

BOOK REVIEW



Scholar's Library: Platinum—Logos Bible Software 4. Belling WA: Logos Research Systems Inc., 2009. Software. Download. US\$ 1,689.95. <http://www.logos.com/gold>

I feel fortunate to be doing biblical research at the time that I am, during the advent of Bible software. I cannot imagine doing my scholarly work apart from the assistance of these tools, which gives me all the more respect for the previous generation of scholars who worked quite capably without them. Certainly Logos has distinguished itself as one of the major players in this highly specialized industry. I have been using the program since 1998, so I have seen it go through quite an evolution. But I must say, the most recent installment of *Logos Bible Software Series X* in the 4.1 (with the most recent update) platform stands out as the most substantial development of the program so far. A fair assessment of software such as this should include two levels of analysis: its efficiency as (1) a piece of Bible software and (2) as a tool for biblical research. In the course of my evaluation within these broad (sometimes overlapping) categories, the reader should keep in mind four caveats. First, I am approaching this review from the distinct perspective of my field, New Testament studies. So I am particularly interested in exploring the facility of the program in assisting scholarly research of the Bible. Secondly, as a Mac, iPhone (iPad, iPod touch) application and PC user, I also hope to comment on the benefits and efficiency of the system on these various platforms in which it is currently offered, where I can. Thirdly, I have already provided an extensive review of Logos 3 in *JGRChJ* (<http://bit.ly/4WsbnF>) and do not wish to repeat those remarks here, so this review builds on what I said there and focuses on the developments from Logos 3 to Logos 4, which are several. If readers are not familiar with Logos 3, they should read that review first. Fourthly, while I hope to note a number of ways that the program could be developed, these are not intended as

criticisms per se. There will always be resources that can be added or interface tweaks that can be made. The program as it stands is an impressive piece of software, well equipped to serve the needs of biblical scholars. The industry represented by the amount and quality of texts and tools produced by Logos in the past several years substantiates Logos's promise to continue to push the limits of technological biblical research on to new significant frontiers. My hope is only to comment on the kinds of directions that would be most helpful for New Testament study as the designers continue to build upon this outstanding program. I really only have one genuine criticism of the program, which I will offer in the final section of this review against the background of praise.

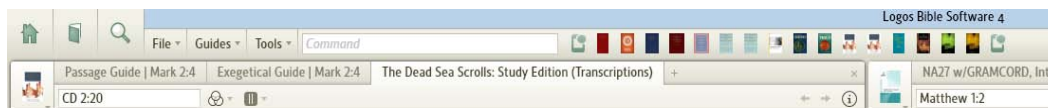
Software Analysis

Four criteria help assess the quality of Logos 4 as a piece of Bible software: (1) Interface and Usability, (2) Integration, (3) Technological Sophistication and (4) Compatibility and Installation.

1. *Interface and Usability.* The interface and speed of Logos were issues of concern in previous editions of the program. I remember actually buying a custom built PC with the fastest available processor and hard drive at the time just so that I could run the program. I am not sure if the standard hardware has finally caught up with Logos or vice versa, but I am running Logos 4 on moderately fast PCs (Intel 3.0 dual core, one with Vista and one with Windows 7) and a MacBook Pro (Intel 2.4 dual core with OS X 10.6 Snow Leopard) and the program runs very efficiently in all three environments. Some of the earlier beta versions for Mac did not perform at optimum levels, but this has been corrected with the release of some of the later beta editions, and now especially with the full version of the program. In any case, the response time, from opening and closing the program to searches to the text that populates pop-up windows, has been improved significantly. While the iPhone app remains a bit more sluggish, who can complain? The price is right—free. And it allows access to a large majority of your library—including commentaries, original language texts, lexicons and many more besides—on your phone!

Perhaps the most substantial—if not, at least the most noticeable—improvement within the Logos 4 system is the new interface. The

design, functionality and display have been redeveloped from the ground up. As far as the design goes, Logos now features a web-based news feed as the default home page that highlights resources within your library, various articles and the most recent pre-publication releases. What appears on the news feed is customizable. I have limited mine to pre-publication offers and featured resources—which is nice because it reminds me of texts I sometimes forget I have, given the size of the library. From the home page you can conveniently navigate to your Library, the Search panel, File options, one of the Guides (automated reports that search your library) or Tools (for organizing your library). A very handy feature, improved from Logos 3, is the short cut menu. You can provide image-based shortcuts along your tool bar for things you often use. I find it convenient to keep Passage and Exegetical Guide shortcuts here, as well as the main primary texts that I tend to use in my research: Philo (Greek and English), OTP (Greek and English), *The Dead Sea Scrolls: Study Edition*, and so on. The Command Line allows the user to work without a mouse. For example, instead of using multiple clicks to open my library, find a resource and finally open it, I can access the resource I need more efficiently with the ‘Open’ command followed by the resource title, or in many cases by just typing in the last name of the author or a resource abbreviation (e.g. BDAG), which will bring up the Open function within the pull down menu. The ‘Go’ button allows instant entry into the tools that the program provides for studying a particular text or topic. Once you’ve built up a user history, you can then access and/or save previous workspaces through the Layouts feature. You can choose your preferred Bible from the home page, but it would be nice if you could choose parallel original language and English resources so that when you hover over verses the English and original language have parallel displays.



1. *Interface and Shortcut Menu*

In terms of functionality, Logos 4 marks substantial advancements within the program. The tabbed interface provides the ability to conveniently organize complex workspaces—all tabs are mobile and can quickly be expanded, relocated or converted to a floating window. Within about 18 seconds of typing Gal. 4.6 into the Go pane on my

Vista based PC and 16 seconds on my MacBook, Logos 4 opens the Passage Guide, Exegetical Guide (although by the time it opens these are still populating), my top five preferred Bibles, Bruce's Galatians in



2. Go Command Results for Gal 4:6

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the NIGTC, an Information Window (which pulls up BDAG as I hover my cursor over the Greek text) and a Text Comparison Window (featuring the verse in consecutive comparison in various translations). The Text Comparison Windows feature has lots of potential, but

currently, its customizability and functionality remain highly restricted—you cannot access morphological tagging, full view options or copy-paste functions from this window, for example, all of which would be very helpful. With the exception of the Guides, all of this is customizable, expandable and linked. You can open new tabs to expand your work space to include further parallel resources, whether commentaries or translations. One helpful development here is that each resource in the Passage Guide opens into a separate tab rather than replacing the open commentary on a given passage (as in Logos 3), facilitating ease of comparison between commentaries. If you change the passage in the Bible display from the Go command workspace, all panels/tabs change with it. Although the Guides are not linked by default, linking the Guides to the other resources is a fairly simple procedure. This function of the interface highly increases the utility of the program.

The Logos designers have improved the bibliographical functions of the program as well. Instead of having to go back to the title page of a book every time I cite it, I can now click on the Information icon, which includes (among others) SBL Style citation with a convenient Copy option. While I highly value this feature, it does need some improvement. First, biblical scholars typically only need Bibliography formatting when writing books or in social scientific format. But since most of us are also engaged in writing articles and papers, we need SBL footnote citation style much (perhaps more) of the time, which the

program does not include at this stage. You can get footnotes style through cutting and pasting from a Logos resource into a document editor, but for frequent occasions where an author is not cited verbatim, footnote style would be helpful in the Information panel. Secondly, I have not found the information to format correctly consistently according to SBL Style. As one example (though I have found several), Logos provides the following format for an anthology of Vermes's previously published papers: Vermes, Geza. Vol. 56, *Scrolls, Scriptures, and Early Christianity*. Library of Second Temple studies. London; New York: T&T Clark, 2005. Notice a few things here: (1) 'Vol.' should be deleted altogether; (2) '56' should come after the series name, not after the author; (3) 'studies' should be capitalized; and (4) 'London;' should have a colon not a semicolon after it. The correct format would be: Vermes, Geza. *Scrolls, Scriptures, and Early Christianity*. Library of Second Temple Studies 56. London: New York: T&T Clark, 2005. These are easy fixes though and from what I understand, Logos is currently working to improve accuracy at this level for future updates. The Library has also undergone some helpful renovations. If I type in 'Clement' my library pulls up ANF II and VIII, volumes within which his writings are included. However, on my Mac I noticed that you cannot use the arrows to scroll down books within the library as on the PC version of the program. This should be synchronized. The books themselves also seem more deeply indexed. If I type $\alpha\lambda$ into the search bar for BDAG, a list of Greek words beginning with $\alpha\lambda$ immediately pulls down. Greek lexica have also been organized more concisely so that instead of the sidebar listing every word that begins with α and then providing an alphabetical list until we reach β , several sub-ranges have been added, e.g. ἄγγελος to ἀγριέλαιος. One feature that has been removed from previous editions is the colored key linking for different kinds of links. All links are now in blue. I think this should be restored. I found the color coding helpful.

The display also marks a drastic improvement from previous versions. The books display more like an e-reader now with high resolution Unicode fonts, almost comparable to an Amazon Kindle—very impressive. Logos 4 also has a reading mode for an even better display when reading large portions of text. With the exception of journals and Wallace's *Greek Grammar*, I thought that the page number function in Logos 3 and before was inadequate. I never could know for sure if I was citing the correct page. That has been corrected in version

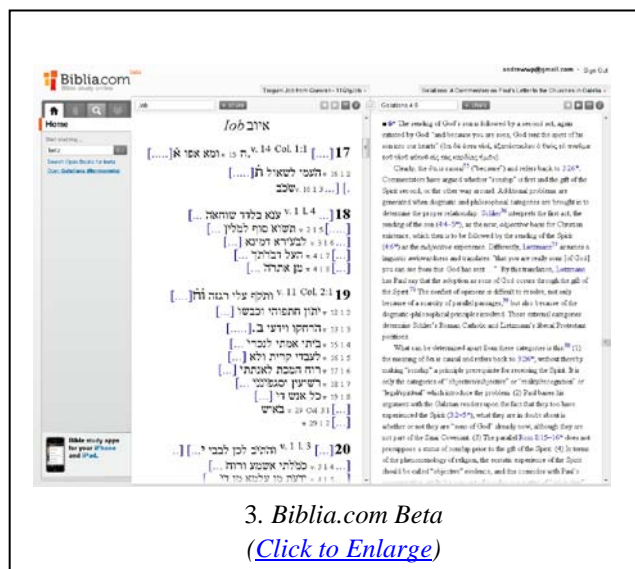
4. Now page breaks can be displayed precisely to represent the print editions of most books (which makes these texts feel and work more like print books)—pagination is still lacking in some of the more pedagogical resources, which I am fine with in most cases. I would prefer having page numbers in all of the IVP Dictionaries, however. I may cite these dictionaries on rare occasions. Images for each book have been attached to the relevant resources, which—as with the pagination function—gives the user a greater sense that they have purchased and are using an actual library. The display for tagged original language texts has been developed in a helpful direction as well. The floating pop-up window (see the above display for πνεῦμα) as you hover over Greek or Hebrew words is an improvement (unfortunately, one not present in the Mac version of the program), but I think that the display here could still be improved—it could be bigger and the information runs together at first glance since it all displays in the same font: perhaps the original language font could be in bold, the morphological data in plain text and the gloss in italics. This would make the display more visually efficient in my opinion. The response time for the information window also still lags in my PC version of the program (3 to 4 seconds per word), but pulls almost instantly in on my MacBook Pro. Hopefully the speed here can be improved in future updates/editions for the Windows edition and it is good to see that some elements of the Mac version constitute a general improvement on the program. In general, the aesthetics of the program are highly appealing—some of the best compared to any of the programs I run, Bible software or not—from the fonts to the multi-leveled display of the books themselves. However, on the PC version of the program (but not on Mac), the fonts used for the sidebar (e.g. within various lexica), search results, Exegetical Guide and the Text Comparison window look primitive and should be converted to a more aesthetically pleasing font consistent with the rest of the program.

2. *Integration.* The Logos 4 system features two primary levels of integration: internal resource integration and external web integration. Logos succeeds with excellence in the first category and has clearly begun taking steps in the direction of the second. The library's resources are highly integrated within themselves in several dimensions. The texts are key linked to one another where they are mentioned. For example, when an author cites Josephus or 4QMMT the

user can easily navigate to that primary text by clicking on the key linked word. The texts are also key linked to themselves so that when an author cites a previous section or page number in the book, the user can click on the link or hover over it to examine the relevant passage. The same is true for abbreviations (each abbreviation is linked to the book's list of abbreviations), which is quite helpful in sources like lexica or textual apparatuses that remain highly dependent upon their lists of abbreviations in their descriptions. Logos also comes with a number of indexing tools that help organize various related resources through easy to access Guides. More features could be mentioned at this level, but these are the main ones. Logos has also begun integrating their system to web-based technologies through, for example, hyper-linking the Perseus Project to their tagged Greek New Testament. Much more could be done here, however. For example, <http://OpenText.org> hyperlinks could be created in association with OpenText.org resources in Logos if users would like to view more linear syntactic representations. Or excellent web-based text-critical tools could be hyper-linked from the textual apparatuses portion of the Exegetical Guide, such as <http://codexsinaiticus.org>, which allows users to view photographs of Codex Siniaticus online. So with a click within Logos, a user could view the photo of Siniaticus for the end of Mark's Gospel here: <http://bit.ly/cuKy3T>. Goodacre provides a list of available online MS images on his site that provide a starting point: <http://bit.ly/91PB45>. Even the Perseus tool could be featured more directly, perhaps in the Word by Word portion of the Exegetical Guide. Lots of possibilities remain to be explored here.

3. *Technological Sophistication*. Logos wins the technology award as far as Bible software is concerned. They seem sensitive to the devel-

opments of Web 2.0, providing their users with communal, interactive technology on a number of platforms for free once a user has purchased the initial software. The 'Report Typo' feature (accessed by right clicking on the typo), for example, provides every



3. *Biblia.com Beta*
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user with the opportunity to help improve the quality of the program's resources. The pre-publication program offers users the power to collectively decide what resources will come to Logos next. Their <http://biblia.com> site, although still in beta mode, seems quite promising along these lines. With your user account, you can access much of your Logos library and tools online from any machine. It seems as though it will have a social networking feature as well. I must say that I like the idea of being able to use my Logos library from any place that has an online connection. The synchronization across the platforms on which Logos is installed is also impressive. Any changes I make to my Mac version of Logos are immediately synchronized with my version of the program on my PC and vice versa. The development of these independent technologies on which their software can run—PC, Mac, iPod and online—shows a commitment from the company to making their product accessible to its users and keeping their program up to date with the most recent developments in software and web design to accomplish this end.

4. *Compatibility and Installation.* Related to the technology issue, I should briefly mention the compatibility and installation of the software. Since Logos can run and synchronize on several platforms, compatibility within different computing environments is not a problem. The exclusive use of Unicode font technology solves compatibility issues related to copy and paste functions—although cut and paste RTL fonts with complex scripts (e.g. Classical Hebrew, Aramaic) from Logos to Microsoft Word for Mac remains a problem, a problem caused by Word rather than Logos. Logos also stores each user's account on their servers so that users do not have to hassle with keeping their product backed up on DVDs. I was able to install Logos on all four of my devices with a simple download. This also eliminates shipping costs and wait times for materials. Logos 4 also features automatic updates, but as far as I can tell users are not given a report of what was changed on their system. It would be nice if they did.

Efficiency for Academic New Testament Study

When I spoke with the editor from *JGRChJ* and then with the representative from Logos, I expressed my interest in reviewing Logos 4 from the perspective of what it offers strictly in terms of 'Original

Language Texts and Tools for New Testament Study'. As a result, this review covers not only Logos—Scholar's Platinum edition (<http://www.logos.com/platinum>) but also some of the best supplementary resources offered by Logos and how these tools can serve New Testament scholars. I want to explore, specifically, what configuration of this program is optimal for sustained academic study of the New Testament. In the increasingly interdisciplinary world of biblical studies, three domains of analysis remain foundational: (1) text criticism; (2) grammatical study; and (3) historical context. One might also add biblical theology, but theological understanding of the New Testament really only emerges from a proper consideration of these more foundational levels. Beyond this, scholars need to compare their results with those from others working in the field through a consideration of the secondary literature. So I shall consider this as a fourth, but separate, category. The Logos Exegetical and Passage Guides seem to have been designed with these (among other) interests in mind. My main goal in collecting Logos resources has been to acquire resources that support these foundational levels of research, which usually tend to be the ones that the Guides organize and report on. This means that the materials I do buy are indexed according to my study of the biblical text.

1. *Text-Critical Analysis*. 'Apparatuses' occupies the first panel of the Exegetical Guide in Logos 4 in the default organization. Scholar's Platinum comes with Tischendorf's four-volume *Novum Testamentum Graece*, a dated but still significant resource, in many cases providing more comprehensive assessment than the apparatuses put out by UBS. For my own research, the Stuttgart Electronic Study Bible, which includes the BHS, the German Bible Society Septuagint and the Nestle-Aland critical apparatuses are also necessary. Although Tischendorf's work was a comprehensive and impressive edition at his time, many MS discoveries (esp. the papyri and, for the Old Testament, the Dead Sea Scrolls) make having more recent critical texts a must for the biblical scholar. So the Apparatuses section of Exegetical Guide pulls these resources for me as well. Perhaps the most helpful feature about Logos's digital version of these editions is the rich levels of tagging that they have. Every abbreviation is key linked to MS or abbreviation descriptions so that you can instantly access the profile for the MSS you are exploring. I find these digital resources far more helpful than the

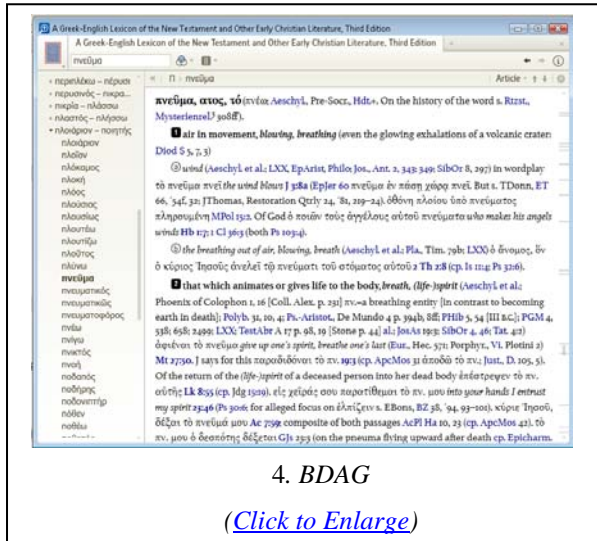
print editions in which one needs to look up the dates, province, etc., for more obscure MSS. In Logos, that data remains a click away.

Logos shows promise in providing the kind of data scholars want by including this section, but I think it could be developed to pull more data. For example, I use Metzger's *Textual Commentary* (which comes with the Platinum edition of Scholar's Library) in the text-critical part of my investigation into a biblical text, along with my apparatuses, to see why the UBS committee made the decisions they did. So, at least with respect to my own conception of biblical research, this resource would fit most naturally here rather than with the commentaries in the Passage Guide, as it currently stands. Comfort and Barrett's *The Text of the Earliest New Testament Greek Manuscripts*, another stock resource with Scholar's Platinum, would also be a beneficial tool for assessing textual history as would (where available) a hyper link to text-critical sites with MS images for these papyri. Logos embeds images for Power Points from external sites. I wonder if a similar technology could be used for MS images. Reproductions with morphological tagging of other MSS such as the major codices (e.g. Vaticanus, Siniaticus, Bezae, etc.) could be of help here as well. These data would actually facilitate examination of the MSS themselves or at least, in some cases, reproductions of them. Logos has initiated development of the Göttingen LXX, an excellent tool, which will provide further material useful for critical investigation of the LXX and its use in the New Testament. Of course, my suggestions here go beyond mere 'apparatuses' to text-critical analysis more generally, but the ability for scholars to evaluate the MSS first hand—whether in digitally reproduced or photographic form—from the Logos platform would be an invaluable feature.

2. *Grammatical Analysis*. I conceive of grammatical analysis not as a limited assessment of individual linguistic structures but as form of interpretation that considers meaningful units of language, from the bottom up and the top down, in the context of the language system as a whole. Logos provides tools that help each of these dimensions of linguistic analysis, including a wide selection of Greek (1) lexica and dictionaries, (2) grammars and (3) syntactic and discourse tools. Resources from each of these categories populate the remaining panels of the Exegetical Guide. Grammars follow Apparatuses in the report, then Visualizations (where syntactic tools display) and finally the Word by Word panel, which collects lexicons and dictionaries while also

providing convenient, graphable word counts broken down per New Testament book. The user can change the default order of the panels, yet another customizable feature. I like to begin with the Visualizations section, then Grammars, then Word by Word to give a nice top down flow to the analysis.

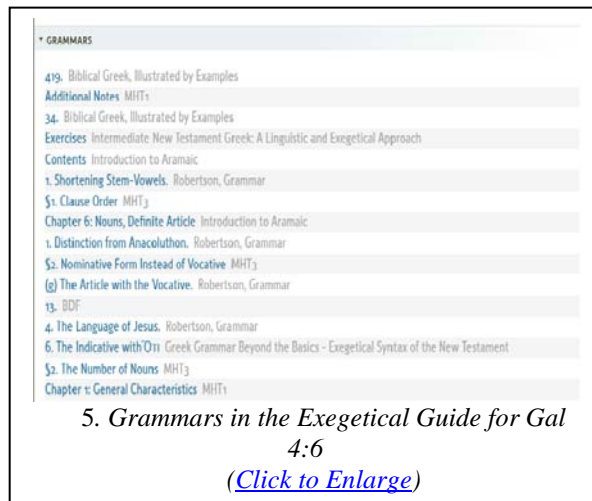
Lexica and Dictionaries. With the upgrade from the Gold to the Platinum edition of Scholar’s Library, the user gets BDAG as part of their base package, an essential for New Testament research. BDAG is typeset and formatted very nicely in its print edition and Logos does an excellent job duplicating these features. This standard lexicon, being as it is highly dependent on often obscure abbreviations, provides another example of a resource where the key-linked pop-up windows help significantly when using the tool. Low and Nida’s semantic domain lexicon comes with Platinum, a significant resource not only for lexical semantics but also broader linguistic analysis of the New Testament text. All that is missing is LSJ and Moulton and Milligan, which can be added to beef up the Word by Word analysis a bit. Platinum includes several dictionaries as well, most notably Kittle’s *TDNT* and Balz and Schneider’s *EDNT*. Good additions here are Brown’s *NIDNTT* and Spicq’s *TLNT*. Kittle’s dictionary has come under fire due to the criticisms of Barr and others, but Brown, in particular, represents a domain-based approach to his classification that appears to avoid some of these fallacies, so at least his would be an important supplement to the *TDNT-EDNT* combination. With this set of resources—the ones that come stock with Platinum plus the supplementary ones I mention—scholars should be able to see what the most important lexica and dictionaries have to say about a New Testament word in their passage.



4. BDAG

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Grammars. Logos upgrades the Greek Grammar portfolio in Platinum by adding Robertson's *Grammar of the Greek New Testament*. That helps the situation a little but the Platinum edition still remains quite light on solid reference grammars. Burton's *Syntax of the Moods and Tenses* is the only other Greek grammatical text that goes beyond the fundamentals, but as with Robertson, this source is quite primitive in its



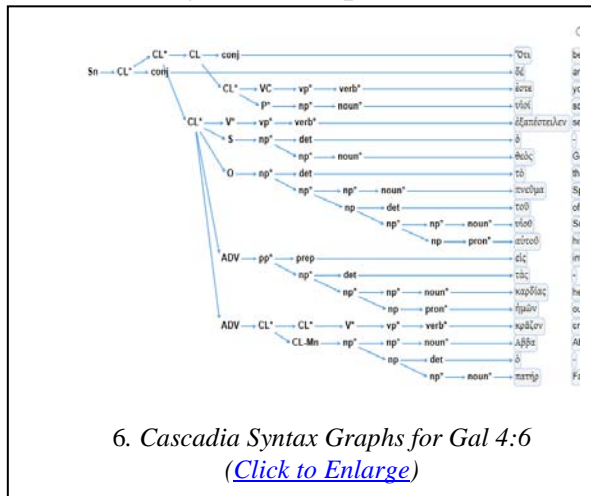
approach. Fortunately, Moulton-Howard-Turner's *Grammar of New Testament Greek*, BDF, Porter's *Idioms*, Wallace's *Greek Grammar*, Zerwick's *Biblical Greek* and Young's *Intermediate New Testament Greek* can and should be acquired if one intends to use Logos as the primary conduit for grammatical assessment of the Greek

New Testament. The great thing about having Greek grammars in Logos is that these resources populate in the Grammars panel of the Exegetical Guide every time the passage under consideration is mentioned in a particular grammar. So if a user is writing a paper, article or monograph and desires to see what the grammarians say about their passage, that information is now readily accessible rather than having to flip through several indices. For this reason, I prefer collecting my reference grammars in Logos. Logos clearly recognizes the need for expanding their assortment of Greek Grammars. They have a number of important older grammars, such as Winer and Buttman, available in their pre-publication system, currently only 'Gathering Interest'. A collection entitled 'Biblical Languages: Reference Grammars and Introductions' (<http://bit.ly/cZORw0>) is another pre-publication release. I really appreciate this concept and several of the grammars included (the ones by Abbott, Smyth, Goodwin and Monro are quite excellent resources for Greek grammatical study), but while this is helpful at some level, New Testament scholars probably do not have as much need for the several Syriac, Latin, LXX and Hebrew grammars in the package as they do for other resources. Perhaps a more New Testament Greek focused collection might include Moule's *Idiom Book*, Gignac's *Grammar of the Greek Papyri*, Mandilaras's *The Verb in the Greek*

Non-Literary Papyri, Gildersleeve and Miller's *Syntax of Classical Greek*, Krüger's *Attic Greek Prose Syntax* and/or Funk's *Beginning-Intermediate Grammar*. I understand that there is a process and that sometimes marketing or copyright or other restrictions account for why such materials have not been made available, but while I believe that we need more grammars in Logos—at least in terms of New Testament study—this collection aims too broadly. I suppose that the collection targets biblical scholars rather than those working with a particular corpus, but the reality is that those who work in biblical studies focus mainly on either the Hebrew Bible or the earliest Christian writings (Logos has, however, showed these testamental sensitivities in their organization of other packages). At the same time, however, I must register my appreciation that so many excellent grammatical tools are available. I confess—with the exception of Moule's *Idiom Book*—the grammars I mention are not as foundational as, say, Robertson, BDF or Porter, but in my view, New Testament interpreters would benefit much more from these than from Latin, Syriac and LXX grammars. Nevertheless, the several out-of-print New Testament Greek grammars that come with the collection as it stands are probably worth the pre-publication price.

Syntactic and Discourse Tools. Logos began adding syntactic and discourse tools to their portfolio with Logos 3.0. The first two databases they added were the OpenText.org project and the Lexham Syntactic Greek New Testament. Of course Logos includes a number of morphological databases, but what is significant about the syntactic tools is that they attempt to mark the text beyond the word level. These New Testament texts are also tagged with Louw and Nida semantic domain information, opening numerous further possibilities for linguistic analysis. Any worthwhile engagement with biblical Greek must come to terms with the way lower-level phenomena (morphemes, words) function meaningfully with higher-level phenomena (word groups, clauses, clause complexes, paragraphs, etc.). These tools, especially the OpenText.org materials, provide an excellent entry point into this kind of analysis. I did an extensive assessment and application of these databases with the Logos search tool in my review of Logos 3.0 Scholar's Gold in *JGRChJ*, so I will not repeat those efforts here, other than to note that the Lexham syntactic database, which was incomplete at the time of that review, now covers the entire New Testament.

Since my last review, Logos has added two syntactic databases that deserve mention here: (1) the Cascadia Syntax Graphs of the New Testament and (2) the Lexham Discourse Greek New Testament. The first tool comes with Platinum, the second can be added for US\$ 149.00. The Cascadia database, developed by the Asia Bible Society, resembles the OpenText.org analysis (Randall Tan worked on both) but uses more traditional categories for its analysis. For example, instead of Complement, the creators use Object and Indirect Object and instead of Adjunct, use Adverb or Adjective, to describe clausal components. At the group level, the creators use designations like Verb Phrase, Noun Phrase, and so on, terminology familiar to traditional linguistic models. However, the analysis goes beyond the OpenText.org displays in annotating the clause complex or sentence level while OpenText.org restricted its syntactic description to the clause level and below. This constitutes a healthy development. We also get more precision in dividing types of Complements and types of Adjuncts with these categories. In contrast to the OpenText.org displays, the Cascadia graphs emphasize word-phrase function and type rather than their syntactic relations to one another, although they display a number of syntactic relations as well. However, at the clause level OpenText.org resources contain deeper analysis of types, describing primary, secondary and embedded kinds of clauses. The analysis itself seems consistent with the OpenText.org displays (i.e. syntactic boundaries are marked consistently between the two databases) based on my cursory comparison of the two. These databases then provide a nice complement to one another, offering a helpful addition to the syntactic capabilities of Logos.



6. Cascadia Syntax Graphs for Gal 4:6
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The designers clearly do not view the Lexham Discourse Greek New Testament as a syntactic database like the others I have mentioned. It is not annotated as a syntactic graph display, but as a searchable Bible. The emphasis remains not on providing users with the ability to perform searches in order to acquire customized results, but on providing the results themselves. Whereas with the previous two

databases, a syntactic query must be created to discover how many fronted complements occur in primary clauses in Mark, the Lexham Discourse Greek New Testament attempts to provide some of this information prepackaged for the user—the fronted structure itself is annotated rather than its constituent parts. If we conceive of discourse analysis in terms of the study of prominence, information structure/flow and cohesion at the various linguistic levels of a text (from word to discourse levels), this tool focuses primarily upon the analysis of prominence and information flow. This can be seen in the fact that it gives attention to cataphoric (forward referring) but not anaphoric (back referring) devices (e.g. grammatical substitution, monolectic reference, pronominal reference, etc.). Although this resource adopts a more eclectic discourse model (with strong inclinations toward the SIL method as represented by Levinsohn) than the functional perspective that I prefer to employ, I am still able to take advantage of its analysis. For example, historical presents remain significant for any model of narrative linguistic criticism. To retrieve a report of the use of all historical presents in, say, Mark, simply use the command <LDGNT = Historical Present> in the search panel while limiting the results to Mark's Gospel. Several other discourse phenomena related to prominence (e.g. μὲν...δέ constructions, negation with ἀλλά, redundant speech frames such as ἀπεκρίθη καὶ εἶπεν) and word order (e.g. fronted elements in primary and secondary clauses, kinds of fronted information: temporal, spatial, etc.) can be quickly located in this way. Anyone serious about linguistic criticism of the Greek New Testament will find much of this information very useful and difficult to get in other places without creating elaborate search equations, further enhancing the potential for discourse analysis using Logos.

3. *Historical Analysis.* For historical analysis, interpreters need a solid selection of—preferably morphologically tagged—primary source texts from the Hellenistic period, Jewish, Christian and Greco-Roman. With Scholar's Gold, users got Philo in Greek and English, and in English only: Josephus, ANF, two editions (Hone and James) of the New Testament Apocrypha (new to Gold and Platinum), *The Nag Hammadi Library* (Robinson) and Charles's *Apocrypha and Pseudepigrapha of the Old Testament*. Now with Platinum you also get two editions (Lake and Lightfoot) of the AF in Greek and English. To get Josephus and the OTP in Greek, one has to upgrade to the Portfolio edition or buy them

separately. In addition to these resources, access to *The Dead Sea Scrolls: Study Edition (Transcriptions and Translations)* will be important for historical analysis. The availability of original language primary source texts was an area I noted in need of improvement in my review of Scholars Gold, and Logos has pushed forward positively in this direction. Since then, in addition to the helpful addition of New Testament apocryphal texts in English, they have completed Josephus and the OTP in Greek as well as the Charlesworth OTP in English (a superior edition to that of Charles). They have also produced Neusner's edition of the Mishnah in their format and have begun work on Neusner's editions of the Babylonian and Jerusalem Talmudim. These mark important developments and illustrate Logos's concern to provide scholars with quality primary texts, especially from early Judaism. The first 15 volumes of the Oxyrhynchus Papyri (<http://bit.ly/asakhl>) as well as Migne's PLG (<http://bit.ly/9iVUmj>) have been placed on pre-publication, but unfortunately it seems that the number of Logos users with a desire to work with such significant texts must be small because these sources have been stuck in the Gathering Interest phase of their pre-publication program for some time now. Although the Oxyrhynchus papyri are available on Perseus, the Logos format would be far superior in terms of access and ease of use. Beyond their obvious value for textual criticism in many cases, the papyri provide vast amounts of comparative material helpful for understanding the literary, linguistic and cultural contexts for the New Testament. It is shocking that more students of the New Testament have not showed interest in having these texts available within the Logos platform, especially considering how quickly more elementary tools and pedagogical kinds of resources move from the Gathering Interest to the Under Development stage. Hopefully Harvard University Press will release the rights to the Loeb Classical Library (LCL) series. They have released to Logos a Classics and Fiction Collection, but what we really need is at least the Greek series of diglot texts provided by the LCL collection, a number of which are public domain. That would provide the balance needed on the Greco-Roman side (thankfully, we have the most important Jewish texts) to do sustained historical research on the complex social matrix for the emergence of early Christianity and its literature. Alternatively, perhaps pursuing relations with UC Irvine and TLG project could allow access to some of these classical resources in Logo's format. Before moving on I should note that the abilities to search the English versions

of these sources needs improvement. We need the ability to search them with the same precision with which we are able to search Bibles. Currently the Basic search yields lots of false hits due to introductory material, notes, etc., contained within them. I would also like to be able to view, graph and analyze the results from these searches in the same way that I am able to do for Bibles. This can be done for the apocrypha and OTP (Charles) but not Philo, Josephus or the Dead Sea Scrolls.

In summary, it seems that much progress has been made by Logos in building the base of primary sources available on their platform. All that is needed at this stage is deeper search potential and more Greco-Roman materials to help balance out the current Jewish emphasis.

4. *Secondary Literature.* Secondary literature remains a central part of biblical study, not only for assessing differing contemporary views, but also for tracing the history of interpretation for a passage. Academic research tends to draw from three main pools of secondary literature: commentaries, monographs and journal articles.

Logos has a very strong foundation of biblical commentaries that continues to expand through their pre-publication system. The Gold Edition came with a decent set of intermediate to advanced level commentaries on the Greek New Testament: Baker Exegetical Commentary on the New Testament (8 vols.), New International Greek Testament Commentary (13 vols.), the UBSNT Handbook Series (20 vols.) and New American Commentary (37 vols.). In Platinum, they have added the Pillar New Testament Commentary (10 vols.), Godet's commentary on Luke (2 vols.), the Baker New Testament Commentary (Hendrickson and Kistemaker) (12 vols.) as well as a set entitled Classic Commentaries on the Greek New Testament (14 vols.). Pillar has some excellent volumes. Godet is a nice addition. I am not sure how many scholars will benefit from Hendrickson and Kistemaker, but the Classical Commentaries collection has immense value, making available excellent exegetical studies from Lightfoot, Westcott, Swete and many more besides. These older commentaries provide important material for understanding the history of interpretation. I am encouraged to see that Logos has expressed interest in developing an entire series of 'Classic Commentaries on...' through their pre-publication program. And again, I am surprised by the lack of interest in them. For example, Logos has made available Classic Commentaries and Studies on Romans (32 vols.) (<http://bit.ly/cmFEbT>), the most frequently studied Pauline letter,

yet the proposed set seems to have stalled out in the Gathering Interest phase while other much lighter weight—and in my view, far less significant—modern commentaries (not to mention names) zip through. These enlightenment era commentaries, scarcely available even in most libraries, by classic scholars like Plummer, Fraser and Stuart, provide interpreters with access to a very important layer in the history of the Letter's interpretation that can probably only be acquired at extremely well-stocked theological libraries (only a few in the world would likely have all of these volumes) or through a collection such as this.

The great advantage of having these and other commentaries in the Logos platform is the ability to pull all commentaries up at the same time using the Passage Guide. I find it much easier to use commentaries in this format because they all align in parallel tabs for easy and quick comparison. So to be able to pull 20 or 30 older commentaries up when writing on a passage in Romans, in addition to the contemporary people (Jewett, Dunn, Cranfield, etc.), would be invaluable. What I have often found is that many of the so-called 'new' theories put forward by modern interpreters have been previously articulated by some of the classics. To mention one of the better examples (a point Stan Porter made me aware of): Dunn's oral theory for Gospel relations had been articulated generations before in Westcott's commentaries on the Gospels and yet Dunn never cites Westcott as his forerunner.

To do serious work with commentaries in Logos, even using contemporary literature, you need to go beyond the resources provided in Platinum, which for the most part consists of the major Evangelical commentaries. WBC, Hermeneia, ICC and the Anchor Bible are among the important mainstream technical commentaries that can be added to the program. The New International Commentary on the New Testament, also a significant resource from an Evangelical perspective, can be purchased as well.

Logos has clearly done a fine job introducing excellent commentaries in their format. Recently, they have begun to take interest in technical academic monographs, having acquired important sets like JSNTSup. I have prioritized my own acquisition of sources, however, in terms of commentaries, text-critical tools, primary texts, grammars, lexica and theological dictionaries, not least due to a finite amount of funds for these tools but also for practical purposes. Platinum comes with a few significant monographs (e.g. Schurer's *A History of the Jewish People* [1890 ed.]) and I have purchased a few sets of monographs (e.g. the

Studies in the Dead Seas Scrolls Collection (<http://bit.ly/9bOsSA>), but I find these materials difficult to use in Logos at this stage since, when studying a passage, I forget what is contained in them, especially in anthologies. You can form a Collection and then search on a passage that way, but then you have to sort through places where your passage is merely mentioned and places where it is discussed, and this procedure remains a few steps removed from the main interface being used to research secondary literature, the Passage Guide. What would make these resources and the Passage Guide more efficient is to include a section on Monographs indicating where in this literature a text is 'discussed' and where it is merely 'cited' as an example.

The same could be done for article literature. Currently Logos has three collections of academic Journals: *Semeia*, *JBL* and the Theological Journals Library. The first two are excellent mainstream journals (*Semeia* comes with Gold and Platinum) whereas the third gathers several Journal collections, primarily from the seminaries, some of which are better than others. Although I would love to see more significant mainstream journals such as *Novum Testamentum*, *New Testament Studies*, *Neotestamentica*, *Biblica*, *Zeitschrift für die neutestamentliche Wissenschaft* and so on, in Logos, I can access many of these through the databases connected with my university library so I am in less of a hurry on these than I am for some of the other texts. However, that I can acquire them online means they are already digitized and could probably be purchased by Logos for reproduction. And if a number of these could be linked into the Passage Guide so that journal articles written on the passage one is considering pull up in the report, this would be far superior to searching something like JSTOR for your passage. I have, in fact, customized my Passage Guide to only include commentaries (among 17 other possible categories, likely useful for many pastors), but if there were panels in the Passage Guide that reported on monographs and articles, distinguishing between where biblical passages are discussed (esp. where the passage occurs in the title of a monograph, chapter or article) and merely cited, I would be far more motivated to buy more of each in the Logos format.

Moving Forward

So far I have made a number of comments about directions in which Logos could move to make their program more appealing to biblical

scholars. This is not to imply that Logos is not sufficiently appealing to scholars already. It is. Such suggestions will always be possible, so in no way do I mean for these comments to take away from the truly impressive nature of the program as it currently stands. Logos is by far the most comprehensive, intuitive, visually appealing, efficient digital library available today for biblical scholars. In providing academically rigorous, carefully indexed, high resolution, searchable texts significant for biblical study, it beats the competition hands down. The design, industry and quality is clearly superb. Everyone involved in the development of this program obviously remains highly committed to producing an excellent product and they have done just that.

The only genuine criticism I have for the program as it stands is this: the current inventory of resources appeals to far too broad a market base. I do not feel that their current lineup caters directly to the needs of the scholar even though the package is entitled 'Scholar's Library'. And my colleagues feel the same way. I asked several of them for feedback on Logos while writing this review and this was the comment I got repeatedly. It was a concern I registered in my first review of the product and wish to reemphasize here.

Let me explain. I probably use less than a third of the resources that come with the base package for Scholar's Platinum, which constitutes a significant amount of resources that I am paying for but not using. Okay, as a reviewer, I get my review copy. Fair enough. But I did spend several hours creating this review and would have loved to have reviewed a product more specifically designed for the needs of scholars. Entire resource categories (pulled from their product comparison chart: <http://bit.ly/a90WB>) that come with my Scholar's Platinum remain obsolete in my daily research. I have never and likely never will use any of the resources found in the Preaching and Teaching (39 vols.), Ministry (74 vols.), Counseling (5 vols.), Devotionals (12 vols.), Theology (188 vols.), Church History (5 vols., not including Early Church Fathers, which is an important set), Apologetics (12 vols.) or Lectionaries (7 vols.) categories. That totals 342 volumes I will almost certainly never use, but which are calculated into the asking price for the set, and some of these were likely quite costly to make, such as Berkouwer's 14 volume *Studies in Dogmatics*. Then, even within a number of the categories of resources, there are books biblical scholars typically have little to no interest in. For instance, I find less than half of the commentaries useful since they approach the text from a popular

or semi-popular rather than a scholarly perspective, including, for example, commentaries by Ironside (5 vols.), Simeon (21 vols.) and Barnhouse (4 vols.) and sets like The Pulpit Commentary (71 vols.), Opening Up Commentary (31 vols.) and the Believer's Church Bible Commentary (19 vols.). There are other examples, but this illustrates my point. Again, this is not to minimize the Platinum edition or the value of any of these resources in particular contexts. I am quite sure many pastors will benefit from having all of these resources in one place and Logos should continue to market the Platinum edition to that market. It also must be kept in mind that even though I believe most academics will find much of the collection obsolete, what will be used is well worth the price, even after you discard the many popular level works. That said, what I would love to see from Logos is lean, focused, specifically academic based packages designed *exclusively* for scholars. The packages could be so much more appealing to biblical scholars if these extraneous volumes were removed and replaced with even half of the equivalent of their value in the kinds of texts scholars require in their daily research needs. They could even keep it so broad as to include both Testaments since, at least in the case of New Testament scholars, there is a tendency to double dip from time to time.

Logos has made an initial move in this direction with the Original Languages Library (<http://bit.ly/cp10kI>). From my perspective, this set-up represents the kind of low end package that would most effectively appeal to the academic market base. It comes with a select number of important academic resources for studying the original languages. From there (on the New Testament side of things), a solid collection of text-critical tools (Stuttgart Electronic Study Bible, the Göttingen LXX), grammars (BDF, Moulton-Howard-Turner, Robertson, Porter, Young, Zerwick), lexica (BDAG, LSJ, M-M), dictionaries (*TLNT*, *EDNT*, *NIDNTT*), primary source texts in Greek/Hebrew and English (OTP, OT and NT Apocrypha, Philo, Josephus, ANF) and technical Greek commentaries (BECNT, Pillar, NIGTC, Anchor, Hermeneia, ICC, WBC, etc.) could be added, leaving aside resources designed for pastors. I think that the cost-benefit ratio of such a package would greatly increase appeal to the academic market.

In an age of increasing technology, scholars cannot afford to ignore the potential for the enhanced efficiency in achieving exegetical results provided by Logos 4. From its interface to its technological achievement to its ability to deliver powerful reports almost instantly within

several foundational domains of analysis, Logos is reinventing the way we think about biblical research.