosses. In substantial entries, the summary is followed by an indented and demarcated section for each function. (Syriac words of similar meaning have been omitted from the following abbreviated example):

> ܛܒ, ܛܒܐ *adj.*, *subst.*, and *adv.*; summary of glosses: (i) good, honourable, kind; valuable, precious, fine; better; do that which is good or desirable; (ii) good things, goods; the good; (iii) very, greatly, extremely, exceedingly, completely, utterly.
>
> *Glosses in detail:* (i) *adj.* good, *of things: a measure* Lk 6:38; *gifts* Mt 7:11; *treasures* Lk 6:45; *part* Lk 10:42; *wine* Jn 2:10; *a tree* Lk 6:43; *fruit*, Lk 3:9, etc.
>
> (ii) *subst. pl.* good things Mt 7:11; *"he has filled the hungry with good things"* Lk 1:53; goods, *"you have many goods"* Lk 12:19; the good, *of persons: "who makes his sun rise on the good and the bad"* Mt 5:45; *of fish* Mt 13:48.
>
> (iii) ܛܒ, ܛܒ, *adv.* very, greatly, extremely, exceedingly, completely, utterly, ܛܒ: ܘܛܒ ܕܚܠܡܝ ܘܡܬܕܡܝ *and they were completely amazed* Mk 6:51; ܛܒ ܐܬܟܥܣ *he was extremely angry* Mt 2:16; *with* ܒ *prefixed:* ܒܛܒ ܚܬܝܬܐ *exceedingly evil* Mt 8:28, *cf.* Lk 5:6, etc.

9.8 Demarcating the Meanings of Lexemes

The different meanings of a lexeme may be distinguished with a number or letter as in BDB, DCH, BDAG and Muraoka 2002. An advantage of this model is that the reader can readily identify one sense from another. Another approach is to present the meanings in clusters along the lines of KPG. An advantage of this arrangement is that the clusters—unlike a definitive separation of meanings imposed by a numerical system—are able to draw attention to different combinations of meanings and shades of meanings, which may overlap or slide into one another as they apply to different occurrences of the same word. Clusters can be demarcated from each other by indentation or a bullet.

9.9 Acknowledgement of Philological Proposals (see also §5.1.7)

Philological proposals regarding a new Syriac word or a new meaning for a known Syriac word, and journal articles pertinent to the treatment of a particular Syriac word or accepted sense of a word, could be acknowledged either in a bibliography at the end

of each volume of the work as in DCH, or within the entry concerned as in BDAG, HALAT and HALOT, and KPG.

9.10 Where Content and Aesthetics Meet

A lexicon that provides a wide range of complex information requires an arrangement that does justice to its contents, is designed with its audience in mind, and is as user-friendly as possible.

From earlier lexica there is a good deal to learn, negatively and positively, about a work's arrangement and presentation. Brockelmann's *Lexicon Syriacum*, superb in content and authored by a brilliant linguist, remains a beacon of warning. For many a beginner it is a maze in which one can become permanently lost even if she or he is familiar with Latin. By way of contrast, the arrangement and presentation of Louw and Nida's lexicon is exemplary: pleasant to the eye and a delight to use. Muraoka 2002 has much larger entries than Louw and Nida, and BDAG has a great deal more detail than either of them, making it far more difficult to organize. Yet both are also clearly set out and functionally accommodating.

By way of summary we may say that to give thought to content alone is not sufficient. As practitioners and theorists we need to keep reminding ourselves that philology and its expression in lexical language give shape and form to a profound aspect of our humanity. Our kind of fascination with words is imbued with its own form of mystery and beauty. In so far as its genre allows, the conception and presentation of the lexicon we have in view would therefore also call for attention to comeliness. Silence we know is integral to music. The subconscious influence of space and balance on the senses is its equivalent in a well presented lexicon.

10. IMPLEMENTATION

Our final question concerns implementation, which I will restrict to a few observations regarding the collaborative and interdisciplinary nature of the project and how tasks might be shared, should we reach the point that the ISLP feels it is ready to begin preparing for publication.

10.1 Editorial Collaboration

Just as R. Payne Smith was assisted by a team in the preparation of *Thesaurus Syriacus*, so the creation of the project we envisage would require collaboration, which, like the ISLP, would be international in scope. A primary question is how the task might be shared. One approach would be that adopted by BDB. Different parts of speech would be farmed out to different scholars. Syriac nouns and adjectives, for instance, would go to one group, verbs to another, and prepositions, adverbs, and presentatives to another. This division of labour has the benefit of maximizing a scholar's control over a clearly demarcated set of lexemes, and minimizing the problem of inconsistency

between entries by different authors, which we meet with, for instance, in *Thesaurus Syriacus*. But for the work we have in mind too much would fall on too few.

My own predilection would be to experiment with a quite different approach, namely, that different scholars would be responsible for different features of an entry. Thus one person or group would prepare the comparative and etymological data, another the senses of words, another the words of similar meaning, and so on. This form of collaboration would draw on the strengths of specific disciplines.

From my preparation of KPG, I have learned how time-consuming each different task can be. Each feature requires its own set of skills and methodology, even though its preparation may be related in one way or another to the preparation of other features. For instance, the provision of correspondences for a major entry can take several weeks. Ascertaining Syriac words of similar meaning requires simultaneous work on every vocabulary item that functions within the semantic subdomain in question. Furthermore, the preparation of this feature is dependent on the prior establishing of the senses of all the Syriac words involved.

Kwasman observes that:

> A dictionary composed by one author is implicitly more consistent. A dictionary composed by many authors or a team can even out weaknesses but the emphasis and interpretation of various terms may differ within the same dictionary.[161]

Whether the approach to the preparation of entries that I am advocating would help to overcome the inconsistencies that are apparent in team-generated lexica remains to be seen. Its most attractive potentiality would probably be its most vulnerable point. A participant would have an intimate knowledge of a particular feature of entries throughout the work, or a corpus of that work, and therefore be in a position to achieve the desired consistency, but would not have the same authorial acquaintance with every detail of a prescribed range of entries. Ultimately, this would be a matter for those responsible to decide.

10.2 Interdisciplinary Consultation

Although lexicographers must be multi-disciplined, it seems that we have often tended to work in relative isolation.[162] This is something that would be good to avoid from the outset so that Syriac lexicography can draw on whatever specialist disciplines it may

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[161] Kwasman, "'Look it up in …'?" 196.

[162] This isolation would seem to have been largely overcome in the field of theoretical and applied lexicography of contemporary languages, for well over a decade ago Henri Béjoint was able to inform us that "One of the consequences of the extraordinary development of meta-lexicography since the late seventies, fostered largely by Reinhard Hartmann, is a rapprochement between specialists of different countries and different languages. Progress in this area has been spectacular, however long it has taken for certain ideas to cross national and cultural boundaries." Henri Béjoint, "'Codeness' and Lexicography," in *Lexicographers and Their Works* (ed. Gregory James; Exeter Linguistic Studies 14; Exeter: University of Exeter, 1989), 1.

require, from etymology and syntax to computational linguistics, from the experience and insights of Syriacists to that of linguists, grammarians, and lexicographers whose specialty is in languages other than Syriac.[163]

To achieve this kind of interdisciplinary co-operation and consultation is an aim of the ISLP as it meets from year to year. Such collaboration will alert the lexicon-makers to the demands and refinements of twenty-first century linguistics and lexicography, help them to avoid pitfalls that might otherwise remain unseen, and be in a better position to plan and prepare a new lexicon for a new generation.

11. AFTERWORD

The year 2003 marked the centenary of Jessie Payne Smith's *A Compendious Syriac Dictionary*. In more than one way her work was a remarkable and sensitively insightful achievement. Its author gave to the world of Syriac the first major Syriac-English lexicon, the option of alphabetical rather than root arrangement as Levy had done earlier in his Aramaic-German lexica,[164] and gave a tantalizing glimpse into the inherent problems of the grammatical classification she had inherited and her attempt to minimize them. That she was unable to improve the latter was due to the fact that the framework of reference in her day was still theoretically and practically determined by the conviction that both form and function are integral to the classifying of words—a view that still shapes grammatical classification in ancient-language lexicography. She also included illustrative examples reworked and abridged from *Thesaurus Syriacus*.

Jessie Payne Smith's contribution, prepared with the blessing and assistance of her father, orbited his and his colleagues' achievement like a smaller friendlier planet. It did not displace the magnum opus it summarized, nor the genius of Brockelmann, but cast a contemporary light on them. For students turning from Latin to English as the language of education it was a morning star from heaven. Far from discrediting its predecessors, it lit an alternative path for a new audience fascinated with what it was learning about Syriac literature. The implications and application of her conceptual framework, along with those of her pioneering contemporaries, are a healthy reminder for our day and age of the significance, risks, rewards, and often necessity of timely innovations.

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[163] Falla, "A New Methodology," 173–80.

[164] See note 54.

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2. THE USER VERSUS THE LEXICOGRAPHER: PRACTICAL AND SCIENTIFIC ISSUES IN CREATING ENTRIES

Alison Salvesen
Oxford Centre for Hebrew and Jewish Studies

In any discussion of the shape of a new Syriac lexicon, the temptation is to focus on methodological issues from the point of view of the lexicographer and researcher. However, the needs of the majority of users, namely new learners of Syriac, should not be forgotten. Commercial considerations will also have a bearing on the project.

A new lexicon would have to be built up layer by layer, like a snowball, starting with the Gospels and then the New Testament, followed by other widely read texts such as the Peshitta Old Testament, Aphrahat, and Ephrem. Other issues that would need to be discussed are the font and vocalization used; the inclusion of comparative philological data; the use of an intuitive abbreviation system; whether lemmata should be cited in alphabetical or root order, and in the emphatic or absolute form; the likely background of the lexicon's users and their aims in learning Syriac; and finally, how to achieve typographical clarity for the work. The lexicon should be fully scientific while remaining as "user-friendly" as possible.

Much of what follows may seem obvious, even self-evident. But it is easy to get wrapped up in what we ourselves, as Syriac researchers and possible future lexicographers, would like to see in a new Syriac dictionary. In this discussion of the technicalities of producing a database and lexicographical methods generally, we must not forget the perspective of the novice Syriacist, stumbling through the pages of our hypothetical lexicon.

The point of such a project, both as a concept and commercially, is to look at the broadest user base and ask, "What does the typical reader want to know?" At the same time, because those compiling the dictionary will be scholars—and the reader and publisher will certainly expect them to be scholarly!—there needs to be a sound intellectual basis for the methodological decisions that are taken. All this is obvious, but in fact it is easy to let a purely academic perspective obscure the needs of the target readership. The two need not be incompatible, of course. But at times it will feel like an unequal yoking.

1. DISTRIBUTION OF USERS

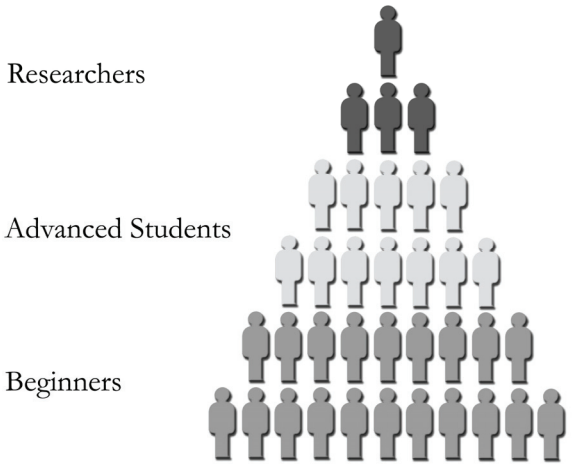

Figure 1. Typical Distribution

1.1 Beginners

The distribution of users of any dictionary can be seen as forming a pyramid. This is not acrobatics but reality. The majority of people who consult a dictionary for a language other than their mother tongue, are going to be beginners. This observation is based on my own experience of learning Syriac along with Hebrew and Aramaic at undergraduate level at Oxford more than twenty years ago, and then teaching the subject to students since 1986. However, these days the typical Syriac beginner at Oxford is much more rarely an undergraduate in Hebrew, Arabic, or Egyptology. Instead, most of those new to Syriac at the Oriental Institute tend to be studying for research degrees in Byzantine history, patristics, rabbinics, early Islamic history, or Muslim theology. I would place such students in the bottom couple of rows of the pyramid initially, along with the occasional more senior academics who decide that they need some Syriac for a current research project and are diligently working through a Syriac primer. Another important group of learners known to me is clustered around the St. Ephrem Ecumenical Research Institute in Kottayam, Kerala, in India. They are usually seminarians, priests, or members of religious orders. As for the sort of texts that all these beginners start out on, they are likely to be the Peshitta Gospels, or possibly liturgical texts. (However, learners using a chrestomathy will normally find a glossary at the back of the book, and the issue of a dictionary may not arise until later.)

1.2 Advanced Students

Some people take the study of the language further than others. In the Oriental Institute in Oxford there are also several students each year taking the Master of

Studies one-year postgraduate degree in Syriac Studies, and occasionally someone on the two-year Master of Philosophy course in Eastern Christian Studies, which requires the study of texts in both Syriac and Greek. These Masters students arrive with some knowledge of Syriac, but they still need to use a dictionary very frequently.

1.3 Researchers

As one becomes more proficient and retains vocabulary more easily, the Syriac dictionary is consulted less often. But there are still less common words that need to be looked up, and days when one's mind is operating at less than full speed and simply cannot remember on Monday morning or Friday afternoon what a particular word means…

2. NUMBER OF WORDS LOOKED UP BY TYPE OF USER

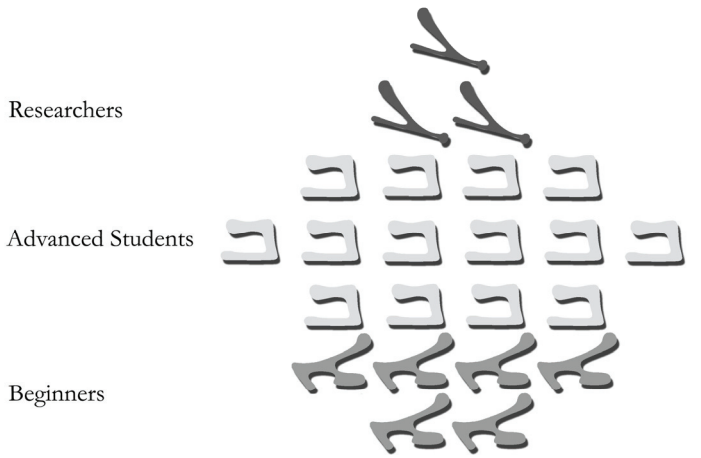

Figure 2. Number of Words

Figure 2 is an attempt to illustrate roughly the number of words for which the types of users mentioned above use a dictionary.

Most **beginners** of any language will be looking up a large number of basic words—sometimes several times—until they have learned them! Occasionally they will run across more difficult or rarer items.

The smaller number of more **advanced students** (our middle tier in Figure 1) will be looking up many more words, and ranging beyond biblical Syriac into Aphrahat, Ephrem, Jacob of Serugh, Narsai, and into genres such as martyr literature and chronicles.

An even smaller number will be **researchers** reading more complex texts, and they will probably know enough Syriac not to need to look up many words. Those they do look up are likely to be less common or technical terms.

3. LEXICAL ISSUES

3.1 Types of Texts Referred To

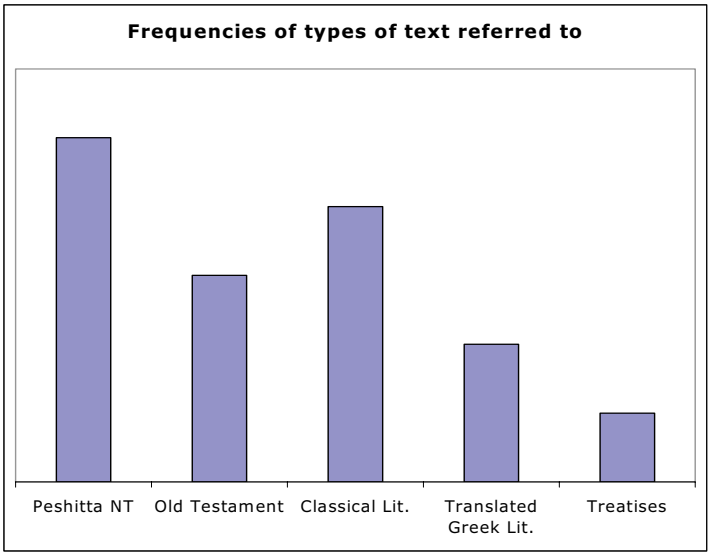

Figure 3. Most Popular Texts

Figure 3 presents a graph indicating the most popular texts read by students. The Peshitta Gospels feature strongly, partly because of the availability of cheap Bible Society editions and, nowadays, resources on the web. Other Peshitta New Testament books and the Old Syriac and Harklean Gospel versions follow closely, and then books of the Old Testament Peshitta, especially Psalms, owing to their liturgical use. Other widely read texts include the *Doctrina Addai*, the *Liber Graduum*, Aphrahat's *Demonstrations*, the many authentic works of Ephrem, the poetry of Jacob of Serugh, and Narsai. Works frequently studied by students of patristics or Byzantine studies include those translated from Greek, for example, the *Life of Antony*, and renderings of Greek writers such as Evagrius, Severus of Antioch, Basil of Caesarea, and John Chrysostom. Other more specialized areas include those of monastic literature, martyr acts and hagiography, chronicles, and technical treatises on maths, medicine, and science.

But from both the lexicographers' and the readers' points of view, the kernel of the corpus of Syriac literature is the Gospels, as they are both fundamental for Syriac Christianity and coincidentally the most often read part of Syriac literature. (One might also consider liturgical texts as of great importance, but of course the liturgy varies from church to church, and many Syriac churches have services in Arabic or English or Malayalam. Also, such texts are rather less studied by students, rightly or wrongly).

3.2 Fonts and Vocalization Systems

One of the biggest difficulties for students of Syriac is the number of fonts and vocalization systems that need to be mastered for a sound knowledge of Syriac. Most people start with Jacobite/Serto script and vowels, and if they are not members of the Syrian Orthodox Church or its branches, this is usually because of the availability of the British and Foreign Bible Society New Testament, and also because a number of elementary grammars such as Coakley's revision of Robinson[1] use Serto. However, some students learn Syriac using Thackston[2] or Muraoka,[3] which both employ Estrangelo, the former with Roman transliterations provided, the latter with Eastern. In the chrestomathies at the back of their grammars, Thackston and Muraoka have unvocalized texts in all three fonts—Serto, Eastern script, and Estrangelo. But since the majority of students will learn Serto first through their study of the Gospels, it seems logical to use that script in the hypothetical lexicon under discussion, as the majority of Syriac lexicographers in the past have done. Alternative Eastern vocalizations perhaps ought to be added in "Nestorian" script, however.

3.3 The Background of Those Learning Syriac

The background of those learning Syriac has already been mentioned, but it is worth restating, since it has a bearing on how far one can assume a common outlook and experience among users of a Syriac dictionary. These days, in contrast to the past, students are often members of the Syriac churches. Therefore they often have some degree of Syriac knowledge, even if only from the liturgy. They may also know Arabic, spoken and sometimes also written.

However, for those learners of Syriac who lack such a background, this may be the first Semitic language they have studied, though often they will know some New Testament Greek. Usually they have studied theology or are involved in church life, whether as laity or clergy. So they are familiar with the Bible, if only in their native language, but possibly also in Greek or Hebrew. However, it is not so unusual these days (at least in Oxford) to find Muslims or Arabists learning Syriac for the purpose of research on Islamic theology or history. Occasionally we have had Jewish students who already know the related Aramaic language of the Babylonian Talmud, and do not need to do much more than learn a new script and some different vocabulary. Overall, therefore, one cannot assume the same kind of background for the readership that the Payne Smith father and daughter could a century ago.

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[1] J. F. Coakley, *Robinson's Paradigms and Exercises in Syriac Grammar* (Oxford: Oxford University Press, 2003).

[2] W. M. Thackston, *Introduction to Syriac: An Elementary Grammar with Readings from Syriac Literature* (Bethesda, Md: IBEX, 1999).

[3] T. Muraoka, *Classical Syriac: A Basic Grammar with a Chrestomathy.* (PLO n.s. 19; Wiesbaden: Harrassowitz, 1997).

3.4 Syriac Grammars

As mentioned briefly above, there is the issue of which Syriac grammars learners are using, and whether this should be reflected in new lexicographical tools. How far do Thackston, Coakley, Healey,[4] Muraoka *et al.* share common ground in terms of grammatical terms and explanations? Or will the user of a Syriac-English lexicon have learnt Syriac from a grammar in another language such as German? All this will have an impact on the readers' familiarity with abbreviations and language definitions. It may also be wise to give cross-references to standard grammars such as Nöldeke[5] for more detailed syntactical information and examples beyond the minimum, rather as the Hebrew lexicon Brown-Driver-Briggs does to Gesenius-Kautzsch.[6]

3.5 Comparative Philology

A methodological issue that could potentially take up a good deal of lexicographical time is that of comparative philology. Goshen-Gottstein's glossary includes many references to related words in other Semitic languages. Should this type of information be included in a future lexicon? For those students who know Arabic, Aramaic, or Hebrew, it may well be helpful to mention cognates. However, cognates can be false friends unless they correspond exactly to the meaning of the Syriac word under discussion: the root *dbr* in Hebrew has a different range of meanings to that found for Syriac *dbr*, even if there is a common origin in Proto-Semitic and there still remains a certain amount of overlap. On the whole, and much as I find them fascinating, my own impression is that cognates are a bit of an unnecessary luxury (especially for the beginner) in that they do not always contribute much to the "feel" or definition of a Syriac lemma, unless it is a Hebraism or Arabism anyway.

3.6 Corpus

The most important issue for the lexicographer is that of the corpus to be covered. The suggestion for the lexical project so far—and it seems an eminently sensible one—is to have a kind of "snowball" corpus. This would be based around the kernel of the Peshitta Gospels, as in Terry Falla's *A Key to the Peshitta Gospels* (KPG), and when and if funding became available, the lexicographical team would add the Old Syriac Gospels, the rest of the Peshitta New Testament, the Harklean version, and move on to the Peshitta Old Testament.

Starting with a basic lexicon in this way is ideal from the commercial point of

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[4] J. F. Healey, *First Studies in Syriac* (Sheffield: Sheffield Academic Press, 1986).

[5] Theodor Nöldeke, *Compendious Syriac Grammar* (trans. James A. Crichton; London: Williams & Norgate, 1904).

[6] Kautzsch, E, ed., *Wilhelm Gesenius' Hebraische Grammatik* (28th ed.; Leipzig: F. C. W. Vogel, 1909); *Gesenius' Hebrew Grammar as edited and enlarged by E. Kautzsch* (2nd English ed. rev. in accordance with the 28th German ed., 1909, by A. E. Cowley (Oxford: Clarendon Press, 1910).

view, since almost every student of Syriac begins the study of the language with the Gospels. As was pointed out earlier, most students have some familiarity with the New Testament because most are Christians and study Syriac for theologically-related reasons. Realistically, many will get no further than the New Testament because they are learning slowly and alone, or because they do not have access to further literature in Syriac, or because they neither want nor need to go beyond that point. And since the Syriac Bible forms the basis for much Classical Syriac literature such as Aphrahat and Ephrem, it is actually at the heart of Syriac. For that reason the next layer of the Syriac lexicographical snowball would logically be the Peshitta Old Testament, perhaps starting with the narrative books and Psalms. The existence of Strothmann's concordance[7] is also helpful.

However, a biblical kernel to the lexicon would pose a methodological problem. The Syriac of the Bible is essentially translation Syriac. That does not mean that it would be "unnatural" Syriac, though in some texts such as the Harklean versions, the Syrohexapla, and certain books of the Old Testament, the flow of the language can deviate from native Syriac in terms of syntax or idiom. Nevertheless, the lexicographer would constantly have to keep in mind the relationship of the Syriac text with the source language in order to avoid giving a definition that reflects the meaning of the word in the Hebrew or Greek source text, rather than the normal meaning of the Syriac word. This is something one runs across frequently in the older editions of the Greek lexicon Liddell-Scott-Jones-McKenzie when dealing with definitions of words that occur in the Septuagint: the meaning given often has more to do with the sense of the Hebrew original than the Greek rendering.

A single example may serve to illustrate that kind of difficulty. The Syriac word ܨܘܼܒܵܐ derived from the verb ܩܵܡ, "to stand," means "covenant" or "agreement" in the majority of instances, especially in biblical Syriac. But in the Peshitta of 1 Samuel chapters 13 and 14 it is used seven times[8] to describe the Philistine military post, corresponding in 13:3, 4 to Hebrew **נציב פלשתים** and in the rest of the cases to **מצב פלשתים**:

Existing Syriac lexica give a section in the definition as follows:

(a) "statio *militum*" (initial definition in both editions of Brun)

(b) "1) *statio,* locus ubi milites in praesidio sunt, 1 Sam. xiii. 3, 4, 23, xiv. 1, 4 etc." (*Thesaurus Syriacus*), hence—

(c) "b) military post, station, garrison" (J. Payne Smith)

(d) "…; poste militaire, military post, *markaz junud"* (Costaz)

(e) "4. praesidium, מַצָּב 1 Sm 13:23; 14:1, 4, 6, 11" (Brockelmann, who also gives the Hebrew or Greek original terms for other translation uses of ܨܘܼܒܵܐ

[7] W. Strothmann, with Kurt Johannes and Manfred Zumpe, *Konkordanz zur syrischen Bibel. Der Pentateuch.* (Wiesbaden: Harrassowitz, 1986); *Konkordanz zur syrischen Bibel. Die Propheten* (Wiesbaden: Harrassowitz, 1984).

[8] 1 Sam 13:3, 4, 23; 14:1, 4, 6, 11.

in this entry such as κανών, στάσις τῶν πόδων, ἀσύστατον, ἀνάστασις, עָמְדָם and בְּרִית, חֻקּוֹת.)

This is important because as far as I can ascertain, ܡܨܘܚܐ is never used in native Syriac literature to describe a military garrison. Therefore the translator of Peshitta 1 Samuel 13 and 14 probably chose it as a neat etymological rendering based on the Hebrew root **נצב** behind the nominal forms **נְצִיב** and **מַצָּב**. "Station" or "post" is a reasonable definition of ܡܨܘܚܐ, found also in native Syriac, and it fits the sense of the passage very nicely. However, the military nuance attributed to it in the dictionaries comes from the context of this particular passage, and not from the Syriac word itself. Jacob of Edessa preserves this rendering ܡܨܘܚܐ in his version of Samuel, no doubt because he correctly took the word in a neutral sense, meaning "post" or "position." Like the original Peshitta translator of Samuel, he allowed the context to show the reader that it must refer to a group of soldiers stationed on watch.[9] Recording the meaning as "garrison" right at the beginning of a dictionary entry, as R. Payne Smith and Brun do, suggests that this military sense is much more fundamental than it actually is, or statistically more important than the much more frequent sense of "covenant," which is listed further down the entry.

So it is helpful when lexica give the Hebrew or Greek behind a word in biblical Syriac, as Falla's KPG and Brockelmann both do, because they alert readers to the fact that they are dealing with translation Syriac. But equally, one cannot assume that a Syriac translator always produced literal renderings of the Greek or Hebrew words in front of him. In KPG, Falla wisely refers to the Greek "corresponding" to words of the Peshitta Gospels, because "it is not unusual for Peshitta renderings to differ, in varying degrees and for various reasons, from their apparent Greek *Vorlage*."[10] Many renderings in biblical Syriac, especially in the New Testament, are contextual or dynamic equivalents. The whole issue of how to deal with translation Syriac in a lexicon that also covers native Syriac literature will need more discussion. Terry Falla's paper in this volume (§6.1.5) deals well with the problem from the perspective of the Gospels.

The problem of relationship to a Greek or Hebrew original does not arise for the next layer of the lexical "snowball" we are discussing. It would be logical to tackle native Syriac literature next, perhaps starting with Aphrahat and Ephrem. These are both fourth century writers who profoundly influenced subsequent Syriac literature, and are accepted by all branches of the Syriac church because they precede the

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[9] Jacob often replaced the wording of the Peshitta with a rendering based on the Greek Samuel. However, in this instance the Greek versions did less well than the Peshitta translator in making sense of the Hebrew *Vorlage* and recognizing the root behind **נְצִיב** and **מַצָּב**. In 1 Sam 13:3, 4, the Old Greek transliterates **נציב** as a proper name Νασειβ, and **מַצָּב** as a place name in 14:1, 11, 6, 11. Symmachus and Theodotion have ἔκστασις for **נְצִיב** in 1 Sam 13:3, and Aquila and the Lucianic recension use ὑπόστημα, found in LXX 2 Sam 23:14. Symmachus has σύστημα at 1 Sam 14:1 as LXX 2 Sam 23:14 for **מַצָּב**.

[10] Falla, KPG, 1:XXVI.

christological disputes of the following centuries. Aphrahat is also relatively easy to read, at least partly because Parisot's edition is in Serto script with vowels! In the case of Ephrem's works, though most of these have been recently edited and translated in reliable German editions by Beck, they are expensive, and because unvocalized, harder to read. Other early and important works, dating from the end of the second to the fourth centuries, would include Bardaisan's *Book of the Laws of the Countries*, the *Acts of Thomas*, the *Odes of Solomon*, and the *Liber Graduum*. At some stage it would be desirable to include epigraphy, both public inscriptions and magic bowls and amulets, since this also reflects native Syriac. Having said that, epigraphy still rarely features on the syllabus as often as literary texts.

After that, the list of possible texts becomes absolutely immense: not a snowball but an avalanche. Even if one imposed a cut-off date, perhaps with Barhebraeus in the thirteenth century, the task would be overwhelming for all but a very large and monumentally well-funded project! However, the first three or four centuries of Syriac literature are a firm foundation for subsequent writing, and their vocabulary is vital for later writers. From the point of view of the lexicon, the main new phenomenon after the Golden Age of Syriac literature and up until the end of the seventh century is the increasing influence of Greek in terms of loanwords and mirror translations such as the Syrohexapla and Harklean versions.

3.7 Type of Lexicon

What type of lexicon do Syriacists from students to researchers like to use? First, it has to be easily available, and thus in library collections, or relatively cheap to buy. Secondly, it is clear that students prefer definitions to be in a modern language—English, French, German, or Arabic for instance—rather than Latin. Brockelmann is an excellent dictionary but is used by few people because Latin is no longer widely known. Besides, even if one knows Latin but is unfamiliar with the Latin word used as a definition—for instance, a technical term, like an agricultural implement—it means one has to consult a Latin dictionary in addition to the Syriac lexicon.

3.8 Introduction

Here follows a confession: it is only when writing this paper that for the first time ever I read the introduction to a number of Syriac dictionaries… I realize that I have almost never read the introduction to any lexicon, unless I happened to be reviewing it! And this is probably not untypical of users in general, especially learners. So although methodology must always be fully explained in the introduction, it must be borne in mind that these pages will be ignored by the vast majority of users! They will simply pick up the lexicon, look up the word they want, and expect to be able to infer the methodology from the lexical entries themselves.

3.9 Abbreviations

Abbreviations need to be clear, and also to a degree intuitive. Brockelmann's lexicon is superior to many others because it gives references to places where a particular Syriac lemma is used. Yet many of the abbreviations for these works are quite idiosyncratic and only comprehensible if one consults the list at the beginning or end of the volume. His acronyms tend to refer to editions rather than authors. Inevitably they are old editions, many of which are no longer readily available. One of numerous examples would be on pages XVIa and 929b of the 1928 edition, where we find the abbreviations "Sb S: Das Quadrivium aus Severus bar Šakku Buch der Dialoge, hsg. von J. Ruska. Leipzig 1896," and six entries later "Sev: Severus bar Šakku dialogus de grammatica ed. Merx in Hist. art. gram." One would not guess from the abbreviations or the listing that these works were by the same author. Furthermore, there is no indication of date for any of the works listed by Brockelmann, which makes it hard for the average reader to perceive any distribution or diachronic semantic development in the way the word is used. In between these references to Severus bar Šakku come "Sch" and "(Sch)": the first refers to Die Schatzhöhle, that is, the *Cave of Treasures*, and the second to Schulthess, along with the next work listed, Schulth, referring to another work by Schulthess. This is very confusing. *Thesaurus Syriacus* has a rather better system, but it is still far from ideal. The abbreviated references in the Greek dictionaries of Liddell-Scott-Jones-McKenzie and Lampe are far clearer, and because the lists give approximate dates for authors, they allow one to perceive any development over time in the semantics of the word in question.

3.10 Absolute or Emphatic

One basic issue for entries is whether the Syriac lemma should be cited in the absolute or emphatic form first in the entry. KPG and J. Payne Smith give the absolute first, then the emphatic, whereas Costaz lists the emphatic first, then the absolute. In the Peshitta, the absolute occurs fairly frequently, especially with numbers or distributively, but in later Syriac literature both the absolute and the construct occur more and more rarely, so it would be worth considering listing the emphatic form first in an entry, since nine times out of ten that is the form of the word that the reader will be looking up. However, Brockelmann lists only the emphatic, which is not very helpful on the rare occasions when a reader has an absolute form in front of her and wonders where it appears in the lexicon. Of course, the absolute form remains very common with adjectival forms where they are used predicatively, and perhaps one should treat entries for nouns differently from those for adjectives.

3.11 Alphabetical or Root order

Alphabetical or root order is a contentious issue in Semitic languages, discussed in greater depth in Terry Falla's paper. It is very helpful semantically to have words listed under roots. However, the beginner who is still working out how to analyse a word so

as to discover the root always prefers alphabetical order, and this is one reason why so many still use Jessie Payne Smith, who does also give the root in the course of the entry. Modern Hebrew dictionaries by and large use alphabetical order, but in a context where a Semitic language is primarily spoken, it is harder to discern the root of a particular word, and it may not be very relevant to the meaning. The example of Modern Hebrew is also relevant because like Syriac, it includes a large number of non-Semitic loanwords that resist classification under root, though the novice learner may well try to extract one. One disadvantage for the alphabetical approach is the vast length of the *Mim* section, because of the number of derived forms beginning with that letter.

3.12 Typographical Clarity

The necessity of typographical clarity ought to go without saying, yet it would be impolitic to mention a number of recent grammars and lexica of ancient languages which have ignored this basic issue. A flawed reference work will be used if it is clearly set out, while the most methodologically sound works are passed over by all but reviewers and advanced scholars if they need a magnifying glass to read them, or the entries are too dense to follow easily. This applies also to materials published on the web. Terry rightly praises George Kiraz's use of a box to highlight the "keyword in context" in his *Concordance to the Syriac New Testament*. Something relatively simple can enhance a lexicon enormously for the user.

4. CONCLUSION

The question is, do reader-oriented dictionaries have to resort to "dumbing down" the Syriac language and vocabulary? Is it possible to be both simple and thoroughly scientific? In the end, the criterion needs to be whether the reader finds the lexicon both easy to use *and* a source of accurate information. The "harmless drudges" who produce the lexicon need to keep the readership ever in mind.

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3. COMPUTING THE SYRIAC LEXICON: HISTORICAL NOTES AND CONSIDERATIONS FOR A FUTURE IMPLEMENTATION

George A. Kiraz
Beth Mardutho: The Syriac Institute

ܡܢܗܘܢ ܕܦ ܙܚܠ ܐܚܪܢ: ܡܢܗܘܢ ܘܒ ܥܒܕ ܐܘܪܗ: ܐܬܪ ܐܚܪܢ ܐܗܠܟ:
ܘܐܬܪ ܟܬܒܘܬ ܐܢܫ؛

Some have expounded ideas, some have corrected words, others have composed chronicles, and still others love to write lexica.

Bar ʿEbroyo (1226–1286)
Storehouse of Mysteries

The purpose of this paper is to give a brief account of the history of Syriac computational lexicography, a field still in its infancy. Previous projects known to me are described in brief, when possible with references to further technical descriptions. Projects which I have personally been involved in are described in more detail not because of ܐܢܐ ܡܫܚ, but merely to document some of the work that has been done. Finally, some remarks are given for a future implementation of a fuller Syriac electronic lexicon.

1. PREVIOUS LEXICAL PROJECTS

Computational Syriac lexicography was born in the 1960s, when a computer system used to occupy an entire room. Oral tradition has it that someone at the University of California, Los Angeles (UCLA), encoded Brockelmann's *Lexicon Syriacum* on a mainframe computer. Stanislav Segert, former Professor at UCLA from whom I learned this in the mid 1980s, attempted to trace down the data during his tenure. No data were found, and the work is presumably lost. One can speculate that at minimum these data contained a transcription of the Syriac lexemes in the *Lexicon*, maybe with Latin correspondences as well. We do not know if any lexicographical or grammatical information was included in the project. The data must have been entered using punch cards, the method of that age, an arduous task in itself. Nothing is known about the intention of the project; it may have been simply a study aid.

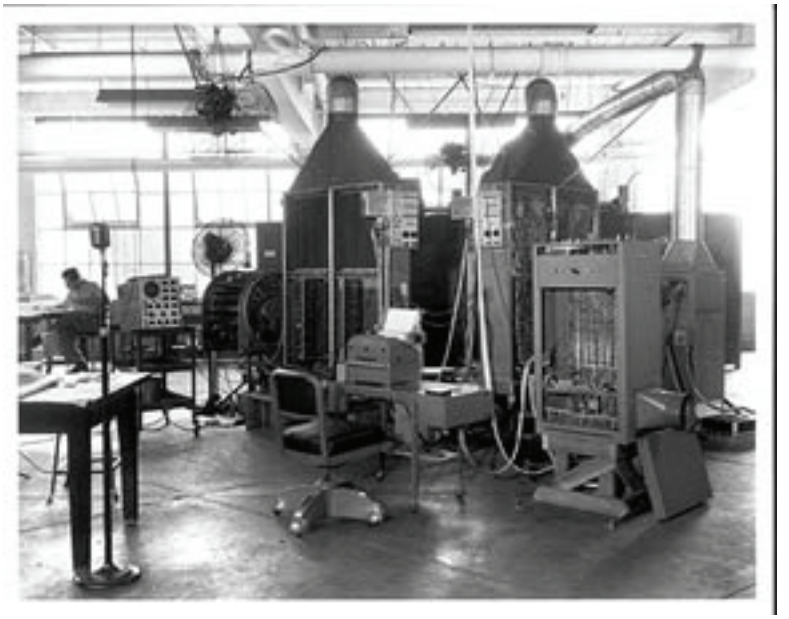

Figure 1. Computer system similar to the one used at UCLA in the 1960s

More ambitious projects followed during the next few decades, although admittedly these were primarily motivated by concordance generation. While concordances are an essential tool for compiling modern lexica, be they electronic or in paper form, the lexical projects implemented during this period had a reverse objective: They were exclusively used for the generation of printed concordances. For this reason, these lexica were corpus-specific, and lacked much of the semantic infrastructure that would otherwise be present in a computational lexicon designed for the sake of lexicography itself. Data from these previous systems, however, can be used as a starting point in a future computational lexicon.

1.1 The Göttingen Project

In 1970, an ambitious project began in Göttingen aiming at the publication of Syriac concordances to Biblical texts. The project was called Der Göttinger Syrischen Konkordanz, and used Fortran IV as its programming language.[1] A number of concordances resulted from this and subsequent work.[2]

The data model of the Göttingen project was a simple one, a feature of data models of the period. Tables were saved in flat files, where each line in a file

[1] The description given here is based on M. Zumpe, *Technische Aspekte der Göttingen Syrischen Konkordanz* (Deutsche Arbeitsgemeinschaft Vorderer Orient, September 2001).

[2] W. Strothmann, *Konkordanz zum Syrischen Psalter* (GOFS 10; Wiesbaden: Harrassowitz, 1976); *Konkordanz zur Syrischen Bible: Der Pentateuch* (GOFS 26; 1986); *Der Propheten* (GOFS 25, 1984); *Die Mautbē* (GOFS 33, 1995); *Konkordanz des syrischen Koheletbuches nach der Peschitta und der Syrohexapla* (GOFS 4; 1973).

represented a record. Fields in each record were fixed-length. For instance, the file containing word forms had the following four fixed-length fields:

- Word form, giving the Syriac word in transcription (suffixed with `=n`, where `n` is numeric, disambiguating word form homographs).
- Root number, giving a number that references the root of the word form. (Each root had its own unique number.)
- Root, the root of the word form in transcription (with `=n`, where `n` is numeric, disambiguating root homographs).
- System Code, giving morphosyntactic information in numeric form.

Table 1 gives sample entries for ܐܘܝܪ 'air,' ܐܒ "father," and ܐܒ "fruit." (Note that the last two words form consonantal homographs.)

Word form	Root Number	Root	System Code
"R	00010	"R	30901
'b'	00020	'b'	41301
'b'=1	00050	'b'=1	40201

Table 1. Data Example from the Göttingen project

Entering data was a challenge in its own right. Someone who must have known Syriac, or at least the Syriac alphabet, transcribed data on data cards. The data was then entered, by someone who did not have to know Syriac, using a traditional keyboard to generate a punch card. The punch card was then fed to an IBM mainframe computer.

Syriac text was entered using simple transcription (one-to-one mapping from Syriac letters to ASCII). The text for Gen 1.1 looked as follows:

```
$K1 $V1 B/R+SYT (^B/RY+SYT) BR'=101 'LH' YT +SMY'
W/YT 'R*'
```

The line represents the text:

ܒܪܝܫܝܬ ܒܪܐ ܐܠܗܐ ܠܫܡܝܐ (ܒܪܝܬ) ܘܠܐܪܥܐ

The tag `$K` precedes a chapter number ("K" for German `Kapitel`), and the tag `$V` precedes a verse number. The character / separates a prefix from the stem of a word. The character ^ marks variants (themselves placed in parentheses). Note the use of `=101` to disambiguate ܒܪܐ "to create," which appears in this verse, from ܒܪ "son," which appears elsewhere in the corpus.

1.2 The Way International Project

Also in 1970, and probably unknown to the Syriac studies community at the time, The Way International, a "nondenominational, nonsectarian Biblical research, teaching and fellowship ministry" (as it describes itself on its web site), began an ambitious project to create a Syriac concordance to the Syriac New Testament. The Way was motivated by George Lamsa's unfounded claims that the Peshitta is superior to the Greek New

Testament and represents an original Aramaic version of the New Testament.[3] During a period of 15 years, The Way managed to encode the entire Syriac New Testament, with a comprehensive lexical database. The concordance[4] that came out of the project was a mere word list, despite the fact that the data model was sufficient to create a concordance as detailed as the one produced later by Kiraz.[5] The Way managed to publish other useful tools from the project: an edition of the New Testament in the Estrangelo script,[6] an inter-linear Syriac-English edition of the Peshitta New Testament,[7] and an English-Syriac index.[8] The Way initially made these publications available to individuals who were not members of their organization.

The data model employed here was based on a relational database. The data were later made available through the Ancient Biblical Manuscript Center (Claremont, CA). The Center received this data on a single magnetic reel-to-reel tape containing twelve data files. The format was created on an IBM System 38 computer. The files were downloaded by them onto sixteen 364K, 5 ¼" floppy disks in a PC environment with the help of the Academic Computer Center at the Claremont Graduate School. Each record type was represented in a flat file, one record per line. Fields were fixed-length. The data was provided in a number of files as follows:[9]

- Roots, listing the roots of all the words that appear in the New Testament (for example, ܐܒ, the root from which ܐܒܐ "father" is derived).
- Words, listing each word at the lexeme level (for example, ܐܒܐ "father").
- Word forms, giving every single instance of a word including prefixes and suffixes, if any (for example, ܘܐܒܗ "and his father").
- Etymologies, giving the Greek or Latin behind foreign words.
- English meanings, giving multiple meanings for each word.
- Text, giving the text of the entire New Testament.

Much energy must have been spent to compile this data. It was later utilized by Kiraz in the SEDRA database project (see below).

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[3] George M. Lamsa, *The Holy Bible From Ancient Eastern Manuscripts, Containing the Old and New Testaments Translated from the Peshitta, The Authorized Bible of the Church of the East* (Nashville: Holman Bible Publishers, 1933; 22nd printing 1981); the NT was reprinted by Harper & Row, n.d. For Lamsa's claims, see George M. Lamsa, *New Testament Origin* (Aramaic Bible Center, 1976).

[4] The Way International Research Team, eds., *The Concordance to the Peshitta Version of the Aramaic New Testament* (New Knoxville: American Christian Press, 1985).

[5] George Kiraz, *A Computer Generated Concordance to the Syriac New Testament*, volumes 1–6 (Leiden: E. J. Brill, 1993).

[6] The Way International Research Team, eds., *The Aramaic New Testament* (New Knoxville: American Christian Press, 1983).

[7] The Way International Research Team, eds., *Aramaic-English Interlinear New Testament*, vol. 1 *Matthew–John*, 1988; vol. 2 *Acts–Philemon*, 1988; vol. 3 *Hebrews–Revelation*, 1989 (New Knoxville: American Christian Press).

[8] The Way International Research Team, eds., *English Dictionary Supplement to the Concordance to the Peshitta Version of the Aramaic New Testament* (New Knoxville: American Christian Press, 1985).

[9] Ancient Biblical Manuscript Center, *The Syriac New Testament Database* (leaflet), 1–6.

1.3 Borbone/The Peshitta Institute

During the 1980s, Pier Giorgio Borbone developed a computational system with which he produced a number of concordances to Biblical texts. Descriptions of this system can be found in various papers.[10] In Borbone's initial system, morphosyntactic tags followed words. For instance, ܥܒܐ "fruit" was coded as `'bn'.N/fruit`. The transcription of the word was followed by a period, followed by the morphological category ('N' for noun), followed by a slash, /, and finally followed by the meaning. Similarly, the verb ܐܙܠ "to go" was coded as `'zl.V/to_go` (where the underscore, _, represents space).

The Borbone system has been developed further and is currently being used for the generation of the Leiden Peshitta concordance, of which one volume has already appeared.[11]

1.4 Kiraz's SEDRA Database

The initial work of George Kiraz's lexical work goes back to 1984 when he began encoding existing lexica in relational databases. The first attempt was to encode an Arabic-Syriac version of Costaz's dictionary.[12] Only the letters *Olaph–Dolath* were entered at the time. In a second attempt during 1990, Kiraz tried getting an international group of volunteers to encode Margoliouth's Syriac-English dictionary through Alaph Beth Computer Systems. The system was called ܨܒܥܐ "array" as databases are considered arrays of data. The acronym SEDRA at the time stood for "Syriac Electronic Data Research Archive."[13] In this case too, very little was achieved. On March 2, 1988, Kiraz signed an agreement with the Ancient Biblical Manuscript Center and incorporated its data into SEDRA. The system was used to publish a detailed concordance to the Syriac New Testament, and a pedagogical word list to assist students in learning New Testament Syriac.[14] Recently, Logos Research Systems

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[10] P. Borbone, 'L'uso dell'elaboratore elettronico per lo studio della Pešitṭa', *Henoch* 9 (1987): 55–96; P. Borbone, 'Un programma per l'elaborazione di testi siriaci e un progetto di redazione di concordanze della Peshitta', in R. Lavenant (ed.), *V Symposium Syriacum 1988* (OrChrAn 236, 1990): 439–50; P. Borbone and F. Mandracci, "Another way to analyze Syriac texts, a simple powerful tool to draw up Syriac computer aided concordances," in *Proceedings of the Second International Colloquium, Bible and Computers: Methods Tools, Results* (Travaux de Linguistique Quantitative 43, 1989): 135–45.

[11] P. G. Borbone, K. D. Jenner (eds.), *The Old Testament in Syriac According to the Peshitta Version,* Part V. *Concordance*, 1. *The Pentateuch* (Leiden: E. J. Brill, 1997).

[12] For another unfinished computational work on Arabic-Syriac dictionaries, see George Kiraz and Daniel Ponsford, "Automatic Compilation of Semitic Lexica," in *Proceedings of the 4th International Conference and Exhibition on Multi-Lingual Computing* (1994); George Kiraz and Daniel Ponsford, "The Arabic-Syriac/Syriac-Arabic Dictionary Project: Report II," in G. Kiraz (ed.), *SyrCOM-95: Proceedings of the First International Forum on Syriac Computing* (1995).

[13] George A. Kiraz, ܨܒܥܐ *The Syriac Electronic Data Research Archive* (SEDRĀ) (leaflet), 1–3.

[14] G. Kiraz, "Automatic concordance generation of Syriac texts," in R. Lavenant (ed.), *VI Symposium Syriacum 1992* (OrChrAn 247, 1994): 461–75; *Lexical Tools to the Syriac New Testament*

incorporated SEDRA in its Scholar's Library.[15] In addition, a team of international scholars is currently using SEDRA to generate an interlinear to the Syriac New Testament. SEDRA is downloadable from the Beth Mardutho Web site (http://www.bethmardutho.org). A number of tools have already been implemented using SEDRA.[16]

SEDRA went through three incarnations. SEDRA I (1989) derived from the database provided by The Way International through the Ancient Biblical Manuscript Center. As flat files were not necessarily efficient for modeling databases, the relational data were converted for use in db_VISTA,[17] a database management system that provided a programmable interface in the C programming language for writing database applications. In the next incarnation, SEDRA II (1990), additional tables and fields necessary for the generation of Kiraz's *Concordance* were added. Moreover, the entire text of the New Testament was vocalized and pointed, punctuation marks were added, and the text was normalized to represent the BFBS edition of the Syriac New Testament,[18] as the text used by The Way was based on other manuscripts, primarily from the British Museum.[19] To accomplish the vocalization and pointing process, a program was written that skipped over words which had been vocalized before. Hence, the word ܒܝܬܐ "house," which appears 201 times in the corpus, is vocalized only once as ܒܰܝܬܳܐ. Initial *bgdkpt* letters were always marked with a *qushshaya* point; an algorithm was written to convert the *qushshaya* into *rukkakha* if the preceding word, if any, ended in a vowel and was not followed by a punctuation mark. The dot on the feminine object pronominal suffix ـܗ was not included in the pointing, and was added later on by another algorithm based on morphological data.

The next incarnation of the project was SEDRA III (1991). The first change was the move from a relational model to a network model where ordered, one-to-many parent-child relations simplified the process of concordance generation. In this model, a parent record would have a pointer to the first child record in another table. That child record would have a pointer to the next child, and so on. For instance,

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(Sheffield: Sheffield Academic Press, 1994; Piscataway, NJ: Gorgias Press, 2002); *A Computer-Generated Concordance to the Syriac New Testament* (6 vols.; Leiden: E. J. Brill, 1993).

[15] Logos Research Systems, *Scholar's Library Silver Edition: A Professional-level Library of Texts and Tools for Serious Bible Study using Greek, Hebrew, and English Resources*, Logos Bible Software Series X (2004).

[16] Examples are *Syriac Dictionary*, a useful tool by Abed Daoud (available from http://www.bethmardutho.org), and a similar on-line tool at http://www.peshitta.org.

[17] Raima Corporation, *dv_VISTA III*™, Version 3.10 (Bellevue, Wash.: 1989).

[18] British and Foreign Bible Society, *The New Testament in Syriac* (London: 1919 and subsequent editions).

[19] For a list of the manuscripts used, see *The Aramaic New Testament (Estrangelo Script)* (New Knoxville: American Christian Press, 1983), x.

- The root ܐܚܕ is a parent record and has a pointer to the first child (in this case, the first lexeme derived from it), namely, ܐܲܚܰܕ.
  - The lexeme ܐܲܚܰܕ then has a pointer to the next lexeme (its sister record) ܐܲܚܳܕܳܐ. It also acts as a parent record and has a pointer to the first word form that derives from it, namely, the emphatic ܐܲܚܰܕ (not to be confused with the lexeme record itself).
    - The word form ܐܲܚܰܕ then has a pointer to the next word form (its sister record) ܐܲܚܳܕܶܐ and so on. It also acts as a parent record and has a pointer to the first verse in which it is cited in the New Testament, namely, Mt 10:37.
      - Mt 10:37 then has a pointer to the next verse (its sister record) in which the word form occurs, namely, Mt 11:27 and so on.

Compare this example with the printed version in Kiraz's *Concordance* (volume 1, pages 2–16).

The technical aspects of this model have been described in detail elsewhere.[20] SEDRA III contains 2,050 roots, 3,559 lexemes, 31,079 word forms and 6,337 English meanings (particular to the context of the New Testament).

1.5 Brigham Young University's Bar Bahlul Project

In early 1998 ISPART, (then CPART), commissioned G. Kiraz to implement a linguistic database of the Syriac language that can be used as a tool to implement search engines of Syriac texts. Central to the creation of a searchable Syriac text was an electronic lexicon compounded with a morphological generator. As Syriac is a highly inflected language, it is not possible to enumerate all of the Syriac words that may occur in texts. Kiraz proposed that a linguistically motivated lexicon be created, accompanied with a morphological generator that would create all, or as many as possible, inflected Syriac words, and named the project after the famous 10th century lexicographer Bar Bahlul.

The electronic lexicon was built in Access Format, and populated with roots and lexemes with many morphological attributes. The database contains abstract information from which a fuller lexicon can be generated using a morphological generator. For instance, the database contains the root ܡܠܟ and indicates the verbal and nominal forms that derive from it. For verbal forms, the database may indicate that this root occurs in p'al, pa"el and ethpa"al. The morphological generator creates the corresponding ܡܲܠܰܟ, ܡܰܠܟ and ܐܶܬܰܡܠܰܟ. As for nominal forms, for each root, the actual nominal forms attested in the language are listed. Figure 2 gives a screen shot of the data entry form.

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[20] George Kiraz, "Automatic Concordance Generation," in R. Lavenant (ed.), *VI Symposium Syriacum 1992* (OrChrAn 247, 1994): 461–75.

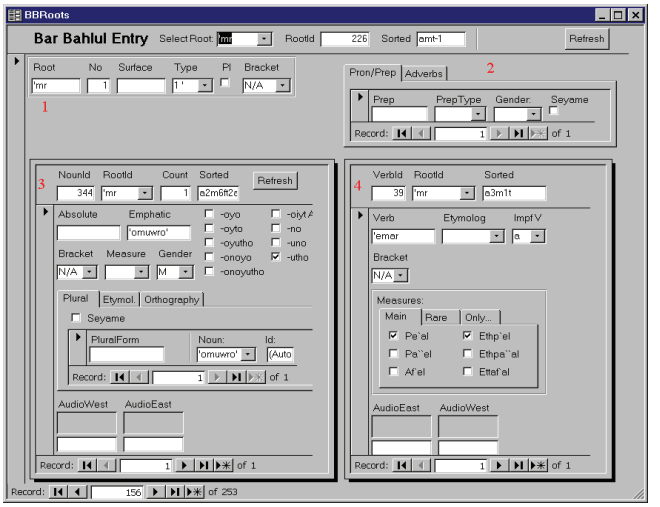

Figure 2. Bar Bahlul Data Entry Form

The morphological generator is expressed in ASCII files according to a special format. In addition to deriving all verbal forms for each root based on information provided in the electronic lexicon, the morphological generator creates forms with object pronominal suffixes, possessive suffixes, and prefixes. The following is an example of morphological rules:

```
# This is a comment
VS1APfaS3M:          12a3
VS1APfaS3F:          1e23at
```

Lines beginning with # are comments. The morphological description takes the following form:

```
Key: Pattern
```

The `Key` indicates when the corresponding pattern should be triggered. In the above example, the entries are triggered in the case of a (from the end of the `Key`): Masculine (`M`) / Feminine (`F`), third (`3`), singular (`S`), imperfect-vowel "a" (`a`), perfect (`Pf`), active (`A`), p'al (`1`), verb string (`VS`). The `Pattern` describes how the entry should be derived from a root. The numerals refer to radical positions in the root. The generator runs iteratively (taking the output of one run as the input of a second run) to produce more words.[21]

[21] This approach departs radically from the more ubiquitous approach of using finite-state technology for morphological analysis and generation. It was used because of its ease and the lack of a finite-state engine. For a finite-state approach to Semitic morphology, see George Anton Kiraz, *Computational Nonlinear Morphology: With Emphasis on Semitic Languages* (Cambridge: Cambridge University Press, 2001).

1.6 The Comprehensive Aramaic Lexicon

In the 1980s, The Comprehensive Aramaic Lexicon Project (CAL) was born under the direction of Stephen Kaufman. The project is ambitious and aims at covering all dialects of Ancient Aramaic. This is probably the first project involving Syriac wherein the lexical aspects of the project are primary, and concordance generation is secondary (that is, concordances help in compiling a lexicon).

Various publications dealing with Aramaic dialects other than Syriac have already come out.[22] A concordance to the Old Syriac Gospels has just been published.[23] More information on CAL can be found on the project's web site at http://cal1.cn.huc.edu.

2. FUTURE CONSIDERATIONS

A new Syriac lexicon, both printed and online is indeed a desideratum, considering that the primary lexicographical works that scholars rely on go back to the late nineteenth century and early twentieth century. Since the mid twentieth century, there has been an incredible growth in Syriac studies. Yet, there has been hardly any work to reflect this development in Syriac lexicography. The task is monumental, and hence a full account of what a computational lexicon of Syriac should contain, or how it should be implemented, would run to hundreds of pages. Here, I only attempt to make brief remarks which may be of use if such a project is embarked upon. (I realise, of course, that my remarks will soon become obsolete, given the rapid rate of advances in computing).

As previous projects, apart from CAL, had concordance-generation in mind (rather than lexicography), their microstructure (for example, which fields to assign to which record-types) is weak. Their strength relies on the data that they have accumulated thus far. These data, provided the source is made available, can then be imported into a new microstructure with fuller lexicographical coverage.

Considering the small size of this field and the difficulty of obtaining funding, a computational model of the Syriac lexicon may need to rely on the user community. For this, an open-source, Internet-based system may be appropriate.

Computational lexicographical projects are typically task-driven. That is, they are designed and implemented to carry out a particular task such as to provide the pronunciation of a word in a text-to-speech system, or to provide misspellings of words in a spelling checker to recover a misspelled word. Such task-driven projects are easier to design, but have obvious limitations for general use. It is preferable that an implementation of a Syriac lexicon be task independent and extendable in order to serve a wider community.

The data model behind the computational lexicon needs to be carefully thought through. Its microstructure needs to cover not only typical fields that are found in

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[22] See http://cal1.cn.huc.edu/ for a list of publications.

[23] J. Lund, *The Old Syriac Gospel of the Distinct Evangelists: A Key-Word-In-Context Concordance* (3 vols.; Piscataway, NJ: Gorgias Press, 2004).

paper-lexica (variant orthographies, dialectical variants, historical spellings, collocations, idiomatic phrases, and so on), but also grammatical, morphological and phonological data that give flexibility for future applications. For instance, there has been hardly any system in previous projects that encodes phonological information, and while most would cater for morphological paradigms, probably none mark transitiveness (because it is not necessary for concordance generation). Of equal importance are semantic and thesaurus-type information. These would not only allow the user to search the lexicon based on concepts (rather than mere roots, lexemes or word forms), but also would allow the building of semantic relations and hierarchies.[24] Examples of semantic relations are the ISA (*a* is *b*), and the PARTOF (*a* is part of *b*) relations. Other semantic relations include synonymy, antonymy, and hyponymy (*a* is subordinate of *b*) from which a lexical hierarchy can be defined.

The macrostructure of the data model needs to handle not only the relations between various types of records, but also data types that would help in building pedagogical-type lexica, be it on paper or electronically. Fields for usage notes, etymologies, historical notes, and literature citations are a few considerations.

Populating any Syriac lexicon model is going to be a difficult, time-consuming task. Traditionally, computer lexica are generated by various search mechanisms on electronic corpora and then use normalization, tokenization and lexicalization techniques to derive lexemes. The lack of any substantial electronic corpus in Syriac makes this approach impossible. Here, the previous projects can be useful if their data are made available.

These considerations set the bar very high, and may be over-ambitious. It is essential, therefore, to begin by designing the system in a modular, scaleable methodology. An implementation can begin with a small module, and move forward as resources become available.

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4. SQUISHES, CLINES, AND FUZZY SIGNS: MIXED AND GRADIENT CATEGORIES IN THE BIBLICAL HEBREW LEXICON

A. Dean Forbes
University of California, Berkeley

Our Problem: Traditional views of part-of-speech classes see them as hard, "either/or" categories [§1]. Several analysts have shown that morphologically-defined parts of speech may overlap (are "mixed") and may be heterogeneous ("gradient") [§2]. How are we to detect and deal with such mixed and gradient classes *so that a coherent taxonomy can be devised?*
Our Solution: Dealing with non-discrete syntactic classes is a four-stage process. **1.** We first use contextual information about the classes to compute their distances apart [§3]. **2.** We then use this set of distances to produce a hierarchical clustering of the classes, on the basis of which we define a set of super-classes [§4]. **3.** We use the distances among these super-classes to infer a one-dimensional continuum (*Ross's class squish*) along which the super-classes are ordered [§5]. **4.** Based on the class squish ordering, we plot each text token in a context space in which mixed and gradient classes are discernible [§6]. We conclude the paper by outlining directions for future work [§7].

1. THE TRADITIONAL VIEW OF PARTS OF SPEECH

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.[1]

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 (i.e., what class it belongs to).[2]

[1] C. F. Hockett, *A Course in Modern Linguistics* (New York: Macmillan, 1958), 221.

[2] A. Radford, *Syntax: A Minimalist Introduction* (Cambridge: Cambridge University Press, 1997), 35. As Radford describes Chomsky's minimalist programme, *minimalism* requires "that

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.[3]

2. SIX ALTERNATE VIEWS OF PARTS OF SPEECH

Questioners of the traditional view of parts of speech have been around for a very long time. As early as 1933, Bloomfield registered this observation: "[I]t is impossible to set up a fully consistent set of parts of speech, because the word-classes overlap and cross each other."[4] Over the years, several alternatives to the traditional hard-class approach to parts of speech have been proposed. We shall briefly introduce six somewhat similar views that differ from the traditional.

2.1 Halliday: *Clines* (1961)

In 1961, Halliday introduced the concept of the *cline:*

> A cline resembles a hierarchy in that it involves relation along a single dimension; but instead of being made up of a number of discrete terms a cline is a continuum carrying potentially infinite gradation. [5]

Trask helpfully expands the definition as follows:

> **Cline** . . . A one-dimensional grammatical continuum resembling a hierarchy except that, instead of consisting of a small finite number of discrete elements, it permits unlimited differentiation. For example, the class **agent** might be regarded as a cline, since some [noun phrases] are more obviously agents than others, and the dividing line between agents and non-agents is by no means obvious. The term was coined by Michael Halliday, and is particularly associated with **Systemic Grammar** and its antecedents; *most other theories of grammar insist upon rigid either/or membership or non-membership of categories, which is highly convenient if not always realistic.* The term **squish** expresses a similar notion. [6]

Allowing categories to lie in a continuum provides for overlap. That it is a one-dimensional continuum does give one pause. Can parts of speech be expected to lie on a "line of categories"?

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any adequate theory of language should be *universal*, *explanatory* and *restrictive*, and should provide grammars which are minimally *complex*, and hence *learnable*." (p. 23) See also the concurring definitions of *part of speech* in D. Crystal, *A Dictionary of Linguistics and Phonetics* (4th ed.; Oxford: Blackwell, 1997), 280, and of *lexical class* in R. L. Trask, *A Dictionary of Grammatical Terms in Linguistics* (London: Routledge, 1993), 155.

[3] Aside from a few references to *prototypes* (about which, see below), there is little that departs from traditional views in P. M. Vogel and B. Comrie, eds., *Approaches to the Typology of Word Classes* (Berlin: Mouton de Gruyter, 2000).

[4] L. Bloomfield, *Language* (Chicago: University of Chicago Press, 1933), 196.

[5] M. A. K. Halliday, "Categories of the Theory of Grammar," *Word* 17 (1961): 241–92.

[6] Trask, *A Dictionary*, 46. Italics added. Other emphases are in the original.

2.2 Ross: *The Squish* (1972)

In 1972, Ross answered the foregoing question in the affirmative. He argued for the *class squish*:

> instead of a fixed, discrete inventory of syntactic categories, [these categories lie in] a quasi-continuum, which contains at least the categories [next] shown, ordered as shown … "
>
> verb > present participle > perfect participle > passive participle > adjective > preposition (?) > 'adjectival noun' > noun
>
> …To pass from [the start to the end along this continuum] is to move in the direction of syntactic inertness, and to move away from syntactic freedom and volatility. [7]

Following Ross's terminology, one may characterize his *class squish* as a *cline* from syntactic volatility to inertness.

As Harris remarks in his fascinating history of linguistics in the sixties and seventies, "[s]quishiness was not a hit." The cool reception was partly due to Ross's being impressively long on diagnosis of problems but unnervingly short on cure, and was partly due to ongoing internecine strife in linguistics.[8]

2.3 Lakoff: *Fuzzy Signs* (1973)

Halliday gave us the cline and Ross gave us the squish, with the class squish and the inertness cline amounting to about the same thing. The West Coast (Berkeley) variant of all this flowed from George Lakoff's *fuzzy grammar*.[9] We've called his variant the *fuzzy sign*. In fuzzy grammar, "instead of sharply distinguished categories, there are 'fuzzy categories' which shade into one another along continua called **squishes**."[10]

2.4 Gazdar *et al.*: *The Hierarchical Lexicon* (1985) [11]

So, what is a *hierarchical lexicon*? The organization of a hierarchical lexicon is equivalent to the organization of the sections of a paper. The basic idea is that higher-level entries subsume lower-level entries ("dominate them"), and information given at the higher level is true of all lower levels. In terms of the paper-headings analogy, for a partial taxonomy of nouns we might have:

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[7] J. R. Ross, "The Class Squish: Endstation Hauptwort," in *Papers from the Eighth Regional Meeting of the Chicago Linguistics Society* 8 (Chicago: Department of Linguistics, 1972), 316–28.

[8] R. A. Harris, *The Linguistics Wars* (New York: Oxford University Press, 1993), 220f.

[9] G. Lakoff, "Fuzzy Grammar and the Performance/Competence Game," in *Papers from the Ninth Regional Meeting of the Chicago Linguistics Society* 9 (Chicago: Department of Linguistics, 1973), 271–91.

[10] Trask, *A Dictionary*, 113.

[11] Our knowledge of the hierarchical lexicon goes back to the work of Gazdar *et al.* on generalized phrase structure grammar. G. Gazdar *et al.*, *Generalized Phrase Structure Grammar* (Oxford: Basil Blackwell, 1985).

1 noun [information true of all nouns]
  1.1 common noun (class N) [information true of common nouns]
  1.2 pure-noun participle (class _) [information true of pure-noun participles]
  1.3 proper noun [information true of all proper nouns]
    1.3.1 human (class H) [information true of human names]
    1.3.2 ethnic (class E) [information true of ethnic names]
    1.3.3 deity (class W) [information true of deity names]

This taxonomy has three levels. Information stored at "node" 1 is true of all of the nodes. Information stored at node 1.3 holds for 1.3.1, 1.3.2, and 1.3.3. And so on.

There is another, equivalent, way to picture the structure of a hierarchical lexicon: its structure is what computer scientists (and genealogists, etc.) call a *tree*. The most general class is the *root* (in the present case, node 1). It *dominates* all of the other nodes. Nodes which dominate no node are called *leaves*. For the example above, one can envision a tree whose root is node 1. Three branches ("edges") exit the root, showing that it dominates nodes 1.1, 1.2, and 1.3. The first two nodes are leaves. The third node, 1.3, has three edges exiting it and leading to the three leaves 1.3.1, 1.3.2, and 1.3.3. Readers interested in seeing what a similar tree would look like should sneak a peek at the subtree with leaves {N, _, W, H, E} almost at the bottom of Figure 1.

The organization of the hierarchical lexicon avoids redundant storage of information. This allows generalizations to be as broad as possible. It also provides a mechanism whereby categories can be subdivided as much or as little as the data require.

Just how the hierarchical lexicon fits in with the other topics that we have been discussing can be seen from the work of Malouf. His primary focus is on the notion of *mixed categories:*

> [T]here is a class of constructions, known as **transcategorial** or simply mixed class constructions. …These constructions involve lexical items which seem to be core members of more than one class simultaneously. A well-known example is the English gerund, which combines with both a direct object (like a verb does) and a genitive possessor (like a noun does).[12]

Malouf's strategy for dealing with mixed categories is to allow the categories to "be much more numerous and much less general" than is traditionally the case.[13] The categories have hard boundaries, but they do overlap. Malouf's hierarchical lexicon "consists of objects of type *word*, organized into a hierarchy of types and subtypes" of the sort that we have described above.

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[12] R. P. Malouf, *Mixed Categories in the Hierarchical Lexicon* (Stanford: CSLI Pubs., 2000), 3.

[13] Malouf, *Mixed Categories*, 7. In Croft's parlance, Malouf is a *class splitter*. (W. Croft, "Parts of Speech as Language Universals and as Language-Particular Categories," in Vogel and Comrie, *Approaches*, 65–102.) Croft complains that splitters have "no way to stop splitting." But the hierarchical lexicon allows one to discover the tradeoffs involved in stopping the splitting of categories at various points.

2.5 Langacker: Prototype Categories (1987)

The proponents of cognitive grammar[14] have their own perspectives on parts of speech. In a section of his introduction to cognitive grammar entitled "*Guiding Assumptions: Discreteness,*" Langacker[15] makes several assertions that are relevant for us:

- "[W]hether a linguistic structure has a certain property, belongs to a particular [class], or participates in a given relation … are often matters of degree." (page 15)
- "Experimental work in cognitive psychology … has demonstrated that [classes] are often organized around prototypical instances. … Membership is therefore a matter of degree: prototypical instances are full, central members of the class, whereas other instances form a gradation from central to peripheral depending on how far and in what ways they deviate from the prototype." (pages 15–16)
- "[T]o posit a continuum is not to abandon the goal of rigorous description: we must still describe the individual structures in explicit detail, even as we articulate their parameters of gradation." (page 19)

Summary to This Point: We have thus far encountered the concept of the class squish (which is equivalent to the syntactic inertness cline and purports to organize the syntactic classes of fuzzy signs along a one-dimensional continuum). We have also encountered notions of heterogeneous part-of-speech classes organized around prototypes, class overlap and graded class membership, mixed classes, and the hierarchical lexicon. For all but the last mentioned, we are aware of no significant attempts to make these various concepts quantitative.

2.6 Schütze: Learnability and Gradience (1995)

Our final non-traditional approach to parts of speech comes from a very different branch of linguistics, *statistical natural language processing (statistical NLP)*.[16] This discipline has been created by "language engineers" motivated by practical language processing goals, such as machine translation, information retrieval, text summarization, question answering, and speech recognition.

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[14] Trask, *A Dictionary*, 48: "**cognitive grammar** … [a]ny approach to grammatical description which is based on, or purports to be based on, our understanding of cognitive processing in the human brain."

[15] R. W. Langacker, *Theoretical Prerequisites* (vol. 1 of *Foundations of Cognitive Grammar*; Stanford: Stanford University Press, 1987).

[16] A good introduction to statistical NLP is C. D. Manning and H. Schütze, *Foundations of Statistical Natural Language Processing* (Cambridge, Mass.: The MIT Press, 2000). Manning and Schütze define statistical NLP as "all quantitative approaches to natural language processing, including probabilistic modeling, information theory, and linear algebra." (p. xxxi)

We shall here focus on *quantitative* approaches to part-of-speech assignment that have emerged from research on the role of *gradience*[17] in language acquisition (and language change).

In his doctoral thesis on language acquisition,[18] Schütze concluded that "gradient representations are more appropriate for resolving ambiguity" than are symbolic or discrete representations and that a gradient model is superior to a discrete model in accounting for language acquisition.[19] He arrived at these conclusions through study of three kinds of ambiguity: part-of-speech, word-sense, and subcategorization.[20] Only his work on part-of-speech ambiguity is relevant to the investigations that we report on below, and hence only it will be discussed here. One aspect of Schütze's view of parts of speech is as follows:

> The notion of part of speech is actually complex, since parts of speech can be motivated on various grounds, such as semantic (commonly called notional) grounds, syntactic distributional grounds, or morphological grounds. Often these notions of part of speech are in conflict.[21]

Having assessed the shortcomings of classical distributional analyses[22] and having concluded that he can overcome the major problems, Schütze focuses solely on *distributionally-defined* parts of speech, leaving aside possibly important morphological and semantic information.[23] To enable quantitative analysis, he introduces a high-dimensional space that he calls TAG SPACE.

Creation of the TAG SPACE structures proceeds as follows:

- *Acquire a large corpus:* Schütze uses the Brown corpus, which consists of 1.1 million words and 47,025 types.
- *Identify the most frequent types:* Schütze uses the 250 most frequent, referred to as the *context words* below.
- *Decide on the focus words for study*: Schütze studies all 47,025.

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[17] Crystal, *A Dictionary*, 173: "**gradience** [is evident in] areas of LANGUAGE where there are no clear boundaries between sets of analytic categories … [I]n GRAMMAR [gradience is evident when] the boundaries between WORD-CLASSES are not clear-cut."

[18] H. Schütze, *Ambiguity Resolution in Language Learning: Computational and Cognitive Models* (Stanford: CSLI Pubs., 1997). Along very similar lines are: J. Zavrel, "Lexical Space: Learning and Using Continuous Linguistic Representations" (PhD diss., Utrecht University, 1996); J. Hughes and E. Atwell, "The Automated Evaluation of Inferred Word Classifications," *11th European Conference on Artificial Intelligence* (New York: Wiley, 1994), 535–39.

[19] Schütze, *Ambiguity Resolution,* 5. Regarding the role of gradience in language change, see D. Denison, "Gradience and Linguistic Change," in *Historical Linguistics 1999: Selected Papers from the Fourteenth International Conference on Historical Linguistics* (ed. L. J. Brinton; Amsterdam: John Benjamins, 1999), 119–44.

[20] Schütze, *Ambiguity Resolution*, 2.

[21] Manning and Schütze, *Foundations,* 144.

[22] Schütze, *Ambiguity Resolution,* 8–13.

[23] Schütze (*Ambiguity Resolution,* 28) is well aware that some accuracy has thereby been sacrificed: "Since a completely correct categorization requires the consideration of semantic and non-local syntactic constraints, [our reduced approach] makes a number of mistakes."

- *For each focus word, make a pre-context list:* Tally how often each of the context words *precedes* each focus word. For example, if *the* is the most frequent word in the corpus and if *the* precedes the focus word *man* 4,500 times, then the first number in the pre-context list for *man* is 4,500. So *man*'s pre-context list would read {4500, …}.
- *For each focus word, make a post-context list:* Tally how often each of the context words *follows* each focus word. For example, if *the* is the most frequent word and if *the* follows *the* 3 times, then the first entry in the post-context list for *the* is 3.[24] So *the*'s post-context list would read {3,…}.
- *Form the incidence matrix of the corpus:* If one orders the context lists down the page (forming the rows of a rectangular array of numbers, a matrix), laying the pre-context and post-context lists side-by-side, then one obtains an *incidence matrix* having 47,025 rows and 250x2 = 500 columns. Each focus word (corresponding to a row of the matrix) is then a point (with coordinates given by the incidence counts of frequent words before and after it) in a 500-dimensional space, TAG SPACE.[25] The 500 entries in a row tell how many times each of the highest-frequency word types preceded and also followed the focus word corresponding to that row.
- *Convert the incidence matrix into a distance matrix:* One then computes the distance in 500-dimensional space between each pair of focus words and organizes them all into a huge distance matrix.
- *Use the distances between the focus words to form class clusters:* If two focus words are close together in TAG SPACE, then they will cluster together. There are many methods available for doing the clustering. As Schütze points out, membership in the clusters need not be either/or. [26]

While the foregoing "recipe" for computational distributional analysis oversimplifies Schütze's work,[27] it does indicate the flavour of his approach to quantitative distributional classification: one may cluster "interesting words" (focus words) based upon their distances from each other reckoned in terms of the incidence patterns of the high-frequency words that surround them.

The Plan for the Remainder of this Paper: We shall use the remainder of this paper to develop *provisional, affirmative* answers to the following three questions:

- Can we create a hierarchical lexicon of biblical Hebrew?
- Can we derive a class squish for biblical Hebrew?

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[24] Example: "The *the* in that note is ugly."

[25] There is a tendency for non-mathematicians to "freak out" when confronted by hyperspace. While it is true that our everyday intuitions about space often fail us in hyperspace, for our present purposes, we may proceed by analogy from ordinary space.

[26] Schütze, *Ambiguity Resolution*, 7.

[27] Schütze studies four more sophisticated and more informative sorts of incidence matrices. He also introduces a powerful method to reduce the dimensionality of TAG SPACE before undertaking clustering.

- Can we develop methods for identifying syntactic classes in biblical Hebrew that are mixed and gradient?

Why do we say *provisional?* Because of three phenomena that, in this initial study, we have not yet dealt with: *long-range dependency, cue phrase*[28] *inclusion,* and *embedding.*

- Not yet having long-range dependency information available decreases the delicacy of our classifications.
- So that they would be ready for later discourse analyses, we have kept many cue phrases—which actually operate at discourse level—as spurious parts of our main clauses.
- Our not catering for embedding also creates errors.[29]

> Consider this example of the problem: "The men who saw the bird talk often." The word just before *talk (bird)* is not its true pre-context word. The embedding of the clause "who saw the bird" has put *bird* and *talk* in spurious adjacency. When embedding occurs, the embedded clause should be extracted for analysis, and it should be replaced by its part-of-speech equivalent, in this case a noun. For this example, we should analyse two clauses: "They saw the bird" and "The men talk often." The sequence "bird talk" is improper for distributional study.[30]

3. DATA PREPARATION

3.1 The Corpus

Schütze used the Brown corpus, an American corpus of 1,100,000 words analysed using sixteen syntactic classes. Zavrel used about 3,000,000 words drawn from the Wall Street Journal and analysed using thirty-six classes. Hughes and Atwell used the LOB corpus, a British corpus of over 1,000,000 words analysed using nineteen classes. (They report results for unspecified corpora of up to 35,000,000 words.) These large corpora allow certain statistical methods, when properly used, to provide quite reliable results.

Alas, our corpus is smaller than these others. The *ketib*-text of the *Leningrad Codex* has about 305,500 words. We have subdivided its words into segments having syntactic functions, yielding about 460,000 segments. (For example, clitic elements are analysed to form segments: prepositions, pronoun suffixes, etc.) Main clause boundaries are marked to signal breaks. (Thereby, the last segment of a predecessor clause does not appear as the immediate pre-context of the first segment of the following clause and vice versa.)

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[28] A *cue phrase* signals discourse relations among clauses, e.g., *if*, *because*.

[29] This likely is not a minor issue. Of more than 82,000 clauses or clause-like entities in our data, almost one-third are embedded.

[30] One can easily envision a circumstance where the sequence would be valid. Consider: "We call the doves' billing and cooing 'bird talk.'"

Our full text is tagged with seventy-four syntactic classes. Several involve semantic distinctions.[31] Some label single lexemes.[32] After relabeling the eight very infrequent classes as specified below, we work with 66 syntactic classes.

Given our limited amount of text, the study of actual *word* distributions, such as was undertaken by Schütze, seems unwise at this time.[33] Instead, *we choose to evaluate the consistency of our assignments of part-of-speech classes.* We, therefore, shall need to change terminology. Where Schütze and his like analysed *focus words* in terms of *context word* incidence, we shall analyse *focus classes* in terms of *context class* incidence. So, rather than dealing with 47,025 focus words and 250 context words, we shall operate with a more manageable 66 focus classes and 66 context classes.

As the Hockett quote at the outset of this paper indicates, the part-of-speech classes form a system. Using distributional analysis, we can assess the *consistency* of our part-of-speech system. That is, the class labels that we have manually assigned can be used to group the classes and see where the clusters make sense and where they signal problems or opportunities for further refinement.

The clause-delimited text that we submit to analysis has these characteristics:

- all *qere* readings are excluded in favour of *ketib* readings
- all blocks of Aramaic are excluded
- all definite articles are reattached to their substantives[34]
- each word is replaced by its syntactic class code[35]
- each of the eight syntactic classes that occurs fewer than one hundred times is relabelled "common noun."[36]

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[31] For example, we distinguish common from proper nouns. Among the proper nouns, we distinguish names of humans, deities, ethnics, rivers, lands, mountains, cities, and other geographical loci.

[32] For example, each of the following prepositions constitutes a class unto itself: class k = כְּ *like,* class l = לְ *to*, class u = עַל *upon.*

[33] When the corpus is small, one must take special care in formulating problems so that the results obtained by statistical analysis are reliable.

[34] Our grounds for this reattachment are that the distributional information that the definite article provides as pre-context is more than offset by the loss of access to the identity of even earlier pre-context. We may compensate for the reattachment by considering all common nouns preceded by definite articles as definite nouns.

[35] Thereby is Gen 1:1 reduced to this sequence of class labels: j N S W e N a e N = (that is: *"in"* <common noun> <suffixed verb> <deity name> <object marker> <common noun> *"and"* <object marker> <common noun> <clause boundary>). The immediate pre-context class of "S" is "N"; the immediate post-context class of "S" is "W."

[36] When classes occur very rarely, there will be too little data available to determine their characteristics reliably. Rather than simply omitting them, we re-label them as common nouns. This helps avoid introducing potentially spurious sequences that might occur were we simply to delete the items. The "noise" added to the pool of common nouns is minimal, there being almost 106,000 common nouns but only 394 relabeled classes (0.4%). Six feebly present classes of interrogatives are relabeled, as are thirty-one instances of *lapsus calami* and forty-two instances of the most peculiar of the participle classes, verb up front and verb/noun out back.

3.2 Specification of Distributional Context

We must next specify which sorts of contexts of focus classes we rely upon. We first need to introduce a bit of notation. Suppose we index a word or class position with the symbol *n*. Then we may refer to the word or class position immediately preceding that word as *n-1*, the word or class position two items prior as *n-2*, the immediately following word or class position as *n+1*, and so on.

Previous Work by Others: Classical part-of-speech tagging programmes used only the predecessor item (*n-1*) as pre-context ("bigram taggers"), the two items immediately preceding the item to be tagged (*n-1* and *n-2*) as pre-context ("trigram taggers"), or the three items preceding (*n-1*, *n-2, n-3*) as pre-context ("four-gram taggers").[37]

Hughes and Atwell evaluate word classification accuracy for three context combinations: simple position (n^{th} item in the clause) with poor results (45% accuracy); pre-context item (*n-1*) plus post-context item (*n+1*) with fair results (76% accuracy); and two closest pre-context items (*n-1*, *n-2*) plus two closest post-context items (*n+1*, *n+2*) with better performance by a small margin (79% accuracy).[38] Zavrel simply accepts the results produced by Hughes and Atwell and also works with two pre- and two post-context items, four in all.[39]

Schütze experiments with five sorts of contexts. His "baseline" context involves *n-1* and *n+1*.[40] His other contexts are beyond the scope of this paper.

Our Approaches: We have experimented with several context configurations using our corpus and set of sixty-six syntactic classes. For our work on the hierarchical lexicon and on the class squish, we shall use a four-position context consisting of *n-1*, *n+1*, *n+2*, *n+3*. For our work on mixed and gradient class identification, we reduce the extent of the context configuration to *n-1* and *n+1,* so that results can be plotted in the "squish plane," defined below.

3.3 Forming the Incidence Matrix

The next data-preparation task is to produce the incidence matrix. The list of syntactic class tokens is replicated four times and shifted so as to produce a combined five-column list of *focus class* tokens (column two) and their associated *context class* tokens (the other columns). The list for Gen 1:1 is shown in Table 1.

We generate four matrices: one for *n-1* counts, one for *n+1* counts, one for *n+2* counts, and one for *n+3* counts.

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[37] Manning and Schütze, *Foundations*, 193.
[38] Hughes and Atwell, "The Automated Evaluation," 536–37.
[39] Zavrel, "Lexical Space," 19.
[40] Schütze, *Ambiguity Resolution*, 36–40.

n-1	*focus class*	*n+1*	*n+2*	*n+3*
=	*j*	*N*	*S*	*W*
j	*N*	*S*	*W*	*e*
N	*S*	*W*	*e*	*N*
S	*W*	*e*	*N*	*a*
W	*e*	*N*	*a*	*e*
e	*N*	*a*	*e*	*N*
N	*a*	*e*	*N*	=
a	*e*	*N*	=	*a*
e	*N*	=	*a*	*N*
N	=	*a*	*N*	*S*

Table 1. Focus Classes and Contexts for Gen 1:1

Ordering the classes from most frequent to least, after Gen 1:1 has been tallied the first twelve rows and columns of the *pre-context matrix* are as shown in Table 2.

	N	=	*a*	*B*	*l*	*H*	*j*	\	*S*	*V*	*e*	*W*
N	0	0	0	0	0	0	**1**	0	0	0	**2**	0
=	**1**	0	0	0	0	0	0	0	0	0	0	0
a	**1**	0	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0	0
l	0	0	0	0	0	0	0	0	0	0	0	0
H	0	0	0	0	0	0	0	0	0	0	0	0
j	0	**1**	0	0	0	0	0	0	0	0	0	0
\	0	0	0	0	0	0	0	0	0	0	0	0
S	**1**	0	0	0	0	0	0	0	0	0	0	0
V	0	0	0	0	0	0	0	0	0	0	0	0
e	0	0	**1**	0	0	0	0	0	0	0	0	**1**
W	0	0	0	0	0	0	0	0	**1**	0	0	0

Table 2. First Twelve Rows & Columns of 'Pre-Context Matrix'

Interpretations: *j* precedes (←) *N* once; *e* ← *N* twice; *N* ← = once; *N* ← *a* once; = ← *j* once; *N* ← *S* once; *a* ← *e* once; *W* ← *e* once; *S* ← *W* once.

The class symbols along the left and top margins of Table 2 are shown to assist in interpreting the matrix; they are not part of it. The meanings of the class symbols are provided in Table 3.

!	jussive verb	J	insistent imperative	d	*do not* אַל
#	numeral	L	land proper noun	e	*[nota accusativi]* אֵת
$	adverb	M	mountain prop. noun	f	*from* מִן
%	preterite verb	N	common noun	g	*negative* בְּלִי
&	tight conjunction	O	ordinal	i	*if* אִם
*	other prepositions	P	noun-verb participle	j	*in* ־בְּ
/	perfect sequential	Q	city proper noun	k	*like* ־כְּ
0	infinitive absolute	R	river proper noun	l	*to* ־לְ
1	*yes?/no?* ־הֲ	S	suffixed verb (perf.)	m	modal
2	*who?* מִי	T	infinitive construct	n	*not* לֹא
3	*what?* מָה	U	*behold!* הִנֵּה	o	*or* אוֹ
=	root clause boundary	V	imperfect verb	p	*with* אֶת
@	adjective	W	divine proper noun	q	*with* עִם
A	*all* כֹּל	X	*exists* יֵשׁ	r	*[nominalizer]* אֲשֶׁר
B	bound pronoun	Y	*still* עוֹד	s	other conjunctions
C	cohortative	Z	*not-exists* אֵין	t	*unto* אֶל
D	demonst. pronoun	\	imperfect sequential	u	*upon* עַל
E	ethnic	^	pure verb participle	v	*until* עַד
F	free pronoun	_	pure noun participle	x	exclamation
G	geog. proper noun	a	coord. conjunction	z	*under* תַּחַת
H	human proper noun	b	*because* כִּי	|	cohortative sequen.
I	imperative verb	c	*also* גַּם	~	speech marker

Table 3. Syntactic Class Codes

The full pre-context (*n-1*) matrix actually has sixty-six rows and sixty-six columns, as do the full post-context (*n+1*) matrix, the post-post-context (*n+2*) matrix, and the post-post-post-context (*n+3*) matrix. If these four matrices are laid side-by-side and melded into a single array, then that sixty-six row by 264 column matrix is the *raw incidence matrix*.

We say "raw" because there is one more step to be carried out before we obtain the actual incidence matrix that we shall use in our analysis. The raw incidence matrix is "unbalanced." Its first row (that pertaining to the contexts surrounding common nouns) sums to almost 319,000. Its final row (that pertaining to the lowest-frequency class, "|" cohortative sequential verb) sums to 303—0.1% the size of the sum for common noun contexts. The imbalance between the sums in the most frequently attested classes and the least allows the former to swamp out the latter in computations. To overcome this, one *standardizes* the matrix.[41] We do this by dividing

[41] H. C. Romesburg, *Cluster Analysis for Researchers* (Belmont, Calif.: Lifetime Learning Pubs., 1984), 78–92.

each element of each row by the sum of that row divided by, say, 4,000.[42] Each row of the standardized incidence matrix thereby sums to 4,000.

3.4 Computing Distances

The final topic needing some discussion before we take up the hierarchical lexicon is the *computation of distances or dissimilarities*. Measures of dissimilarity, *distances*, are central to statistical pattern recognition. Therefore, any book on pattern recognition includes a discussion of ways of measuring distance.[43]

For our purposes, we shall introduce only the distance measure that we shall use in this work: the *city-block distance*. Having experimented with several distance measures, this one works the best across our present set of tasks.[44] That is, its use results in the most coherent results.

The city-block distance is easily understood. Suppose you are at some intersection in a city saturated with buildings and want to walk to an intersection three blocks east and four blocks north. You will have to traverse a city-block distance of seven blocks. Were you able to fly via the shortest distance (the Euclidean distance), the journey would involve a flight of only five blocks.

Having chosen our distance measure, we next compute the distances between all syntactic classes. The results are stored in a sixty-six row by sixty-six column matrix, ready for use in our work on a hierarchical lexicon.

Summary of our Data-Preparation Phase: We begin by converting the Hebrew parts of the *ketib* תנ"ך into a list of syntactic class labels, where the n^{th} *class token* is symbolized by c_n. We then form an array of syntactic class contexts, whose n^{th} row is $\{c_{n-1}, c_n, c_{n+1}, c_{n+2}, c_{n+3}\}$, c_n being what we term the *focus class* (token) and the other classes being its *context*. We next read through the array, keeping count of how many times each syntactic class precedes each other syntactic class (pre-context), how many times each follows each (post-context), and so on. The four resulting matrices of counts are then laid side-by-side to produce the raw incidence matrix, a matrix having sixty-six rows (one for each syntactic class) and 264 columns (sixty-six columns for each of four parts of the full context). So that the information regarding frequently-occurring classes does not swamp out that associated with infrequently-attested classes, we standardize the raw incidence matrix to produce the final incidence matrix. Finally, we use the incidence matrix to compute a sixty-six row by sixty-six column matrix holding all pair-wise city-block distances between syntactic classes.

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[42] The normalizing factor is completely arbitrary. The crucial point is that, after standardization, each row has the same sum.

[43] A. D. Gordon, *Classification* (London: Chapman & Hall, 1981), 13–32. D. J. Hand, *Discrimination and Classification* (Chichester: John Wiley & Sons, 1981), 158–62.

[44] This agrees with what Hughes and Atwell found, "The Automated Evaluation," 537.

4. TOWARD A HIERARCHICAL LEXICON OF BIBLICAL HEBREW

In our earlier subsection on the hierarchical lexicon, we noted that such a lexicon normally has a tree structure. From the example provided, one could infer that a lexicographer might well be able to devise a tree specifying the hierarchical relations among lexemes and their groupings. And indeed, hierarchical lexica have been produced in the linguistics community. But we are interested in something else: given our corpus of manually-assigned syntactic classes, can the computer produce the precursor of a hierarchical lexicon, a tree of syntactic classes based only on the distributionally-derived distances between all pairs of classes?

4.1 Hierarchical Clustering: The Basics

There is a vast literature on hierarchical clustering techniques.[45] Clustering methods divide into two basic techniques: *agglomerative* (or "bottom-up") and *divisive* (or "top-down"). The former starts with as many proto-clusters as there are objects; it iteratively groups them together until a single cluster is arrived at. The latter starts with one master cluster; it successively peels off objects until there are as many clusters as objects. Most researchers take the agglomerative approach, as will we. One then proceeds as follows, keeping track of each "move":

A. Let each original object (for us, syntactic class) be an initial cluster.
B. Scan the distance matrix and identify the two closest clusters. (On *our* first pass, these will be the two closest syntactic classes, which we find to be the common nouns [symbol: N] and the pure noun participles [symbol: _].)
C. Merge the two closest clusters into a new cluster. (In our case, N and _ combine to create an N_ cluster.)
D. Re-compute the distance matrix, since there is now one cluster fewer than before. (To re-compute the distances, one needs first to select a *cluster distance computation convention*.)
E. If there is only one cluster, jump to step F. Otherwise, continue at step B.
F. Use the record of the cluster-merging moves to *draw a labeled tree* that shows how the lower-level clusters merge to form higher-level ones.
G. Compute a suitable *evaluative measure*, a number whose size tells you how reliable the clustering is, in some sense.

The foregoing is all straightforward, except for three issues each of which we will take up briefly:

- choosing the cluster distance convention
- drawing the representative tree

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[45] See Romesburg, *Cluster Analysis*. Also, Hand, *Discrimination*, 155–85; Gordon, *Classification*, 33–53. For an introduction to clustering in the context of biblical orthography, see F. I. Andersen and A. D. Forbes, *Spelling in the Hebrew Bible* (Rome: PBI, 1986), 294–308. For alternate treatments, see D. N. Freedman, A. D. Forbes, and F. I. Andersen, *Studies in Hebrew and Aramaic Orthography* (Winona Lake: Eisenbrauns, 1992), 29–34; 93–98.

- selecting and computing the evaluative measure.

4.2 Which Cluster Distance Convention?

One of three cluster distance conventions typically is chosen:

- *Nearest neighbour:* the distance between two clusters equals the distance between their two nearest constituents. (The resulting method is termed the "single linkage" method.)
- *Furthest neighbour:* the distance between two clusters equals the distance between their two furthest constituents. (The resulting method is termed the "complete linkage" method.)
- *UPGMA*[46]*:* the distance between two clusters equals the average of all distances between all pairs of constituents, one from each cluster. (The resulting method is often termed the "average linkage" method.)

The weaknesses of the first two methods are partially overcome in the third. Therefore, most researchers opt for UPGMA,[47] as do we.

4.3 Tree Production

The mechanics of producing a representative tree are messy but not intrinsically daunting. The same software packages that provide for the other aspects of the clustering process also carry out this task nicely. We use the S-Plus system.[48]

4.4 Selecting and Computing the Evaluative Measure

Think about what hierarchical clustering is attempting: we are given all of the pair-wise distances between sixty-six entities (syntactic classes) in a 264-dimensional syntactic context space. We try to represent these distances concisely by way of a two-dimensional tree. Information might be lost in this process. How much? How good a representation of the space is the tree? The answers to these questions are not simple and are well beyond the scope of this paper.

Although various alternate evaluative measures have been proposed,[49] the preferred evaluative measure for trees produced by hierarchical clustering remains the so-called *cophenetic correlation coefficient*.[50] This is a number that can lie anywhere between -1 and +1. The closer its value is to +1, the less distortion is occurring in moving from distance matrix to tree. Any value greater than or equal to 0.8 is usually considered adequate.[51]

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[46] UPGMA = unweighted pair-group method using arithmetic averages.

[47] Romesburg, *Cluster Analysis*, 126.

[48] *S-Plus 6 for Unix/Linux*, Insightful Corp., Seattle, Wash. This package is expensive. The public-domain "R system" is alleged to be quite good. We have no experience using it.

[49] Romesburg, *Cluster Analysis*, 190–91.

[50] Romesburg, *Cluster Analysis*, 24–27.

[51] Romesburg, *Cluster Analysis*, 27.

4.5 The Syntactic Class Tree

When the foregoing methods with the various choices made are applied to the syntactic class distributional data, the tree diagram in Figure 1 on the next page results. Its cophenetic correlation coefficient is 0.82, acceptable but not stunning.

The tree is on its side. Its root is at the lower right of the diagram. Each of its leaves has a syntactic class label. At the top of the diagram is a distance scale. Reading up from the position where two edges ("branches") join, one may read off the distance at which the clusters merge. For example, the two closest syntactic classes are N (common noun) and _ (pure noun participle), at the extreme lower left. They are 1.14 units apart. We next examine the four major clusters in Figure 1.

The Substantive Cluster: At the bottom of the figure is a major cluster consisting of fifteen syntactic classes. At its very bottom is a sub-tree consisting of H and E. The algorithm has grouped human proper nouns and ethnic proper nouns together as similar. To this cluster (sub-tree) is added W, the class of divine proper nouns, at a little remove from the other two constituents. So the algorithm has clustered all of the personal proper nouns together in one cluster. As mentioned above, the earliest cluster formed consists of common nouns (N) and pure noun participles (_). This cluster is merged, a bit to the right in the tree, to form a cluster of five substantives. Slightly to the right in the diagram, a residual class of "other geographical proper nouns" (G) and city proper nouns (Q) are merged, as are mountain proper nouns (M) and land proper nouns (L). These in turn combine to form a cluster, to which river proper nouns (R) join, yielding a cluster of all five classes of geographical proper nouns. A bit higher in the figure, a slightly odd combination occurs: adjectives (@) and bound pronouns (B) combine.[52] These, in turn, join up with the place-name cluster. Next, the common-substantives-and-personal-proper-noun cluster and the upper sub-tree merge to create an even larger cluster of substantives. Finally, three outlier classes straggle in: the ordinals (O), the numerals (#), and—a far out, seemingly inappropriate outlier—class o, *or* אוֹ.

[52] Our class of *adjectives* is highly restricted in its membership. With very few exceptions, our adjectives must modify an immediately preceding noun.

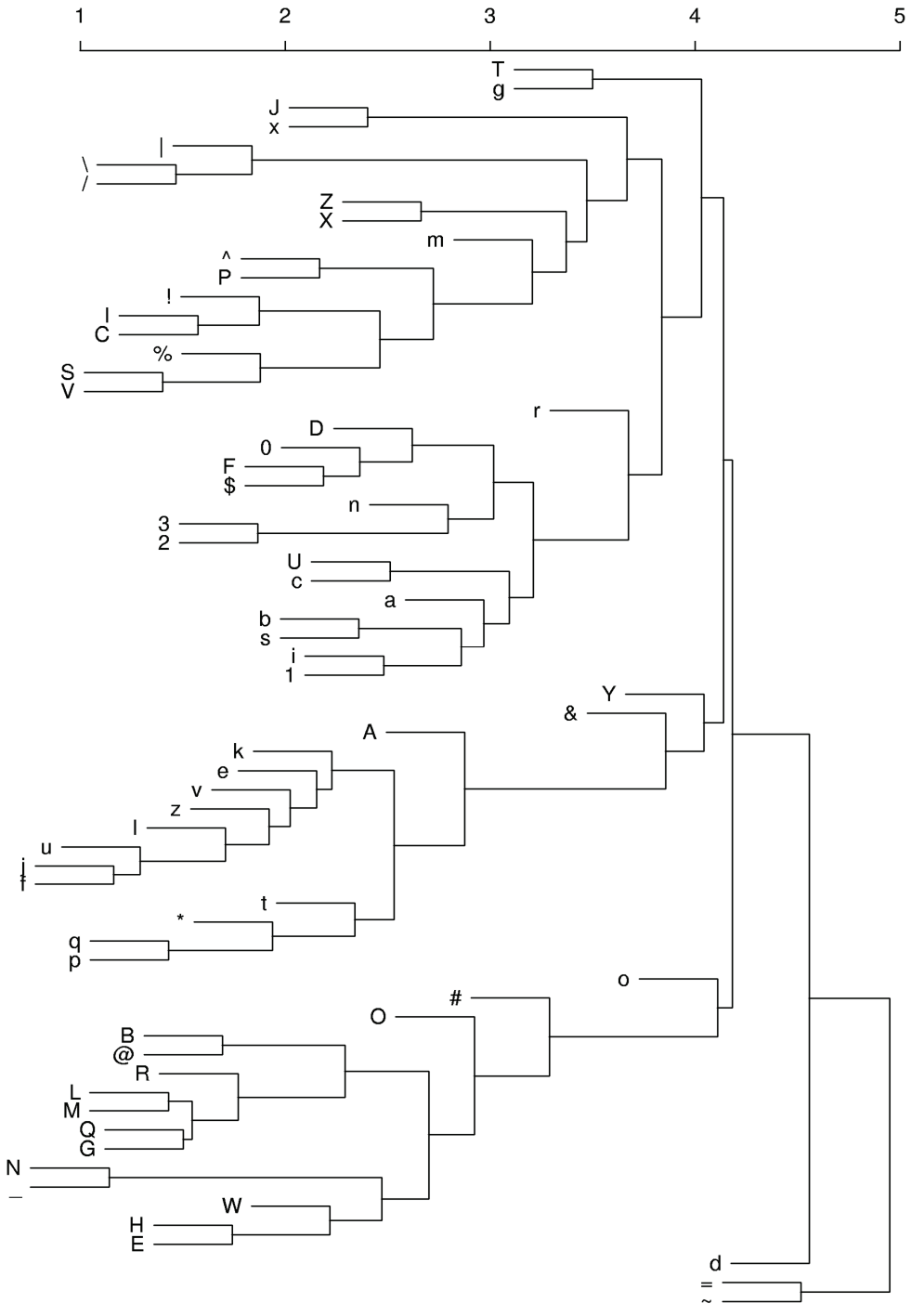

Figure 1. Syntactic Class Tree

The Preposition Cluster: The next major cluster, proceeding upward, also contains fifteen classes. At its bottom, four prepositions combine into a sub-tree, and above this, the other eight prepositions combine to form another sub-tree. These two sub-trees then combine to form a sub-tree holding all of the prepositions. A good bit higher up class A, *all* כֹּל, joins in. One wonders if כֹּל is an outlier, or is it actually to be considered an off-by-itself pseudo-preposition? Much further away from the central prepositional cluster are two outlier classes: very tight coordinating *and* (&)[53] and עוֹד (Y).

A Ragbag Cluster: The third major cluster from the bottom of the diagram is strange and merits further study, should it persist once we deal with *long-range dependency, cue phrase inclusion,* and *embedding*. None of its constituents is all that close to any other.[54] The sub-tree lowest in the cluster consists of four conjunctions (a, b, s, i)[55] plus the class labeled 1, *yes?/no?* הֲ. With these is merged a sub-tree consisting of *behold!* הִנֵּה (class U), plus גַּם (class c). These seven classes make up the lower part of the "ragbag cluster." Its upper part consists of two sub-trees. The first sub-tree consists of class 2, *who* מִי, and class 3, *what* מַה, plus quite far away from these, *not* לֹא, class n. The second sub-tree is an amalgam of demonstrative pronouns (D), infinitives absolute (0), free pronouns (F), and adverbs ($). And finally, from quite a remove the "nominalizer" (class r), אֲשֶׁר, is added in.

The Verb Cluster: The uppermost major cluster consists of sixteen syntactic classes, all verbal with the exception of the class of exclamations (x). We will not expound this cluster, since by now the reader should be able to examine a cluster and see which classes are closest to each other, are late to the party, and draw suspicion.

> We are now able to show how we have dealt with one situation of mixed categories, the problem of the *participle*. Having detected three major and distinct sub-types of participles, we have labelled instances of each kind with its own class. In Ross's notation and moving from most verbal to most nominal:
>
> *verb participle (^) > noun-verb participle (P) > noun participle (_)*[56]
>
> What we observe from the tree of syntactic classes is that the pure verb participle (^) and the noun-verb participle (P) cluster right together, while the pure noun participles (_) are located not in the verb cluster, but in the noun cluster adjacent to the common nouns (N).

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[53] Such as the coordinating conjunction in תֹּהוּ וָבֹהוּ.

[54] That is, the whole sub-tree is shifted rightward in the diagram. Each constituent is fairly far from its mates, as can be seen by reading the distances from the scale at the top of the diagram.

[55] Note that classes b and i are *cue phrases par excellence*; they do not function in syntax. Class a is presently contaminated, consisting of the *and*s that function syntactically plus those that operate at discourse level.

[56] What we have here, let it be noted, is a participle squish.

The Outliers: Five classes belong to no major cluster (T, g, d, =, and ~), and four join major clusters suspiciously late (r, Y, &, and o). One wonders why these odd behaviours occur. Consider the root clause boundary (=) and the speech marker (~). Although = and ~ combine (at the very bottom right of the page), they are far apart from each other, being separated by 4.52 units. This pair of items (as a weak mini-cluster) then joins everything else.

This brings up an important point. If one gives a hierarchical clustering algorithm the distances for a set of objects, the algorithm will cluster every last one, even if the data do not intrinsically form groups.[57] This behaviour may be occurring with the single or double outlier classes that merge into clusters late. Later in this paper, we will present a method for visualizing the distributional characteristics of classes. This, among other things, allows diagnosis of why some cluster constituents seem oddly associated and why they join the others so late.

The Syntactic Tree, Basis for the Hierarchical Lexicon: We see, then, that the syntactic class tree provides a blueprint for creating a hierarchical lexicon. When (and if) we are able to perform reliable distributional analysis upon words rather than upon pre-assigned syntactic classes, then a quite large tree will be produced. To the extent that our set of syntactic classes and our assignments of words to these classes are trustworthy, we expect that the right-most structure of the *word-based tree* will be very much like that shown in Figure 1. Using distributional information (plus, perhaps, cohesion chain information), it should be possible for the computer to propose the structure of a proper hierarchical lexicon.

5. THE SYNTACTIC CLASS SQUISH

Everyone talks about the [class squish], but no one ever does anything about it.
—Mark Twain's comment on the *weather,* modified

5.1 Preparing to Build a Squish

Ross's squish is said to be a continuum, implying that it should be possible to be quantitative and make statements like: "prototypical nouns are in the lowest fifth of the squish scale, while prototypical verbs lie in the upper fifth." But Ross's symbolic presentation of the class squish merely indicates the ordering of the classes (their ranking). Indeed, his simplest "equation" is:

Verb > Participle > Adjective > Preposition > Noun

which might be read "the most volatile of the parts of speech is the verb; then in decreasing order of volatility come the participle, adjective, preposition, and noun."[58]

We want the computer to draw a syntactic class squish for biblical Hebrew.[59] For this first iteration, we shall constrain our approach. Consistent with Ross's exposition,

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[57] In Andersen and Forbes, *Spelling*, 23–25 and 306–308, we generated spurious events ("verse parity counts") and clustered them. As predicted, the resulting trees were nonsense.

[58] Harris, *The Linguistics Wars*, 220.

we limit the number of syntactic classes dealt with.[60] We collapse forty-seven closely-related classes into ten (super)classes. These are defined by combining classes sharing sub-trees in our syntactic class tree (Figure 1). The ten new (super)classes (relabelled by adding primes) and their forty-seven original-class constituents are:

T'	T, g	2'	n, 3, 2
J'	J, x	a'	a, b, s, i, 1
V'	|, \, /, !, I, C, %, S, V	p'	A, k, e, v, z, l, u, j, i, t, *, q, p
X'	Z, X	H'	W, H, E
0'	D, 0, F	G'	R, L, M, Q, G

Keeping the other nineteen classes[61] gives us a total of twenty-nine classes.

5.2 Sequencing Objects Based on Their Characteristics

Our immediate goal is to investigate whether and how our part-of-speech classes for biblical Hebrew distribute along a class squish. Producing a class squish for Hebrew will enable the study of the part-of-speech affinities of individual *tokens*.

We have quantitated the contexts of our parts of speech and have converted them into a matrix of distances in twenty-nine dimensional space. We need now to move from hyperspace to the one-dimensional continuum that is a squish.

There is a method for transforming high-dimensional data to low: *seriation*. *Seriation* is well known in archaeology. Suppose that we have a collection of graves (analogous to our syntactic classes) and that for each grave we have a list of the contents found therein (analogous to our text measurements). The method of seriation takes the contents lists and, after a fair amount of data preparation and computation, orders the graves along a *time* continuum.[62]

There is a complication, one that perhaps can be appreciated through a slightly fanciful thought experiment.

> A playful archaeologist challenges us to estimate the relative dates pertaining to a set of a half-dozen graves, dates that he has marked on a noodle. (He has decided on a conversion factor between years and millimetres of distance and has then marked each date appropriately.) So that the problem is not too easy, he has suspended the noodle in his fish tank and then measured off the

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[59] We know of no computational attempts to do this for any language.

[60] Ross first illustrated the squish concept using five major syntactic classes. In later work, he used eight classes.

[61] Nine of these are outlier classes in Figure 1: T, g, r, Y, &, o, d, =, and ~. Their inclusion in the analysis degrades the results. Experiments have shown us that were we to allow ourselves to combine and delete classes *ad libitum*, we could make our present results very much cleaner.

[62] For a brief discussion of seriation, see K. V. Mardia *et al.*, *Multivariate Analysis* (London: Academic Press, 1979), 409–13. The method has also been applied in biblical studies: ordering portions of biblical text based on the spelling practices found in each. See "The Seriation of Portions," in Freedman *et al.*, *Studies*, 125–34.

> three coordinates (x, y, z) of each of the six marked points as best he could. Unfortunately, his eyesight is poor, the fish keep nudging the noodle, and the water aeration currents bow it.[63] In spite of measurement *imprecision* and *contamination*, can we estimate the relative dates? Clearly, the measurements describe a distorted linear continuum. If we hypothesize that the noodle comes close to lying in a plane, albeit a plane the orientation of which we do not know, then a three-step process suggests itself: a) determine that plane which best fits the observed data, and plot the data on it;[64] b) measure along the inferred "noodle band" to reconstruct the relative dates; c) analyse the results to see how well the hypothesis of planarity was fulfilled.

This situation is not all that far from the sort of situation that one faces with real-world data. The process for solution proposed above is just what one does when one undertakes seriation.[65] Chatfield and Collins advise:

> "[C]onstruct suitable measures of [distance], find a two-dimensional solution and then see if the points fall into a comparatively long narrow band, which need not necessarily be straight. If they do, then a one-dimensional solution can be inferred in an obvious way."[66]

Note that whether the objects to be sequenced differ as to time or some other variable ("inertness"?) does not matter. The method will attempt to sequence them. Of course, if the hypothesis of planarity is badly violated, then the whole endeavour will be moot. Also, if the data do not lie on a line, or at least in a band, then one will need to question the result.

5.3 Moving from Hyperspace to the Plane

Our preferred method for projecting data in hyperspace onto an optimal plane is called *classical multidimensional scaling (CMDS)*. Knowing that the method performs an optimal transformation should suffice for our purposes.[67]

We are now in position to carry out seriation as sketched above. We supply the distance matrix for our twenty-nine classes to the classical multidimensional scaling algorithm. We plot the class labels at their projected points in the optimal plane. Next,

---

[63] Kendall describes a situation in which use of an imprecise distance criterion to describe a series of integers distorts the straight line that naturally would be used to contain them into a horseshoe-shaped curve. The ordering is quite correct, but the continuum is no longer a straight line. D. G. Kendall, "Seriation from Abundance Matrices," in *Mathematics in the Archeological and Historical Sciences* (eds. F. Hodson *et al.*; Edinburgh: University Press, 1971), 215–52. Kendall's example of the "Horseshoe Effect" is also explained in Freedman *et al.*, *Studies,* 127–29.

[64] Because of the imprecision of the measurements and the random errors (fish nudges) and systematic errors (currents) in the data, the band in which the noodle lies may be broad.

[65] There is one further complication, one of degree not of kind: the data usually lie in hyperspace, not three-dimensional space. The process is thereby unchanged.

[66] C. Chatfield and A. J. Collins, *Introduction to Multivariate Analysis* (London: Chapman & Hall, 1980), 205.

[67] For a non-technical introduction to CMDS, see Freedman *et al.*, *Studies*, 104–10. For a technical discussion, see Mardia *et al.*, *Multivariate Analysis*, 394–409.

we draw dotted links between labels that lie within 0.3 units of each other. The resulting configuration of linked points is shown in Figure 2.

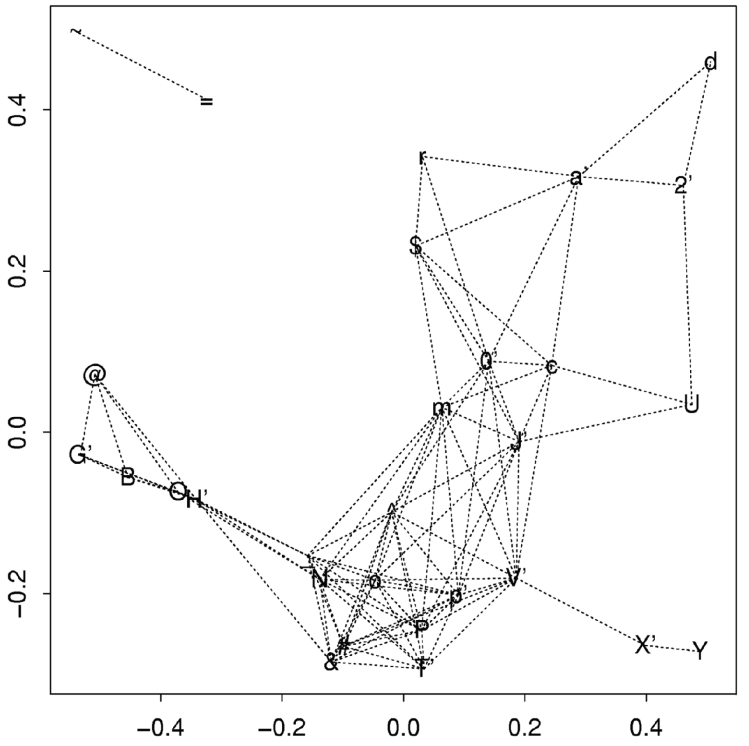

Figure 2. Seriated Syntactic Classes

The linked labels do define a band, nicely compact on the left (the substantives) but rather scattered on the right (the verbs, prepositions, quasiverbals, and "ragbag"). We can estimate how much "information"[68] has been lost in projecting the data from twenty-nine dimensions down to two via a "goodness-of-fit" index.[69] We find that the data in the plane "leave out" about a third of the original distance "information." This is higher than we would prefer but not debilitating.

5.4 Constructing the Squish

We next construct the squish from the data in the plane. We are in *terra incognita*. To our knowledge, no one has ever inferred a squish from actual data before. We proceed as follows: 1. Draw a smooth curve through the band of linked class labels. Let classes

[68] We put *information* in quotes because an uncertain amount of the variation in the distance measurements may be spuriously due to the effects of the existence of outliers and their inclusion in the analysis.

[69] Mardia et. al., *Multivariate Analysis*, 408.

of large membership exert a powerful influence on the routing of the curve and the outliers very little. 2. From each label, draw a perpendicular over to the curve. The location of a class in the squish is where its perpendicular intersects the curve. Figure 3 shows the results of this exercise. (Only a few [dashed] perpendiculars are shown.)

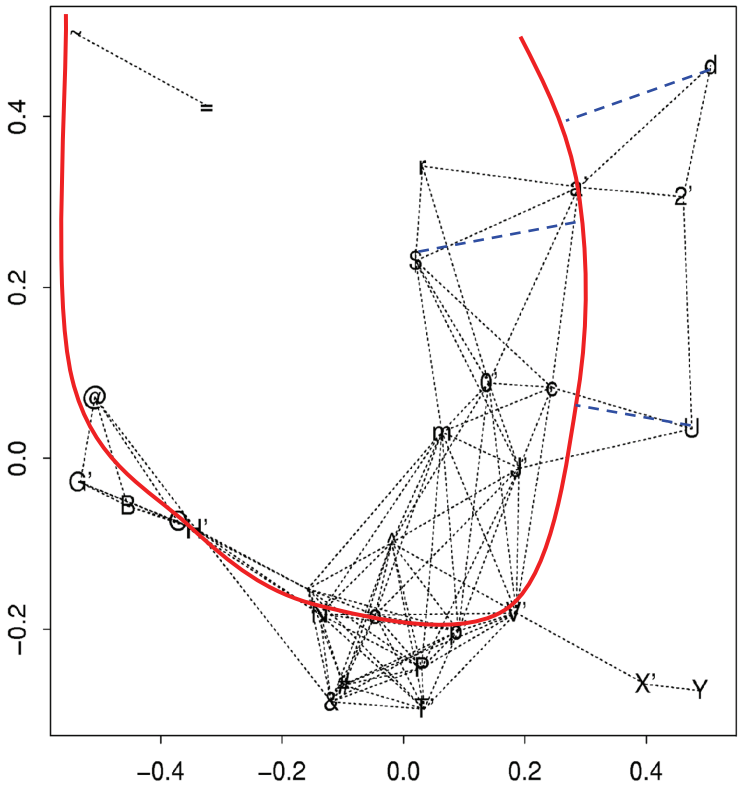

Figure 3. Constructing the Squish

The ordering[70] of the syntactic classes in the squish from least volatile to most volatile, with outliers peppered in, is as follows:

[70] Since we prefer to think in terms of volatility, and since the squish will become a coordinate axis, we have reversed the sense of our squish from Ross's. (That is, we use the <-relation rather than the >-relation.) Note that we have included the outlier syntactic pseudo-classes = and ~ in the squish, even though they were not linked to the squish band proper. Their inclusion is important for the work to be reported below.

~ < = <
@ < G' < B < O < H' < _ < N < & < # < o <
P < T' < ^ <
p' <
V' <
X' < Y < J' < m < U <
c < 0' < $ < 2' < a' < d < r

The printed lines of the squish, as subdivided above, correspond to the following more inclusive categories:

Pseudo-syntactic classes <
Substantives <
Nouny verbals ("verby" participles, infinitives construct) <
Prepositions <
Verbs <
Quasiverbals <
"Ragbag"

We could extract from the squish curve the relative linear distances between the syntactic categories. However, given the known deleterious influences of outliers (and given that we have not yet dealt with long-range dependencies, cue phrase inclusion, and embedding), the results of such an exercise would be suspect.

5.5 A Vindication of Ross?

Comparing our computationally-derived squish for biblical Hebrew with Ross's proposed squish for English, it appears that there *is* something basically insightful about his proposal. From what is known about seriation, we can be confident that *some (as yet unknown) characteristics of word contexts are varying systematically across the syntactic classes*. We have as yet made no attempt to figure out what characteristics are involved. But we have devised a way of approaching this matter. The method can also be used to study the mixed and gradient properties of parts of speech. We now turn to a discussion of this method.

6. VISUALIZING THE DISTRIBUTIONAL BEHAVIOUR OF SYNTACTIC CLASSES

6.1 What is Needed

To this point, our focus has been on the relations among syntactic classes. Each class has been a point in a (hyper)space or a leaf in the syntactic class tree. We have gained perspective on class mixed-ness or heterogeneity only when we have intuited that a class was not homogeneous, have split it into several new classes, and have studied how the split-off parts related to other classes. If the parts reassembled in our analysis

space, then the division likely was pointless. But if each part joined disparate classes, then the splitting might well have improved the homogeneity of our taxonomy.

Our parade example of this sort of study is the participle.[71] We have elsewhere shown that a word identified as a participle by morphology might function as a verb (a class we label ^), as "noun up front and verb behind" (P), as a pure noun (_), or as a "noun up front but both a noun and verb behind" (:).

One might ask whether splitting a class such as the participles is warranted, or if there are other classes that should be split to obtain a set of more homogeneous classes. To get at these issues, a means of *visualizing the distributional behaviours of classes* is needed.

6.2 Tokens and Contours in Squish Space

Suppose that we use the ordered class squish labels as x- and y-axis labels in a plane. Let the x-axis specify the syntactic class of the immediate pre-context of a word (*n-1*), and let the y-axis specify the immediate post-context (*n+1*).[72] The resulting squish space is shown in Figure 4. There, the low range of the squish corresponds to *substantives*, one further along to *verbals*, further on to *quasiverbals*, and still further on to *ragbag* classes, with various outliers intruding along the way. Suppose that we wish to plot the context of *token n* in our text. If its pre-context is in class O and its post-context in class p', then we position a data point as indicated by an "X." (Label "Pre POS" signifies "*Pre Part of Speech*.")

[71] F. I. Andersen and A. D. Forbes, "What Kind of Taxonomy is Best for Feeding to Computer-Assisted Research into the Syntax of a Natural Language?", in *Bible and Computer* (ed. J. Cook; Leiden: Brill, 2002), 23–42.

[72] The squish space being defined is two-dimensional. Because display of four-dimensional information is not straightforward, we are not including the *n-2* and *n-3* contexts. But there are ways of presenting such data, via "trellises," etc. We defer such elaborations of method for now.

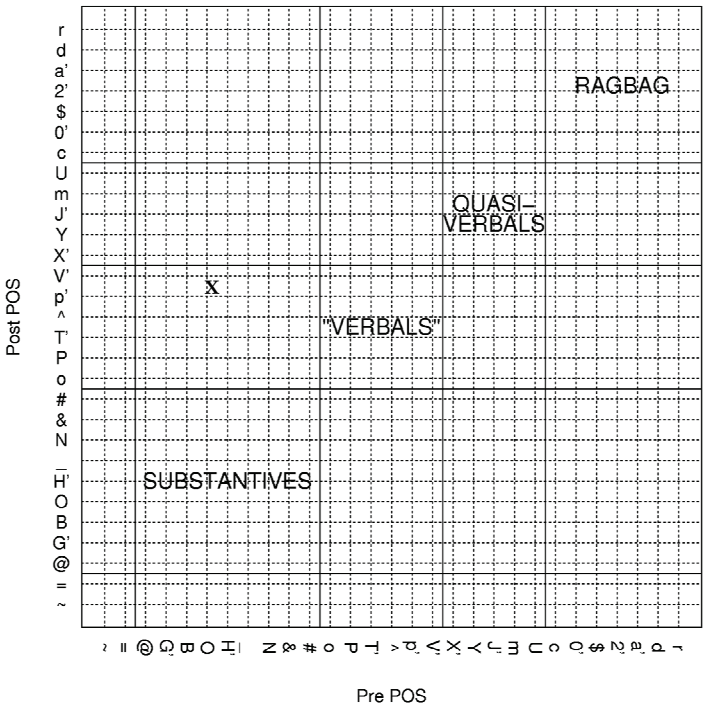

Figure 4. Squish Space

We might plot a point for each text token. However, obscure clouds of dots would result. To obtain usable plots, we:

- *Select a syntactic class.* (Each class will have its own plot.)
- Instead of plotting a full set of points for all of the tokens of the class, *interpolate the data.* That is, convert the irregularly-spaced observed data into equivalent values on a regular grid (the "squish grid" in Figure 4).
- Based on the interpolated data, *draw a smooth*[73] *contour plot* that shows the pre- and post-contexts of the chosen class.

One example of a *contour plot* is the *topographic map.* In it, nearby points at the same elevation are joined by a contour. Another type of contour plot is the weather map, in which points of equal pressure are joined by contours ("isobars").

Figure 5 shows the squish space contour plot for our *adjective* class. The plot shows that the item before an adjective is almost always a common noun.[74] The four "mountains" all lie directly upward above the common noun label (N) on the x-axis. The post-context of the adjective shows more variety. The class immediately after an

[73] Most contouring routines draw fairly smooth plots. If the data are rapidly varying, the variations will get smoothed out. This is helpful when outliers introduce spurious variation, but it can hide useful information when classes nearby on the squish behave differently.

[74] This is because of our idiosyncratic and very restrictive definition of *adjective*, namely that for a token to be classified as an adjective, it must follow a noun and modify it.

adjective is one of the following: a clause boundary marker (=), a common noun (N), a preposition or verb (p' or V'),[75] or a conjunction (a'), with minor activity involving classes $ and 0', etc.

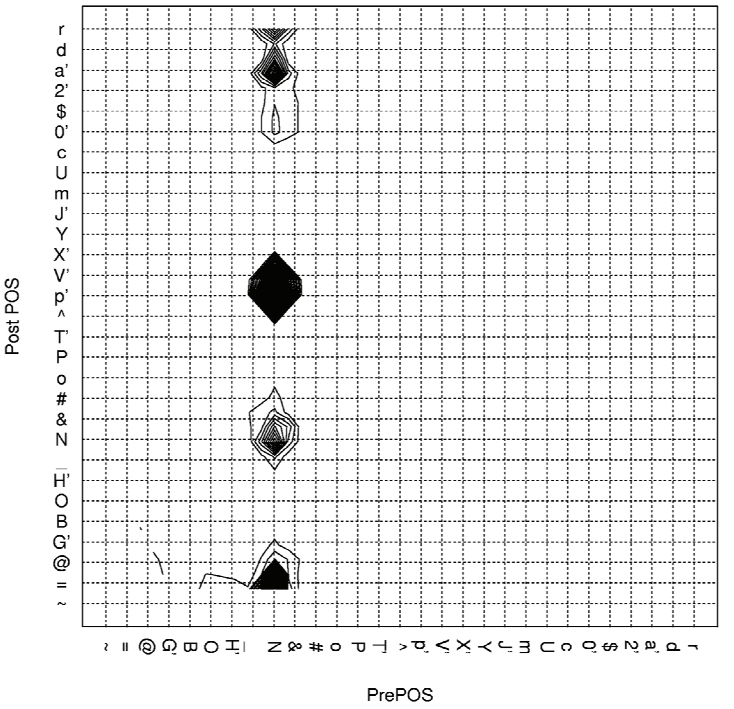

Figure 5. Squish Space Contour Plot for Adjectives

6.3 When to Split and When to Quit

Clearly, one might sub-divide the class of adjectives into four new classes with each corresponding to one of the "mountains" in the squish plane. But, Schütze warns:

> One can always make the move of splitting categories into finer subcategories so that each subclass has perfectly discrete properties. But these subdivisions come at a price of missing many important generalizations. [76]

To split or to quit? To get past this dilemma, one should examine the syntactic roles of all potential "split-off classes" through study of the *syntactic parse markers*[77] that their tokens appear in. Are the roles distinctly different or basically the same? If the former,

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[75] The hexagonal "mountain" for a post-context of {p' V'} (<preposition> <verb>) is solid black. This is because many contours are very close to each other, indicating that this peak is very tall, i.e., this post-context is very frequent.

[76] Schütze, *Ambiguity Resolution*, 15.

[77] See F. I. Andersen and A. D. Forbes, "Attachment Preferences in the Primary History," in Cook, *Bible and Computer,* 167–86.

then class splitting may be warranted; if the latter, then the class's integrity should be maintained.[78] This approach is dependent on the insights of a human analyst. It may be possible, however, to devise methods of quantitating sub-class differences and thereby eliminate the need for a human analyst.

6.4 A Short Gallery of Part-of-Speech Squish Plots

To give readers some idea of the appearance of the squish plots for various syntactic classes, we provide a gallery of several below. Figures 6 and 7 illustrate a problem that will be corrected in the next iterations of our work. Both squish plots are for identical data for the (super)verb class (V'). In Figure 6, forty contours are plotted. Most of the activity is upward from pre-context class a'. There is a large peak at the intersection of Pre POS = a' and Post POS = p'.[79] The extreme largeness of this (a', p')-peak makes the contour intervals so large that much activity elsewhere does not show up on the plot. The peak at (a', p') is huge because we have not excluded cue phrases from our root clauses, that is, it is an artifact that will go away in later, more refined, analyses.

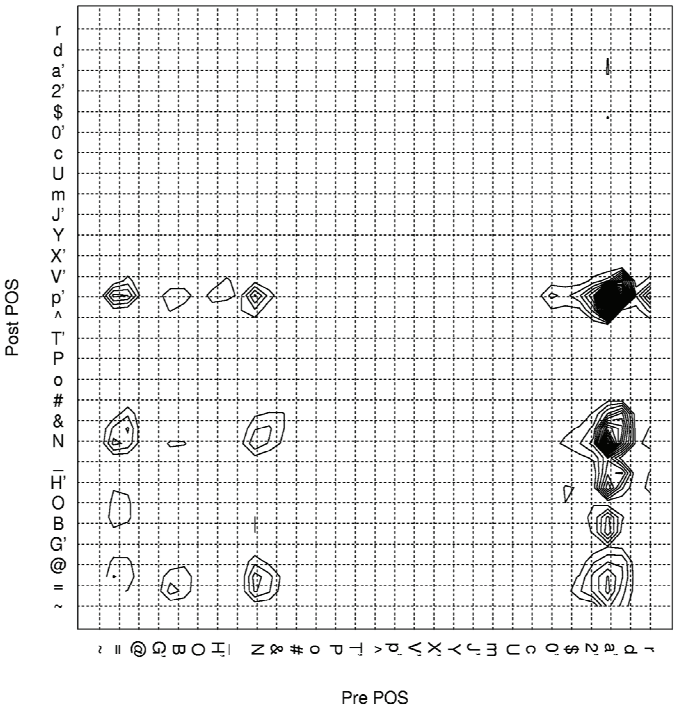

Figure 6. Verb Squish Plot with Forty Contours

[78] The participle is once again instructive. The milieu of purely nominal participles (class _) is quite different from, say, that of noun-verb participles (class P).

[79] For simplicity, let us adopt the usual convention for specifying points in a plane. The format is (x, y), so the huge peak is at (a', p').

To bring out the details of the low-amplitude data in the present circumstances, we allow 400 contours, resulting in Figure 7.

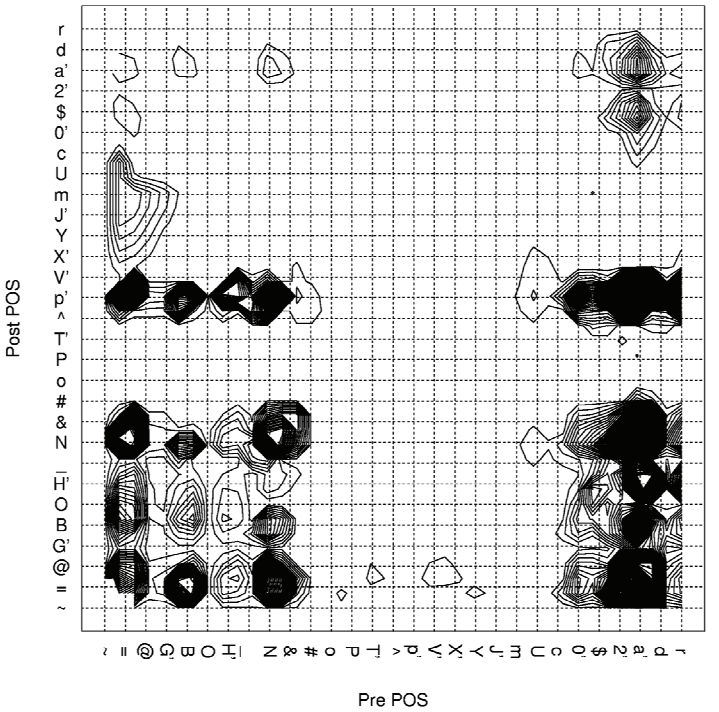

Figure 7. Verb Squish Plot with 400 Contours

Figure 7 documents several interesting facts:

- From pre-context class o through pre-context class U (verbs and quasiverbals), there is almost no activity.[80]
- There is post-context activity in the quasiverbal interval (classes X' through U) when the verb is clause-initial (pre-context class =). Why that should be merits investigation.
- The sequence {H' V' H'}is rare, {H' V' _}even more rare.

Recall that our (super)verb class merges nine verb classes from the syntactic class tree (Figure 1). It may be that we were overzealous in merging these verb classes.

Figure 8 is the forty-contour squish plot for purely verbal participles (class ^). We observe that:

- Unlike the verb class, the purely verbal participles seems little affected by pre-context cue phrases (in class a').
- When clause-initial, the purely verbal participles are equally likely to be followed by classes N (common noun) through p' (preposition).

[80] What little activity there is draws suspicion and should be checked.

- Suffixation (post-context class B) seems only to occur when the pre-context class is itself B, or c, or 0'.

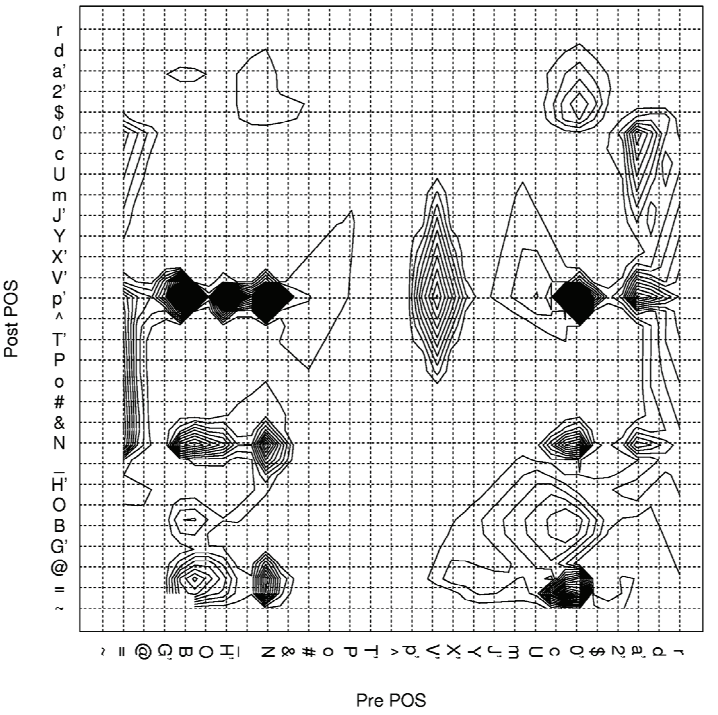

Figure 8. Verbal Participle Squish Plot

Figure 9 shows the squish plot for class U, which is dominated by *behold* הִנֵּה. Like the plot for the verb class, this one fails to show low-amplitude activity because it is dominated by three large sharp peaks, one at (a', N) [166 tokens], one at (=, N) [331 tokens], and one at (=, B) [252 tokens]. The plot shows the smoothing effect near the (=, B)-peak. Thus, activity at (=, O) appears, even though no token in class c has O as its post-context. The reason is that (=, H') has sixty-five tokens. The contouring routine smoothes away the zero amplitude of (=, O) on its way from the 252 tokens at (=, B) to the sixty-five at (=, H'). Class c is interesting for analysis regarding mixed or gradient behaviour. It has recently been studied in detail via traditional methods.[81] Figure 10 shows the rich forty-contour squish plot for גַּם. We leave it to the reader to puzzle out the significances of the patterns exhibited.

[81] F. I. Andersen, "Lo and Behold! Taxonomy and Translation of Biblical Hebrew הִנֵּה" in *Hamlet on a Hill: Semitic and Greek Studies Presented to Professor T. Muraoka on the Occasion of His Sixty-Fifth Birthday* (ed. M. F. J. Baasten and W. Th. van Peursen; OLA; Leuven: Peeters, 2003), 25–56.

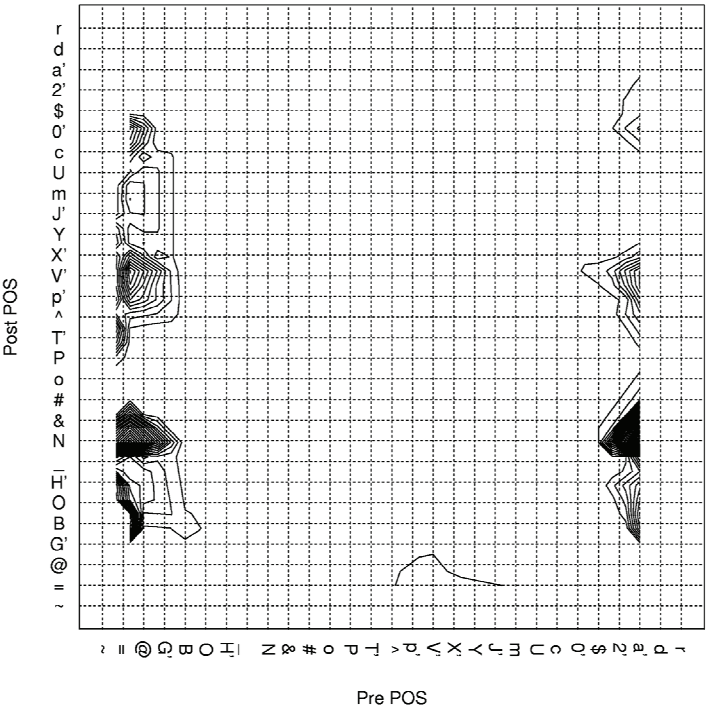

Figure 9. הִנֵּה Squish Plot

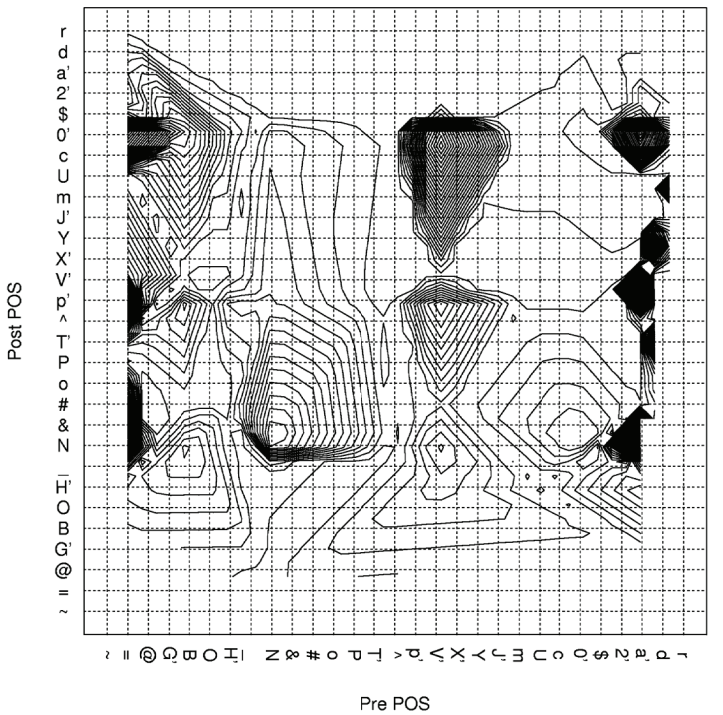

Figure 10. Squish Plot for גַּם

7. QUID NUNC?

We have used part-of-speech distributional information to construct a syntactic class tree for biblical Hebrew and have used information in that tree to formulate a seriation problem. By solving the seriation problem, we have derived a class squish for biblical Hebrew. Using the squish class ordering, we have made plots showing the behaviour of text tokens in a context-revealing syntactic squish space.

Our ultimate plan is to refine our present parts of speech by dividing seriously mixed classes into more homogeneous separate classes and by explicitly identifying any gradient classes as such.

At various points along the way, we have noted limitations in our analysis and have occasionally indicated extensions that should be adopted. In this brief concluding section, we shall simply indicate the improvements that we intend to investigate and—if they look promising—implement.

7.1 The Basic Ingredients

In the work reported above, we focused exclusively upon our set of syntactic classes. The results would be strengthened were our corpus to prove large enough to allow us, with confidence, to use the *word* as our basic unit, rather than our manually-assigned *part of speech*. If word-based analysis eludes us, we might enhance the power of our results by including additional information about word types that already is in our lexicon for the corpus. (For example, we might introduce additional syntactic information and/or subcategorization specifics for the verbs.)

7.2 Elimination of Known Contaminants

Our results have been distorted because of our not eliminating two sources of spurious distributional data: *cue phrases* and *embedding*. We are in the process of dealing with the former problem. And, since we have phrase markers for every root clause, we are already in position to deal with embedding.

We deleted all definite-article-class tokens from our data so as to include more-informative pre-context into our analysis frame. We did not, however, undertake analogous deletions for utterly predictable (and hence information poor) segments such as *to* ʾלְ before infinitives. Doing this sort of thing should be investigated.

We expect that eliminating known contaminators of our data should bring the outliers under control. If not, then we will address the outliers via one of the approaches devised by statisticians.

7.3 Introducing Additional Information into the Analysis

Our squish space plots here have only two dimensions. With our present choice of context, they could have four. By using *trellis displays*, we should be able to increase the dimensionality.

Our present formulation makes no attempt to include information involving *long-range dependency*. We earlier suggested that *coherence chain data* might be of help here. Whether and when our discourse analysis will include cohesion chain representation in our database, we cannot say. Any volunteers?

In going from the hierarchical tree to the seriation process, we perhaps were too aggressive in collapsing down the number of classes included in the analysis. This matter deserves to be revisited.

As noted earlier, Schütze makes use of an alternate representation of context that promises to make dealing with syntactic ambiguity possible, something that our present choice of context does indirectly.

Our analyses rest entirely on *precedence relations* among text tokens. We have made no effort to include incidence phenomena in the analysis. (And, to judge from what others have found while working with English, we probably should *not* include them.) But our parse graphs include an enormous amount of information as regards the *dominance relations* that hold in clauses. It would seem wise to investigate how such information might be folded into our analysis. (One obvious idea would be to include indication of the sort of *predicator/argument/adjunct* that a given token heads.)

7.4 Embellishments and Extensions

In the next iteration, we will revisit our choices of distance measure, cluster distance, cluster algorithm, and seriation approach. We want to make the extraction of the squish curve during seriation more rigorous. Also, we should investigate the rationale for using relative distances on the squish rather than rank order in formulating squish space.

If we are able to begin the analysis at word level, then we might succeed in algorithmically specifying a set of syntactic classes. However, this may not be needed. The classes that we already have are quite serviceable, as witness their success in generating the syntactic class tree above. They "just" need improvement and refinement where *"particles"* are concerned (our "ragbag" plus the outliers) and perhaps at a few other places.

Other important extensions relate to:

- using the squish plots to suggest candidates for study as regards mixed or gradient composition
- formalizing, even automating, adjudication of class status via parse graph analysis.

The issues of *class heterogeneity quantitation* and *prototype identification* also could prove computationally fascinating.

> *Whatever it is you think may prevent you, begin unconditionally; then this belongs to the beginning, is no longer that which prevents a beginning but is that with which you begin.*
>
> — *Søren Kierkegaard*

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5. DESIDERATA FOR THE LEXICON FROM A SYNTACTIC POINT OF VIEW

Janet W. Dyk
Computer-Assisted Linguistic Analysis of the Peshitta
Vrije Universiteit, Amsterdam

The single question addressed by this paper is that 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. The lexicon is the domain of words, of lexemes. Do these in themselves have a lexical part of speech isolatable from all environmental questions, or are they merely a product of the interaction of the pattern of elements in which they appear? Is there a basic value from which the various syntactic functions of an item can be deduced on the basis of generally applicable linguistic rules?

From a formal point of view, words display distinct contrastive and combinatorial functions. It is the lexicon where these unique properties can be stored. The 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. Though the various functions which an element may have could be entered into the lexicon as separate items, reference should be made to the basic form from which the other functions are derivable on the basis of consistently applied syntactic rules. Traced within an extensive text corpus, an element 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.

Three separate elements of the Syriac language are considered: the particle ܕ, the participle, and verbal valency. Though these three are diverse in nature, the approach advocated as to which information should be presented in the lexicon is uniform. Language data can be viewed as a limited number of simple elements that can be combined in accordance with a finite set of syntactic rules. This results in structures that can be described hierarchically as building blocks and their combinatory patterns. The lexicon should present the basic attributes of the entry, and may then go further to list other possibilities dependent on the particular environment, but it should not lose the link to the basic property from which the others are systematically derivable.

By kind invitation of Terry Falla, I have been included in this special Syriac initiative. It is not without trepidation that I have prepared for this presentation. The Syriac and lexicographic expertise represented in the participants is impressive, particularly to one whose primary field of research has been neither of the two.

The single question which I would like to address is that 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. The lexicon is the domain of words—the lexemes, if you please. Do these in themselves have a lexical part of speech isolatable from all environmental questions, or are they merely a product of the interaction of the pattern of elements in which they appear? Is there a basic value from which the various syntactic functions of an item can be deduced on the basis of general linguistic rules? If so, what are the basic values and what are the generally applicable linguistic rules?

In antiquity, a bipartite system was used to define the major grammatical classes (nouns and verbs) based on logic, that is, on the role of a word as a constituent of a proposition. In one classification system, verbs and adjectives were put together in the same class because of their ability to predicate something of a noun, and later what we commonly call nouns and adjectives were put together in contrast to verbs. Words not belonging to the major classes received little attention.[1] From this rudimentary beginning, various schools of thought have expanded and modified the classes into which words should be divided.

Each approach has its own reasons for defining the parts of speech as it does and for determining what information should be included in the lexicon. Some prefer a more notional approach in which the category of a word is determined by the notion to which it refers, for example, "a noun is the name of a person, place or thing," as many of us learned in elementary school. A more formal approach attempts to establish:

> the conditions under which a certain word may be said to belong to a particular grammatical class… In practice, this was always determined in terms of the distribution of the word—its potentiality of occurrence in sentences relative to the occurrence of other words in the same sentences.[2]

In spite of not accepting it theoretically, in practice traditional grammarians have been guided by this principle. This approach reflects how in actual practice the Hebrew and Syriac projects under the umbrella of the Werkgroep Informatica at the Vrije Universiteit in Amsterdam have been dealing with the data.

When constructing a lexicon, there seem to me to be several issues involved, which when not clearly delineated can render conflicting results. There are theoretical issues such as those mentioned—that is, whether a lexical item is a basic part of speech and the effect of the syntactic environment on determining the function of an item—as well as practical issues such as the necessity that a lexicon be both user-friendly enough for beginners and consistently systematic enough for more advanced scholars. Terry Falla has compared two Greek-English lexica, one including syntactic information and one not, where "…the respective inclusion and exclusion of syntactical material in these two lexicons are in accord with the principles they have set

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[1] J. Lyons, *Introduction to Theoretical Linguistics* (Cambridge: Cambridge University Press, 1971), 11.

[2] Lyons, *Introduction*, 147.

themselves."[3]

From a formal point of view, words display "a particular contrastive and combinatorial function."[4] It is in the lexicon that these unique properties can be stored. These properties reveal the words to be members of a particular distributional class. Within the Government and Binding theory of syntax, the categories to which words are said to belong are referred to as *syntactic categories*, that is, nouns, verbs, and so on; the syntactic category determines the distribution of the element. It is assumed that this information belongs in the lexicon. Furthermore, lexical information "plays a role in sentence structure because the syntactic category of a word determines its distribution."[5]

The CALAP (Computer-Assisted Linguistic Analysis of the Peshitta) project of the Leiden University and the Vrije Universiteit, Amsterdam, builds upon the experience of the linguistic analysis of the Hebrew Old Testament in which syntax analysing programmes are implemented. Experience has taught us that information should be available at that point where it is relevant. Lexical information is that type of information which is not derivable from the morphology or the syntax. It includes information on the part of speech, lexically determined gender, and at times lexically determined state and number (when present) and, of course, a gloss. Stored in the electronic lexicon, this information is retrievable by the syntax-analysing programmes. Morphological information, to be found at the level of word grammar, provides values derivable from the morphology, comprising information on gender, state, number, person, stem formation, tense, and so on. Phrase structure information has to do with patterns of how words combine together to form phrases. At this point, due to the syntactic construction in which it occurs, an item may have a "phrase-determined part of speech" which differs from the lexical part of speech with which the form began. At the next level, where phrases combine to form clauses, information is needed by the programmes analysing clause structure on matters such as nominal clause patterns, verbal valency patterns, and the use of verbal tenses, as well as lists of locative and temporal expressions. For analysing how clauses combine into larger units of text, information that functions at the level of text hierarchy is needed. This includes, among other matters, information on episode and paragraph markers, the presence of explicit subjects, the possibility of recognizing word or phrase repetitions, and the presence of parallel and chiastic structures.

In this way, each level makes its contribution. In practice we find that assigning a particular part of speech to a lexical entry allows us to trace the function of the element in syntactic patterns and to register when that particular part of speech functions as a different part of speech at another level. This appears not to occur arbitrarily but to be

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[3] T. C. Falla, "The Lexicon for Which We Long? Some Primary Issues Regarding the Future of Classical Syriac Lexicography," *The Harp* 11–12 (1998/1999), 265.

[4] Lyons, *Introduction*, 149.

[5] L. Haegeman, *Introduction to Government & Binding* (Oxford: Blackwell, 1991), 29.

dependent on factors which can be made explicit. Furthermore, of the vast number of theoretically possible transitions which could be made between the parts of speech, few are implemented. Of those transitions which do occur, only in a proportionately small number of cases is this possibility actually made use of. That is to say, most lexemes retain their basic part of speech in the majority of their occurrences in real texts, which would appear to argue for the validity of the category "part of speech."

To avoid getting stranded in explaining theoretical models, I would like to consider three separate items of Syriac language data: the particle ܕ, the participle, and the matter of verbal valency.

1. THE PARTICLE ܕ

In the electronic lexicon of the CALAP project, an entry is assigned a part of speech. Initially, this has been extracted from existing lexica. That the whole issue of parts of speech is a matter of debate is not hereby ignored. The point is not to solve all theoretical linguistic questions beforehand, but to classify lexical elements according to their morphological characteristics and syntactic behaviour as encountered. The electronic lexicon distinguishes the ten following parts of speech, alphabetically listed:

adjective
adverb
conjunction
interjection
interrogative
negation
preposition
pronoun
substantive (noun)
verb

In standard lexica one often encounters more than one part of speech for a given entry. This concurs with what we have found while building up the database hierarchically. When it becomes apparent that a lexical item in a specific environment functions in a particular manner, this has been noted. These observations have resulted in assigning a "lexical set" to certain lexical entries. Some of these lexical sets are merely subsets which manifest a specific syntactic behaviour but remain within the same part of speech. These include, for example (alphabetically listed):

cardinal (substantive)
demonstrative (pronoun)
gentilic (adjective)
interrogative (pronoun)
noun of existence (substantive)
ordinal (adjective)
personal (pronoun)
proper (substantive)
quotation (verbs of speaking)

verb of existence ("to be")

Other lexical sets indicate that the item has a possibility of shifting in function to that of another part of speech in a particular environment, so that we have lexical sets such as:

possible adverb
possible conjunction
possible interjection
possible interrogative
possible preposition

These shifts are not generally applicable to a particular part of speech but are related to individual lexemes.

Besides these, there are transitions in a function which are a reflection of a characteristic of the language's system itself. Such need not be indicated by a specific lexical set. These include such transitions as:

verb	to	adjective (participles)
verb	to	substantive (participles)
adjective	to	adverb
adjective	to	substantive
adverb	to	conjunction

This seems like a lot of shifting going on, but when we tally the number of transitions encountered in an actual text corpus, the number is comparatively low. Within the Hebrew Old Testament data, 15,604 transitions were noted in a total of 420,371 words; that is, in only about 3.7% of the occurrences did a word change its basic part of speech. Within the Aramaic data (the limited text corpus of the Aramaic portions of the Old Testament), 151 transitions were noted in a total of 6,106 words; that is, in only about 2.5% of the occurrences did a word change its basic part of speech. Within the Syriac data prepared thus far (portions of the Book of Kings and Ben Sira), 1,788 transitions were noted in a total of 25,212 words; that is, in about 7.1% of the occurrences a word changed its basic part of speech. The item we are discussing here, the Syriac ܐ, accounts for 4.2% of the total amount of changes, leaving only 2.9% for all other transitions:

	Number of words	*Number of transitions*
Hebrew	420371	15604 3.7%
Aramaic	6106	151 2.5%
Syriac	25212	1788 7.1% (ܐ = 4.2%)

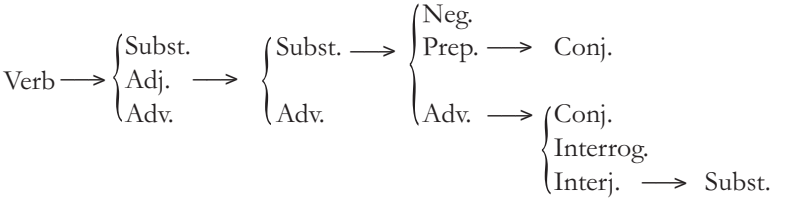
Table 1. Part-of-Speech Transitions

Thus, though theoretically all words could be allowed to switch part of speech in order to accommodate themselves to their environment, in fact a fairly low percentage of cases actually do so. Apparently a part of speech is fairly stable in its syntactic functioning, and is perhaps properly a reflection of the distribution of an item.

To develop a concept of when items do change their parts of speech, two separate sources of information were compared. First, the Hebrew, Aramaic, and Syriac databases were searched for all cases where a lexical item began with one part of speech and switched to another in a particular syntactic context. It appears that the switches only apply to certain parts of speech and then only in defined environments, for example:

possible adverb applies to
substantives functioning adverbially
possible conjunction applies to
prepositions followed by predication
possible interjection applies to
clause initial adverbs functioning as interjections
possible interrogative applies to
clause initial adverbs functioning as interrogatives
possible preposition applies to
certain substantives introducing a NP.

As a second source of information, all "possible…" notations in the lexicon were selected and note was taken of which part of speech these were related to. We mention again that traditional lexica are the source of this information. When these two results were put together and arranged so that consecutive switches followed one another, it became apparent that a particular order of flow obtains among the possible shifts in part of speech. The order followed is:



While still accounting for all possible shifts, the initial part of the string can be streamlined into:

Verb → Adj. → Subst. → Adv. → Prep. → Conj.

This is not to say that all intervening steps are attested. For the Hebrew data, this single string accounts for 84% of the transitions which do occur. For the Aramaic data, it covers 97%, and for Syriac data, all transitions are covered. These results are constructed on the basis of actually occurring examples within the database of a textual corpus. Thus, it appears that when a part of speech behaves as another part of speech within a particular environment, it does so from left to right in the list given.

Returning now to the particle with which we are dealing, it seems that J. Payne Smith has broken a record by giving no less than four separate entries for this particle—mind you, not separate meanings under one entry but separate entries, suggesting four homographs. How the reader is to make a choice between these is somewhat of a mystery. The following meanings or uses are listed:

- rel. pron. *who, which, what; he, she* or *they who, that which*
- cardinal-to-ordinal converter *the second, the seventh*
- relative, causal and final conj. *that, so that, in order that*
- the sign of the genitive *of, by, about, for, against, on account of*

Considering these more closely, one sees that the functions "rel. pron." and "relative, causal and final conj." involve cases where the particle is followed by predication of some sort (a dependent clause), and that when it precedes a cardinal or is "the sign of the genitive" it is not followed by predication.

Brockelmann lists the particle as "particula relativa" and notes the paragraphs in Nöldeke's grammar where it is dealt with. Nöldeke treats extensively the various structures in which the particle is followed by predication.[6] In a totally different section where he deals with the "Genitive and Construct State," Nöldeke treats the particle when not followed by predication. Later a connection is made to the structures in which the particle is followed by predication, whereby a common basic function or sense is given:

> The separation of the Genitive from the governing word presents no difficulty, however, when ܕ is employed… In these cases already the superior independence of ܕ, properly a Demonstrative-(Relative-)Pronoun ("that of"), is shown. This becomes still more conspicuous when no governing word is expressed …[7]

The peculiar ability of this particle to introduce a subordinate structure, with or without predication, while retaining reference to an element which functions syntactically within the subordinated structure, is inherent to what is known as the relative pronoun. This unique property could be taken as a lexically determined characteristic. Beyond this particular inherent ability of both subordinating a structure and functioning syntactically within the subordinated structure, this particle occurs in syntactic patterns as prepositions do.

The simplest environment in which the particle occurs is that in which it is not followed by predication but by a noun phrase. In this environment, in spite of its unique characteristics as "particula relativa," ܕ functions syntactically as a preposition does. In other environments, it is followed by predication and functions as a subordinating conjunction.

Checking the direction of flow of possible shifts of part of speech, we see that the preposition precedes conjunction. The opposite direction of change (from conjunction to preposition) is not attested in the data. Furthermore, other prepositions also can function as conjunctions when followed by predication. In the CALAP database, the particle ܕ is assigned "preposition" as the basic part of speech from which the rest can be derived. As lexical set it is assigned the function it assumes in a more complex

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[6] Theodor Nöldeke, *Compendious Syriac Grammar* (trans. James A. Crichton; London: Williams & Norgate, 1904).

[7] Nöldeke, *Compendious Syriac Grammar*, 165 (§208), 166 (§209).

syntactic environment, namely, possible conjunction. In this way it fits into the patterning of the language as a whole. This choice, I expect, goes against the language intuition of most Syriac scholars, but allow me to illustrate.

- As preposition patterning consistently with other prepositions as expansions of noun phrases or as introductory particles for nominal clause constituents:

2 Kings 17:3 ܥܠܘܗܝ ܢܦܩ ܫܠܡܢܐܣܪ ܡܠܟ ܐܬܘܪ ܡܠܟ
against him went out Shalmaneser, king of [prep.] *Assur*

1 Kings 2:15 ܠܝ ܗܝ ܐܚܝ
and she (the kingdom) became my brother's (lit.: of my brother) [prep. introducing pred. complement]

- As subordinating conjunction when followed by predication, sometimes introducing a subordinate clause, sometimes introducing a clause constituent which includes predication:

1 Kings 3:28 ܡܛ ܕܚܟܡܬܐ ܕܐܠܗܐ ܒܗ ܐܝܬ ܕܚܙܘ ܕܥܒܕ ܗܘ ܕܝܢܐ
because that [sub. conj.] *they saw that* [sub. conj., clause as object] *the wisdom of* [prep.] *God was in him*

- As subordinating conjunction followed by predication while still functioning as the expansion within a noun phrase:

1 Kings 3:6 ܘܐܝܟ ܗܫܐ ܝܗܒܬ ܠܗ ܒܪ ܕܝܬܒ ܥܠ ܟܘܪܣܝܗ ܐܝܟ ܝܘܡܐ ܗܢܐ
and you have given him a son that [sub. conj., clause attrib. within NP] *shall sit upon his throne as this day*

This particle thus often functions as a preposition, expressing possession or as an expansion of a noun phrase, as well as introducing verbal complements or adjuncts, and when followed by predication functions as a subordinating conjunction. Other prepositions do likewise:

- As preposition patterning consistently with other prepositions as expansions of noun phrases or as introductory particles for nominal clause constituents:

2 Kings 25:17 ܘܟܬܪܐ ܕܥܠܘܗܝ ܢܚܫܐ
and the capital upon it [expansion of NP] *was of bronze*

1 Kings 1:23 ܘܢܦܠ ܥܠ ܐܦܘܗܝ ܥܠ ܐܪܥܐ
and he fell upon his face [verbal compl.] *upon the ground* [verbal compl. / adjunct]

- As subordinate conjunction followed by predication:

2 Kings 17:34 ܥܠ ܕܠܐ ܫܡܥܘ ܒܩܠ
because [sub. conj.] *that they forsook the LORD*

Thus, in spite of its unique lexical qualities as a relative pronoun, for a consistent processing of patterns within the language system, the particle ܕ can be listed as functioning as a preposition which, like other prepositions, can function as a conjunction when followed by predication.

2. THE PUZZLE OF THE PARTICIPLE

The participle has challenged scholars for ages. It has been variously categorised as a verb, an adjective, a participial adjective and a verbal adjective. I realize that by broaching the subject I fling myself into an area that has been dealt with extensively by those within this project. Yet allow me to present an approach to the participle which has resulted in a consistent treatment of this form within syntactically analysed texts of both Hebrew and Syriac.

Scholars are often prevented by their own expertise from following their desire to let the language speak for itself. Trained in the tradition of western languages and grammar, we are often not aware that what we have learned as grammar is derived from, and is therefore often limited to, a particular language or group of languages. Thus it is unpalatable to have a form like the Hebrew participle, as slippery as an eel, which is here a noun and there a verb and then again an adjective or even almost an adverb when it functions as a subject-oriented adjunct.

A factor that has contributed to clouding scholars' intuitions concerning the functioning of the participle has to do with whether the verb is transitive or intransitive, active, stative, or passive. It is not surprising that more passive participles tend to function as adjectives due to their passive nature, but this is not valid always and everywhere. By virtue of their "minus control" characteristic, the so-called stative verbs are more aligned with adjectives and, probably for this reason, have been treated in lexica at times as verbal and at times as non-verbal.

The essence of the participle is that it has a "Doppelnatur,"[8] having a verbal core but nominal endings. In this lies the key to its success, whereby in Hebrew it could develop from a marginal verbal form occurring in subordinate syntactic environments to assuming predominance as the main verb, expressing the present tense. And still, even when capable of being the main verb, the participle continues to occur as an adjective, a noun and a subject-oriented adjunct, and this is true in all phases of the language, extending even up through Ivrit.

Perhaps the participle generates confusion because it does not have one particular point in the syntactic hierarchy at which it changes in function from a verb to something else, nor when changing to a nominal function does it lose its ability to govern elements verbally. It is not a case of "nominalization," as in many languages. Rather it stays its sweet little double-natured self and continues to be able to do most anything, accommodating itself pleasantly to its companions in the sentence. What we would like, of course, is for it to be one or the other, as expressed by a result published by Francis Andersen and Dean Forbes:

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[8] E. Sellin, *Die verbal-nominale Doppelnatur der hebräischen Participien und Infinitive und ihre darauf beruhende verschiedene Construktion* (Leipzig: Ackermann & Glaser, 1889); J. Kahan, *Uber die verbalnominale Doppelnatur der hebräischen Participien und Infinitive und ihre darauf beruhende verschiedene Konstruktion* (Leipzig: C. W. Vollrath, 1889).

> As the outcome of the use of syntactic functions as diagnostics for part of speech allocations, we have three kinds of participles: purely nominal; purely verbal; nominal and verbal at once.[9]

This approach would involve assigning a particular function to a participle in a specific occurrence, which seems to me to be information more suited to a syntactic concordance than to a lexicon. For a lexicon, one could choose to lexicalise those instances which occur only in one type of environment as either "purely nominal" or "purely verbal," but the need to account for those cases which are "nominal and verbal at once" still remains.

Two types of information seem to be at work: the part of speech and the effect of the syntactic environment. To state that a form is "purely nominal" would only be possible if one had assessed a comprehensive list of all occurrences of the form and found that in all cases this simple description is sufficient. Stating that a form is "purely verbal" is making the assumption that this form never implements its syntactic potential of being embedded in a nominal context. With a limited and defined corpus, one could choose this approach, but the results would be valid only for that limited corpus. Such descriptions are in essence deductions made on the basis of what a participle is able to do syntactically and the evaluation of all of the environments in which a particular form occurs. As long as the entry in the lexicon contains a reference as well to the participial form of the verb involved, and a statement that the function listed is dependent on the specific syntactic context, this solution is both user-friendly and systematically consistent.

Whether or not certain examples are isolated as "purely this or that," problems continue to arise wherever the participle exhibits its versatility. It is the syntactic environment of the participle which provides the definition as to which function it has in that particular occurrence. The fact that certain participles make selective use of this syntactic potential has to do with factors such as (a) transitivity, intransitivity, passivity and stativity of the verb involved, (b) the tendency of languages to lexicalise a frequently repeated usage, and (c) the effects of language variation. Though it could be useful to list certain functions in specific environments as an aid to the user, the link to the elegance of the language system should not be lost.

Using the insights of Lappia and Voskuil[10] in their analysis of nominal infinitives, the participle can be seen as having a verbal dimension justifying the presence of its verbal aspects, and a nominal dimension accounting for its nominal characteristics. The switch from the verbal function, which is at the core of the participle, to another function is occasioned by the presence of other elements governing the participle syntactically. This was captured by Andersen and Forbes by their experiment of letting

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[9] F. I. Andersen and A. D. Forbes, "What Kind of Taxonomy is Best for Feeding into Computer-Assisted Research into the Syntax of a Natural Language?" *Bible and Computer* (ed. J. Cook; Leiden: Brill, 2002), 23–42.

[10] M. Lappia and J. E. Voskuil, "Nominal Infinitives," *LCJL* 3 (ed. S. Barbiers, M. den Dikke, and C. Level, 1991), 169–82.

the computer recognize

> every word with the form of a participle … to be a noun in relation to what preceded it, a verb in relation to what followed it.[11]

As they admit, this is too simple, but the fact that this rule did work as well as it did has to do, I believe, with the strict word order within Hebrew nominal constructions. Because a participle is often embedded within a nominal environment, that is, governed by a nominal element, it was subjected to this strict word order. Once it escapes the restriction of nominal government, word order is no longer a dependable criterion. Thus, this practical rule is only partially useful, as they concede.

We turn to a few examples taken from the Books of Kings with which I am now working. The least contested examples are those in which an active participle clearly functions as the main verb within the construction in which it occurs:

- with explicit subject and direct object:

1 Kings 1:40 ܗܘ ܥܡܐ ܕܚܠܝܢ ܒܡܚܠ̈ܬܐ
and the people drummed/beat [pt.] *timbrels*

- with pronominal subject, enclitic pronoun, and direct object:

1 Kings 2:5 ܘܥܬܐ ܐܢ ܝܕܥܬ ܐܬ ܕܥܒܕ ܠܝ ܝܘܐܒ ܒܪ ܨܪܘܝܐ ܒܪ ܢܪ ܒܪ ܢܪ ܗܘ ܥܒܕ
and now, you know [pt.] *what Joab the son of Zuriah did to me*

- with an explicit subject and a form of ܗܘܐ:

1 Kings 3:2 ܐܠܐ ܕܥܠ ܒܡܬܐ ܗܘ ܕܒܚܝܢ ܒܒܡ̈ܬܐ ܗܘ ܥܡܐ
except the people were offering [pt.] *upon the heights*

It becomes less obvious when the participle is a passive form, although it can appear in the same syntactic patterns as the active participle:

- with an explicit subject and a form of ܗܘܐ:

1 Kings 1:4 ܘܬܒ ܫܘܠܡܝܬ ܒܬܐ ܗܘܬ ܒܬܠܬܐ ܗܘ
and the maiden was very fair [pass. pt.] *of face*

1 Kings 2:45 ܘܒܪܟ ܗܘܐ ܠܫܠܡܘܢ ܡܠܟܐ ܗܘ
and may King Solomon be blessed [pass. pt.]

In these two examples, one could question what it is that triggers our reactions to the participial forms. The second one ("blessed") has more chance of being listed under the verb to which it belongs, while the first one ("being fair") tends to end up as a separate entry, called a "verbal adjective" or "participle adjective," whatever that might be. It is particularly interesting to note that although the presence of complements tends to strengthen the sense of verbality of a form, it is the first example ("being fair") which has a complement ("of face"), while the second one has none.

I suggest that we are reacting to the transitivity, intransitivity, stativity or passivity of the predicate, and not in essence to its basic nature as the participial form of a lexical entry whose part of speech is "verb."

The following examples are also passive participles, but are at less risk of being lexicalised as a "verbal adjective" or "participle adjective":

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[11] Andersen and Forbes, "What Kind of Taxonomy?", 34.

- in an independent clause, with an explicit subject and a verbal complement:

2 Kings 25:4 ܘܟܠܕ̈ܝܐ ܚܛ̈ܪܝܢ ܠܡܕܝܢܬܐ
and the Chaldeans surrounded [pass. pt.] *the city*

- in a dependent clause, with a verbal complement:

1 Kings 2:3 ܟܬܝܒ ܒܢܡܘܣܝ ܒܐܘܪܝܬܐ ܗܝ
as is written [pass. pt.] *in the law of Moses*

- with an explicit subject, a complement and a form of ܗܘܐ:

1 Kings 2:28 ܐܝܠ ܗܘ ܗܘܐ ܒܬܪ ܐܕܘܢܝܐ ܝܘܐܒ
because Joab was inclined [pass. pt.] *after/was a follower of Adonia*

1 Kings 2:45 ܘܬܗܝ ܟܘܪܣܝܗ ܕܕܘܝܕ ܩܝܡ ܩܕܡ ܝܗܘܐ ܗܘܐ ܒܪܝܟ ܠܥܠܡ
and may David's throne be established [pass. pt.] *before the LORD forever*

The ability of the participle to adapt to the surrounding syntax is clearly seen in:

1 Kings 2:32 ܕܩܛܠ ܒܬܪ̈ܝܢ ܓܒ̈ܪܝܢ ܛܒ̈ܝܢ ܡܢܝܗ
that he attacked/fell upon two men more righteous [pass. pt.] *and better than he*

where J. Payne Smith remarks that there is "only an active participle" of the verb, and lists the passive participial form separately without indicating its part of speech.

And, what about the fattened ones (cows) for Adonia's feast?

1 Kings 1:9 ܘܕܒܚ ܐܕܘܢܝܐ ܥ̈ܢ̈ܐ ܘܬ̈ܪ̈ܥ̈ܐ ܥܡ ܟ̈ܪ̈ܝ̈ܐ ܕܝܩ̈ܪ̈ܐ
and Adonia sacrificed sheep and bulls and fattened cows [pass. pt.]

And then—though it might be a Hebraism—there are the participles, which may or may not be in construct state, with or without their own verbal complements, but which are firmly embedded in a nominal phrase:

2 Kings 25:18 ܘܬܠܬܐ ܓܒ̈ܪ̈ܐ ܕܡܛ̈ܪܐ
and three guards [pt. c. st.] *of the gate*

2 Kings 23:11 ܒܝܬ ܐܘܨܪ̈ܐ ܕܢܬܢ ܣܪܝܣ ܕܡܠܟܐ
the house of the treasury of Nathan, the steward (entrusted one [pass. pt.]*) of the king*

The problems are familiar and have been documented by several participants in this session. Is there a way out?

From the experience of working with a hierarchically structured database of the Hebrew Old Testament, and more recently with the Syriac Books of Kings, I would like to advocate classifying the participle—whether active or passive, transitive, intransitive or stative—as a verbal form belonging to the verbal root which would be the lexical entry. There is one system of syntactic rules which can account for all occurrences and functions of the participle. Its functions can be deduced on the basis of syntactic rules consistently applied. In order to meet the needs of the beginning student, it could be useful to provide separate entries for participial forms with a particular function in a specific context, with a cross reference to the verbal root to which it belongs. This is more a matter of pragmatics, of course, but while thus helping the student whose main aim is to find the form needed, the more advanced scholar is able to recognize a consistent treatment of the form within the language system as a whole.

In other words, a participle is a verb and retains this as a basic property but can assume other functions as dictated by the syntactic environment. It is imperative that the effect of the environment be kept as a separate factor and not be attached to the participle as lexical entry, because this would become inconsistent and untenable as soon as an example turned up in which the same form in a different syntactic environment required that another function be ascribed to it.

The differences between the various participles are not ones of form but of syntactic environment. Their particular function in a specific case is a result of the hierarchical language system. The participle is affected by the syntactic rules which apply to various levels of the language. At heart it is a verb and remains so in function until it falls under the government of a nominal element.[12] All elements dependent on it as a verb fall under a verbal shield and remain there even when the participle is governed by a nominal element.

It is not necessary to try to capture all of the syntactic environments of a participial form as separate lexical entries. This potential of the Hebrew and Syriac participle is part of the language system, not a property of a particular lexical entry. Specific examples of various functions of a particular participle could be given in the lexicon under the verbal form, as illustration, but it would be impractical to try to be exhaustive in this regard.

3. VERBAL VALENCY

The final topic I would like to touch on, but only briefly, is that of verbal valency. At this point it has not been possible to do extensive research into the verbal valency patterns of Syriac, but I would like to share some examples from Hebrew and make a few suggestions for the lexicon on this subject.

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, and, therefore, information which rightly belongs in the lexicon. A verb can be said to have a certain "argument structure, that is, it is specified for the number of arguments it requires."[13] 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. From the research done on Old Testament Hebrew, it seems that a verb is restricted in its meaning by the elements with which it occurs. This is true of other languages as well. We cite as example the English

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[12] Cf. my "participle reanalysis corollary": "For the participle to be able to undergo reanalysis and function as the main verb, there must an absence of elements which would force a nominal analysis of the participle." J. W. Dyk, *Participle in Context: A Computer-Assisted Study of Old Testament Hebrew* (VU University Press, 1994), 138.

[13] Haegeman, *Introduction*, 36.

sentences:

They spent the night there.
They spent the night together.

These two sentences conjure up quite different images.

In the Amsterdam database of Old Testament languages, clause atoms (that is, stretches of phrases between which not more than a single predicate relationship is present) are isolated. Where a verb is present, this verb is taken to be the core of the construction which organizes the elements around it. The elements which occur with a particular verb are recorded in a verbal valency list. When a new stretch of text is to be parsed, the programme consults the verbal valency list to suggest parsing labels for the new text. New patterns are recorded and are available for the next round. The registration of patterns occurring in the data forms a basis for distinguishing between various uses of the verb within the language system.

As illustration we take the verb **שִׂים** "to place" in Hebrew. The primary pattern of elements occurring with this verb involves a direct object which gets placed and a location where the object is placed. A secondary pattern of elements involves a double object. In this case, the meaning shifts to "to make into," that is, something already present is made into something else. This can be used in various situations:

Josh 8:28	to make a city [into] a heap of ruins
1 Sam 8:1	to make one's sons [into] judges over Israel
1 Sam 18:13	to make someone [into] a captain
Ps 39:9	to make someone [into] a reproach of fools

In 1 Kings 5 we have the story of King Hiram providing timber for Solomon's building projects. In verse 9 (MT: 5:23) we read:

וַאֲנִי אֲשִׂימֵם דֹּבְרוֹת בַּיָּם
KJV: and I will convey them by sea in floats
NIV: and I will float them in rafts by sea

The translators of the KJV evidently took the primary meaning of the verb "to place" and understood the "in floats" as the location where the timber would be placed in order to convey it by sea. The pattern is, however, that of the verb with a double object. Hiram was not proposing to convey the large cedars by floats, but to make them into floats, which is, of course, what one does with large trees. The Syriac version has here understood the meaning correctly and rendered:

ܐܣܝܡ ܐܢܘܢ ܠܦܠܓܐ ܒܝܡܐ
I will make them into a raft by the sea

using the verb ܥܒܕ "to do, make" (cf. also RSV: "and I will make it into rafts to go by sea").

Another case where the King James, and this time also the RSV, missed this particular meaning of the Hebrew verb is in Jeremiah 5:22:

אֲשֶׁר־שַׂמְתִּי חוֹל גְּבוּל לַיָּם
KJV: placed the sand for the bound of the sea
RSV: I placed the sand as the boundary for the sea

Here it would have been more correct to translate: "made the sand a boundary for the sea," as indeed the NIV does. Here the Peshitta renders:

ܣܡܬ ܚܘܠܐ ܠܝܡܐ

I placed sand a boundary for the sea

In this the Peshitta follows the Hebrew idiom closely. When checking in our electronic verbal valency list, we find that the verb ܣܡ in Syriac does not occur with a double object, but only with a single object which gets placed, often accompanied by where the object is to be placed. Thus this special use of the Hebrew double object seems to be missing from the texts upon which our database is built. Payne Smith lists under this verb the occurrence with ܚܘܠܐ "boundary," with the meaning "to set bounds, define a boundary," which would explain the choice of this verb in combination with "boundary," but the role of "sand" remains peculiar in Syriac.[14]

In another case as well, the Syriac translator(s) seem(s) to have missed the nuance of the Hebrew, being influenced again (it would appear) primarily by the lexical elements occurring in the valency pattern of the verb, in particular the word "name," as indeed it appears the translators of the King James, of the RSV, and of the NIV were as well. In 2 Kings 17:34 we read in Hebrew:

יַעֲקֹב אֲשֶׁר־שָׂם שְׁמוֹ יִשְׂרָאֵל

KJV, RSV, NIV: Jacob, whom he named Israel

If the essence of the use of a double object with this verb is that one thing is "made into" or "changed into something else," then it is not so much that Jacob was "named" Israel—as would have been the case if the verb **קרא** "called" had been used with "name"—but that his name, which was already existent, was "made into" or changed to "Israel." The Peshitta here uses the denominative verb "to name, call, denominate; give a surname, take or assume a name," thus also missing the point of the Hebrew valency pattern:

ܕܩܪܝ ܫܡܗ ܠܫܡܗ ܝܣܪܝܠ

literally: Jacob, whom he named his name Israel

Due to the stage of data preparation in this ongoing Syriac project, research into valency patterns of Syriac verbs has not yet been done. The verbal valency list is being built up as each chapter of Kings or Ben Sirach is parsed. The groundwork is being laid.

It would be a great aid to both beginners and advanced scholars if the lexicon would make explicit which valency patterns occur with a verb and what meanings result from these patterns. This is a gold-mine which has hardly been tapped. The patterns occurring with a verb can help us understand the text, for various meanings are dependent precisely on the valency patterns employed.

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[14] C. Brockelmann (*Lexicon Syriacum* [Hildesheim: Georg Olms, 1966]) gives no evidence of a double object construction for this verb either.

4. CONCLUSION

Though the three elements I have touched upon may seem to be diverse, the approach advocated here is uniform regarding which information should be presented in the lexicon. Language data can be viewed as a limited number of simple elements which can be combined in accordance with a finite set of syntactic rules. This results in structures which can be described hierarchically as building blocks and their combinatory patterns. The lexicon should present the basic attributes of the entry, and may then go further to list other possibilities dependent on the particular environment, but should never lose the link to the elegance of the language system itself.

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6. ON MATCHING SYRIAC WORDS WITH THEIR GREEK *VORLAGE*

Peter J. Williams
University of Cambridge

The question that lexicographers of the Septuagint ask is whether the Hebrew supposed to underlie the Greek can legitimately be used as an indicator of the meaning of the Greek. Likewise Syriac lexicographers approaching the New Testament must ask to what extent the Greek should guide their understanding of the Syriac. This paper dwells on some of the difficulties involved in matching Syriac words with Greek ones and also on some of the counter-intuitive or surprising results that comparison of the Syriac and Greek leads us to. Examples are taken from the Old Syriac and Peshitta Gospels.

1. Syriac can equate a "gender-neutral" term in Greek with a "gendered" term in Syriac.

2. The Syriac Gospels frequently reverse the order of a pair of items in the Greek (as occurs sometimes in the Old Testament Peshitta), so that in examples like Jn 10:1 the Syriac word corresponding to the Greek is not the one that a superficial reading would lead us to believe.

3. Syriac prefers the unmarked verb ܐܡܪ to introduce speech, whereas Greek uses more varied vocabulary. Consequently ܐܡܪ can be fulfilling functions that we might not expect.

4. Greek plurals may correspond to Syriac singulars and vice versa. This sometimes gives us insight into the correspondence between the number of entities denoted and grammatical number.

As we seek to develop lexicographical tools for the study of Syriac it is natural to begin with the earliest Syriac literature.[1] This quickly leads us to a consideration of the Old Syriac Gospels and to a lesser extent the Peshitta. These are of interest because of their early date and because—containing as they do the text that was the focal point of religious and literary interest for the Syriac speaking church—they are likely to have exercised an influence on subsequent language. The Old Syriac Gospels are also noteworthy for containing some forms, with an air of primitivity, that do not show up in other texts.[2] These Gospels naturally therefore arouse the hope that they will disclose primitive meanings from which other attested meanings can be shown to be subsequent developments.

The question then immediately arises as to how we know what a word in the Old

[1] Abbreviations used in this essay for Syriac versions of the New Testament are: *Syr*^{s} (Old Syriac Sinaitic Manuscript), *Syr*^{c} (Old Syriac Curetonian Manuscript), and *Syr*^{p} (Peshitta).

[2] For instance, the masculine plural demonstrative ܗܠܝܢ (e.g., Lk 8:13 *Syr*^{sc}) and its feminine counterpart ܗܠܝܢ (Mt 15:24 *Syr*^{c}).

Syriac Gospels means. Here we find a parallel to our own discipline in Septuagint lexicography, where debate continues about whether one should ever assign meanings to words in the Septuagint on the basis of the Hebrew.[3] We must consider exactly the same question in lexicography of the Syriac New Testament: should the Greek be used as a guide for the meaning of the Syriac?

This question is of course only part of a much wider debate in academic circles about how meaning is to be decided and about the respective roles of the author, reader, and community in relation to meaning. Here it is assumed that it is legitimate to ask questions about ancient authorial intention and thus of an ancient translator's intention. To do so is difficult, but certainly no more difficult than to ask questions of the way an ancient community would have read a document. Once the legitimacy of asking questions of a translator's intention has been granted, then it is a relatively small step to justify our use of the source text as one of a number of guides to that intention, with the provisos that the source text is not extant and that it may have been misunderstood. One may also, of course, legitimately ask what a translation meant in the culture that received and used it, but that is not our concern here. We are investigating, then, meaning defined as what the translator intended, or the nearest approximation to the translator's intention that we can achieve.

Even though we may be justified in using the Greek in investigating Syriac meaning, in many cases the Greek seems to play little role in lexicography. If a word is well known from multiple attestation, it is less likely that the Greek will play a significant role in modern discussion of its meaning. On the other hand, with rare words modern investigators may be looking for any clue they can find, and the Greek will provide a clear guide in discussion.

But as well as not always being perceived as relevant in semantic discussion of the Syriac, the Greek may be left aside because it is difficult to match Syriac and Greek words. This is because the Old Syriac is not a word-for-word translation. One cannot therefore always equate Syriac and Greek words as translational equivalents.

So far the territory is generally familiar. In a recent investigation of the translation method of the Old Syriac and Peshitta, however, I came across a number of phenomena that make the matching of Syriac and Greek words more problematic.[4] At the same time, once these problems are faced the Greek may prove more fruitful in lexicography than had previously been thought.

I raise a few specific issues that I hope will be of general interest.

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[3] A recent offering in this debate, which raises a significant challenge to any lexicographical project on translation literature, is Cameron Boyd-Taylor, "The Evidentiary Value of Septuagintal Usage for Greek Lexicography: Alice's Reply to Humpty Dumpty," *BIOSCS* 34 (2001): 47–80. Earlier literature is surveyed there.

[4] P. J. Williams, *Early Syriac Translation Technique and the Textual Criticism of the Greek Gospels* (Texts and Studies; Piscataway, NJ: Gorgias Press, 2004). A more detailed discussion of many of the phenomena described in this essay can be found there.

1. WHEN THE SYRIAC AND GREEK WORDS DO NOT MATCH IN GENDER

Any contemporary lexicographical project is going to have to deal with some popular but also tricky questions of gender. The question of representation of gender has not only been of interest to those involved in liturgical reform and producing contemporary translations of the Bible, but its significance for the domain of Semitic lexicography was highlighted by decisions in the Sheffield Dictionary of Classical Hebrew, such as to represent נְבִיאָה by "prophet (fem.)" as opposed to the traditional "prophetess."[5]

Even those more inclined to follow existing conventions will do well to reflect on some of the gender issues raised by comparison of the Syriac and Greek New Testaments. In the Gospels the vocative τέκνον, traditionally "child," always becomes ܒܪܝ "my son" (Mt 9:2 *Syr*$^{\text{ph}}$, 21:28 *Syr*$^{\text{sch}}$, Mk 2:5 *Syr*$^{\text{p}}$, Lk 2:48 *Syr*$^{\text{ph}}$, 15:31 *Syr*$^{\text{sch}}$, 16:25 *Syr*$^{\text{ch}}$). There are two formal differences between the Syriac and the Greek: the first, the addition of the possessive; the second, the gender of the term. Greek τέκνον gives the impression of being a gender-neutral term, whereas ܒܪ can only be applied to males, and is therefore rendered "son." The equation between vocative τέκνον and ܒܪܝ is not so much of relevance to our understanding of the term ܒܪܝ as it is of significance when we consider the relationship between a language with three "genders" and a language with only two, the masculine and the feminine. Syriac's own equation between a gender-neutral term and its own gendered term might in turn justify modern scholars, living in a more linguistically gender-neutral environment, in equating the Syriac gendered term with their own gender-neutral one. That said, it must be remembered that there was no way in Syriac of saying "my child" without indicating the gender of the child. As we represent the Syriac semantics we must represent all the information present in the Syriac.

Similarly, the plurals τέκνα and τεκνία, used vocatively, become ܒܢܝ "my sons" in Mk 10:24 *Syr*$^{\text{ph}}$ and Jn 13:33 *Syr*$^{\text{ph}}$, and τὰ τέκνα becomes ܒܢܘܗܝ "his sons" in Mt 18:25 *Syr*$^{\text{sch}}$. In this last case the context of the original Greek almost certainly suggests that, within the parable, the individual has a normal allotment of children. The parable has impact when we imagine an assortment of children of both genders being sold off to pay the debt of the unforgiving servant. From the perspective of the Greek, ܒܢܘܗܝ should therefore be "his children," not "his sons." ܒܢܐ may, but does not have to, include females. Hence, though it is grammatically and in traditional lexicography the plural of ܒܪ, it is not the semantic plural of ܒܪ, in the sense that it does not simply denote a multiple of the entity ܒܪ. It is in fact a frequent phenomenon in gendered languages that the plurals of terms do not necessarily share the same relationship to the genders as do their singulars. As far as this is the case it may sometimes be profitable to consider the singulars and the plurals of words to be separate lexemes.

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[5] D. J. A. Clines, ed., *The Dictionary of Classical Hebrew*, Vol. 4, ל–י (Sheffield: Sheffield Academic Press, 1998), 12.

2. WHEN THE SYRIAC AND GREEK WORDS DO NOT MATCH IN ORDER

Equating Syriac words with Greek ones relies on the fact that there is a strong sequential correlation between the Syriac and Greek texts. Here we consider a slight complication. Relatively recently, it was observed by Gelston, writing on the Minor Prophets, that

> …there is a certain tendency in the Peshiṭta to reverse the order of paired words in the Hebrew… [6]

Richard Taylor on the Peshitta of Daniel notes:

> In a number of instances where MT and other external evidence have "A and B," the Peshiṭta reads "B and A."[7]

The relevance of this to the New Testament is that this is a phenomenon that I believe that I discovered in the Gospels only in 2002.[8] So far as I know there is only one three-word hint in previous scholarship that this phenomenon had been observed in the New Testament—an observation by Wichelhaus in 1850.[9] However, the list of possible examples is extensive. Below is a list of references where an Old Syriac witness and/or the Peshitta reverse(s) the order of a pair of items relative to all Greek witnesses recorded in most significant editions of the Gospels: Mt 3:11, 5:45, 6:17, 10:18, 10:28, 12:19, 12:25, 17:17, 17:21, 18:17, 21:12, 23:28, 24:10; Mk 1:40, 7:3, 8:38, 9:4, 9:25, 9:29, 11:15, 13:9, 14:41, 16:8; Lk 2:16, 2:20, 2:37, 3:16, 6:25, 7:30, 7:41, 8:2, 9:6, 9:25, 9:41, 11:33, 11:49, 11:51, 15:25, 16:13, 16:19, 17:23, 19:2, 19:45, 23:50; Jn 1:17, 3:5, 3:32, 12:49, 13:14.

There is a sufficient number of examples that the phenomenon is unlikely to be due to accidental textual causes. Ad hoc mechanisms such as assimilation, error, and subconsciously preferred order may all have a place in dealing with these texts, but none of these explanations, nor a combination of them, can explain the extent of the list.

On the other hand, the failure of appeal to accidental causes to account for the phenomenon does not necessarily justify seeing pair reversal as an entirely unified phenomenon. It may be that more than one factor will need to be invoked in explaining the list. Nevertheless, one clear explanation for the reversal of some pairs can be given.

The Syriac language underwent considerable shifts, especially during the fifth century and following, under the pressure to represent the technical vocabulary of Greek theological works in Syriac. Now whereas Greek puts a negative alpha at the

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[6] A. Gelston, *The Peshiṭta of the Twelve Prophets* (Oxford: Clarendon Press, 1987), 71.

[7] Richard A. Taylor, *The Peshiṭta of Daniel* (MPIL 7; Leiden: E. J. Brill, 1994), 320–21.

[8] A much fuller discussion of this is found in chapter 5 of Williams, *Early Syriac Translation Technique*. The position presented here largely as a conclusion is justified on the basis of more extensive argumentation there.

[9] The relevant phrase is "ordine inverso poneret" in J. Wichelhaus, *De Novi Testamenti Versione Syriaca Antiqua quam Peschitho Vocant, Libri Quattuor* (Halle: Orphanotropheum, 1850), 254.

beginning of a word to negate the word, the Syriac of the earliest translations cannot do anything similar. A negative would not only negate the word that immediately followed it, but also often subsequent words in the context. However, as can be seen from the writings of Philoxenus of Mabbog in the sixth century, by his time any noun could be negated simply by prefixing Syriac ܠܐ, as one might use the English un-. Because of the situation with Syriac negatives, when the earliest translators came across a pair of items in Greek, the first one of which had alpha privative in front, the Syriac reversed the order of the pair so that the Syriac negative would not be applied to both words in the pair.

The way a negated first word in Greek becomes a negated second word in Syriac can be seen in the following examples:

(a) τὸ ἄλαλον καὶ κωφὸν πνεῦμα (Mk 9:25) produces ܪܘܚ ܕܠܐ ܡܠܠܐ ܘܐܝܟܐ ܠܐ ܡܫܡܥ in *Syr*^{sp}.

(b) ὦ γενεὰ ἄπιστος καὶ διεστραμμένη (Mt 17:17 // Lk 9:41) produces three different renderings: ܐܝܟܐ ܕܠܐ ܗܝܡܢܐ ܕܠܐ ܦܫܝܩܐ (Mt 17:17 *Syr*^{sc}), ܕܠܐ ܦܫܝܩܐ ܘܐܝܟܐ ܠܐ ܗܝܡܢܐ (Lk 9:41 *Syr*^{s}) and ܐܝܟܐ ܠܐ ܗܝܡܢܐ ܕܠܐ ܦܫܝܩܐ (Lk 9:41 *Syr*^{c}).

Mt 17:17 and its parallel Lk 9:41 suggest that the same reversal may have taken place three times independently while translating a single Greek phrase.

I shall not discuss further the explanation for the phenomenon of pair reversal, though I would confess my perplexity as to its cause, having considered many possible explanations. It is rather the potential import of this to semantic discussions that we will consider.

Once one is alert to the possibility of deliberate pair reversal by the translators, one can quickly make allowance for it in considering which Syriac words correspond to which Greek ones. In fact, even without knowing of the possibility of pair reversal as a widespread phenomenon, the reversal of a pair like "evil … good" (Mt 5:45) will scarcely lead the lexicographer astray. The pitfall for lexicographers is rather when there are pairs which are closer semantically. Take for instance the case of Lk 3:14. There John the Baptist tells soldiers, "Do violence to no man, neither exact anything wrongfully" (RV) or more concisely "No bullying; no blackmail" (NEB). The overwhelming Greek testimony is that the first verb is διασείω, the second συκοφαντέω. A single twelfth century Greek manuscript offers the reverse order. The two Greek words are evidently ones that refer to acts of maltreatment, and we might therefore take relatively little notice of the exact semantics of the two terms. Our three Syriac texts read as follows: *Syr*^{s} ܠܐ ܥܒܕ ܒܥܝܛܐ ܠܐ ܒܙܙ ܒܥܝܛܐ, *Syr*^{c} ܒܙܙ ܠܐ ܥܒܕ ܒܥܝܛܐ ܠܐ and *Syr*^{p} ܠܐ ܒܙܙ ܒܥܝܛܐ ܥܒܕ ܠܐ ܒܥܝܛܐ. *Syr*^{p} thus presents the verbs in the opposite order to that of the Old Syriac witnesses. How are we to decide which Syriac words correspond to which Greek ones? Here what we may call Pair Reversal Theory may help.

Since Greek διασείω normally refers to physical violence, or the threat thereof, it

most naturally is aligned with Syriac ܐܝܠܦܢܐ. On the other hand, συκοφαντέω, referring as it does (for example, Lk 19:8) to financial oppression, is most naturally aligned with Syriac ܥܫܩ. We should note that in the Septuagint συκοφαντέω may correspond to the Hebrew cognate עָשַׁק (for example, Job 35:9, Ps 119[118]:122, Eccl 4:1).

As a generalisation Old Syriac presents more reversed pairs than the Peshitta, and it seems that within the Peshitta there is a tendency to revise out reversed pairs. There is still a real possibility that the Peshitta preserves reversed pairs once present in the Old Syriac but no longer extant in our Old Syriac witnesses, or that the Peshitta preserves reversed pairs not from the Old Syriac but from some other source, such as the Diatessaron. Further investigation is required here. However, there is a presumption that the Old Syriac is more likely to preserve the earlier form of the text than the Peshitta.

When this knowledge is combined with our knowledge of equivalencies elsewhere, the most obvious interpretation is that the Old Syriac witnesses represent the reversal of a pair in translation, with the outside possibility that they reflect a variant *Vorlage* attested in a single minuscule. Pair Reversal Theory enables one to eliminate the need to posit unusual equivalencies in translation, since the items in the pair can be assigned to the member which they more usually or naturally fit with.

In Jn 10:1 Jesus uses the expression "he is a thief and a robber," using the Greek words κλέπτης and λῃστής. *Syr*^{s} has ܓܢܒܐ ܘܠܨܐ and *Syr*^{p} has ܠܨܐ ܘܓܢܒܐ. The fact that two different Syriac translations use the words in a different order might be taken to support the view that the two Syriac words were basically interchangeable. Both, after all, are words for those who steal others' possessions. Pair Reversal Theory might, however, be used to present an alternative explanation. When the thirteen other occurrences in the Gospels of the Greek word λῃστής "robber" are considered, we see that ܠܨܐ was its regular Old Syriac equivalent though ܓܢܒܐ occurs once. The word was also represented by a Syriac loan-form of itself, ܠܣܛܝܣ, in Mt 21:13 *Syr*^{c}, 27:38 *Syr*^{p}; Mk 11:17 *Syr*^{p}, 15:27 *Syr*^{p}; Lk 10:30 *Syr*^{p}, 19:46 *Syr*^{p}, 22:52 *Syr*^{p}. It is represented by ܚܕܐ, ܕܡܩܛܠ in Mt 27:38 *Syr*^{s}, 27:44 *Syr*^{s}; by ܓܢܒܐ in Mk 11:17 *Syr*^{s}; and by ܠܨܐ in Mt 26:55 *Syr*^{sp}, 27:44 *Syr*^{p}; Mk 14:48 *Syr*^{sp}, 15:27 *Syr*^{s}; Lk 10:30 *Syr*^{sc}, 10:36 *Syr*^{scp}, 19:46 *Syr*^{sc}, 22:52 *Syr*^{sc}; Jn 10:8 *Syr*^{sp}, 18:40 *Syr*^{p}. This presents a strong statistical presumption that ܠܨܐ rather than ܓܢܒܐ will be representing λῃστής. When this is brought into consideration, along with the fact that in all other instances κλέπτης is translated by ܓܢܒܐ (Mt 6:19 *Syr*^{c}, 6:20 *Syr*^{c}, 24:43 *Syr*^{sp}; Lk 12:33 *Syr*^{scp}, 12:39 *Syr*^{scp}; Jn 10:8 *Syr*^{sp}, 10:10 *Syr*^{sp}, 12:6 *Syr*^{sp}), we have an even stronger reason to believe that when κλέπτης and λῃστής occur together and the Syriac words ܓܢܒܐ and ܠܨܐ are used, the former corresponds to the former and the latter to the latter, regardless of the order in which they occur. Pair Reversal Theory enables us to explain away what would otherwise be exceptions to widely observed patterns of correspondence.

3. WHEN THE SYRIAC AND GREEK WORDS DO NOT MATCH IN USE

As anyone who has studied any Syriac will tell you, the verb ܐܡܪ means "say." Or does it? To be sure it is often best rendered "say," but does it adequately represent the word to say that it means "say"? How should a dictionary represent the word? One of the things we notice when we consider the translation of the Greek Gospels into Syriac, especially the Old Syriac, is the way there is less variety in the Syriac modes of expression that represent speech.[10]

The use of ܐܡܪ to represent Greek verbs that we do not translate by "say," may be observed repeatedly in the case of a single verb, ἀπαγγέλλω "announce," which is translated by some form of ܐܡܪ in Mt 28:11 *Syr*^{p}; Mk 5:14 *Syr*^{sp}, 16:13 *Syr*^{p}; Lk 8:20 *Syr*^{scp}, 8:47 *Syr*$^{s(c)p}$, 9:36 *Syr*^{scp}, 13:1 *Syr*^{scp}, 18:37 *Syr*^{scp}, 24:9 *Syr*^{scp}. The question arises whether, given its correspondence to the Greek word "announce," we should in fact not register "announce" as one of the meanings of ܐܡܪ.

Or to push things further, we might note that ܐܡܪ may also render the Greek verb "ask." It renders ἐρωτάω in Mk 10:17 *Syr*^{s}, Lk 5:3 *Syr*^{sp}, Jn 1:21 *Syr*^{c}, 5:12 *Syr*^{c}, 18:7 *Syr*^{s}. Why do we not register the English word "ask" as one of the meanings of ܐܡܪ? It might be objected that there has been an alteration in meaning in the move from Greek to Syriac, a suggestion which I do not reject. However, this still leaves us with the fact that the Syriac is using the word ܐܡܪ, traditionally "say," in places where we in English would still prefer "ask."

Let us consider Lk 5:3 a little further. In the Greek it is simple enough. Jesus gets into Simon's boat and asks him (ἠρώτησεν) to launch out. The transaction is perfectly polite. Now consider *Syr*^{s} and *Syr*^{p}. They begin, "Jesus went up and sat in it [the boat]," then have ܘܢܚܘܬ ܐܡܪ ܠܗ, and continue "…a little from the land into the water." How do we translate ܘܢܚܘܬ ܐܡܪ ܠܗ? Traditionally, the answer is simple: ܐܡܪ means "say" and so the whole phrase means "and he said that they should lead it." The problem with this rendering is that whereas the Greek presents Jesus making a request, the traditional understanding of the Syriac presents him giving a command. Of course when someone in authority makes a request it may in fact function as a command. Nevertheless, it is often important pragmatically that it is still formally dressed up as a request. What is, however, happening here? Is it that Syriac ܐܡܪ is drawing close to Arabic أَمَرَ "command"? This in itself could be fun, allowing us even to speculate about the prehistory of the semantics of the Arabic verb. However, we must consider whether we have not misread the Syriac. We must, of course, allow for the possibility that there is a semantic shift between the Greek and Syriac. Yet we should be wary of any model that suggests multiple semantic shifts taking place in the process of translation. After all, the translators were presumably trying to represent the meaning of the original as best they knew how. Given that Syriac ܐܡܪ so regularly translates a verb "to ask," we should at least consider granting that ܐܡܪ could better correspond

[10] F. C. Burkitt, *Evangelion da-Mepharreshe: The Curetonian Version of the Four Gospels* (Cambridge: Cambridge University Press, 1904), 2:132.

to our verb "ask." If we allow this and abandon the traditional rendering, then the Syriac of Lk 5:3 can be translated "he asked that they should lead it." This would have the disadvantage that we would not be able to give a consistent equivalent in translation of ܐܡܪ, sometimes rendering it "say" and sometimes "ask." On the other hand, it might well give a much fairer impression of the pragmatics of the transaction in Lk 5:3. Whether Jesus formally gave a command or made a request in Greek, the need to heed it is equal. But for us to render the Syriac as "he said that they should lead it" is probably to put more of an authoritarian slant on Jesus' action than is suggested either in the Greek or in the Syriac. Jesus' request was not framed as a command in Syriac, even if the traditional English rendering of the Syriac might suggest so. ܐܡܪ is pragmatically unmarked.

But I would like to press the issue of the meaning of ܐܡܪ yet further. In the Nestle-Aland Greek text there are in the Gospels 209 occurrences of ἀποκρίνομαι, traditionally "answer." For over half of these occurrences one or more Old Syriac witnesses reads ܐܡܪ without the verb traditionally rendered "answer," namely ܥܢܐ. Some of these may go back to a *Vorlage* without the Greek ἀποκρίνομαι, but it is hardly likely that the Syriac was translated from a text with a variant reading in over half the instances where the Nestle-Aland text has ἀποκρίνομαι. The most reasonable conclusion to draw is that ܐܡܪ has no less right than ܥܢܐ to be considered a good Syriac translation of ἀποκρίνομαι.

This then raises the question of whether or not we might say that ܐܡܪ means "answer." There are certainly some instances where "answer" fits the Syriac context rather well. One might consider Mk 11:29–30 where Jesus says ἐπερωτήσω ὑμᾶς ἕνα λόγον καὶ ἀποκρίθητέ μοι ... ἀποκρίθητέ μοι. The first ἀποκρίθητέ μοι is translated in *Syr*^{sp} ܠܝ ܘܐܡܪܝܢ and the second ܠܝ ܐܡܪ. Here Jesus is clearly demanding a specific response. The same could be said for Mk 14:40 where it is said of the disciples καὶ οὐκ ᾔδεισαν τί ἀποκριθῶσιν αὐτῷ, but in *Syr*^{sp} we have ܘܠܐ ܝܕܥܝܢ ܡܐ ܕܢܬܒܢ ܠܗ.

To conclude, ܐܡܪ may usefully be thought of as "say," "announce," "ask," or "answer." But can it be said to mean all of these? I would argue that it fulfils functions that other languages fulfil with their verbs "say," "announce," "ask," and "answer." Yet what of the relationship between function and meaning? It certainly does not mean "ask" in the sense of being explicitly marked as a verb of interrogation or request like English "ask" or Greek ἐρωτάω. In that sense it may be useful to consider ܐܡܪ as an unmarked form introducing speech. It is neutral, not explicitly marking an utterance as a request, a response, an initiation of information, or a command. The nub of the matter in considering the difference between Syriac and English or Greek (or for that matter many other languages) is that Syriac prefers to use an unmarked form, whereas the other languages prefer marked forms. The problem then comes because in English our word "say" can sometimes be understood as a marked form implying that the utterance is not a question. This is certainly the case for Lk 5:3 as translated by Burkitt

"…and said that they should put it out from the dry land a little into the water."[11] To some extent the problem is the verb "should." But then English speakers have little choice over the modal verb used after English "say." The alternative "said that they might" would imply that Jesus was giving permission, not giving a command or making a request. This leaves us with a problem: it is impossible to translate ܐܡܪ in English by "say" without making a decision about the pragmatics of the transaction. If, as I am, we are sceptical of the idea that the Syriac here represents a command or permission, then we are forced into the position that the only correct way to render the pragmatic force of the Syriac is to represent ܐܡܪ by "ask" or "request" or some other similar verb. In that sense we can put our conclusions strongly and say that to render ܐܡܪ here as "say" so misrepresents the pragmatics of the event as to be a wrong rendering, while "ask" is a correct rendering.

4. WHEN THE SYRIAC AND GREEK WORDS DO NOT MATCH IN NUMBER

In certain cases a Syriac singular may represent a Greek plural, or a Syriac plural may represent a Greek singular. Can we learn anything about Syriac semantics from these equations? Surely we can.

Take the Syriac term ܠܚܡܐ "bread." This occurs in the singular regardless of whether the Greek *Vorlage* has singular ἄρτος or plural ἄρτοι.[12] The exception to this is when the Syriac term occurs alongside a numeral or ܟܡܐ "how many," in which case the absolute plural ܠܚܡܝܢ occurs.[13] Thus it seems that Syriac ܠܚܡܐ corresponds both to the Greek singular "bread"—a generic term—and to the Greek plural "loaves"—a term usually used for specific examples of bread in the form they have after being baked but prior to being broken. The equation between singular ܠܚܡܐ and the plural ἄρτοι, for instance in Mt 4:3 where the devil suggests that Jesus command "these stones to become loaves" (Greek) or "these stones to become bread" (Syriac), may at least raise the question in the lexicographer's mind whether ܠܚܡܐ in addition to being a generic term may also usefully be viewed as a collective term. ܠܚܡܐ may denote a number of loaves just as ܬܘܪܐ may denote a number of cows.

Another case would be the word ܚܛܝܬܐ, which occurs twice in the plural in the New Testament (Mt 7:16 *Syr*$^{\phi}$, Lk 6:44 *Syr*$^{\phi}$[14]). If, as I suggest, it is possible that the Syriac plural might correspond to the Greek singular σταφυλήν in Mt 7:16 and not to the Greek plural σταφυλάς then ܚܛܝܬܐ may not have been felt to function as a collective and therefore as an adequate representation of the Greek collective

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[11] Burkitt, *Evangelion da-Mepharreshe*, 1:271.

[12] This statement applies to the Peshitta but cannot be conclusively shown for the Old Syriac since the latter's text is unpointed. Nevertheless, all the evidence suggests that the Old Syriac and Peshitta agree in this.

[13] P. J. Williams, "Bread and the Peshitta in Matthew 16:11–12 and 12:4," *NT* 48 (2001): 331–33.

[14] Even though there are no *seyame* on the word in Luke 6:44 *Syr*^{s}, since it is highly unlikely that the form is in the absolute state, it is best to conclude that it is plural.

σταφυλήν. This would support the interpretation of the term ܐܲܫܟܽܠ as a singulative, "one grape," rather than a collective, "a grape cluster." The textual uncertainty here does not allow the Greek to play a strong role, but the use again of a Syriac plural to represent a Hebrew singular in Deut 32:14 of the Old Testament Peshitta would seem to point in the same direction.

One of the less obvious equations in the Old Syriac is between the Greek singular παράδοσις "tradition" and the plural ܦܩܕ̈ܐ, "commandments." Yet this equation can be seen in Mt 15:2 *Syr^{c}*, 15:3 *Syr^{sc}*, 15:6 *Syr^{sc}*; Mk 7:9 *Syr^{s}*, 7:13 *Syr^{s}*. The Greek παράδοσις clearly refers to a whole body of teaching that has been handed down in the form of commandments. We may argue about the extent to which the Old Syriac ܦܩܕ̈ܐ has adequately represented the original, but we may also ask if this tells us anything distinctive about the Syriac word. Could it be that at this early stage ܦܩܕ̈ܐ retained more of the connotation of something entrusted by one to another than simply of a command? After all, Babylonian Jewish Aramaic attests the meaning "will" and "testament" for the same lexeme.[15]

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[15] Michael Sokoloff, *A Dictionary of Jewish Babylonian Aramaic of the Talmudic and Geonic Periods* (Ramat-Gan: Bar Ilan University, 2002), 891.

7. SHOULD THE HARKLEAN VERSION BE INCLUDED IN A FUTURE LEXICON OF THE SYRIAC NEW TESTAMENT?[1]

Andreas Juckel
Institute for New Testament Textual Research
University of Münster

This paper argues for including unique Harklean vocabulary in a Syriac New Testament lexicon. It would enrich the lexicon's semantic analysis and facilitate a comparison between Harklean and non-Harklean Syriac-Greek correspondences.

Reflections on the usability and use of the Harklean version in a future lexicon of the Syriac New Testament inevitably encounter the question of this lexicon's principal features.[2] With regard to the different Syriac versions of the New Testament (Old Syriac, Peshitta, Philoxenian, and Harklean) one of these features could be the presentation of comparative information drawn from the individual lexical and translational principles of these versions, thus reflecting the general revisional development of the Syriac New Testament towards the Greek. This comparative feature would respond well to the present editorial situation of Syriac New Testament texts. The situation is dominated by comparative editions[3] which were produced during the last two decades (including the Harklean) and offer a wealth of comparative information which directly bears on the diachronic aspect of translation technique and word formation.

The *Thesaurus Syriacus* (ed. R. Payne Smith, 1879–1901) and C. Brockelmann's *Lexicon Syriacum* (1895, 2nd ed., 1928) both quote the Harklean version[4]. These quotations are drawn from the *editio princeps* (1778–1803) of J. White,[5] which is now

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[1] I am grateful to see my paper included in this volume, although personal circumstances prevented me from reading it at the *SBL International Meeting* at Cambridge in 2003. Terry C. Falla constantly encouraged me to prepare the paper for publication and considerably improved its English. Without his encouragement and assistance I would not have completed the paper.

[2] A general outline of Syriac lexicography is given by S. Brock, "Syriac Lexicography: Reflections on Resources and Sources," *AS 1* (2003): 165–78; repr. chap. 8 of this volume.

[3] G. A. Kiraz, *Comparative Edition of the Syriac Gospels: Aligning the Sinaiticus, Curetonianus, Peshîṭtâ and Ḥarklean Versions* (4 vols.; NTTS 21; Leiden: E. J. Brill, 1996; Piscataway, NJ: Gorgias Press, 2004); B. Aland and A. Juckel, *Das Neue Testament in Syrischer Überlieferung,* vol. 1, *James, 1 Peter, 1 John* (1986); vol. 2 part 1 *Romans–1Corinthians* (1991), part 2 *2 Corinthians–Colossians* (1995), part 3 *1Thessalonians–Hebrews* (Berlin: de Gruyter, 2002).

[4] Correspondences between the Harklean (White) and the Greek are quoted in O. Klein, *Syrisch-Griechisches Wörterbuch zu den vier kanonischen Evangelien* (Giessen: Alfred Töpelmann, 1916).

[5] *Sacrorum Evangeliorum Versio Syriaca Philoxeniana* (2 vols.; Oxford: Clarendon Press, 1778); *Actuum Apostolorum et Epistolarum tam Catholicarum quam Paulinarum versio syriaca Philoxeniana* (2

replaced for the most part by new editions and which certainly does not represent the original version of 615–616 CE.[6] To replace, or at least to supplement, citations of White's text in the lexicon with citations from editions of the (more) original text would be desirable in the light of the results of recent Harklean research[7] and of research on translation technique.[8]

This paper will argue for the inclusion of the Harklean in the lexicon which should a) quote the Harklean vocabulary not existing in the Peshitta, and b) reduce comparison of the Syriac-Greek correspondences to the characteristic translational-cum-lexical features of the Harklean. It is not feasible to represent fully the Harklean as well as the Peshitta in the lexicon because of the version's intended identity with the Greek. This would require the introduction of all Greek-Syriac correspondences for which a separate analytical concordance is necessary.

Before presenting lists of Harklean words in support of their proposed inclusion, comments are necessary on two fundamental aspects of the Harklean: on its revisional development (which bears on the original text), and on its Greek dress (which bears on its compatibility with the earlier Syriac version[s] in a lexicon).

1. THE REVISIONAL DEVELOPMENT OF THE HARKLEAN VERSION

An essential condition for the inclusion of the Harklean in the future lexicon is a reliable edition which offers the (most) original text. The editorial situation of the Harklean complies with this requirement for most parts of the New Testament and will do so for all parts in the near future. But there is a special feature of the Harklean text which affects its representation in a lexicon. A permanent revisional development towards the Greek Byzantine text is traceable in the Gospel manuscripts and partly in the Praxapostolos. The intention of this revision is to keep the Harklean in line with

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vols., 1799–1803). The basic manuscript (Ms New Coll. 333) White used for his edition breaks off at Heb 11:27. The missing text was edited (from Ms Add. 1700 of the Cambridge University Library) by R. L. Bensly, *The Harklean version of the Epistle to the Hebrews chap. XI:28–XIII:25, now edited for the first time, with introduction and notes on this version of the Epistle* (Cambridge: Cambridge University Press, 1889). White believed his text to be the Philoxenian version to which Thomas of Harqel only attached critical signs and marginal notes.

[6] An edition of the Gospel of Luke was begun by Peter A. L. Hill in his unpublished dissertation *The Harklean Version of Luke 1–11: A Critical Introduction and Edition* (PhD diss., University of Melbourne, 2002). On the Harklean version see B. M. Metzger, *The Early Versions of the New Testament: Their Origin, Transmission and Limitations* (Oxford: Clarendon Press, 1977), 68–75.

[7] A. Juckel, "Introduction to the Harklean Version," in G. A. Kiraz, *Comparative Edition of the Syriac Gospels*, 1:xxxi–lxxxii; "The Revisional Development of the Harklean Margin," *Hugoye: Journal of Syriac Studies* 1 (1998) [http://www/acad.cua.edu/syrcom/Hugoye]; "Die Bedeutung des Ms. Vat. Syr. 268 für die Evangelien-Überlieferung der Harklensis," *OrChr* 83 (1999): 22–45.

[8] S. Brock, "Aspects of Translation Technique in Antiquity," *Greek, Roman and Byzantine Studies* 20 (1979): 69–87; "Towards a History of Syriac Translation Technique," in R. Lavenant (ed.), *III Symposium Syriacum 1980* (OrChrAn 221, 1983): 1–14; "Diachronic aspects in Syriac word formation," in R. Lavenant (ed.), *V Symposium Syriacum 1988* (OrChrAn 236, 1990): 321–30.

the prevailing textform of the Byzantine Empire, which itself developed gradually in the first millennium and was approved by an "ecclesiastical edition" (von Soden) in the twelfth century.[9] To participate in the "ecumenical" prestige of this text the Harklean was subjected to continuous "corrections," while the original text of the version received no vital attention and was threatened by obliteration.

Besides the continuous slow revisional development in the first millennium we know of two thorough revisions in the second millennium. One is ascribed to Dionysius bar Ṣalibi († 1171, Bishop of Amid) in subscriptions to two Gospel manuscripts;[10] another one is preserved in Ms New Coll. 333, which was published by J. White in the *editio princeps* of the Harklean. For more than two centuries scholars associated this twelfth/thirteenth century Oxford manuscript and its admirable edition with the seventh century version.[11] They were impressed by the extensive Harklean marginal readings of this manuscript and by the Greek imprint of its translational and lexical features. Both, however, reflect the final stage of a revisional development of the version.[12]

The Greek imprint on the original version was more moderate than the one on Ms New Coll. 333, especially with regard to the representation of proper nouns, Greek foreign words, and loanwords. This does not affect its qualification as "mirror translation" (S. Brock) but essential details of its identity. The earliest stage of the Harklean is found in Ms Vat. syr. 268. This eighth/ninth century Gospel manuscript proves to be hardly affected by revisional development towards the Byzantine text. It is the only known Gospel manuscript (out of a maximum of about 100) which kept most of the non-Byzantine readings the revisors faded out during the history of the version. This earlier stage of text in the Vatican manuscript has the best claim for originality and was printed in full in the *Comparative Edition of the Syriac Gospels*.[13]

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[9] Hermann Freih. von Soden, *Die Schriften des Neuen Testaments in ihrer ältesten erreichbaren Textgestalt hergestellt auf Grund ihrer Textgeschichte*. Vol. 1:1–3: *Untersuchungen*; vol. 2 *Text und Apparat*. (Göttingen: Vandenhoeck & Ruprecht, 1902–1913); K. Wachtel, *Der Byzantinische Text der Katholischen Briefe. Eine Untersuchung zur Entstehung der Koine des Neuen Testaments* (Berlin: de Gruyter, 1995). On the "ecclesiastical edition" see von Soden vol. 1:2, 757–64.

[10] See note 26.

[11] This view is continued by the Greek New Testament editions which quote the Harklean Gospels according to White's text and not according to Kiraz's edition. The only exception so far is *The New Testament in Greek. The Gospel according to St. Luke*, edited by the American and British committees of the International Greek New Testament Project. Part 1 (chapters 1–12); part 2 (chapters 13–24) Oxford: Clarendon Press, 1984–1987. R. Köbert, who was responsible for the Harklean in the apparatus of this edition, quotes two early Harklean witnesses (Ms Vat. syr. 267, and 268 [i.e., the Harklean manuscript of Kiraz's edition]) besides White's text. The result is a sometimes contradictory quotation of the Harklean which reflects the revisional development of the version.

[12] For details see A. Juckel, "Introduction to the Harklean Version," in G. A. Kiraz, *Comparative Edition* 1: xxxi–lxxxii.

[13] The design of the *Comparative Edition* did not allow for the inclusion of Harklean variant readings. The text-critical priority of the Vatican manuscript is still to be proved by a critical

For the Harklean Praxapostolos four manuscripts only are at our disposal.[14] This scanty material does not allow us to trace the revisional development with the same certainty as in the Gospels; but variant readings in the two later witnesses reflect Byzantine influence, and Ms New Coll. 333 again presents its exaggerated Greek dress. Ms St. Mark syr. 37 (St. Paul only) in Jerusalem, the main witness of the first millennium, is more original than the text of the Cambridge and the Oxford manuscripts and was employed for the printed Harklean text by the project *Das Neue Testament in syrischer Überlieferung.*[15]

According to our present knowledge, the texts of the Vatican manuscript (Gospels) and of the Jerusalem manuscript (St. Paul) preserve the most original texts of the Harklean. For Acts unfortunately only manuscripts of the second millennium are available (from Cambridge and Oxford);[16] for the Catholic Epistles the manuscript from London is the most reliable.

2. THE SYRIAC VERSIONS AS A TEXT CORPUS

Because the language of the Harklean version is a literal rendering of the Greek and has a non-Syriac imprint, it may appear that it and the Peshitta would be incompatible in a future lexicon.

There are numerous Greek marginals in the Harklean which give the exact Greek background of Syriac words and phrases, indicating that this version was intended by its translator(s) to be read as a *Greek* text. Although the Harklean translation is the final and non-colloquial stage within the development of the Syriac New Testament text, it is not a singular and odd production of philological radicalism. Rather, it is the long-grown fruit of a broad translational movement inaugurated by the Syriac-orthodox (Miaphysite) Church at the beginning of the sixth century. This translational movement adopted the Greek-"ecumenical" literature for scholarly and dogmatic use. The Harklean itself is part of a translation project of the Old (Syrohexapla) and New Testament at the beginning of the seventh century. It was designed to introduce the "ecumenical" standard texts in a quasi-Greek adaptation to the Syriac-orthodox Church. This project was directed and executed by prominent members of the ecclesiastical hierarchy (Paul of Tella, Thomas of Harqel) and inaugurated by Patriarch Athanasius I ("Gammala").[17]

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edition, although preliminary investigations set out its priority in some detail. See the articles of A. Juckel in note 7.

[14] Ms Add 1700 of the University Library, Cambridge (1169–1170 CE), and Ms 333 of New College, Oxford (ca. 12th–13th cent.) for Acts, Pauline and Catholic Epistles; Ms syr. 37 (ca. 8th–9th cent.) of St. Mark in Jerusalem for the Pauline Epistles only; Ms Add. 14,474 of the British Library (ca. 9th cent.) for the Catholic Epistles.

[15] The editions of this project (see note 3) give the variants of the two later manuscripts, but no orthographica of proper nouns, foreign words, and loanwords.

[16] The project *Das Neue Testament in syrischer Überlieferung* continues with the volume of Acts.

[17] The project was designed to serve the reunion of the Syriac-orthodox (Miaphysite) Church with the Greek (Chalcedonians), and especially the reconciliation with the Coptic

But the Greek imprint on the Syriac of the Harklean is neither identical with the one we meet in Ms New Coll. 333 (that is, White's edition) nor a feature of the Harklean alone. From the very beginning, the source-oriented strategy of translation has been the red-thread in the history of the Syriac New Testament. Although that strategy is developed most in the Philoxenian/Harklean revisions, it is already effective in the Peshitta, which brings the Old Syriac into closer accordance with the Greek. To a significant degree, the Greek imprint on the Peshitta is concealed by the Peshitta's retention of Old Syriac vocabulary and grammatical features;[18] but the generally smooth alignment of the Peshitta and Harklean texts in Kiraz's recent edition of the Syriac Gospels proves the Peshitta's far-reaching compliance with the Greek. It is the Philoxenian that explicitly introduces the *graeca veritas* to the Syriac versional tradition, thus declaring the Peshitta to be an inadequate translation for theological and dogmatical use.[19] Furthermore, the Harklean takes the adoption of the *graeca veritas* to the extreme by revising the Philoxenian to a calque of the Greek text. The Harklean's aim in shifting from translation to calque was to adapt Syriac semantics to Greek semantics and introduce a strict correspondence between the Greek and the Syriac vocabulary.[20]

There is one more thread in the history of the Syriac New Testament which holds the different stages of translation together, the Peshitta. Preceded by the Old Syriac and corrected and developed by the Philoxenian, it contributes considerably to the vocabulary of the Harklean (directly or via the Philoxenian). By their common participation in both the Greek source language and the Peshitta heritage, the individual Syriac versions of the New Testament constitute a corpus of texts for the future lexicon which covers the translational and lexical development up to the seventh century. Their compatibility is the result of the historical and textual continuity of their translational development. None of the individual translations can be excluded without mutilation or distortion of this corpus.

Church, which actually succeeded in 616; see J. Maspero, *Histoire des Patriarches d'Alexandrie depuis la mort de l'empereur Anastase jusqu' à la réconciliation des églises jacobites (518–616*) (Paris: Librairie ancienne Édouard Champion, 1923), and C. Detlef G. Müller, "Anastasios und die Versöhnung der Ägypter mit den Westsyrern," in *Coptology: Past, Present, Future*: *Studies in Honour of Rodolphe Kasser*, ed. by S. Gieversen, M. Krause, P. Nagel (OLA 61, 1994), 71–85. His excellent Greek formation qualified Thomas of Harqel not only for the execution of the project but also destined him to negotiate with the Chalcedonians and the Coptic Miaphysites.

[18] P. J. Williams, *Early Syriac Translation Technique and the Textual Criticism of the Greek Gospels* (Texts and Studies 2; Piscataway, NJ: Gorgias Press, 2004).

[19] S. Brock, "The resolution of the Philoxenian/Harclean problem," in *New Testament Textual Criticism: its Significance for Exegesis: Essays in Honour of Bruce M. Metzger* (ed. E. J. Epp and G. D. Fee; Oxford: Clarendon Press, 1981), 325–43, esp. 328–29.

[20] The consistency of translational and lexical features in the Harklean could hardly be achieved by its translator(s) without a detailed "lexicon" of these features. The necessary sequential information (concordance) could be provided by the *Eusebian sections* for the Gospels and by the *stichoi* for the rest of the New Testament canon.

3. COMPARATIVE USE OF THE HARKLEAN VERSION

The natural place of the Harklean version in the general history of the Syriac New Testament is contrasted by the highly specialized formalism of its "mirror translation." The Harklean's philological design, its parallel with the Syrohexapla, its revisional adoption of the Philoxenian, and its historical setting, make it the most complex and elaborate of all Syriac New Testament versions. The intended identity of the Harklean with the Greek is an exciting attempt to fix the lexical correspondence between both languages. However, only a complete analytical concordance will be able to give the full record of this correspondence and a detailed presentation of its translational and lexical principles. Without burdening the proposed future lexicon too much with an anticipated analytical concordance, selected Harklean readings would provide sufficient lexical and comparative information. To employ the Harklean in this way would reduce comparison to the version's characteristic lexical features and leave the Peshitta to serve as the corpus's unrivalled point of comparison. The reduction of comparison to characteristic lexical features would contribute to the incorporation of the diachronic aspects inherent in the corpus of different versions.

The lexical features of the Harklean version proposed for comparison are:

a) simple words not existing in the Peshitta
b) proper nouns
c) foreign (mainly Greek) words
d) Syriac compounds
e) adjectives and adverbs

The following lists offer words and expressions of the Harklean version not exisiting in the Peshitta New Testament at all. For the sake of space they are drawn from the Gospels only, but all occurrences in the NT are given (excepting the non-Peshitta Epistles 2 Peter, 2 & 3 John, Jude, and Revelation).[21] The lists are based on the editions given in note 3; only Acts is quoted according to the *editio princeps* of J. White (see note 5). The Harklean word, its Greek correspondence,[22] the English translation,[23] and the Peshitta[24] are quoted.

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[21] G. A. Kiraz, *A Computer-Generated Concordance to the Syriac New Testament,* vols. 1–6 (Leiden: E. J. Brill, 1993). E.g., ܗܲܢܲܛܲܦ̈ܵܐ is in the Harklean Gospels, but not in the Peshitta Gospels. It did not enter the lists below because it occurs in the Peshitta of Acts and St. Paul. Further articles should continue with lists of lexical material drawn from St. Paul and from Acts and the Major Catholic Epistles.

[22] For Gospels and Acts these correspondences are taken from a provisional retroversion of the Harklean prepared by the present writer; for St. Paul and the Major Catholic Epistles the retroversions printed in the volumes of B. Aland and A. Juckel (see note 3) were used.

[23] According to the *Concise Greek-English Dictionary of the New Testament,* by Barclay M. Newman, Jr. (Stuttgart: Deutsche Bibelgesellschaft, 1993).

[24] According to the British and Foreign Bible Society volume of 1920. Due to the different translation technique of the Harklean and the Peshitta the lexical correspondence of the Peshitta can seldom be given by a simple equivalent. In numerous cases there is no correspondence at all or one disagreeing with the Greek and the Harklean. Therefore the

The translational (in)consistency of the Harklean is checked and further useful information is given in smaller type, but no thorough comparison with the Peshitta is made.

3.1 Simple Words Not Existing in the Peshitta

The following list contains numerous words which are *hapaxlegomena* in the Greek text or which occur twice or three times only. This indicates the intended identity of the Harklean with the Greek and its adaptation to Greek semantics. While the Peshitta renders different Greek words (φάντασμα, ὀπτασία, εἶδος, ὅραμα) by ܚܙܘܬܐ, the Harklean adopts ܬܚܘܝܐ for φάντασμα, because it does not derive from the root *to see*. However, the Harklean renders the words ὀπτασία, εἶδος, ὅραμα, by the root ܚܙܐ.

The lexical consistency of the Harklean is strong, but not perfect. A particular Greek word is not always rendered by the same Syriac word, see ܚܘܫܒܢܐ, ܬܘܒܝܐ, ܚܫܒܢܐ etc. Whether this is due to reflection on semantics or rather to the defective concordance of the translator(s) cannot be decided with certainty. As it is the word known from the Peshitta which usually replaces the special Harklean rendering, translational inconsistency may be one reason. This relapse into the Peshitta is usually overwhelmingly attested by the majority or complete range of Harklean witnesses.[25]

Abbreviations: Syr^{h} = Harklean; *Syr*^{p} = Peshitta; NA^{27} = Nestle-Aland, 27th ed. of the Greek NT; no c. = no correspondence; var. lec. = varia lectio; id. = idem, the same; > = deriving from

ܝܩܝܪܐ/κράτιστος/most excellent (*Syr*^{p} ܩܪܝܡܐ) Lk 1:3. Acts 23:26; 24:3; 26:5.

ܫܠܝܚܘܬܐ/πρεσβεία/messenger(s) (*Syr*^{p} ܫܠܝܚ̈ܐ) Lk 14:32; 19:14.

ܟܦܢܬܐ/πλοιάριον/(small) boat (*Syr*^{p} ܐܣܦܣܬܐ) Mk 3:9. Jn 6:22 (twice), 23; 21:8.

ܚܘܫܒܢܐ/κοράσιον/girl (*Syr*^{p} ܛܠܝܬܐ) Mk 5:41, 42.

κοράσιον/ܛܠܝܬܐ Mt 9:24, 25; 14:11. Mk 6:22, 28 (twice).

ܫܟܝܐ/γαλήνη/calm (of the sea) (*Syr*^{p} ܫܬܝܬܐ) Mt 8:26. Mk 4:39 (*Syr*^{p} ܫܠܝ). Lk 8:24.

ܒܝܥܬܐ/ᾠόν/egg Lk 11:12 (*Syr*^{p} no c.).

ܒܝܬ ܐܣܝܪܐ/φυλακή/prison (*Syr*^{p} ܒܝܬ ܐܣܝܪ̈ܐ) Mt 5:25; 14:3; 18:30; 25:36, 39, 43, 44; 27:16. Mk 6:17, 27. Lk 3:20; 12:58; 21:12; 22:33; 23:19, 25. Jn 3:24. Acts 5:19, 22, 25; 8:3; 12:4, 5, 6, 10, 17; 16:23, 24, 27, 37, 40; 22:4; 26:10. Heb 11:36. 1 Pet 3:19.

Peshitta correspondences in the following lists simply give a report of the corresponding Peshitta text.

[25] By the four manuscripts of the Praxapostolos this "overwhelming attestation" of course is not given. In the Gospels, however, it is quite obvious by the manuscript attestation whether identity with the Peshitta is a relapse or the original Harklean text.

φυλακαί are ܫܡܫ ܒܝܬܐ (not ܒܝܬ ܣܗܪܘܬܐ) Acts 22:4; 26:10; ܒܝܬܐ (without ܫܡܫ) 2 Cor 6:5; 11:23 — φυλακή/ܫܡܫ ܐܡܬܐ Mt 14:10, 25 — φυλακή/ ܫܡܫ ܐܡܬܐ period of time into which the night is divided Mt 14:25; 24:43. Lk 2:8; 12:38 *(twice!).* Acts 12:10.

ܒܝܬܝܐ/οἰκιακός/member of household (*Syrᵖ* ܒܝܬ ܕ) Mt 10:25, 36; 24:45 (ܒܝܬܘܬܐ/οἰκετείας!).

οἰκεῖος/ܒܝܬܝܐ Eph 2:19. 1 Tim 5:8 — οἰκέτης/ܒܝܬܝܐ Acts 10:7 — οἰκεῖος/ܒ ܒܝܬ Gal 6:10 — οἰκέτης/ܒ ܒܝܬ Lk 16:13. Rom 14:4 — οἰκέτης/ܒܥܠ 1 Pet 2:18.

ܐܙܠ/ἄγω/go (*Syrᵖ* ܗܠܟ) Mk 1:38. Jn 11:7 (*Syrᵖ* ܢܐܙܠ), 15, 16 (*Syrᵖ* no c.).

According to its different meanings ἄγω is represented by ܢܐܙܠ, ܡܛܠ, ܒܨ.

ܫܪܐ/ἀπαλλάσσω/set free; settle the matter with s.o. Lk 12:58 (*Syrᵖ* ܦܨܐ). Acts 19:12 (*Syrᵖ* ܦܨܐ). Heb 2:15 (*Syrᵖ* ܫܒܩ).

ܓܢܒܐ/κλοπή/theft (*Syrᵖ* ܓܢܝܒܘܬܐ) Mt 15:19. Mk 7:22.

ܣܡܟ/ἀνακλίνω/put to bed (*Syrᵖ* ܐܬܟ) Lk 2:7.

ἀνακλίνω/seat at table, is represented by ܣܡܟ.

ܐܫܬܥ/ἐρεύγομαι/declare, tell (*Syrᵖ* ܐܒܥ) Mt 13:35.

ܡܨܥܢܐ/λεπρός/leper (*Syrᵖ* ܡܨܥܢܐ) Mt 8:2; 10:8; 11:5; 26:6. Mk 1:40; 14:3. Lk 4:27; 7:22; 17:12 — λέπρα/leprosy is ܡܨܥܢܐ in the Harklean and in the Peshitta.

ܡܫ/ἅπτω/take hold of, touch (*Syrᵖ* ܡܫ and ܐܚܕ) Mt 8:3, 15; 9:20, 21, 29; 14:36 (twice); 17:7; 20:34. Mk 1:41; 5:27, 28, 30, 31; 6:56 (twice); 7:33; 8:22; 10:13. Lk 5:13; 6:19; 7:14, 39; 8:44, 45 (twice), 46, 47; 18:15; 22:51. Jn 20:17 (twice). 1 Cor 7:1. 2 Cor 6:17. Col 2:21. 1 Jn 5:18.

ἅπτω/ܡܫ Mk 3:10 — ܩܪܒ/προσφαύω/touch Lk 11:46.

ܐܫܬ/ἅπτω/light, ignite Lk 8:16 11:33 — ܐܫܬ/ἅπτω/ light, ignite Acts 28:2.

ܐܒܟܡ/κωφός/dumb, mute; deaf (*Syrᵖ* ܐܛܢܫ) Mt 9:32, 33. Lk 7:22.

ܐܛܢܫ/κωφός Mt 11:5; 12:22 (twice); 15:30, 31. Mk 7:32, 37; 9:25. Lk 1:22; 11:14 (twice).

(ܕܝܡܘܢ) ܐܬܕܝܡܢ/δαιμονίζομαι/be demon-possessed (*Syrᵖ* ܕܝܡܘܢ) Mt 4:24; 9:32 (*Syrᵖ* ܐܢܫ ܕܝܡܘܢ ܒܗ); 12:22; 15:22 (*Syrᵖ* ܒܬܪ ܕܐܬ ܒܗ ܥܡܐ) Mk 1:32; 5:15, 16, 18 (*Syrᵖ* three times ܕܐܬ ܒܗ ܥܡܐ). Lk 8:36. Jn 10:21.

δαιμονιζόμενος/ܕܝܡܘܢ Mt 8:16, 28, 33.

ܩܘܡ/διατρίβω/remain, stay Jn 3:22 (*Syrᵖ* ܥܡܪ). Acts 12:19 (*Syrᵖ* ܐܙܠ); 14:3, 28 (*Syrᵖ* both ܗܘܐ); 15:35 (*Syrᵖ* ܩܥܕ); 16:12 (*Syrᵖ* no c.); 20:6 (*Syrᵖ* ܗܘܐ); 25:6, 14 (*Syrᵖ* both ܗܘܐ).

ܗܳܟܰܝ ܟ̰ܰ/ὁμοίως/in the same way, likewise (*Syrp* ܐܳܦ̰ܳ and ܐܰܦ̰ܶ) Mt 22:26; 26:35; 27:41. Mk 15:31. Lk 5:10, 33 (*Syrp* no c.); 6:31; 16:25 (*Syrp* no c.); 17:28 (*Syrp* ܐ̰ܰܦ̰ܶ ܕ̰ܳ), 31 (*Syrp* no c.). Jn 5:20 (*Syrp* ܗ̰ܳܐ̰ܳ). Rom 1:27 (*Syrp* ܕ̰ܳ). 1 Cor 7:3, 4, 22 (*Syrp* all three ܐܰܦ̰ܶ). Heb 9:21 (*Syrp* no c.). Jas 2:25 (*Syrp* ܐܰܦ̰ܶ). 1 Pet 3:1, 7 (*Syrp* both ܐܰܦ̰ܶ) 5:5 (*Syrp* no c.).

ܒ̰ܟ̰ܝ/δακρύω/weep (*Syrp* ܐܶܬ̰ܰ ܒ̰ܰܟ̰ܝ̰ܳ) Jn 11:35.

ܬ̰ܥ̰ܝ̰/ὑπωπιάζω/wear out (somebody) (*Syrp* ܥ̰ܲܩ̰ܰ) Lk 18:5.

ὑπωπιάζω/ܟ̰ܲܝ̰/treat with severity *or* keep under control 1 Cor 9:27.

ܐܰܦ̰ܳܢ̰ܛ̰ܳܣ̰ܡ̰ܳ/φάνταςμα/ghost, apparition (*Syrp* ܐ̰ܳܗ̰ܡ̰) Mt 14:26. Mk 6:49.

ܝ̰ܠ̰ܕ̰ܐ̰/γένεσις/birth; lineage Mt 1:1 (*Syrp* ܡ̰ܟ̰ܬ̰ܳܐ̰), 18 (*Syrp* ܡ̰ܟ̰ܝ̰). Jas 3:6 (*Syrp* ܥ̰ܳܠ̰ܡ̰ܐ̰ ܕ̰ܟ̰ܝ̰ܢ̰ܐ̰).

γένεσις/ܡ̰ܟ̰ܬ̰ܳܐ̰ Lk 1:14 (*Syrp* ܒ̰ܪ̰ܝ̰ܟ̰ܐ̰) — γένεσις/ܚ̰ܢ̰ܢ̰ܐ̰ Jas 1:23 (*Syrp* ܐ̰ܦ̰ܲ) — παλιγγενεσία/ܬ̰ܫ̰ܒ̰ܘ̰ܬ̰ܐ̰ ܝ̰ܠ̰ܕ̰ܐ̰ Mt 19:28 (*Syrp* ܒ̰ܬ̰ܲܝ̰ܐ̰ ܚ̰ܕ̰ܬ̰ܐ̰) — παλιγγενεσία/ܡ̰ܟ̰ܬ̰ܳܐ̰ ܘ̰ܬ̰ܫ̰ܒ̰ܘ̰ܬ̰ܐ̰ Titus 3:5 (*Syrp* ܒ̰ܪ̰ܝ̰ܟ̰ܐ̰ ܘ̰ܬ̰ܫ̰ܒ̰ܘ̰ܬ̰ܐ̰).

ܐ̰ܠ̰ܐ̰ ܗ̰ܝ̰ܡ̰ܢ̰ܐ̰/ἀπιστία/unbelief (*Syrp* ܐ̰ܠ̰ܐ̰ ܗ̰ܝ̰ܡ̰ܢ̰ܐ̰ ܠ̰ܐ̰ ܐ̰ܡ̰ܢ̰ܐ̰) Mt 13:58. Mk 6:6; 9:24; 16:14. Rom 11:20, 33. 1 Tim 1:13. Heb 3:12, 19.

ἀπιστία/ܐ̰ܠ̰ܐ̰ ܗ̰ܝ̰ܡ̰ܢ̰ܐ̰ ܠ̰ܐ̰ ܐ̰ܡ̰ܢ̰ܐ̰ Rom 3:3 — ἀπιστία/ܐ̰ܠ̰ܐ̰ ܗ̰ܝ̰ܡ̰ܢ̰ܐ̰ ܐ̰ܡ̰ܢ̰ܐ̰ Rom 4:20.

ܐ̰ܠ̰ܥ̰ܕ̰ܢ̰ܐ̰/ἡδονή/pleasure (*Syrp* ܐ̰ܠ̰ܥ̰ܕ̰ܢ̰ܐ̰) Lk 8:14. Titus 3:3.

ἡδονή/ܐ̰ܠ̰ܥ̰ܕ̰ܢ̰ܐ̰ Jas 4:1, 3 — ἡδέως/ܒ̰ܫ̰ܠ̰ܡ̰ܐ̰/gladly Mk 6:20; 12:37. 2 Cor 11:19; 12:9, 15.

ܐ̰ܣ̰ܦ̰ܐ̰ܠ̰ܝ̰ܐ̰/ἀσφάλεια/safety, full truth Lk 1:4 (*Syrp* ܐ̰ܡ̰ܬ̰ܐ̰). Acts 5:3 (*Syrp* ܒ̰ܫ̰ܡ̰ܐ̰). 1 Thess 5:3 (*Syrp* ܐ̰ܡ̰ܬ̰ܐ̰).

ἀσφαλής, ἀσφαλῶς, ἀσφαλίζομαι II. ܥ̰ܩ̰ܐ̰.

ܐ̰ܡ̰ܝ̰/φεγγός/light (*Syrp* ܐ̰ܡ̰ܝ̰ܐ̰) Mt 24:29. Mk 13:24.

ܙ̰ܥ̰ܘ̰ܪ̰ܐ̰/μικρός/small, little (*Syrp* ܙ̰ܥ̰ܘ̰ܪ̰ܐ̰) Lk 12:28 (all other μικρός in the Harklean and *Syrp* ܙ̰ܥ̰ܘ̰ܪ̰ܐ̰).

ܚ̰ܪ̰ܐ̰ܟ̰ܐ̰/χάραξ/barricade Lk 19:43 (*Syrp* no c.).

ܟ̰ܝ̰ܪ̰ܝ̰ܬ̰ܘ̰ܡ̰ܝ̰ܢ̰ܐ̰/κεχαριτωμένη/favoured Lk 1:28 (Harklean by error > χαίρω; *Syrp* ܚ̰ܕ̰ܝ̰ܬ̰ ܚ̰ܝ̰ܠ̰ܐ̰).

ܚ̰ܢ̰ܐ̰ ܙ̰ܒ̰ܕ̰/χαριτόω/bestow on freely Eph 1:6.

ܟ̰ܘ̰ܟ̰ܠ̰ܘ̰/κύκλῳ/round about Mk 6:6, 36. Lk 9:12 (*Syrp* all three ܟ̰ܘ̰ܒ̰ܝ̰ܐ̰). Rom 15:19 (*Syrp* ܐ̰ܝ̰ܠ̰ܝ̰ܢ̰ܐ̰).

κύκλῳ/ܣܒܝܢܐ Mk 3:34.

ܫܘܠܝܐ/κράσπεδον/fringe, edge; tassel (*Syrp* ܫܘܠܝܐ) Mt 23:5.

κράσπεδον/ܗܕܒܐ Mt 9:20 — κράσπεδον/ܫܦܐ Mt 14:36. Mk 6:56. Lk 8:44.

ܨܒܝܢܐ/πρόθυμος/willing Mt 26:41 (*Syrp* ܡܙܕܡܢ). Mk 14:38 (*Syrp* ܪܘܚܐ ܕܡܙܕܡܢܬ).

προθύμως/ܨܒܝܢܝܬ 1 Pet 5:2 — προθυμία/ܨܒܝܢܘܬܐ Acts 17:11. 2 Cor 8:11, 12, 19; 9:2 — τὸ πρόθυμον/ܨܒܝܢܘܬܐ Rom 1:15.

ܐܦܣܘܕܝ/ἀπόδημος/away from home (*Syrp* ܐܙܠ) Mk 13:34.

ἀποδημέω/ܐܙܠ Mt 21:33; 25:14, 15. Mk 12:1. Lk 15:13; 20:9.

ܚܝܬܐ ܕܒܪܐ/θηρίον/(wild) animal (*Syrp* ܒܗܝܬܐ) Mk 1:13. Acts 11:6; 28:4, 5 (*Syrp* ܚܝܘܬܐ). Titus 1:12. Heb 12:20. Jas 3:7.

ܡܙܓܐ/μίγμα/mixture (*Syrp* ܡܫܚܐ) Jn 19:39.

ܥܘܪܕܢܝܐ/ὀνάριον/(young) donkey (*Syrp* ܥܘܪܕܢܐ) Jn 12:14.

ܫܘܝܬܐ/ἐρήμωσις/desolation, destruction (*Syrp* ܫܘܝܐ) Mt 24:15. Mk 13:14.

ἐρήμωσις/ ܫܘܝܐ Lk 21:20.

ܛܘܪܝܐ/ὀρεινή/hill country (*Syrp* ܛܘܪܐ) Lk 1:39, 65.

ܒܛܠ/βεβηλόω/desecrate (sabbath) (*Syrp* ܚܫܠ) Mt 12:5.

βεβηλόω/ܚܠܠ Acts 24:6 — βέβηλος/ܚܘܠ 1 Tim 1:9; 4:7; 6:20. 2 Tim 2:16. Heb 12:16.

ܐܬܐ/πλέω/sail Lk 8:23 (*Syrp* ܐܬܐ) Acts 21:3 (*Syrp* ܐܙܠ); 27:2, 6 (*Syrp* both ܡܛ), 24 (*Syrp* ܐܬܐ).

καταπλέω/ܐܬܐ/sail Lk 8:26.

ܩܠܦ/σαλπίζω/sound a trumpet (*Syrp* ܩܠ) Mt 6:2 1 Cor 15:52.

ܡܬܩܠܐ/δάνειον/debt (*Syrp* ܡܬܩܠܐ) Mt 18:27.

ܛܥܘܢ/ὁ θηλάζων/unweaned child (*Syrp* ܝܘܠܕܐ) Mt 21:16.

θηλάζω/ܝܠܕ/nurse Lk 11:27.

ܠܒܫ/διαζώννυμι/put on (clothes) (*Syrp* ܐܙܪ) Jn 13:4, 5.

διαζώννυμι/ܚܓܪ Jn 21:7.

ܟܗܢܘܬܐ/ἱερατεία/priestly office (*Syrp* ܟܗܢܘܬܐ) Lk 1:9.

ἱερατεία/ܟܗܢܘܬܐ Heb 7:5 — ܟܗܢܬܐ/ἱεράτευμα/priesthood 1 Pet 2:5, 9.

ܐܪܒ/ἐνεδρεύω/lie in ambush Lk 11:54 (*Syrp* ܩܛ). Acts 23:21 (*Syrp* ܟܡܝܢ ܠܗ ܓܒܪܐ ܕܐܪܒܐ) — ἐνέδρα/ܐܪܒܐ/ambush, plot Acts 23:16 (*Syrp* ܟܡܝܢܐ); 25:3 (*Syrp* id.).

ܐܘܣܦܣܐ/ὀσφῦς/waist (*Syrᵖ* ܐܙܘܪܐ) Mt 3:4. Mk 1:6. Acts 2:30 (*Syrᵖ* ܚܨܐ). Eph 6:14. Heb 7:5, 10.

ὀσφῦς/ܐܙܘܪܐ Lk 12:35. 1 Pet 1:13.

ܐܟܡܣ/ἐκμάσσω/wipe (*Syrᵖ* ܡܫܚ) Lk 7:38, 44. Jn 11:2; 12:3; 13:5.

ܐܓܪܡܐ/γράμμα/letter of the alphabet (*Syrᵖ* ܐܘܬܐ) Jn 5:47; 7:15 (*Syrᵖ* ܟܬܒܐ). Acts 28:21 (*Syrᵖ* ܐܓܪܬܐ). Rom 2:27, 29; 7:6. 2 Cor 3:6 (twice), 7. Gal 6:11 (*Syrᵖ* ܐܘܬܝ) 2 Tim 3:15 (*Syrᵖ* ܟܬܒܐ).

γράμμα/ܐܘܬܐ Lk 16:7 — γράμμα/ܟܬܒܐ Acts 26:24.

ܒܥܓܠ ܒܥܓܠ/ταχύ/quickly (*Syrᵖ* ܒܥܓܠ) Mk 9:39.

ταχύ/ܒܥܓܠ Mt 5:25. Jn 11:29 — ταχύ/ܒܗܦܐ ܗܘ Mt 28:7. Jas 1:19 (ܒܗܦܐ) — ταχύ/ܒܛܠܠܐ ܡܫ Mt 28:8. Lk 15:22.

ܐܦܘܬܐ/διασπορά/dispersion (*Syrᵖ* ܐܓܘܬܐ) Jn 7:35.

διασπορά/ܦܙܘܬܐ Jas 1:1 — διασπορά/ܙܘܬܐ 1 Pet 1:1.

ܐܓܪܐ/φόρος/tax, tribute (*Syrᵖ* ܡܢܐ ܕܡܠܟ) Lk 20:22; 23:2. Rom 13:6, 7 (twice).

ܐܘܕܝܐ/ὁδηγός/guide (*Syrᵖ* ܡܕܒܪܢܐ) Mt 15:14; 23:16, 24. Acts 1:16. Rom 2:19 (*Syrᵖ* both ܐܦܝܣܩܘܦܐ).

ܐܦܪܣܝܐ/δανιστής/moneylender (*Syrᵖ* ܒܥܠ ܪܒܝܬܐ) Lk 7:41.

ܛܝܓܢܝܬܐ/ὀπτός/broiled, baked (*Syrᵖ* ܛܝܓܢܝܬܐ) Lk 24:42.

ܐܬܪ/τελέω/pay (taxes) (*Syrᵖ* ܫܠܡ) Mt 17:24.

τελέω/ܫܠܡ Rom 13:6.

ܐܦܛܘܪܝܐ/πανουργία/deceit, cunning (*Syrᵖ* ܒܛܠܢܘܬܐ) Lk 20:23.

πανουργία/ܒܛܠܢܘܬܐ 2 Cor 4:2; 11:3. Eph 4:14 — πανουργία/ ܚܟܡܬܐ ܕܒܛܠܐ 1 Cor 3:19 — πανοῦργος/ ܒܥܠ ܒܛܠܢܘܬܐ 2 Cor 12:16.

ܐܣܟܡܬܐ/ἀνάλημψις/taking up, ascension (*Syrᵖ* ܣܘܟܠܐ) Lk 9:51.

ܐܦܣܩܘܦܐ/ἐπισκοπή/visitation (of God's presence among men) Lk 19:44 (*Syrᵖ* ܦܘܩܕܢܐ). 1 Pet 2:12 (*Syrᵖ* ܦܩܝܕܐ).

ἐπισκοπή/ ܐܦܝܣܩܘܦܐ Acts 1:20. 1 Tim 3:1.

ܐܡܥܐ/σπλάγχνον/one's inmost self Lk 1:78 (*Syrᵖ* ܪܚܡܐ) Acts 1:18 (*Syrᵖ* ܒܛܢܐ).

σπλάγχνα/ܪܚܡܐ/affection, love 2 Cor 6:12; 7:15. Phil 1:8; 2:1. Col 3:12. Philem 7, 12, 20. 1 Jn 3:17.

ܩܢܝܢܐ/χρήματα/possessions (*Syrp* ܢܟܣܐ) Mk 10:23, 24. Lk 18:24. Acts 8:18 (*Syrp* ܟܣܦܐ), 20 (*Syrp* ܟܣܦ ܕܗܒܐ); 24:26 (*Syrp* ܡܘܡܒܐ).

τὸ χρῆμα/ܩܢܝܢܐ Acts 4:37.

ܣܛܢܐ/διάβολος/the Devil (*Syrp* ܕܝܐܒܠܘܣ and ܒܥܠ ܕܒܒܐ) Mt 4:1, 5, 8. Lk 4:3, 6, 13. Eph 4:27; 6:11. 1 Tim 3:11. 2 Tim 3:3. Titus 2:3. Jas 4:7. 1 Pet 5:8. 1 Jn 3:8 (three times), 10.

διάβολος/ܕܝܐܒܠܘܣ Mt 4:11; 13:39; 25:41. Lk 4:2, 5; 8:12. Jn 6:71; 8:44; 13:2. Acts 10:38; 13:10. 1 Tim 3:6, 7. 2 Tim 2:26. Heb 2:14.

ܡܪܝܡܢܐ/μέριμνα/anxiety, worry Mt 13:22 (*Syrp* ܕܐܓܐ); 28:14 (*Syrp* ܕܒܪܐ). Mk 4:19 (*Syrp* ܕܐܓܐ). Lk 8:14; 21:34 (*Syrp* both ܕܒܪܐ).

μέριμνα/ܕܒܪܐ 2 Cor 11:28. 1 Pet 5:7.

ܦܣܘܩܐ/πήρα/bag (*Syrp* ܫܩܠܐ) Mt 10:10. Lk 9:3; 10:4; 22:35, 36.

ܣܦܣܛܝܣ/βασανιστής/jailer, torturer (*Syrp* ܡܬܝܢܝܐ) Mt 18:34.

ܓܐܐܘܬܐ/ὑπερηφανία/arrogance, pride (*Syrp* ܪܡܝܘܬܐ) Mk 7:22.

ὑπερήφανος/ܓܐܐ/arrogant, proud Rom 1:30. 2 Tim 3:2. Jas 4:6. 1 Pet 5:5 — ὑπερήφανος/ܪܡ Lk 1:51.

ܬܓܠܝܬܐ/ἀνάδειξις/public appearance (*Syrp* ܫܘܝܐ) Lk 1:80.

ἔνδειξις/ܬܓܠܝܬܐ Rom 3:25, 26 — ἔνδειξις/ܫܘܝܐ 2 Cor 8:24. Phil 1:28.

ܡܬܬܝܒܝܬܐ/οἰκουμένη/world, inhabited earth (*Syrp* ܐܪܥܐ) Mt 24:14. Lk 2:1 (*Syrp* ܟܠ ܥܡܐ); 4:5; 21:26. Acts 17:6, 31; 19:27 (*Syrp* ܟܠ ܒܝܬ ܡܫܟܢܐ); 24:5. Rom 10:18 (*Syrp* ܫܦܘܬ). Heb 1:6; 2:5 (*Syrp* twice ܟܠ ܥܠܡܐ).

ܚܘܪܬܐ/ἰχθύδιον/small fish (*Syrp* ܢܘܢܐ) Mt 15:34. Mk 8:7.

ܪܓܥܐ/στιγμή/moment, instant (*Syrp* ܒܬܪ ܫܥܬܐ) Lk 4:5.

ܡܫܠܠ/σεσαλευμένος/shaken together (*Syrp* no c.) Lk 6:38.

σαλεύω/ܙܥ Mt 11:7; 24:29. Mk 13:25. Lk 6:48; 7:24; 21:26. Acts 2:25; 17:13. 2 Thess 2:2. Heb 12:27 (twice) — σαλεύω/ܙ Acts 4:31; 16:26. Heb 12:26.

ܓܣܣܐ/ἐγκάθετος/spy (*Syrp* ܡܬܩܛܠ) Lk 20:20.

ܐܢܘܡܝܐ ܕܥܒܕܐ/ἀνομία/lawlessness, sin (*Syrp* ܥܘܠܐ) Mt 7:23; 13:41; 23:28; 24:12. Rom 4:7; 6:19 (twice). 2 Cor 6:14. 2 Thess 2:7. Titus 2:14. Heb 1:9; 10:17. 1 Jn 3:4 (twice).

ܣܐܕܠܐ/ὑπόδημα/sandal, shoe (*Syrp* ܢܥܠܐ) Mt 3:11. Mk 1:7. Lk 3:16; 10:4; 15:22; 22:35. Jn 1:27. Acts 7:33; 13:25.

ὑπόδημα/ܢܥܠܐ Mt 10:10 — ὑποδέομαι/ܠܒܫ Mk 6:9. Acts 12:8.

ܣܢܕܠܝܐ/σανδάλια/sandals (*Syrp* ܣܢܕܠ) Mk 6:9. Acts 12:8.

ܣܗܪ̈ܝܐ/σεληνιάζομαι be an epileptic (*Syrp* > ܣܗܪ̈ܐ) Mt 4:24; 17:15.

ܣܒܪܐ/προσδοκία/expectation, foreboding Lk 21:26 (*Syrp* no c.). Acts 12:11 (*Syrp* ܣܒܪ ܘܣܒܪܢܘܬܐ).

ܣܒܪܐ/ἀποκαραδοκία/eager longing Rom 8:19 (*Syrp* ܣܒܪ). Phil 1:20 (*Syrp* ܣܒܪ).

ܣܡܘܩ/πυρράζω/be red (*Syrp* ܣܡܘܩ) Mt 16:2, 3.

ܣܘܢܣܝܣ/σύνεσις/understanding, intelligence Lk 2:47 (*Syrp* ܣܘܢܣܝܣ). Col 1:9 (*Syrp* ܚܟܡܬܐ).

σύνεσις/ܣܘܛܐ Mk 12:33. 1 Cor 1:19. Col 2:2 — σύνεσις/ ܚܟܡܬܐ Eph 3:4. 2 Tim 2:7.

ܣܥ/ἀνάπτω/kindle, set ablaze (*Syrp* ܐܫ) Lk 12:49.

ἀνάπτω/ܐܬܝܥ Jas 3:5.

ܣܪܝܣ/εὐνουχίζω/castrate Mt 19:12 (twice) (*Syrp* ܕܐܣܝܢ ܕܐܣܝܢ/ ܕܐܣܝܢ ܕܐܣܝܢ).

ܚܪܨ/σπαργανόω/wrap in baby clothes (*Syrp* ܒܙ ܚܪܨܬܐ) Lk 2:7, 12.

ܗܦܟ/ὑποστρέφω/return, go home Lk 2:43; 23:48 (*Syrp* both ܐܬܐ) — In all other cases ὑποστρέφω is translated by ܐܬܐ.

ܟܢܐ/ἀγανακτέω/be indignant, angry (*Syrp* ܟܢܐ) Mt 20:24 (*Syrp* ܪܓܙ); 21:15; 26:8. Mk 10:14, 41 (*Syrp* ܙܥ); 14:4. Lk 13:14.

ἀγανάκτησις/ܟܢܝܢܘܬܐ 2 Cor 7:11.

ܟܬܘܒܬܐ/κατοίκησις/home (*Syrp* ܟܬܒ) Mk 5:3.

ܒܙ/χωρέω/make *or* have room for (*Syrp* ܣܥܪ) Mt 19:11, 12 (twice). Mk 2:2 (*Syrp* ܫܥ). Jn 8:26[37]; 21:25. 2 Cor 7:2 (*Syrp* ܦܫܚ).

ܚܢܛ/σινιάζω/sift (of wheat) (*Syrp* ܚܛ) Lk 22:31.

ܓܠܓܠ/κυλίομαι/roll about Mk 9:20 (*Syrp* ܓܠܓܠ); 16:4 (*Syrp* ܓܠ).

ܐܠ ܓܠ/ προσκυλίω/roll against *or* to Mk 15:46 (*Syrp* ܐܠ ܓܠ) — ܡܢ ܓܠ/ ἀποκυλίω/roll away Mk 16:3 (*Syrp* ܡܢ ܓܠ) — προσκυλίω/ ܥܠ ܓܠ Mt 27:60 — ἀποκυλίω/ ܥܠ ܓܠ Mt 28:2. Lk 24:2.

ܓܠܓܡ/διεγείρομαι/grow rough (of the sea) (*Syrp* ܐܬܥܪ) Jn 6:18.

ܟܠܝܢܝܕܝܘܢ/κλεινίδιον/bed, cot (*Syrp* ܟܠܝܐ) Lk 5:19, 24.

ܦܠܛ/παροψίς/plate, dish Mt 23:25, 26 (*Syrp* both no c.).

ὄψις/ܦܠܛ/face Jn 11:44.

ܣܘܡܦܣܝܘܢ/συμπόσιον/group sharing a meal (*Syrp* ܟܘܪܣܝܐ) Mk 6:39.

ܟܣܡܐ/χάσμα/chasm, pit (*Syrp* ܒܝܪ ܩܒܪ) Lk 16:26.

ܐܡܒܪܝܡܐܘܡܐܝ/ἐμβριμάομαι/speak harshly to (*Syrp* ܙܥܦ ܥܠ) Mk 14:5.

ἐμβριμάομαι/ܐܬܪܓܫ Mt 9:30. Mk 1:43. Jn 11:33, 38.

ܠܝܬܐ/λαξευτός/cut out of the rock (*Syrp* ܢܚܬ) Mk 15:46. Lk 23:53.

ܦܬܬ/ψίχιον/crumb, scrap (of bread) (*Syrp* ܦܬܝܬܐ) Mt 15:27. Mk 7:28. Lk 16:21 (τὰ πίπτοντα).

ܐܬܒܗܬ/διαπορέω/be very confused (*Syrp* ܐܬܒܗܬ) Lk 9:7. Acts 2:12 (*Syrp* ܗܘܐ); 5:24 10:17.

ܐܒܗܬ/ἀπορέω/be at a loss Lk 24:4. Jn 13:22. Gal 4:20.

ܐܬܝ/ἀτενίζω/look straight at, stare (*Syrp* ܫܝ) Lk 4:20; 22:56. Acts 1:10; 3:4; 6:15; 7:55; 10:4; 11:6; 13:9; 14:9 (*Syrp* ܫܪܐ); 23:1. 2 Cor 3:7, 13.

ἀτενίζω/ܫܝ Acts 3:12.

ܟܦܢ/περιδέω/wrap, bind (*Syrp* ܚܙܪ) Jn 19:40.

ܟܦܢ/διαζώννυμι/wrap around, put on (clothes) Jn 11:44; 21:7.

ܡܚܪܬܐ/ἄροτρον/plow (*Syrp* ܡܫܟܐ ܘܩܒܘܬܐ) Lk 9:62.

ܟܣܝܐ/κλάσις/breaking (of bread) Lk 24:35 (*Syrp* ܟܣ ܟܣܐ). Acts 2:42 (*Syrp* ܟܣܐ).

ܩܪ/ψύχομαι/grow cold, die out (*Syrp* ܩܦܐ) Mt 24:12.

τὸ ψυχρός/ܩܪܝܐ/cold (water) Mt 10:42 — ψῦχος/ܩܘܪܐ/cold Jn 18:18. Acts 28:2. 2 Cor 11:27.

(I. ܝܪܩ) ܝܪܩ/χλωρός/green Mk 6:39 (*Syrp* no c.).

ܐܦܪܐ/ἀφρός/foam Lk 9:39 (*Syrp* ܫܒܐ).

ܫܘܠܛܢܐ/ἀρχή/authority, ruling power Lk 20:20 (*Syrp* ܫܘܠܛܢ). Rom 8:38 (*Syrp* no c.). 1 Cor 15:24 (*Syrp* ܪܫܝܬ). Eph 1:21; 3:10; 6:12. Col 1:16; 2:10, 15 (*Syrp* all six ܫܘܠܛܢܐ). Titus 3:1 (*Syrp* ܪܫܝܬ).

ἀρχή/ܪܫܝܬ/beginning Mt 24:8. Mk 13:8. Jn 1:1, 2 — ἀρχή/ ܩܕܡܝܬ/beginning Jn 2:11; 8:25. Acts 11:15. Phil 4:15. Col 1:18. Heb 2:3; 3:14; 5:12; 6:1; 7:3 — ἀπ’/ἐξ ἀρχῆς/ ܡܢ ܩܕܡܝܬ/from the beginning Mt 19:4, 8; 24:21. Mk 10:6; 12:19. Lk 1:2. Jn 6:64; 8:44; 15:27; 16:4. Acts 26:4. 1 Jn 2:7, 24 (twice); 3:8, 11 — ἀπ’ ἀρχῆς/ ܡܢ ܪܫܝܬ 1 Jn 1:1; 2:13, 14 — κατ’ ἀρχήν/ ܒܪܫ ܪܫܝܬ Heb 1:10 — ἀρχή/ܪܫܝܬ/corner Acts 10:11; 11:5.

ܩܕܡܝܬ(ܐ)/ἐπίβλημα ράκους/laid-on piece of stuff, patch (*Syrp* ܠܒܘܫ ܩܕܡܝܬ) Mt 9:16. Mk 2:21. Lk 5:36.

ܥܕܐ/ἀγέλη/herd (*Syrᵖ* ܒܥܝܪܐ) Mt 8:30, 31, 32 (*Syrᵖ* twice, ܒܥܝܪܐ/no c.). Mk 5:11, 13. Lk 8:32, 33.

ܬܟܫ/συντρίβω/crush, shatter Mk 14:3 (*Syrᵖ* ܫܒܪ). Lk 9:39 (*Syrᵖ* ܡܥܩ).

συντρίβω/ܢܓܪ Mt 12:20 — συντρίβω/ܡܚܐ Mk 5:4 — συντρίβω/ܡܥܩ Jn 19:37. Rom 16:20.

ܪܩܕܐ/χορός/dancing Lk 15:25 (*Syrᵖ* no c.).

ܣܛܪܐ/ῥάπισμα/a blow, slap (*Syrᵖ* ܣܛܪ) Mk 14:65. Jn 19:3.

ῥάπισμα/ܣܛܪ Jn 18:22.

ܫܛܝܘܬܐ/λῆρος/nonsense (*Syrᵖ* ܫܛܝܘܬܐ) Lk 24:11.

ܥܩܝܠ/τεθλιμμένος/difficult, narrow (way) (*Syrᵖ* ܥܩܝܠ) Mt 7:14.

θλίβω/ܡܥܩ/press hard (of a crowd) Mk 3:9 — θλίβομαι/experience trouble, is represented by ܥܩ.

ܫܚܬܐ/ἄτοπος/improper, wrong, evil Lk 23:41 (*Syrᵖ* ܫܚܬ). Acts 25:5 (*Syrᵖ* ܫܚܝܬܐ); 28:6 (*Syrᵖ* ܫܚܬ). 2 Thess 3:2 (*Syrᵖ* ܒܝܫܐ).

ܚܢܓ/χαρίζομαι/deal generously with; cancel a dept (*Syrᵖ* ܫܒܩ) Lk 7:21, 42 (*Syrᵖ* ܒܛܠ), 43. Acts 25:16; 27:24. Rom 8:32. 1 Cor 2:12. 2 Cor 2:7, 10 (three times, *Syrᵖ* ܒܛܠ); 12:13. Gal 3:18 (*Syrᵖ* ܒܛܠ). Eph 4:32 (twice). Phil 1:29; 2:9. Col 2:13 (*Syrᵖ* ܒܛܠ). Philem 22.

χαρίζομαι/ܚܢܐ Acts 3:14 25:11.

ܫܕܪ/ἀπολύω/send away (*Syrᵖ* ܫܕܪ) Mk 15:11, 15. Lk 8:38; 9:12; 14:4. Jn 18:39 (twice); 19:10 (*Syrᵖ* ܫܒܩ), 12 (twice). Acts 4:23; 13:3 (*Syrᵖ* ܫܪܐ); 16:35 (*Syrᵖ* ܫܪܐ), 36; 17:9.

(usually ἀπολύω/ release, set free, is represented by ܫܕܪ) — ܫܦܠ/χαλάω/lower, let down Mk 2:4. Lk 5:4, 5. Acts 9:25. 2 Cor 11:33.

I. ܡܚܐ/ῥαπίζω/hit, strike (*Syrᵖ* ܡܚܐ) Mt 5:39; 26:67.

I ܡܚܐ/ἐδαφίζω/completely destroy Lk 19:44 — II. ܡܚܐ/κατακρημνίζω/throw down from a cliff Lk 4:29.

ܐܟܪܐܣܝܐ/ἀκρασία/lack of self-control Mt 23:25 (*Syrᵖ* no c.) 1 Cor 7:5 (*Syrᵖ* ܓܝܠܐ ܘܟܝܢܘܬܐ)

ἀκρατής/ܠܐ ܡܬܚܫܒ ܒܢܦܫܗ/lacking self-control 2 Tim 3:3.

ܬܩܠ/θεμελιόω/found; establish firmly (*Syrᵖ* ܬܩܠ) Mt 7:25. Eph 3:17. Col 1:23. Heb 1:10. 1 Pet 5:10 (no c.).

ܡܫܠ/ὁρίζω/determine; appoint, designate (*Syrᵖ* ܡܢܐ) Lk 22:22. Acts 2:23; 10:42; 11:29; 17:31. Rom 1:4 (*Syrᵖ* ܡܒܪ). Heb 4:7 (*Syrᵖ* ܡܡ).

ὁρίζω/ܦܪܨ Acts 17:26.

ܛܘܪܐ/βουνός/hill (*Syrp* ܛܘܪܐ) Lk 3:5; 23:30.

ܐܬܦܠܓ/περισπάομαι/be distracted *or* worried (*Syrp* ܐܬܛܪܚ) Lk 10:40.

ܐܝܬܝܪ/εἰς εὐθεῖαν/straight; upright (*Syrp* ܐܬܝܪ) Lk 3:5.

ܐܝܬܝܪܘܬܐ/εὐθύτης/uprightness Heb 1:8 (*Syrp* ܐܝܬܝܪܘܬܐ) — εὐθύς/ܐܝܬܝܪ Mt 3:3. Mk 1:3. Lk 3:4. Acts 8:21; 9:11; 13:10.

ܡܙܘܢܐ/τροφή/food, nourishment (*Syrp* ܡܙܘܢܐ) Mt 6:25; 10:10; 24:45. Jn 4:8. Acts 2:46; 27:33, 34 (*Syrp* ܡܗܝܡܢܘܬܐ), 36 (*Syrp* ܡܙܘܢܐ). 1 Tim 6:8 (*Syrp* ܡܗܝܡܢܘܬܐ). Heb 5:12, 14 (*Syrp* both ܡܗܝܡܢܘܬܐ). Jas 2:15.

ܐܦܣܝܛܝܣܡܘܣ/ἐπισιτισμός/food Lk 9:12 — τροφή/ܡܗܝܡܢܘܬܐ Mt 3:3. Lk 12:23. Acts 27:38 — τροφή/ܡܙܘܢܐ Acts 9:19; 14:17.

3.2 Proper Nouns

The revisional development not only improved the agreement of the Harklean with the Byzantine text; it also affected the orthographical representation of proper nouns and of Greek foreign words. Their increasingly Greek spelling was intended to introduce more authenticity to the Harklean text, although this was actually overriding the original orthography. The obliterated original version was replaced by a more authentic update which continued the original intention of the Harklean, that is, to represent the contemporary "ecumenical" text in a quasi-Greek form.

The future lexicon including the Harklean should reflect this dynamic development of orthography by quoting the three revisional stages, that is, the most original stage represented by Ms Vat. Syr. 268, the revision of Dionysius bar Ṣalibi († 1171) represented by Ms Add. 17,124 (1233–1234 CE)[26] of the British Library, and the revision represented by Ms New Coll. 333 (12th–13th cent.). In addition to these revisional stages the influential "massoretic" orthography of proper nouns should be given.[27]

The following sample presents proper names from Lk 3:23–30 (genealogy of Jesus, abridged) according to the revisional stages and the "Syriac Massora." While Ms Vat. syr. 268 gives almost the Peshitta-type form, an increasing shift towards the Greek

[26] Ms New Coll. 334 (12th–13th cent.), the second manuscript of the Dionysius revision, is very defective and sometimes difficult to read even in the original. Neither its text nor its orthography is completely identical with Ms Add. 17,124 of the British Library; nevertheless, both manuscripts are representatives of the same revisional stage (for details see A. Juckel, "Introduction to the Harklean Version," in G. A. Kiraz, *Comparative Edition* 1: xxxvi–xliv.

[27] On the "Syriac Massora" see W. Wright, *A Short History of Syriac Literature* (London: Adam & Charles Black, 1894; Piscataway, NJ: Gorgias Press, 2001). The "massoretic" activity started in the 8th cent.; the earliest "massoretic" manuscripts are from the 9th and 10th cent. (Add. 12,178 of the British Library, and Vat. Syr. 152).

spelling is reflected by the revisions and the "Massora".

The vocalisation of the following proper names is taken from the manuscripts indicated in the header; for the unvocalized Ms Vat. syr. 268 the vowels of the Peshitta are adopted.

Greek	*Vat.syr.268*	*BL Add. 12,178*	*BL Add. 17,124*	*N. Coll. 333*
Lk 3:23–30	*Thomas*	*Massora*	*Dionysius*	*Ed. White*
Ἰωσήφ	ܝܘܣܦ	ܝܘܣܦ	ܝܘܣܦ	ܝܘܣܦ
Ἡλί	ܐܝܠܝ	ܐܝܠܝ	ܐܝܠܝ	ܐܝܠܝ
Μαθθάτ	ܡܬܬܝܐ	ܡܬܬܝܐ	ܡܬܬܝܐ	ܡܬܬܝܐ
Λευί	ܠܘܝ	ܠܘܝ	ܠܘܝ	ܠܘܝ
Μελχί	ܡܠܟܝ	ܡܠܟܝ	ܡܠܟܝ	ܡܠܟܝ
Ἰανναί	ܝܢܝ	ܝܢܝ	ܝܢܝ	ܝܢܝ
Ἰωσήφ	ܝܘܣܦ	ܝܘܣܦ	ܝܘܣܦ	ܝܘܣܦ
Ματταθίου	ܡܬܬܝܐ	ܡܬܬܝܐ	ܡܬܬܝܐ	ܡܬܬܝܐ
Ἀμώς	ܥܡܘܣ	ܥܡܘܣ	ܥܡܘܣ	ܥܡܘܣ
Ναούμ	ܢܚܘܡ	ܢܚܘܡ	ܢܚܘܡ	ܢܚܘܡ
Ἑσλί	ܐܣܠܝ	ܐܣܠܝ	ܐܣܠܝ	ܐܣܠܝ
Ἰωσήφ	ܝܘܣܦ	ܝܘܣܦ	ܝܘܣܦ	ܝܘܣܦ
Ναγγαί	ܢܓܝ	ܢܓܝ	ܢܓܝ	ܢܓܝ
Μάαθ	ܡܥܬ	ܡܥܬ	ܡܥܬ	ܡܥܬ
Ματταθίου	ܡܬܬܝܐ	ܡܬܬܝܐ	ܡܬܬܝܐ	ܡܬܬܝܐ
Σεμεΐν	ܫܡܥܝ	ܫܡܥܝ	ܫܡܥܝ	ܫܡܥܝ
Ἰωσήφ	ܝܘܣܦ	ܝܘܣܦ	ܝܘܣܦ	ܝܘܣܦ
Ἰωδά	ܝܘܕܐ	ܝܘܕܐ	ܝܘܕܐ	ܝܘܕܐ
Ἰωανάν	ܝܘܚܢܢ	ܝܘܚܢܢ	ܝܘܚܢܢ	ܝܘܚܢܢ
Ῥησά	ܪܫܐ	ܪܫܐ	ܪܫܐ	ܪܫܐ
Ζοροβαβέλ	ܙܪܘܒܒܠ	ܙܪܘܒܒܠ	ܙܪܘܒܒܠ	ܙܪܘܒܒܠ
Σαλαθιήλ	ܫܐܠܬܝܐܝܠ	ܫܐܠܬܝܐܝܠ	ܫܐܠܬܝܐܝܠ	ܫܐܠܬܝܐܝܠ
Νηρί	ܢܪܝ	ܢܪܝ	ܢܪܝ	ܢܪܝ
Μελχί	ܡܠܟܝ	ܡܠܟܝ	ܡܠܟܝ	ܡܠܟܝ
Ἀδδί	ܐܕܝ	ܐܕܝ	ܐܕܝ	ܐܕܝ
Κωσάμ	ܩܘܣܡ	ܩܘܣܡ	ܩܘܣܡ	ܩܘܣܡ
Ἐλμωδάμ	ܐܠܡܘܕܐ	ܐܠܡܘܕܐ	ܐܠܡܘܕܐ	ܐܠܡܘܕܐ
Ἤρ	ܐܪ	ܐܪ	ܐܪ	ܐܪ

Greek	*Vat.syr.268*	*BL Add. 12,178*	*BL Add. 17,124*	*N. Coll. 333*
Lk 3:23–30	*Thomas*	*Massora*	*Dionysius*	*Ed. White*
Ἰησοῦ	ܝܫܘܥ	ܝܫܘܥ	ܝܫܘܥ	ܝܫܘܥ
Ἐλιέζερ	ܥܠܝܥܙܪ	ܥܠܝܥܙܪ	ܥܠܝܥܙܪ	ܥܠܝܥܙܪ
Ἰωρίμ	ܝܘܪܝܡ	ܝܘܪܝܡ	ܝܘܪܝܡ	ܝܘܪܝܡ
Μαθθάτ	ܡܬܬܬ	ܡܬܬܬ	ܡܬܬܬ	ܡܬܬܬ
Λευί	ܠܘܝ	ܠܘܝ	ܠܘܝ	ܠܘܝ
Συμεών	ܫܡܥܘܢ	ܫܡܥܘܢ	ܫܡܥܘܢ	ܫܡܥܘܢ

3.3 Greek Words[28]

The following Greek loan words the Harklean adopted without translation. Some of them are *termini technici* (εὐνοῦχος, βάτος, λεπτόν, φυλακτήριον etc.) or topographical terms (περίχωρος, ἡ προβατική) a translation of which was inappropriate. But also ἄρα and μᾶλλον are "mirrored," in order not to neglect them in the translation.

ܐܘܢܘܟܐ/εὐνοῦχος/eunuch (*Syrʰ* ܣܪܝܣܐ) Mt 19:12. Acts 7:27, 34, 36, 38, 39.

ܐܦܘܩܪܝܣܝܣ/ἀπόκρισις/answer (*Syrʰ* ܦܘܓܡܐ) Jn 1:22.

ἀπόκρισις/ܦܘܓܡܐ ܕܐܬܝܗܒ Lk 2:47; 20:26. Jn 19:9.

ܐܪܐ/ἄρα/therefore, then (*Syrʰ* ܟ or no c.) Mt 7:20; 12:28; 17:26; 18:1; 19:25, 27; 24:45. Mk 4:41; 11:13. Lk 1:66; 8:25; 11:20, 48; 12:42; 22:23. Acts 8:22; 11:18; 12:18; 17:27; 21:38. Rom 5:18; 7:3, 21, 25; 8:1, 12; 9:16, 18; 10:17; 14:12, 19. 1 Cor 5:10; 6:20; 7:14; 15:14, 15, 18. 2 Cor 1:17; 5:14; 7:12. Gal 2:21; 3:7, 29; 4:31; 5:11; 6:10. Eph 2:19. 1 Thess 5:6. 2 Thess 2:15. Heb 4:9; 12:8.

ܐܪܐ/ᾶρα/interrog. particle expecting a negative response (*Syrʰ* ܟ or no c.) Mk 10:26. Lk 18:8. Acts 8:30. Gal 2:17.

ܒܬܐ/βάτος/a liquid measure (*Syrʰ* ܒܬܐ) Lk 16:6.

ܙܘܢܐ/ζώνη/belt Mt 3:4 (no c.); 10:9 (*Syrʰ* ܨܒܥܐ).

ζώνη/ܙܘܢܐ Mk 1:6; 6:8. Acts 21:11 (twice).

ܛܝܛܠܘܣ/τίτλος/notice, inscription Jn 19:19 (*Syrʰ* ܟܬܒܐ), 20 (*Syrʰ* ܦܘܪܫܢܐ).

ܠܦܛܘܢ/λεπτόν/lepton Mk 12:42 (*Syrʰ* ܡܨܝܢ). Lk 12:59; 21:2 (*Syrʰ* both ܡܥܛܦܐ).

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[28] Key works on Greek words in Syriac are written by A. Schall, *Studien über griechische Fremdwörter im Syrischen* (Darmstadt: Wiss. Buchgesellschaft, 1960); S. Brock, "Greek words in the Syriac Gospels (*Vet* and *Pe*)," *Le Muséon* 80 (1967): 389–426; "Some Aspects of Greek Words in Syriac," *Abhandlungen der Akademie der Wissenschaften zu Göttingen* 96 (1975): 80–108.

ܡܰܚܠܚܽܐ/ܡܳܚܽܐ/μᾶλλον/(much) more (*Syr*^{p} mainly ܒܠܡܶ, or no c.) Mt 25:9. Mk 7:36; 14:31. Lk 17:8. Jn 12:43. Acts 4:19; 5:29; 20:35; 27:11. 2 Cor 8:13; 12:9. Gal 4:9, 27. Eph 4:28. 1 Thess 4:10. 2 Tim 3:4. Philem 9. Heb 12:13.

In all other cases μᾶλλον is rendered by ܒܠܡܶ.

ܡܫܺܝܚܳܐ/ܡܫܺܝܚܳܐ/Μεσσίας/Messiah, Hebrew and Aramaic equivalent of Greek Χριστός Jn 1:41; 4:25.

ܡܰܕܘܳܐ/μόδιος/basket, bucket (*Syr*^{p} ܡܰܠܠܳܐ) Mt 5:15. Mk 4:21. Lk 11:33.

ܡܽܘܪܳܐ/μύρον/ointment (*Syr*^{p} ܡܶܫܚܳܐ) Mk 14:3, 4, 5. Lk 7:37, 38; 23:56. Jn 11:2; 12:3 (twice), 5 (*Syr*^{p} ܫܽܡܢܳܐ).

ܢܰܡܽܘܣܳܝܳܐ/νομικός/pertaining to the law; lawyer (*Syr*^{p} ܡܫܬܰܥܳܐ) Mt 22:35 (*Syr*^{p} ܢܳܡܽܘܣܳܝܳܐ ܚܰܕ). Lk 7:30; 10:25; 11:45, 46, 52; 14:3. Titus 3:9, 13.

ܦܰܪܗܶܣܝܳܐ/παρρησία/openness, frankness (*Syr*^{p} ܟܠ ܟܽܠܳܐ) Jn 7:4 (*Syr*^{p} ܒܓܠܝܐ), 26 (*Syr*^{p} ܒܓܠܝܐ); 10:24 (*Syr*^{h} ܦܪܗܣܝܐ, *Syr*^{p} ܒܓܠܝܐ). Acts 2:29; 4:13, 29, 31; 28:31. Heb 3:6 (*Syr*^{p} ܒܓܠܝܐ ܕܐܝܬ). 1 Jn 2:28 (*Syr*^{p} ܒܓܠܝܐ ܕܐܝܬ); 3:21 (ܒܓܠܝ ܕܐܝܬ); 4:17 (*Syr*^{p} ܒܓܠܝܐ ܕܐܝܬ); 5:14 (*Syr*^{p} ܦܪܗܣܝܐ).

παρρησία/ܦܰܪܗܶܣܝܳܐ/2 Cor 3:12; 7:4. Eph 3:12; 6:19. Phil 1:20. Col 2:15. 1 Tim 3:13. Philem 8 — (ἐν τῇ) παρρησίᾳ/ܒܓܠܝܐ/openly, frankly in *Syr*^{h}.

ܦܽܘܠܰܟܬܺܝܪܝܳܢ/φυλακτήρια/phylacteries (small cases) (*Syr*^{p} ܬܰܦܠܺܝܢ) Mt 23:5.

ܦܪܽܘܩܳܐ/περίχωρος/surrounding region Mt 14:35 (*Syr*^{p} ܟܽܠ ܓܰܒܠܺܝܬܳܐ ܗܳܘ). Mk 1:28 (*Syr*^{p} ܓܰܒܠܺܝܬܳܐ ܗܳܘ). Lk 4:14 (*Syr*^{p} ܟܽܠ ܓܰܒܠܺܝܬܳܐ ܗܳܘ); 8:37 (*Syr*^{p} no c.).

περίχωρος/… ܓܰܒܠܺܝܬܳܐ ܗܳܘ Mt 3:5. Lk 3:3; 4:37; 7:17. Acts 14:6.

ܫܽܘܩܶܐ/πλατεῖα/wide streets (*Syr*^{p} ܫܽܘܩܶ) Mt 6:5 12:19 Lk 10:10 13:26 14:21.

πλατεῖα/ܫܽܘܩܶ Acts 5:15.

ܢܽܘܗܪܳܐ/φανός/lantern, torch (*Syr*^{p} ܫܪܳܓܳܐ) Jn 18:3.

ܦܩܰܕ/παραγγέλλω/command, order (*Syr*^{p} ܦܩܰܕ) Mt 10:5. Mk 6:8; 8:6 .Lk 5:14; 8:56; 9:21. Acts 1:4; 4:18; 5:28, 40; 10:42; 15:5; 16:23; 17:30; 23:22, 30. 1 Cor 7:10; 11:17. 1 Thess 4:11. 2 Thess 3:4, 6, 10, 12. 1 Tim 1:3; 4:11; 5:7; 6:13 (*Syr*^{p} ܦܩܰܕ), 17.

παραγγέλλω/ܦܩܰܕ Acts 16:18.

ܒܶܝܬ ܚܰܣܕܳܐ/ἡ προβατική/'sheep gate' (*Syr*^{p} no c.) Jn 5:2.

ܩܶܛܽܘܣ/κῆτος/large sea creature (*Syr*^{p} ܢܽܘܢܳܐ) Mt 12:40.

ܟܢܳܣ/κῆνσος/tax (*Syr*^{p} ܡܰܟܣܳܐ ܕܪܳܫ) Mt 17:25; 22:17, 19. Mk 12:14.

ܩܪܰܛܽܘܢ/κεράτιον/pod (of the carob tree) (*Syr*^{p} ܚܰܪܘܼܒܶܐ) Lk 15:16.

ܩܪܡܝܕܐ/κέραμος/roof tile Lk 5:19 (*Syrᵖ* no c.).

ܩܪܡܝܕܝܢ/κεράμιον/jar (made of clay) Mk 14:13 (*Syrᵖ* ܟܘܢܐ). Lk 22:10 (*Syrᵖ* ܟܘܕܐ).

ܩܘܪܒܐ/κόραξ/crow, raven (*Syrᵖ* ܥܘܪܒܐ) Lk 12:24.

ܪܝܫ ܙܘܝܬܐ/κεφαλὴ γωνίας/main corner-stone (*Syrᵖ* ܪܝܫ ܙܘܝܬܐ and ܐܒܢ ܙܘܝܬܐ) Mt 21:42. Mk 12:10. Lk 20:17. Acts 4:11. Eph 2:20. 1 Pet 2:7.

γωνία/ܙܘܝܬܐ Acts 26:26 — ܙܘܝܬ̈ܐ/γωνίαι Mt 6:5.

ܐܪܟܝܛܪܝܟܠܝܢܘܣ/ἀρχιτρίκλινος/head steward (*Syrᵖ* ܪܒ ܣܥܘܕܬܐ) Jn 2:8, 9 (twice).

ܬܝܟܐ/θήκη/sheath (of a sword) (*Syrᵖ* ܡܫܟܐ) Jn 18:11.

3.4 Syriac "Compounds"

These "compounds" are the lexical feature which seems most incompatible with the Peshitta in a lexicon. They "mirror" Greek words consisting of εὐ- , προ- , ἀρχι- , ἀλλο- , παν- , πολυ- , πρωτο-, and so on. These extreme calques of Greek words were especially vulnerable to being replaced by the Peshitta renderings during the production of the version (see the samples given in smaller type).

ܒܪ ܐܡܐ/ἀλλογενής/foreigner (*Syrᵖ* ܓܝܪ ܠܐ ܒܪ ܥܡܐ ܗܘ) Lk 17:18.

ܣܓܕ ܥܠ ܐܪܥܐ/γονυπετέω/to prostrate (*Syrᵖ* ܣܓܕ ܥܠ ܐܪܥܐ ܗܘ) Mt 17:14.

γονυπετέω/ܣܓܕ ܥܠ ܐܪܥܐ ܗܘ Mt 27:29. ܣܓܕ ܥܠ ܐܪܥܐ ܗܘ Mk 1:40; 10:17.

ܐܬܪ/ἀγγαρεύω/force, press into service (*Syrᵖ* ܐܬܪ) Mt 5:41; 27:32.

ἀγγαρεύω/ܐܬܪ ܠܗ Mk 15:21.

ܙܝܢ ܕܣܝܡܐ/πανοπλία/armor Lk 11:22 (*Syrᵖ* ܙܝܢ ܕܣܝܡܐ).

πανοπλία/ܙܝܢ ܕܣܝܡܐ Eph 6:11, 13 — πανοικεί/ܒܝܬ ܐܒܗ ܕܣܝܡ ܟܠ with one's entire household Acts 16:34.

ܚܕ ܥܝܢ/μονόφθαλμος/one-eyed (*Syrᵖ* ܚܕ ܥܝܢܐ) Mt 18:9 Mk 9:47.

ܒܛܠ/βατταλογέω/babble, use many words Mt 6:7 (*Syrᵖ* ܦܛܦܛ).

ܚܨܦܣܛܪܘܛܘܣ/λιθόστρωτος/stone pavement *or* mosaic (Danker, *A Greek-English Lexicon*) Jn 19:13 (*Syrᵖ* ܒܝܬ ܐܒܢܐ).

ܡܬ/ἐκπνέω/die (*Syrᵖ* ܡܝܬ) Mk 15:37, 39. Lk 23:46. Jn 19:30 (*Syrᵖ* no c.).

ܝܩܪ/πολυτελής/costly; of great value (*Syrᵖ* ܣܓܝ̈ܐ) Mk 14:3. 1 Tim 2:9.

πολυτελής/ܝܩܪ ܕܥܠ ܠܒܫܐ (*Syrᵖ* ܠܒܘܫ ܝܩܪ) 1 Pet 3:4.

ܦܠܘܓܐ ܣܓܝܐ/πολυλογία/many words (*Syrᵖ* ܣܓܝ̈ܐ ܡܠ̈ܝ) Mt 6:7.

ܠܚܡܐ ܕܐܦܪܘܬܐ(ܘ ܠܚܡ ܐܦܝܐ)/(ἄρτοι τῆς) προθέσεως/bread offered to God (*Syrp* ܠܚܡ ܕܐܦܝܐ ܘܡܕܒܚܐ) Mt 12:4. Mk 2:26. Lk 6:4. Heb 9:2 (no sey!) (*Syrp* ܐܦܝ ܠܚܡ).

πρόθεσις/ܡܕܒܚܐ Acts 11:23; 27:13. Rom 8:28; 9:11. 2 Tim 3:10 — πρόθεσις/ܬܐܒ ܕܡܕܒܚܐ Eph 1:11; 3:11. 2 Tim 1:9.

ܡܚܫܒܬܐ ܕܠܒܐ/διαλογισμός/thought, motive (*Syrp* ܡܚܫܒܬܐ) Lk 2:35; 6:8. 1 Tim 2:8.

διαλογισμός/ܡܚܫܒܬܐ Mt 15:19. Mk 7:21. Lk 9:46, 47 — διαλογισμός/ܡܚܫܒܬܐ Lk 5:22; 24:38. Rom 1:21; 14:1. 1 Cor 3:20. Phil 2:14. Jas 2:4.

ܡܐܐ (ܕܡܐ)/ἑκατονταπλασίων/a hundred-fold (*Syrp* ܡܐ ܕܡܐ) Mt 19:29. Mk 10:30. Lk 8:8.

ܙܒܢܐ ܕܒܝܬܐ/εὐκαιρία/opportune moment, good chance Lk 22:6 (*Syrp* ܒܥܝܬܐ).

εὐκαιρία/ܙܒܢܐ ܘܒܥܝܬܐ Mt 26:16 — εὔκαιρος/ܙܒܢ ܫܦܝܪ Mk 6:21. Heb 4:16 — εὐκαίρως/ܒܥܝܬܐ ܘܒܙܒܢܐ Mk 14:11 — εὐκαίρως/ܙܒܢ ܐܦ ܫܦܝܪܐ 2 Tim 4:2.

ܩܛܪ ܒܣܡܐ/θυμιάω/offer incense Lk 1:9 (*Syrp* ܣܡ ܒܣܡܐ).

θυμιατήριον/ܡܕܒܚܬܐ ܕܣܡ Heb 9:4.

ܐܬܩܪܒ ܒܬܩܢ/ἀκριβόω/ascertain, Mt 2:7 (*Syrp* ܒܩܫ), 16 (*Syrp* ܐܬܩܪ).

ἀκριβῶς/ܒܬܩܢܐ/accurately Mt 2:8. Lk 1:3. Acts 18:25. Eph 5:15. 1 Thess 5:2 — ἀκριβέστερον/ܒܬܩܢ ܝܬܝܪ Acts 23:15, 20 — ἀκριβέστερον/ܒܬܩܢ ܒܬܩܢܐ Acts 18:26 — ἀκριβέστερον/ܒܬܩܢܐ Acts 24:22.

ܐܬܕܚܠ ܒܠܒܐ/μετεωρίζομαι/worry, be upset Lk 12:29 (*Syrp* ܠܒܐ ܐܬܕܚܠ).

ܦܘܩܕܢܐ ܕܦܘܩܕܢܐ/ἀπόκρισις/answer, reply (*Syrp* ܦܘܩܕܢܐ) Lk 2:47; 20:26. Jn 19:9.

ἀπόκρισις/ܐܦܘܩܡܢܛܣ Jn 1:22.

ܡܬܠܐ ܣܡ/παραβολῇ τίθημι/compare (*Syrp* ܣܡ ܠܡܬܠܐ) Mk 4:30.

ܫܡܫ ܠܡܫܡܫ/δουλεύω/serve (as a slave) (*Syrp* ܫܡܫ) Mt 6:24 (twice). Lk 15:29; 16:13 (twice). Jn 8:22[33]. Acts 7:7; 20:19. Rom 14:18; 16:18. Gal 4:8, 9, 25. Eph 6:7. Phil 2:22. Col 3:24. 1 Thess 1:9. 1 Tim 6:2. Titus 3:3.

δουλεύω/ܫܡܫ Rom 6:6; 7:6, 25; 9:12; 12:11 — δουλεύω/ܡܫܡܫ Gal 5:13.

ܥܐܪܬܐ ܕܣܟܝܬܐ/ἑορτὴ ἡ σκηνοπηγία/Feast of Tabernacles Jn 7:2 (*Syrp* ܣܟܝܬܐ ܕܡܐܣܦܐ).

ܩܕܡܝܬܐ ܒܟܢܫܐ/πρωτοκλισία/place of honour Mt 23:6 (*Syrp* ܒܟܢܫܐ ܩܕܡܝܬܐ). Mk 12:39 (*Syrp* ܒܟܢܫܐ ܒܡܬܝܢ). Lk 14:8 (*Syrp* ܒܟܢܫܐ ܩܕܡܝܬܐ); 20:46 (*Syrp* ܒܟܢܫܐ ܒܡܬܝܢ).

πρωτοκλισία/ܩܕܡܝܬܐ ܒܣܥܘܕܬܐ Lk 14:7.

ܩܕܡܝܬܐ ܒܟܘܪܣܝܐ/πρωτοκαθεδρία/place of honour (*Syrp* ܒܟܘܪܣܝܐ ܒܡܬܝܢ) Mt 23:6. Mk 12:39. Lk 20:46.

πρωτοκαθεδρία/ܩܕܡܝܬܐ ܒܟܘܪܣܝܐ Lk 11:43.

ܩܕܰܡ ܡܶܢ/προάγω/go ahead of (*Syr*^{p} ܡܶܢ ܩܕܰܡ) Mt 2:9. In all other cases προάγω is represented in *Syr*^{h} by ܡܶܢ only.

ܪܳܡܳܐ ܥܕܺܝ/ὁρμάω/rush Mt 8:32 (*Syr*^{p} ܥܕܺܝ).

ὁρμάω/ܥܕܺܝ Mk 5:13 — ὁρμάω/ܪܳܡܳܐ ܐܶܬܰܪ Lk 8:33. Acts 19:29 — ὁρμάω/ܫܪܳܐ Acts 7:57.

ܪܰܒ ܟܳܗܢܶܐ /ἀρχιερεύς/high priest (*Syr*^{p} ܟܳܗܢܶܐ ܪܰܒ *in Gospels and Acts; in Heb* ܟܳܗܢܳܐ ܪܰܒ).

ܪܰܒ ܟܢܺܝܫܳܐ/ἀρχισυνάγωγος/president of a synagogue (*Syr*^{p} ܟܢܺܝܫܳܐ ܪܰܒ) Mk 5:22, 35, 36, 38. Lk 8:49; 13:14. Acts 13:15; 18:8, 17.

ܡܳܐܐ ܪܰܒ/ἑκατοντάρχος/-χης/centurion (*Syr*^{p} ܩܲܣܛܪܘܢܳܐ) Mt 8:5 etc. (*Gospels, Acts*).

ܫܠܳܡܳܐ ܐܲܣܦܰܣܡܽܘܣ/ἀσπασμός/greeting (*Syr*^{p} ܫܠܳܡܳܐ) Mt 23:7. Mk 12:38. Lk 11:43; 20:46. 1 Cor 16:21 (one Harkl. Ms). Col 4:18.

ἀσπασμός/ܫܠܳܡܳܐ Lk 1:29, 41, 44. 2 Thess 3:17.

ܩܠܳܐ ܣܽܘܡܦܳܘܢܝܰܐ/συμφωνία/music (*Syr*^{p} ܩܠܳܐ ܕܰܒܽܘܪܳܐ) Lk 15:25.

(ܐܰܫܬܰܟܰܚ) ܒܰܪ ܚܡܳܐ ܐܰܫܬܰܠܗܰܒ/πυρέσσω/be sick with fever Mt 8:14 (*Syr*^{p} ܒܰܪ ܚܡܳܐ ܐܰܫܬܰܟܰܚ). Mk 1:30 (*Syr*^{h} ܐܰܫܬܰܠܗܰܒ only; *Syr*^{p} ܒܰܪ ܚܡܳܐ).

φλόξ/ܠܗܳܒܳܐ/flame Lk 16:24. Acts 7:30. 2 Thess 1:8. Heb 1:7 — φλογίζω/ܐܰܫܬܰܠܗܰܒ/set on fire Jas 3:3 (twice).

ܐܰܝܬܝܳܪ ܫܽܘܟܠܳܐ/εὐσχήμων/respected, of high standing Mk 15:43 (*Syr*^{p} ܐܺܝܬܝܳܪ). Acts 13:50 (*Syr*^{p} ܫܽܘܟܠܳܐ); 17:12 (*Syr*^{p} ܒܰܪ ܚܰܝܠ).

τὸ εὔσχημον/ܐܰܝܬܝܳܪ ܡܰܕܽܘܟܠܳܐ/good order 1 Cor 7:35 — τὰ εὐσχήμονα/ܐܰܝܬܝܳܪ ܫܽܘܟܠܳܐ 1 Cor 12:24 — εὐσχημόνως/ܐܰܝܬܝܳܪ ܒܰܫܽܘܟܠܳܐ Rom 13:13. 1 Cor 14:40. 1 Thess 4:12.

ܫܽܘܦܪܳܢ ܛܒܳܐ/εὐγενής/of high *or* noble birth Lk 19:12 (*Syr*^{p} ܒܰܪ ܐܰܢܫܳܐ ܛܒܳܐ). Acts 17:11 (*Syr*^{p} ܢܰܒܠܳܐ). 1 Cor 1:26 (*Syr*^{p} ܒܰܪ ܐܰܢܫܳܐ ܛܒܳܐ).

ܕܰܚܠܬܳܢܳܐ ܛܒܳܐ/εὐσεβής/religious Lk 2:25 (NA^{27} *var. lec.*, *Syr*^{p} ܫܪܺܝܪܳܐ). Acts 10:2 (*Syr*^{p} ܫܪܺܝܪܳܐ), 7 (*Syr*^{p} ܕܰܚܠܬܳܢܳܐ ܥܰܡ).

εὐσέβεια/ܕܰܚܠܬܳܢܽܘܬܳܐ/godliness, godly life Acts 3:12 (*Syr*^{p} *var. lec.* ܫܽܘܦܪܳܢ) 1 Tim 2:2 (*Syr*^{p} ܕܰܚܠܬܳܢܽܘܬܳܐ ܥܰܡ); 3:16 (*Syr*^{p} ܪܰܙܳܐ); 4:7, 8 (*Syr*^{p} both ܪܰܙܳܐ); 6:3, 5, 6 (*Syr*^{p} all three ܕܰܚܠܬܳܢܽܘܬܳܐ ܥܰܡ), 11 (*Syr*^{p} ܪܰܙܳܐ). 2 Tim 3:5 (*Syr*^{p} ܕܰܚܠܬܳܢܽܘܬܳܐ ܥܰܡ). Titus 1:1 (*Syr*^{p} ܕܰܚܠܬܳܢܽܘܬܳܐ ܥܰܡ) — εὐσεβῶς/ܒܰܕܰܚܠܬܳܢܽܘܬܳܐ 2 Tim 3:12. Titus 2:12 (*Syr*^{p} both ܕܰܚܠܬܳܢܽܘܬܳܐ).

ܙܒܢܳܐ ܛܒܳܐ/εὔκαιρος/suitable, timely Mk 6:21 (*Syr*^{p} ܒܰܪ ܚܰܝܠ). Heb 4:16 (*Syr*^{p} ܠܙܒܢܳܐ ܕܰܚܣܺܝܢ).

εὐκαίρως/ܒܙܒܢܳܐ ܕܰܚܣܺܝܢ Mk 14:11 — εὐκαίρως/ܙܒܢܳܐ ܛܒܳܐ 2 Tim 4:2.

ܛܒ ܥܒܰܕ/εὖ ποιέω/do good Mk 14:7 (*Syr*^{p} ܥܒܰܕ ܛܒ) Acts 15:29 (*Syr*^{p} ܛܒ ܥܒܰܕ).

εὖ γίνομαι/ܛܒ ܗܘܳܐ ܥܒܰܕ/be well Eph 6:3.

ܪܥܘܬܐ/εὐδοκία/good will (*Syrᵖ* ܪܥܘܬܐ) Mt 11:26. Lk 2:14 (*Syrᵖ* ܒܢܝ ܐܢܫܐ); 10:21. Phil 1:15 (*Syrᵖ* ܒܚܕܐ ܪܥܘܬܐ); 2:13 (*Syrᵖ* ܒܪ). 2 Thess 1:11.

εὐδοκία/ܪܥܘܬܐ Rom 10:1 — εὐδοκία/ܒܪ ܢܫܐ ܛܒܬܐ Eph 1:5, 9.

3.5 Adjectives and Adverbs

The Harklean generates adjectives and adverbs by attaching the ending *-aya, -anaya* and *-a'it*. This kind of word formation is minimally developed in the Peshitta, which mostly gives a nominal rendering of adjectives and adverbs.

ܝܪܘܫܠܡܝܐ/Ἱεροσολυμῖται/inhabitants of Jerusalem Mk 1:5 (*Syrᵖ* ܐܗܠ ܝܪܘܫܠܡ). Jn 7:25 (*Syrᵖ* ܐܢܫ ܝܪܘܫܠܡ).

ܣܘܡܛܝܩܝ/σωματικός/physical (*Syrᵖ* ܓܫܡܢܝ ܕܒܪܢܫ) Lk 3:22.

σωματικός/ܓܫܡܢܝ 1 Tim 4:8.

ܟܕܒ/ψευδο-/false- Mt 19:18. Mk 10:19; 14:56, 57. Lk 18:20 (all of ψευδομαρτυρέω/ ܣܗܕ ܟܕܒ, where *Syrᵖ* reads ܣܗܕ ܒܫܘܠ ܕܫܘܝ).

(ܒܠܝ) ܠܐ ܕܚܠ ܟܕܒ/ἀφόβως/without fear (*Syrᵖ* ܠܐ ܕܚܠ) Lk 1:74.

ἀφόβως/ܠܐ ܕܚܠ 1 Cor 16:10. Phil 1:14.

ܝܕܝܐ/ἴδιος/one's own, personal Mk 15:20. Titus 1:12 (*Syrᵖ* both no c.).

ἰδίᾳ/ܒܝܕܝܐ/individually 1 Cor 12:11.

ܒܢܘܢܟ/νουνεχῶς/wisely (*Syrᵖ* ܒܚܟܡܬܐ) Mk 12:34.

ܚܫܘܟܐ/σκοτεινός/dark (*Syrᵖ* ܚܫܘܟܐ) Mj 6:23. Lk 11:36.

σκοτεινός/ܚܫܘܟܐ Lk 11:34.

ܫܦܝܪ/καλῶς/well, rightly (*Syrᵖ* ܛܒ) Mk 7:6, 9, 37; 12:28, 32; 16:18. Lk 6:26, 27; 20:39. Jn 4:17; 8:37[48]; 13:13; 18:23. Acts 10:33. 1 Cor 7:37, 38; 14:17. Gal 4:17; 5:7. Phil 4:14. 1 Tim 3:4, 13. Heb 13:18.

καλῶς/ܛܒ Mt 12:12; 15:7. Acts 25:10; 28:25. Rom 11:20. 2 Cor 11:4. 1 Tim 3:12; 5:17 — καλῶς/ܛܒܝܢ Jas 2:3, 8, 19 (var. lec. ܛܒ).

ܒܪܟܐ/μακάριος/blessed, fortunate (*Gospels:* ܒܪܟ, only Jn 13:17 ܒܪܟܝܢ). 1 Tim 1:11; 6:15 (*Syrᵖ* both ܒܪܟܬܐ). Titus 2:13 (*Syrᵖ* ܒܪܟ). Jas 1:12 (*Syrᵖ* ܒܪܟ), 25 (*Syrᵖ* ܒܪܟܝܢ). 1 Pet 3:14; 4:14 (*Syrᵖ* both ܒܪܟ).

μακαρισμός/ܒܪܟ Rom 4:6, 9. Gal 4:15.

ܟܐܦܝ/λίθινος/made of stone (*Syrᵖ* ܟܐܦܐ) Jn 2:6. 2 Cor 3:3.

ܟܢܝܢܝ/ἀκάνθινος/of thorns, thorny (*Syrᵖ* ܟܢܝܬܐ) Mk 15:17.

ἀκάνθινος/ܟܢܝܬܐ Jn 19:5.

ܚܕܐ/κατ' ἰδίαν/alone, apart (*Syrᵖ* mainly ܚܕܐ + suff.) Mt 17:19; 20:17; 24:4. Mk 4:34; 6:31, 32; 7:33; 9:28. Lk 9:10; 10:23.

ܡܠܟܐ/βασιλικός/royal, belonging to the king Jn 4:46, 49 (*Syrᵖ* both ܒܪ ܡܠܟܐ). Acts 12:20 (*Syrᵖ* ܡܠܟܐ), 21 (*Syrᵖ* ܠܒܘܫܐ ܡܠܟܐ). Jas 2:8 (*Syrᵖ* ܡܠܟܘܬܐ).

ܡܡܬܐ/θανάσιμον/deadly poison (*Syrᵖ* ܣܡܐ ܡܡܬܐ) Mk 16:18.

ܫܕܪܐ (ܦܛܪܐ)/ἀποστάσιον/written notice of divorce (*Syrᵖ* ܦܛܪܐ ܕܫܒܘܩܐ) Mt 5:31.

ܦܛܪܐ ܕܫܕܪܐ/βιβλίον ἀποστασίου Mt 19:7. Mk 10:4.

ܠܐ ܡܣܬܟܠ/ἀσύνετος/without understanding Mt 15:16 (*Syrᵖ* ܠܐ ܡܨܬܟܠ). Mk 7:18 (*Syrᵖ* ܠܐ ܡܫܟܚ).

ἀσύνετος/ܠܐ ܡܣܬܟܠ Rom 1:21 — ܠܐ ܚܟܝܡ Rom 1:31 — ܣܟܠ Rom 10:19.

ܡܬܢܓܕ/ἀντιλεγόμενος/controversial (*Syrᵖ* ܡܬܢܓܕ) Lk 2:34.

Rom 10:21. Titus 1:9 also > ܡܬܢܓܕ; Lk 20:27; 21:15. Jn 19:12. Acts 4:14; 13:45; 28:19, 22. Titus 2:9 translate ἀντιλέγω/contradict, refute by ܥܢ + ܫܩܠ/ ܡܫܟܚ/ ܡܚܐ.

ܡܬܟܚܠ/δυνατός/possible; powerful; able (*Syrᵖ* ܡܟܝܠ) Mt 19:26; 26:39. Mk 9:23; 10:27; 14:35, 36. Lk 18:27. Acts 2:24; 7:22; 11:17; 18:24; 20:16; 25:5. Rom 4:21; 11:23. 2 Cor 10:4. 2 Tim 1:12. Titus 1:9.

δυνατός/ܚܙܐ/ܡܟܝܠ Mt 24:24. Mk 13:22. Lk 14:31. Rom 12:18. Gal 4:15. Heb 11:19. Jas 3:2 — δυνατός/ܫܘܬܦܐ Lk 1:49; 24:19. Rom 15:1. 1 Cor 1:26. 2 Cor 12:10; 13:9 — τὸ δυνατόν/ܡܬܟܚܠ ܐܝܬܝ Rom 9:22.

ܒܬܝܫܐ/εὐτόνως/vehemently (*Syrᵖ* ܫܦܝܪ ܠܡܐ) Lk 23:10.

εὐτόνως/ܫܘܬܦܐ ܠܡܐ Acts 18:28.

ܠܐ ܢܡܘܣܝ/ἄνομος/lawless (*Syrᵖ* ܠܐ ܕܝܢܐ) Mk 15:28 Lk 22:37 Acts 2:23 (*Syrᵖ* ܥܘܠܐ) 2 Thess 2:8 1 Tim 1:9.

ἄνομος/ܠܐ ܢܡܘܣܝ, 1 Cor 9:21 (three times) — ܠܐ ܢܡܘܣܝܘܬܐ/ἀνομία/lawlessness, sin (*Syrᵖ* ܥܘܠܐ) Mt 7:23; 13:41; 23:28; 24:12. Rom 4:7; 6:19 (twice). 2 Cor 6:14. 2 Thess 2:7. Titus 2:14. Heb 1:9. 10:17. 1 Jn 3:4 (twice).

ܒܪܫܠܡ/λαμπρῶς/splendidly (*Syrᵖ* ܒܫܘܠܡ) Lk 16:19.

ܡܫܡܫܠܐ/πυκνός/often, frequently (*Syrᵖ* ܡܫܡܫܠܐ) Lk 5:33. Acts 24:26. 1 Tim 5:23 (*Syrʰ* ܡܫܡܫܐ/ *Syrᵖ* ܡܫܡܫܐ).

ܦܘܣܢܐ/ἐπιούσιος/for today; necessary for existence (*Syrᵖ* ܦܘܣܢܐ) Mt 6:11.

ἐπιούσιος/ܦܘܣܢܐ, Lk 11:3.

ܨܘܪܝܐ/Σύρος/Syrian Lk 4:27 (*Syrᵖ* ܨܘܪܝܐ).

ܦ̈ܝ̈ܢ̈ܩ̈ܝ̈ܣ̈ܐ ܣ̈ܘ̈ܪ̈ܝ̈ܐ/Σύρα Φοινικίσσα or Συροφοινικίσσα/Syrophoenician woman Mk 7:26.

ܒ̈ܣ̈ܟ̈ܘ̈ܠ̈ܐ/δυσκόλως/with difficulty Mt 19:23 (*Syrᵖ* ܒ̈ܣ̈ܟ̈ܘ̈ܠ̈ܐ).

δυσκόλως/ܒ̈ܣ̈ܟ̈ܘ̈ܠ̈ܐ Mk 10:23. Lk 18:24.

ܥ̈ܡ̈ܝ̈ܐ/ἐθνικός/pagan, Gentile Mt 5:47 (*Syrᵖ* ܥ̈ܡ̈ܝ̈ܐ); 6:7; (ܥ̈ܡ̈ܡ̈ܐ) 18:17.

ἐθνικῶς/ܥ̈ܡ̈ܝ̈ܐ Gal 2:14.

ܥ̈ܣ̈ܪ̈ܐ/δέκατος/tenth (*Syrᵖ* ܥ̈ܣ̈ܪ̈ܐ) Jn 1:39.

ܩ̈ܕ̈ܡ̈ܝ̈ܐ/πρῶτον/first (of all) Mk 3:27 (*Syrʰ* only here, in all other cases ܩ̈ܕ̈ܡ̈ܝ̈ܐ, *Syrᵖ* ܩ̈ܕ̈ܡ̈ܝ̈ܐ).

ܒ̈ܩ̈ܠ̈ܐ/ταχύ/quickly Mt 28:8 (*Syrᵖ* ܒ̈ܩ̈ܠ̈ܐ). Lk 15:22 (*Syrᵖ* no c.).

ταχέως/ܒ̈ܩ̈ܠ̈ܐ(ܟ) Lk 14:21; 16:6. Jn 11:31; 13:27; 20:4. Acts 17:15. 1 Cor 4:19. Gal 1:6. Phil 2:19, 24. 2 Thess 2:2. 1 Tim 5:22. 2 Tim 4:9 — τάχιον/ܒ̈ܩ̈ܠ̈ܐ 2 Tim 4:9 (var. lec.). Heb 13:19, 23 — ἐν τάχει/ܒ̈ܟ̈ܒ̈ܩ̈ܠ̈ܐ Rom 16:20. 1 Tim 3:14. 2 Tim 4:9 (var. lec.).

ܦ̈ܩ̈ܙ̈ܐ/πεζῇ/on foot; by land Mt 14:13 (*Syrᵖ* ܒ̈ܚ̈ܕ̈ܐ).

πεζῇ/ܒ̈ܚ̈ܕ̈ܐ Mk 6:33.

ܫ̈ܬ̈ܝ̈ܬ̈ܝ̈ܐ/ἕκτος/sixth (*Syrᵖ* mainly ܫ̈ܬ̈ܝ̈ܬ̈ܝ̈ܐ) Mt 20:5; 27:45. Mk 15:33. Lk 1:26, 36; 23:44. Jn 4:6; 19:14. Acts 10:9.

ܬ̈ܠ̈ܬ̈ܝ̈ܐ/τρίτος/third (adj.) (*Syrᵖ* mainly ܒ̈ܬ̈ܠ̈ܬ̈ܝ̈ܐ) Mt 16:21; 17:23; 20:3, 19; 22:26; 27:64. Mk 9:31; 10:34; 12:21; 15:25. Lk 12:38; 13:32; 18:33; 20:12, 31; 24:7, 46 Jn 2:1. Acts 2:15; 10:10; 23:23. 1 Cor 15:4. 2 Cor 12:2.

τρίτος/ܒ̈ܬ̈ܠ̈ܬ̈ܝ̈ܐ Lk 9:22.

ܬ̈ܫ̈ܥ̈ܝ̈ܐ/ἔνατος/ninth (*Syrᵖ* mainly ܬ̈ܫ̈ܥ̈[ܝ̈]) Mt 20:5; 27:45, 46. Mk 15:33, 34. Lk 23:44. Acts 10:3, 30.

ἔνατος/ܒ̈ܬ̈ܫ̈ܥ̈ܝ̈ܐ Acts 3:1.

4. SUMMARY

This paper suggests the *restricted* inclusion of the Harklean in the future lexicon by pointing to the vocabulary not attested in the Peshitta and to the characteristic lexical features of the Harklean for comparative use. Textual problems connected with the revisional development of the version, and the Greek dress, do not affect the availability of the (most) original text and the compatibility with the earlier versions in the lexicon.

The Syriac New Testament versions (Old Syriac,[29] Peshitta, Harklean) constitute a corpus of texts upon which the lexicon should be based. Whether this implies the inclusion of the Philoxenian[30] (in the restricted form of the Harklean), and of the non-Peshitta portions[31] of the Harklean version, should be discussed by the lexicography team. The purpose of the present paper is to contribute to this discussion and to indicate the range of the lexical material that the Harklean version is able to contribute to the future lexicon of the Syriac New Testament.

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[31] For 2 Pet, 2 & 3 Jn, and Jude in the Harklean version one has to use the manuscripts mentioned in note 14; for the Harklean Rev, which is attested in ca. a dozen manuscripts, Ms Mardin Orth. 35 (11th–12th c.) is the best available witness in the facsimile edition of A. Vööbus, *The Apocalypse in the Harklean Version* (CSCO 400, subs. 56), Louvain: Peeters, 1978.

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8. SYRIAC LEXICOGRAPHY: REFLECTIONS ON RESOURCES AND SOURCES[1]

Sebastian P. Brock
The Oriental Institute, University of Oxford

1. RESOURCES

On the surface, Syriac is one of the best served of the Aramaic dialects as far as dictionaries are concerned; but, having said this, one needs to remember that Syriac has by far the largest corpus of extant literature, its production having been continuous ever since the second century up to the present day.

In the first part of this article a few remarks are offered about the three major Syriac dictionaries, each of which has its own offspring, namely:

1. R. Payne Smith, *Thesaurus Syriacus* (2 vols.; Oxford: Clarendon Press, 1879–1901), with a literal, as well as figurative, offspring, compiled by his daughter, Jessie Payne Smith (Mrs Margoliouth), *A Compendious Syriac Dictionary* (Oxford: Clarendon Press, 1903);
2. C. Brockelmann, *Lexicon Syriacum* (2nd ed.; Halle: Max Niemeyer, 1928), which served as the basis for L. Costaz, *Dictionnaire syriaque-français, Syriac-English Dictionary,* قاموس سرياني-عربي (Beyrouth: Dar el-Machreq, 1963); and
3. Toma Audo, *Dictionnaire de la langue chaldéenne:* ܡܫܢܐ ܕܠܫܢܐ ܟܠܕܝܐ (2 vols.; Mosul: Imprimerie des pères dominicains, 1897)—cited below as *Simta*—upon which is based the recent work by E. Thelly, *Syriac-English-Malayalam Lexicon* (Kottayam: Deepika Book House, 1999).

All compilers of dictionaries build on the work of their predecessors, and as Robert Payne Smith made clear on the very title page, much of the material in his [166]
Thesaurus Syriacus had been collected by others, in particular Etienne Quatremère and Georg Bernstein, to whose names those of G. W. Lorsbach, A. J. Arnoldi, and F. Field were also added. Quatremère's materials had primarily been gathered from the collection of Syriac manuscripts in Paris; to these Payne Smith added, not only the collections of materials made by the other named scholars, but also much of his own, based on his reading of more recently published texts. This element happened to be of the greatest importance, for these were publications resulting from the acquisition by the British Museum in the 1840s of the large collection of very old Syriac manuscripts

[1] This paper was read by Alison Salvesen at the Syriac Lexicography session of the 2003 SBL International Congress. We expresss our thanks to Sebastian Brock and to the publishers of *Aramaic Studies* for permission to reproduce it here, from *Aramaic Studies* 1.2 (2003) 165–78.

that had come from the Syrian Monastery in Egypt. These included a great deal of hitherto completely unknown Syriac literature, often preserved in very early manuscripts. As R. Payne Smith notes in the Preface of the first fascicule, which came out in 1868, he had made use of all publications of these texts up to 1866. The list of sources for the second volume of the work, which was published in 1901, will be found to be greatly expanded, and it includes publications up to 1899. Thus the later fascicules of the *Thesaurus* were able to draw on numerous important texts that had not yet been made available by the time of the earlier fascicules that made up the first volume. This imbalance was to some extent made up by Jessie Payne Smith's *Supplement to the Thesaurus Syriacus of R. Payne Smith, S.T.P.* (Oxford: Clarendon Press, 1927), which was compiled from her father's notes, as well as from her own reading of texts published subsequent to the *Thesaurus*.[2] As a matter of fact, Robert Payne Smith had died in 1895, six years before the second volume came out. As his daughter and her husband, David S. Margoliouth, inform us in the Preface to the second volume, Robert Payne Smith had only reached the middle of the root *š-m-š* when he died; it was they who completed the alphabet, and they specifically request the users not to impute to "the blessed Dean [sc. of Canterbury]" any errors they might find in the final letter.

Jessie Payne Smith's *Supplement* came out a year before the appearance of the
[167] greatly expanded second edition of Carl Brockelmann's *Lexicon Syriacum*.[3] Whereas the first edition, published in 1895 (when Brockelmann was only 27 years old!), ran to 510 pages, the second contains 930. The great strength of Brockelmann's *Lexicon* lies in the references he gives for rarer words: only rarely does one come across an unusual word in a published text whose occurrence Brockelmann has not caught. Although the second edition is for normal purposes essential, the first edition does have one advantage that has been lost in the second: at the end Brockelmann provides a very useful Latin-Syriac glossary, and it is only in the first edition that the Syriac words are actually given, for in the second edition one only finds page numbers to the entries in the *Lexicon*, which makes locating the words much more cumbersome.

Toma Audo's Syriac-Syriac *Simta* is in two quarto volumes and runs to 1130 pages. Audo, who was the Chaldean Metropolitan of Urmi, was one of the finest of the

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[2] For the *Supplement*, see also J. Schleifer, "Berichtigungen und Ergänzungen zum Supplement des Thesaurus Syriacus," *Or* 8 (1939): 25–58. At the end Schleifer has this nice tribute: "Auch in der Ausarbeitung des Materials erweist sich die Verfasserin als eine ihres grossen Vaters würdige Tochter, dem sie kein schöneres Denkmal kindlicher Pietät setzen konnte als vorliegendes Werk, das nun, da wir ihren Heimgang zu beklagen haben, zu ihrem eigenen Ehrenmal wird." (Jessie Payne Smith died in 1933).

[3] Among the responses, that by J. Schleifer should be noted, "Randglossen zu C. Brockelmanns Lexicon Syriacum," *ZS* 7 (1929): 170–96 (ܪ to ܠ), *WZKM* 42 (1935): 199–216 (ܬ to ܟ); 43 (1936): 113–39 (ܡ to ܐ). Schleifer's series of articles on the passages from Galen identified in E. A. W. Budge's *Syriac Book of Medicines* (2 vols., Amsterdam: Philo Press, 1976 = London, 1913) contain further material of interest for medical lexicography; these were published in *ZS* 4 (1926): 70–122, 161–95; 5 (1927): 195–237; 6 (1928): 154–77, 275–99; and in *RSO* 18 (1940): 341–72; 20 (1942–1943): 1–32, 162–210, 383–98; and 21 (1946): 157–82.

many excellent Syriac scholars produced by the various Syriac Churches of the Middle East towards the end of the nineteenth century.[4] Although the *Simta* was published four years before the second and final volume of the *Thesaurus* appeared, it appears to have been little used by Western scholars, at least until recently (when it has been photographically reprinted in smaller format, Chicago, 1978, and by émigré Syriac communities in Europe: Stockholm, 1979, and the Monastery of St. Ephrem, Holland, 1985).

How do these three great dictionaries compare?

Arrangement: as far as arrangement is concerned, all three are by root, and this principle has been retained by both Costaz and Thelly, whereas Jessie Payne Smith has reorganized the entries into a strictly alphabetic form.

Content: Various *sondages* suggest that the *Simta* has the most lexical entries, closely followed by the *Thesaurus*, whereas the *Lexicon Syriacum* has slightly less. The number of entries is, of course, considerably reduced in the three offspring dictionaries, though [168] these are still perfectly adequate for reading most texts. Some figures, showing some surprising differences between the *Simta* and the two big European dictionaries, will be given below, towards the end of this article. On one particular point the *Thesaurus* stands apart from its companions: it alone incorporates items in Palestinian Syriac (Christian Palestinian Aramaic) and in Modern Syriac. These obviously now need to be treated quite separately from Classical Syriac.

Exact references to sources are, of course, found in both the *Thesaurus* and the *Lexicon*; in the former these include many to particular manuscripts in the case of certain important texts which were still unpublished. The *Thesaurus* and (to a much lesser extent) the *Lexicon* also provide references to the medieval lexicographers Bar Bahlul and Bar ʿAli. The *Simta* gives some references, but these are reduced in number and are of a very general nature. In the three offspring dictionaries no references are given.

Citations of illustrative passages are wonderfully rich in the *Thesaurus* (and many are preserved in the *Compendious Syriac Dictionary*, though of course without the references). By contrast, the *Lexicon* and the *Simta* have hardly any citations.

Two further small points should be mentioned: all the Western dictionaries are in Serto script, whereas both Audo and Thelly are in the East Syriac script. More importantly, from a practical point of view, the *Thesaurus* and the *Lexicon* employ only Latin, while the *Simta* is Syriac-Syriac. This, of course, renders them difficult to use for many readers of Syriac texts today; such people are, however, better served in the three offsprings, all of which make use of English.

All the dictionaries produced by Western scholars have been based on Syriac literature only up to the early fourteenth century. Writing in Classical Syriac, however,

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[4] On him see R. Macuch, *Geschichte der spät- und neusyrischen Literatur* (Berlin: W. de Gruyter, 1976), 211–13.

has continued to be produced continuously right up to the present day.[5] Whether Audo included materials from the later period, of the fourteenth to nineteenth century, is unclear, though it seems quite likely, and if so, it may well explain some of the surprising figures cited below for citation of certain word formations: Audo himself translated at least two books of Latin scholastic theology and in the course of doing so he probably needed to resort to a number of neologisms. As far as twentieth-century
[169] writing in Classical Syriac, or *kthobonoyo*, is concerned, no academic dictionary is available, though a certain amount of material is being collected by Professor Ebbe Knudsen's Tur 'Abdin project, and in connection with this Elie Wardini has produced an interesting study of neologisms.[6] In the absence of any scholarly dictionary covering twentieth-century usage, there are now a certain number of practical dictionaries and word lists available that have been produced by members of the various Syriac communities. One of the most extensive of these so far is Sabo Hanna and Aziz Bulut's *Wörterbuch Deutsch-Aramäisch, Aramäisch-Deutsch* (Heilbronn, published by the authors, 2000). In this the Syriac-German section runs to 426 pages, and the German-Syriac one to 487 pages.[7]

Leaving aside the topic of the many lexical innovations in twentieth-century Syriac, and returning to the period of the corpus of Syriac literature covered by the three great dictionaries, it remains to point out the main reasons why these three great lexical resources, despite all their undoubtedly great merits, are nevertheless today seriously inadequate in many ways, and in need of supplementation. A few basic facts and figures will suffice to indicate why this is so.

The two great series which contain editions of (mostly hitherto unpublished) Syriac texts, the Patrologia Orientalis and the Syriac series of the Corpus Scriptorum Christianorum Orientalium (CSCO), were both founded just after the appearance of

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[5] On this, see above all Macuch, *Geschichte*; also my "Some Observations on the Use of Classical Syriac in the Late Twentieth Century," *JSS* 34 (1989): 363–75.

[6] E. Wardini, "Neologisms in Modern Literary Syriac," *MUSJ* 53:5 (1993–1994): 401–566, and 54 (1995–1996): 167–324. An interesting collection of neologisms, meant for practical use, is to be found in A. Nuro, *Tawldotho, or Syriac Neologisms: Principles, Criteria and Examples* ܬܘܠܕܬܐ ܐܘ ܡܠܬܐ ܚܕ̈ܬܬܐ ܕܡܫܬܡܫ ܒܗ̇ ܒܣܦ̈ܪܘܬܐ ܣܘܪ̈ܝܝܬܐ (Stockholm: published by the author, 1997).

[7] Others are Issa Hanna, *Mini-Wörterbuch: Deutsch-Assyrisch*: ܡܝܢܝ-ܡܠܬܐ ܓܪ̈ܡܢܝܐ ܠܐܬܘܪ̈ܝܐ (Augsburg: Mesopotamien-Verein, 1984), 134 +133 pp.; Simon Atto dbeth-Dayroyo, *Nederlands Suryoyo Woordenboek:* ܡܠܘܢ ܣܘܪܝܝܐ ܠܗܘܠܢܕܝ (Enschede: published by the author, 1986), 146 + 151 pp.; Simon Atto, ܡܠܘܢ ܣܘܪܝܝܐ-ܛܘܪܟܝܐ: *Süryanice-Türkçe Sözlük* (Enschede: published by the author, 1990), 272 pp.; A. Bulut, *Woordenboek Nederlands-Syrisch, Syrisch-Nederlands* (Enschede: Federatie Turabdin Nederland, 1993), 409 + 352 pp.; Hatune Dogan, ܡܢܬܪ: *Wörterbuch: Syrisch-Deutsch, Deutsch-Syrisch* (Aleppo: Mardin Press, 1997), 170 + 148 pp. The appendix (pp. 590–705) to Odisho M. Giwargis Ashitha's ܡܠܦ ܘܡܠܝ: *Assyrian-Arabic Dictionary* (Baghdad: al-Maghreb, 1997), provides a Syriac-Arabic-English glossary of scientific, medical and other technical terms. There are two recent Arabic-Syriac dictionaries: Younan Hozaya and Anderios Youkhana, *Bahra: Arabic-Assyrian Dictionary* (Arbil, 1998), and Schlemon Esho Khoshaba and Emanuel B. Youkhana, *Zahreera: Arabic-Syriac Dictionary* (Duhuk, 2000).

the second volume of the *Thesaurus*. In the CSCO sub-series, Scriptores Syri, some 115 [170]
editions of Syriac texts have by now appeared, and 94 of these editions are also subsequent to the date of the second edition of the *Lexicon*.

Even where more recent editions of Syriac texts cover works already available to R. Payne Smith and Brockelmann in earlier editions, the newer editions are often infinitely more reliable than their predecessors. Nowhere is this more so than in the case of the works of the major fourth-century Syriac writer, Ephrem.[8] In both the *Thesaurus* and the *Lexicon* Ephrem is quoted from the eighteenth-century edition, whose text (and Latin translation) is notoriously unreliable in places, as any comparison of it with E. Beck's editions in the CSCO will bring out.

2. SOURCES

So, without labouring the point any further, I come to the second part of my discussion, Sources; that is, sources that might prove useful for any future work on Syriac lexicography. At the same time, I hope to point to some possible practical ways forward.

Here it is important to stress the word "practical," since there is a very large gap still between what might be the ideal, and what is actually attainable in practical terms. The ideal, of course, would be to have a completely new *Thesaurus*, but the essential means for creating such a work today would be a searchable corpus of texts in electronic form, comparable to the *Thesaurus Linguae Graecae*, whose existence has revolutionized approaches to, and methods of, compiling Greek dictionaries.[9] Such a corpus of Syriac texts in electronic form of course simply does not yet exist. Obviously it would be highly desirable that such a corpus be gradually built up, based on good editions. And here a second important point, sometimes overlooked, needs to be remembered: there is still a huge volume of Syriac texts which have never been published, and these include many works by major Syriac authors, such as the fifth- and sixth-century poets, Jacob of Serugh, Narsai, and the various Isaacs, and numerous important writers of the Abbasid period, such as Moshe bar Kepha, Iwannis of Dara, and Anton of Tagrit, not to mention the huge, and often still unpublished, compendia [171]
by Barhebraeus (and others) in the thirteenth century.

However, rather than give up in despair at the enormity of the task ahead, it is important to focus on some practicable ways forward. I leave aside here such obvious things as the need to edit important unpublished texts, and concentrate on two useful categories of lexical tools: (a) those that focus on a single author or corpus, and (b) those that focus on particular areas, such as foreign vocabulary, or word formation.

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[8] A dramatic case is noted in my "Diachronic Aspects of Syriac Word Formation: An Aid for Dating Anonymous Texts," in R. Lavenant (ed.), *V Symposium Syriacum 1988* (OrChrAn 236, 1990): 321–30 (330 n. 22).

[9] An important colloquium, entitled "Ancient Greek Lexicography: Building an International Database and an English-language Replacement for Liddell and Scott" was held in Cambridge, July 2002.

2.1 Particular Authors and Bodies of Texts

Coming under the first category I have in mind certain already existing word lists and concordances.

Thanks to the efforts of the late Werner Strothmann and his associates at Göttingen, we now have concordances to all books of the Peshitta Old Testament,[10] and indeed for the Pentateuch there is the luxury of a second concordance,[11] differently arranged, and based on a slightly different (and older) text. For the deutero-canonical books Strothmann provided just a word list[12] (which is of course much better than nothing), although for Ben Sira, the only book in this category translated from Hebrew, there is also a full concordance.[13] As far as the Syriac Old Testament is concerned, the desiderata that remain are concordances for the Syrohexapla (apart from Qohelet), the so-called "Syro-Lucianic" translation, and Jacob of Edessa's revised versions (only one of which has so far been published in full).[14]

[172] The Peshitta New Testament is also now well served, thanks to George Kiraz's *A Computer-Generated Concordance to the Syriac New Testament*, in six volumes.[15] This invaluable tool also includes the sixth-century version of the minor Catholic Epistles and Revelation: although these books do not feature in the original Peshitta New Testament canon, they are normally printed in this version (sometimes thought to represent the Philoxenian revision) in modern editions of the Peshitta New Testament, and so their inclusion is a practical one. Desiderata for the Syriac New Testament are concordances for the Old Syriac Gospels and for the Harklean revision. In the former case, however, it would be premature to produce a concordance before further editorial work is done, for it seems likely that newly developing techniques for reading palimpsests will in due course make it possible to read much more of the underlying Old Syriac text in Sinaiticus Syriacus 30. For the Harklean, apart from Acts and the

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[10] W. Strothmann, K. Johannes and M. Zumpe, *Konkordanz zur syrischen Bibel: Der Pentateuch,* 4 vols. (Göttinger Orientforschungen, Reihe Syriaca [GOFS] 26; Wiesbaden: Harrassowitz, 1986); *Die Propheten,* 4 vols. (GOFS 25; 1985); *Die Mauthē,* 6 vols. (GOFS 33.1–6, 1995); N. Sprenger, *Konkordanz sum syrischen Psalter* (GOFS 10; 1976); W. Strothmann, *Konkordanz des syrischen Koheletbuches nach der Peschitta und der Syrohexapla* (GOFS 4; 1973).

[11] P. G. Borbone, K. D. Jenner (eds.), *The Old Testament in Syriac According to the Peshitta Version,* Part V. *Concordance*, 1. *The Pentateuch* (Leiden: E. J. Brill, 1997).

[12] W. Strothmann, *Wörterverzeichnis der apokryphen-deuterokanonischen Schriften des Alten Testaments in der Peshitta* (GOFS 27; 1988).

[13] M. M. Winter, *A Concordance to the Peshiṭta Version of Ben Sira* (MPIL 2; Leiden: E. J. Brill, 1976).

[14] A. G. Salvesen, *The Books of Samuel in the Syriac Version of Jacob of Edessa* (MPIL 10; Leiden: E. J. Brill, 1999). For other published parts of Jacob's work, see W. Baars, "Ein neugefundenes Bruchstück der syrischen Bibelrevision des Jakob von Edessa," *VT* 18 (1968): 548–54.

[15] It should be noted that The Way International's *The Concordance to the Peshitta Version of the Aramaic New Testament* (New Knoxville: American Christian Press, 1985) is not a concordance at all, but a word list. Mention should also be made of T. C. Falla's *A Key to the Peshitta Gospels*, I. *'Ālaph to Dālath;* II. *Hē to Yōdh* (NTTS 14, 19; Leiden: E. J. Brill, 1991, 2000). This is especially valuable for its indication of the Greek counterparts.

minor Catholic Epistles, there are now good editions available for the Gospels,[16] Epistles,[17] and Revelation.[18] When one turns to the huge corpus of non-biblical Syriac texts the situation is infinitely less satisfactory. Here there is only one concordance available so far, to the *Odes of Solomon*.[19] Full (or reasonably full) words lists, however, are available for all the texts published in the three volumes of the *Patrologia Syriaca*. [173] This means that at least the following texts, all important ones, are covered in this way: the Apocalypse of Baruch, the Book of the Laws of the Countries (Bardaisan), Aphrahat's Demonstrations, and the Book of Steps (*Liber Graduum*). A full concordance for Aphrahat has been prepared by Robert Owens in connection with the Comprehensive Aramaic Lexicon project, but this has not yet been published.

Extensive word lists have also been provided to many of W. Strothmann's editions of Syriac authors, notably certain works of the early fifth-century author John of Apamea.[20] Otherwise, all that is available for the lexicographer are the select word lists that usefully accompany certain editions of Syriac texts in the CSCO and elsewhere.

Of the many desiderata in the area of non-biblical Syriac texts, one stands out a long way, namely a concordance covering Ephrem's genuine works. Preliminary steps towards such a concordance have indeed been taken on two separate occasions, the first organized by Margot Schmidt in the 1970s, and then more recently by George Kiraz.

2.2 Particular Topics

The second category, of lexical tools which focus on particular areas, will best be considered in two parts—published and unpublished materials.

Probably the area for which a reasonable amount of information is fairly readily accessible concerns Greek words in Syriac. Many editions of Syriac texts in the CSCO and elsewhere contain indexes of Greek words that occur, and there is also a monograph on the subject, Anton Schall's *Studien über griechische Fremdwörter im Syrischen* (Darmstadt: Wissenschaftliche Buchgesellschaft, 1960). This contains a complete

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[16] By A. Juckel, in G. A. Kiraz, *Comparative Edition of the Syriac Gospels, Aligning the Sinaiticus, Curetonianus, Peshitta and Harklean Versions*, 4 vols. (NTTS 21; Leiden: E. J. Brill, 1996).

[17] B. Aland, *Das Neue Testament in syrischer Überlieferung*, I. *Die grossen katholischen Briefe* (ANTF 7; Berlin: W. de Gruyter, 1986); B. Aland and A. Juckel, *Das Neue Testament in syrischer Überlieferung*, II. *Die paulinischen Briefe*, 1–3 (ANTF 14, 23, 32; Berlin: W. de Gruyter, 1991, 1995, 2002).

[18] A. Vööbus, *The Apocalypse in the Harklean Version: A Facsimile Edition of Midyat Orth. 35* (CSCO 400; Subsidia 56; Leuven: Peeters, 1978).

[19] M. Lattke, *Die Oden Salomos in ihrer Bedeutung für Neues Testament und Gnosis,* II. *Vollständige Wortkonkordanz* (OBO 25.2; Fribourg: Editions Universitaires; Göttingen: Vandenhoeck & Ruprecht, 1979).

[20] W. Strothmann, *Johannes von Apamea* (PTS 11; Berlin: W. de Gruyter, 1972); *Der Koheleт-Kommentar des Johannes von Apamea. Syrischer Text mit vollständigem Wörterverzeichnis* (GOFS 30; Wiesbaden: Harrassowitz, 1988); and other publications of his in the series GOFS.

inventory for the earliest non-biblical Syriac texts, including Aphrahat but excluding Ephrem. The second part of the book provides a selection of terms connected with the Greek cultural milieu, drawn from texts dealing with "Religion, Kultus und Mythos;"
[174] an index to these, absent in the book, has subsequently been provided.[21] Schall did not include the evidence of the considerable number of Greek words in the Syriac Bible (above all, the New Testament), but collections and studies of this material are now available for the Peshitta Pentateuch[22] and for the Gospels (Old Syriac and Peshitta).[23] Outside the above mentioned works there are a few further studies, either of a general nature,[24] or focused on one particular author.[25]

A whole series of works on the Aramaic vocabulary of various specialized areas of natural history was produced by the astonishingly learned Rabbi of Szeged, Immanuel Löw, and these all include a great deal of material of relevance to Syriac lexicography. Although his *Aramäische Pflanzennamen* came out in 1881, before the *Thesaurus* was completed, his subsequent monographs in the area of zoology all appeared after it.[26]

A scholar who has devoted several articles to the topic of Syriac lexicography more recently is Ulrich Seidel, and of particular relevance here are his two articles
[175] dealing with agricultural terms, "Studien zum Vokabular der Landwirtschaft im Syrischen," *Altorientalische Forschungen* 15 (1988), pages 133–73 (Part I), and 16 (1989), pages 89–139 (Part II). Other specialized work in this area that is subsequent to 1960

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[21] By R. Voigt, "Griechischer Wortindex zu Anton Schalls 'Studien über griechischer Fremdwörter im Syrischen'," in R. Lavenant (ed.), *VII Symposium Syriacum 1996* (OrChrAn 256, 1998): 539–43. See now also his "Griechische Fremdwörter im Syrischen: eine Bibliographie," *Graeco-Arabica* 7–8 (1999–2000): 555–70.

[22] J. Joosten, "Greek and Latin Words in the Peshitta Pentateuch: First Soundings," in R. Lavenant (ed.), *VII Symposium Syriacum 1996* (OrChrAn 256, 1998): 37–47.

[23] S. P. Brock, "Greek Words in the Syriac Gospels (*Vet* and *Pe*)," *Le Muséon* 80 (1967): 389–426.

[24] E.g. S. P. Brock, "Greek Words in Syriac: Some General Features," *Scripta Classica Israelica* 15 (1996): 251–62 (repr. in *From Ephrem to Romanos* [Aldershot: Variorum Reprints, 1999], chap. XV).

[25] E.g. M. Lattke, "Die griechische Wörter im syrischen Text der Oden Salomos," *Aram* 5 (1993): 285–302. Other such studies (since 1960) can be readily located in S. P. Brock, *Syriac Studies: a Classified Bibliography (1960–1990)* (Kaslik: *Parole de l'Orient*, 1996), and the update for 1991–1995 in *Parole de l'Orient* 23 (1998): 241–350 (that for 1996–2000 is forthcoming in the same periodical. [Editor's note: this is now published: *Parole de l'Orient* 29 (2004): 263–410]).

[26] "Aramäische Fischnamen," in C. Bezold (ed.), *Orientalische Studien Th. Nöldeke gewidmet*, I (Giessen: Alfred Töpelmann, 1906): 459–70; "Aramäische Schlangennamen" in Z. Günzburg and I. Markon (eds.), Ωηψλ) {ηρβ)λ }ωρκζ *Festschrift zu Ehren des Dr A. Harkavy* (St Petersburg: H. Itkowski, 1908), 37–62; "Aramäische Lurchnamen (Frosch und Salamander)," in Florilegium ou recueil de travaux d'érudition dédiés à … Melchior de Vogüé à l'occasion du 80e anniversaire de sa naissance (Paris: Imprimerie nationale, 1909), 391–406; "Aramäische Lurchnamen, I. Eidechsen," ZA 26 (1912): 126–47. Löw's reviews of various fascicules of the Thesaurus Syriacus are also worth consulting: fasc. VI, ZDMG 37 (1883): 469–76; fasc. VII, ZDMG 41 (1887): 359–64; fasc. VIII, ZDMG 45 (1891): 697–705; fasc. IX, ZDMG 47 (1893): 514–37 (especially important for its identification of citations in Bar Bahlul from Paul of Aegina); fasc. X, ZDMG 52 (1998): 308–17.

can readily be located through the standard bibliographies, under the entry "Language."[27]

Turning to unpublished materials, I take the opportunity here to mention various collections of materials of lexical interest that I have made over the years. The two main areas covered are Greek words and certain specific word formations. Three points, however, should be kept in mind at the outset. First, my own interest is not in lexicography as such; rather, it lies in trying to isolate certain diachronic features within the Syriac lexicon, and in this respect is closely linked to my interest in changes in translation techniques over time. Second, the collections of all these materials are at present in a fairly preliminary stage of organisation. Third, for the most part I have concentrated on Syriac literature only up to the end of the seventh century. Behind my decision to concentrate on this earlier period lie several practical reasons: this is the period covered by the majority of texts published so far, and a large number of those texts that remain unpublished are available in early manuscripts in the British Library;[28] also, the period up to c. 700CE constitutes a more or less manageable corpus, and belongs to the time prior to the gradual supplanting of Syriac by Arabic.

My collection of Greek words in Syriac is partly on cards, and partly in the form of lists from individual texts that I have read, but which have not yet been transferred to the cards. The most detailed information, however, lies in concordances, compiled on slips, of Greek words in the poets Narsai, Isaac of Antioch, and (not yet completed) Jacob of Serugh.[29]

At the Fifth Symposium Syriacum I drew attention to the likely significance, for diachronic purposes, of certain types of Syriac word formations.[30] Collections of these particular materials have now been made for a large number of writings, both original Syriac and translations from Greek, both published and unpublished (when these exist in early manuscripts), up to the end of the seventh century. Once again, however, the [176] proper organization of all this is a task for the future, awaiting the availability of time. At present the most advanced collection concerns adjectival forms in *–āyā*, which show a very large expansion over the course of the fourth to seventh centuries, thus providing some very useful criteria for dating undated texts or ones of disputed authorship.[31]

Not surprisingly, new formations are very often first attested in translations from Greek, a language which of course is far richer than Syriac in adjectives.

Although these systematic collections of select materials remain very incomplete (and so have not been analysed in any detail), they nevertheless have made two things abundantly clear:

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[27] See note 25.

[28] That is, dated or datable to the fifth to seventh centuries.

[29] A preliminary study based on materials collected from Narsai is given in "Greek Words in Ephrem and Narsai: a Comparative Sampling," *Aram* 11–12 (1999–2000): 439–49.

[30] "Diachronic Aspects," 321–30.

[31] Some examples are given in "Diachronic aspects," 327–30.

1. They have thrown up a certain number of derived forms which are not recorded in any of the three large dictionaries.
2. In quite a number of cases they allow chronological patterns to be discerned, thus providing a very useful tool in dating anonymous texts.

The process of collecting this material has also offered some interesting sidelights on the comparative coverage of the three main dictionaries. As a sample test case I took all the non-verbal derivatives with initial *Mim* (that is, derived from *pa"el* or *af'el*)[32] listed under the letter *Beth* in the *Thesaurus*, the *Lexicon* and the *Simta*. The results turned out to be quite surprising in that they highlighted some major differences in coverage for these particular categories of lexical entries in the three dictionaries. These differences concerned two separate aspects: (1) the number of verbal roots possessing such derivatives; and (2) the total numbers of such derivatives. Thus (1), the total number of verbal roots beginning with *Beth* possessing such derivatives is 76, of which 32 are only to be found in the *Simta*; moreover, only 4 are not in the *Simta*, but present in either the *Thesaurus* (three examples) or *Lexicon* (one example). And (2), the total number of derivatives in these categories with first radical *Beth* is as follows: *Simta* = 363; *Thesaurus* = 97; *Lexicon* = 45. My own collections of materials have produced at least a further seven lexical items under first radical *Beth* that are not found in any of the three large dictionaries. The astonishing difference between the *Simta* and the two Western
[177] dictionaries in the total number of derivatives to be found may be due to Audo's having made use of Syriac literature produced after the fourteenth century, since a number of new formations may have appeared in the seventeenth to nineteenth centuries, when numerous translations into Syriac were made from both Latin and Arabic.

Although these findings are based on a single letter, it seems likely they will prove typical for the rest of the alphabet as well, and so will probably have certain implications for the eventual coverage of Syriac in the Comprehensive Aramaic Lexicon.

Undoubtedly Syriac provides one of the biggest challenges for the Comprehensive Aramaic Lexicon, and the early plans for how this dialect of Aramaic might be covered were over-ambitious and quite unrealistic. Clearly some selection with regard to what is covered will be necessary, and some suggestions for possible practical ways forward were submitted in response to the relevant circulars that had been sent out for comment.

In reaching any decision over what the parameters of any selection of texts should be, a great deal will depend on prior decisions concerning the intended scope of the Lexicon.

The following remarks, however, are applicable to any proposed new large-scale lexicon of Syriac.

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[32] Thus, e.g., ܡܬܒܬܒ, ܡܒܠ-, ܒܢܐ- etc.

Given the absence of any electronic corpus of texts comparable to what is available for Greek, the only practicable way forward would be to use as the starting point the materials already available in three existing major dictionaries of Syriac, and to build upon this basis by means of supplementation, for the large part drawn from texts published after 1928. In the case of Ephrem, it would be particularly important to aim at better coverage, using the editions in CSCO and elsewhere, and replacing any references to the eighteenth-century edition. Materials from major writers such as Philoxenus, Jacob of Edessa, the East Syriac monastic authors, Dionysius bar Ṣalibi and Barhebraeus would all need to be excerpted, and translation literature should also be included, covering a representative selection of what has been edited of both patristic authors (Gregory of Nazianzus and Severus would be particularly important) and classical writings (for example, what survives of translations of Aristotle's logical works).[33] Liturgical texts, too, would be an important source, in particular the West Syriac *Fenqitho* and East Syriac *Hudra*, both of which contain prayers composed in the [178]
early centuries of Arab rule and revel in unusual vocabulary. Seeing that so many important works have not yet been edited, it would also be necessary to draw on a judicious and representative selection of unpublished texts, both by Syriac authors and translations.[34] On the other hand, it would probably be wise, for a variety of reasons, to exclude the rather large body of Syriac texts produced in the last half millennium or so; twentieth-century Syriac literature, in particular, would best be treated separately.

Such a task of supplementing the combined resources of the three existing major dictionaries, although formidable, would be a manageable undertaking—provided, of course, the resources, financial and of suitably qualified personnel, could be found. And indeed, on a smaller scale, it would be desirable if a database of materials could be built up gradually, and to which editors of new texts could contribute individually, so that this would eventually become a major lexicographical resource for Syriac scholars, and one from which one day in the distant future a new major Syriac lexicon might be compiled.

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[33] The list of editions of main Syriac authors and of translations given in the bibliographical section of T. Muraoka, *Classical Syriac: A Basic Grammar with a Chrestomathy* (PLO n.s. 19; Wiesbaden: Harrassowitz, 1997), pp. 135–46 could serve as an initial guide for making any such selection.

[34] E.g. Iwannis of Dara, and the Dionysian Corpus, to give but a single example of each category.

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