SOFTWARE REVIEW

Scholar's Library: Gold. Logos Bible Software 3. Belling, WA: Logos Research Systems, 2006. Software. DV. US$1,379.00.
http://www.logos.com/gold

The Gold edition of Scholar's Library is by far the most powerful tool in the Libronix platform so far. This collection, part of the new Logos Bible Software 3 lineup, represents several significant advancements in digital research technology in biblical scholarship. The strategy of the program designers and marketers for this new edition seems to be three-fold: powerful interactive electronic resources, advanced search capabilities and customizability. The extensive nature of the program resists comprehensive assessment, so I will limit myself in this review to an evaluation of its value for New Testament scholarship, the field in which I am currently working. For a comprehensive list of what comes with the software see http://www.logos.com/gold#contents.

Academic study of the New Testament is an exegetically-based discipline and the exegetical task is an interdisciplinary one. The scholar must have the ability to research several dimensions of the text simultaneously: its linguistic dimension, its literary dimension, its social dimension, and so on. Logos has sought to facilitate this need through a number of significant commentaries, lexicons and diction-aries, grammars, text-critical and translation tools, background works, syntactic and synoptic databases and extra-biblical Greek texts.

One of the most appealing elements of this package is its commentaries. While a total of 29 different commentaries and sets are listed on the website, not all of these will be of interest to the New Testament scholar. Warren Wiersbe's Be Series or the Bible Know-ledge Commentary, for example, will probably not be of much use. However, the technical commentaries that come with the program are good ones. The most recent 12 volumes of the New International Greek Testament Commentary (NIGTC) are included, as well as Lightfoot's excellent commentaries on the prison epistles (plus Galatians). All 20

volumes of the UBS Handbook Series on the New Testament come with the program, which work through significant translational and grammatical issues. The New American Commentary (NAC) (both Old and New Testaments, 31 vols.) is not a technical commentary, but it is written by scholars and contains some analysis of more technical interpretive issues in the footnotes. Some of the commentaries in this series are more valuable than others for academic research of the New Testament. The price of these commentaries alone—if one were to buy them new in paper form—nearly justifies the cost of the software. Keil & Delitzch, an older technical commentary on the Old Testament, as well as the UBS Handbooks on the Old Testament are also included, which may be of interest to New Testament scholars, especially those working on issues related to social history, intertextuality and theology. The program is also significantly expandable in terms of the commentaries currently available in the Libronix format. The first 58 volumes of the Word Biblical Commentary (WBC), as well as all of the current volumes of the International Critical Commentary (ICC) (both older and newer editions, e.g. both Ephesians volumes are included—Abbott and Lincoln) can be added to the system (both at a very reasonable price). The Pillar New Testament Commentaries (PNTC) have also been released recently, and the available Baker Exegetical New Testament Commentaries (BENT) and the Hermeneia Series are now being shipped, all of which are important contributions to New Testament scholarship.

While I certainly appreciate having commentaries in paper form, there are distinct benefits to having them in Logos's digital format. First, the sources are interactive at several levels. All abbreviations are hyperlinked, which is especially helpful for sources with rich bibliographical information like WBC or with numerous abbreviations like ICC. One can hold the cursor over the abbreviation to get a pop-up box, and click on it to get the information window to remain fixed. All the commentaries are also key-linked to other significant sources such as *TDNT*, BDAG, Philo and Josephus (as well as biblical texts). Another convenient feature of the digital version is the ability to navigate within the commentary. One can enter page numbers, select headings from the table of contents in the side panel or enter passage references. Instead of having to hold a finger or a book mark at the relevant portion of the commentary while flipping the pages, one can simply use the back/forward and up/down arrows at the top of the screen to navigate

quickly from section to section within the commentary. For example, to get bibliographical information, just click on the title page heading in the side panel, and once the necessary data is retrieved, simply click the back button to return to the place in the commentary. The Logos book-marking feature also accommodates this level of functionality. I imagine that as more resources are added in the future, especially academic New Testament journals and monographs, this will greatly increase the capacity to link into other sources. *Semeia*, an excellent interdisciplinary journal focusing on hermeneutics (esp. literary and ideological criticism) is the only scholarly journal that comes with Scholar's Gold edition, but several significant Sheffield mono-graphs are now available in the Logos platform and a number of others are in the pre-publication stages of development.

Other significant resources that come with the Gold edition are the Greek tools, including lexicons, dictionaries, grammars, text-critical material and a selection of important texts, including some extra-biblical literature in Greek and English. The most significant New Testament lexicon included is Louw and Nida's semantic domain dictionary. Lust's Greek–English lexicon for the LXX and the abridged version of Liddell and Scott's seventh edition are also included, but LSJ and BDAG can be purchased separately. (One would especially benefit from adding either or both of these to the collection since they are thoroughly hyper- and key-linked.) The program also includes two important dictionaries: *Theological Dictionary of the New Testament* (*TDNT*) (10 vols.) and *Exegetical Dictionary of the New Testament* (*EDNT*) (3 vols.). It is extremely unfortunate that Zondervan has not allowed

EDNT (larger view)

Logos to put the *New International Dictionary of New Testament Theology* and its Old Testament equivalent (*NIDOTT*) into their format as well. *TDNT* employs a more primitive approach to word studies but *EDNT*, based on the German original *Exegetisches Wörter-buch zum Neuen Testament*, is a definite improvement on this. Both are important to have, and Logos Gold includes two of the three most sig-nificant Greek dictionaries available. The sheer size of *TDNT* makes the digital format preferable and both dictionaries are richly annotated with several convenient interactive features that make the electronic form of the text more efficient in many ways than the paper versions. All the Scripture

references are key-linked to the preferred version (in blue) and references to other articles in the dictionary itself or in other sources which come with Scholars Gold are key-linked (in red). Most abbreviations are hyper-linked (in green), which is especially helpful with obscure sources and the initials at the end of articles in *TDNT*, i.e. one needn't look the author up in the name index).

The collection is pretty strong in terms of Hebrew grammars, but only includes Burton's *Syntax of Tenses and Moods* and Nunn's *Syntax* for Greek. This seems to be due to the fact that none of the standard intermediate and reference grammars for Greek have been available in digital format (with the exception of Wallace and now Robertson), but most of the best ones are

Metzger's Textual Commentary (larger view)

under preparation and available on pre-publication at the Logos website, including BDF (now shipping), Moulton-Howard-Turner, and Porter (now shipping).

The text-critical aids, however, are impressive. Metzger's textual commentary is included along with Tischendorf's apparatus and Com-

Novum Testamentum Text-Critical Apparatus (larger view)

fort and Barrett, *The Text of the Earliest Greek Manuscripts*. The level and detail of annotation makes these sources in Logos superior to those available in any other format—digital or print. In both Metzger and the apparatus, MSS abbreviations are key-linked with extensive information. The apparatus has such detailed information, I find it helpful to open a permanent information window when using it.

As can be seen in the display above, nearly every reference is key-linked, which supremely enhances the efficiency with which the user can access these types of sources that are heavily dependent on technical notation. It also makes these resources more accessible to the novice or student. Additionally, Scholar's Gold includes the Greek text of Philo, fully morphologically tagged and searchable at the word level, and English translations of the Old Testament Pseudepigrapha, the Church Fathers beginning with the Apostolic era, and the Nag Hammadi Library—all important to the study of Christian origins.
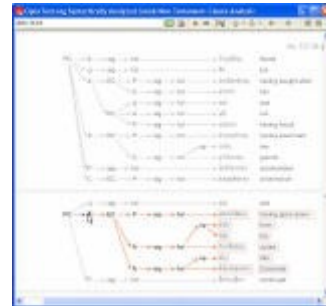
In terms of resources, Logos has far exceeded any other collection of electronic texts for biblical studies with their new Gold edition of

Scholar's Library, providing digital, searchable, interactive access to some of the most important tools in New Testament scholarship. And their unique interface, as well as the extensive key-linking options, makes their system the preferable digital platform for these sources. The enterprise of digital books for biblical scholarship is still fairly open and Logos is to be commended for aggressively aspiring to build their collection with quality texts. There is, nevertheless, room for expansion and improvement. Their agenda for stocking their inventory with critical commentaries is welcome and on track. From a New Testament perspective, however, I think that there should be more focus on accumulating morphologically and syntactically annotated Hellenistic Greek texts for social, literary and linguistic comparison with the New Testament. This is a significant concern for modern New Testament scholarship. For example, Logos might consider working on the pseudepigraphal Gospels, a collection of documentary papyri (this would provide a valuable source for key-linking), an assortment of classical of authors such as Plutarch and Seneca, and so on; adding some of the most relevant volumes (or even the whole collection) from the Loeb Classical Library, annotated at least at the word level, would be indispensable and monumental. They have recently added Homer's *Iliad*, but a selection of Hellenistic texts and papyri would have been far more welcome. Josephus, the Old Testament Greek Pseudepigrapha and the Apostolic Fathers are currently under production, but there is still much room for expansion on this front.

The packages could also be a bit more focused. While Old Testament commentaries, handbooks, background studies, syntactic databases, Hebrew–Aramaic grammars, lexicons, wordbooks, and various ancient Near Eastern materials, as well as theological, apologetic, church history, pastoral care and preaching resources may at times be helpful for the New Testament scholar, most of the time, I imagine, more New Testament oriented materials would be *most* helpful. Perhaps three collections are warranted: one for the Old Testament, one for the New Testament and a comprehensive package. It seems that if cutting back on some of these resources could allow for the addition of more relevant texts to particular disciplines in biblical scholarship (grammars, lexicons, commentaries, journals, etc.) this would provide significant economic value to those collections, since the buyers would only be paying for and getting the sources most relevant to their disciplines (of course, Logos owns the rights to many of these added resources and
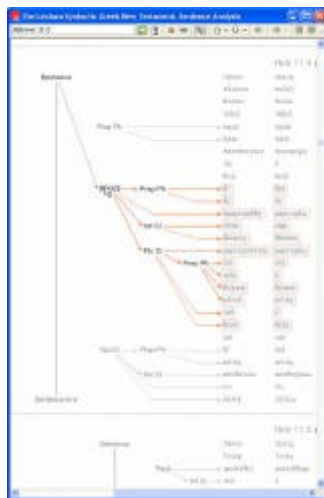
they are included as a bonus—I have no complaint about this!). This way the packages would seem more focused and directly oriented to biblical scholarship. When editing the proof of this review, I see that Logos has already began to implement this suggestion.

Logos has been working hard at accumulating quality academic resources for some time now, but perhaps their most significant advancement in the new 3.0 software is the syntactic databases which seek to annotate the text above the word level. This is an important improvement on conventional text-tagging, which has only marked the text morphologically. Two New Testament Greek databases are included:

OpenText.org Clause Analysis (larger view)

OpenText.org and Lexham. The OpenText.org project represents a contemporary approach to Greek syntax while the Lexham database is much more traditional. Both databases include an interactive display. In
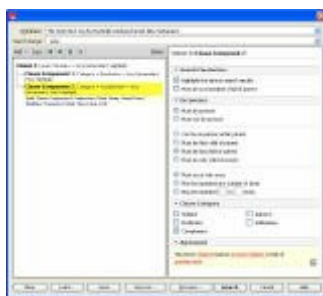

the OpenText.org display, for example, the user can hold the cursor over particular clausal components to see which of the other components it is related to. The OpenText.org project makes use of several categories that may be foreign to those unfamiliar with modern linguistics; however, all Logos 3.0 software comes with helpful glossaries that explain the meanings of the abbreviations and terms. Pop-up windows linked to the glossaries also provide definitions as one holds the cursor over the relevant letters.

Lexham Syntactical Analysis (larger view)

While the OpenText.org project bases its analysis within the clause, the Lexham project works from a sentence-based framework and has the same types of interactive features associated with the OpenText.org displays.

There are significant differences between the two projects. The approach of the Lexham analysis seems to be more eclectic, drawing on a variety of theories, while the OpenText.org model is inspired by systemic functional syntactic theory and dependency analysis. Lexham is closer to traditional grammatical analysis while the OpenText.org analysis emphasizes logical and structural relations within and between clauses.

It should also be noted that the displays of the OpenText.org materials

OpenText.org Word Groups: Acts 12:19

have been restructured into the current form in Logos. These changes represent some improvements, but not without the sacrifice of other significant features in the original block displays produced by the OpenText.org project (displayed below). Some of the advantages of the Logos new format include the interactive features, preservation of the original word order and the ability to view the clause and word group analysis on the same page (they were originally two separate OpenText.org displays). The down side is that it is hard to account for certain syntactic phenomena (e.g. discontinuous constituents) with the graph model that they use. I say 'hard' (not impossible) because the applications of graph modeling

in syntactic theory have not usually allowed for the intersection of branches (referred to as the 'no-crossing condition'), as the Logos displays do. In all fairness,

OpenText.org Box Display (Acts 12.19)

however, there is an attempt to account for these difficult structures in the displays (a hard task for any theoretical model), unlike many Chomskyan analyses of New Testament Greek. Another unfortunate
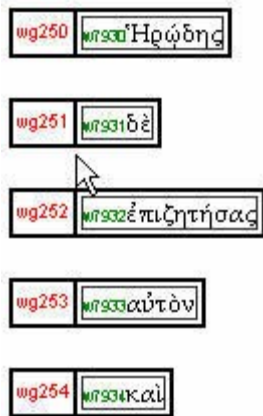

Syntax Search Interface: PC Unmarked Order Search in Luke (larger view)

element is that the new displays do not (visually) account for embedding as well as the originals. The greatest advantages that come with these syntactic databases are, of course, the new search capabilities above the word level. The potential is literally unlimited. Rick Brannan and others have worked out some excellent, practical examples and explanations of this (see http://blog.logos.com/archives/syntax).

Here, however, I want to focus on the potential value that these tools bring directly for New Testament scholarship.

A helpful recent study by I.S.C. Kwong, *The Word Order in the Gospel of Luke* (LNTS, 298; SNTG, 12; London: T&T Clark, 2005), provides an example of how these tools could be used to aid future New Testament scholarship. Unfortunately, when Kwong was writing his
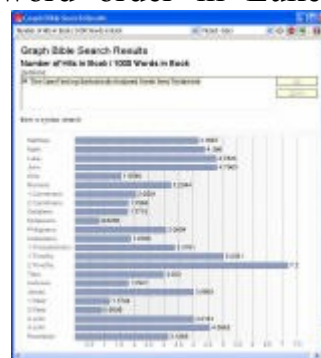
thesis (completed in 2003 at the University of Surrey), upon which his book was based, the OpenText.org project was just getting under way and a search engine for the database had not yet been written. Kwong had to gather all of the data for his research by hand! Had Kwong had access to the tools currently available in Logos, he would have been able to save huge amounts of time and could have extended his study to Acts—had he so desired—without much added effort. Kwong begins his study with an investigation of unmarked word order in Luke, searching for several different configurations. As an example (p. 62) Kwong concludes that Predicate (**P**) + Complement (**C**) in primary and secondary clauses is one of four unmarked orders in Luke. Markedness is determined by Kwong based on frequency, so this conclusion amounts to saying that **PC** constituent order is the most common in Luke when these elements are present. Kwong investigates this order in six different clause types: independent clauses, dependent clauses, participial clauses, infinitival

Graphed Results for PC Order in the New Testament (larger view)

clauses, embedded clauses and their dependents. For example, in Luke he finds 306 occurrences of **PC** order in primary clauses where only the complement and predicator are grammaticalized in the clause and only 78 occurrences of **CP** order. The OpenText.org model has more stringent criteria for what counts as an independent or primary clause so a search using their database yields less on both sides (**PC**=94x; **CP**=29x), but the result is the same—**PC** constituent order is dramatically more frequent than **CP** constituent order. **PC** is the unmarked order in primary clauses in Luke. **CP** orders in Luke, therefore, are prominent and place relatively more importance on the semantic content of the clauses which take this marked order. Kwong then uses these marked structures to draw several interesting conclusions about Luke's use of word order.

A search like this, which initially probably took many hours, can now be performed in a matter of seconds using the OpenText.org database and the Logos syntax search engine. Not only that, now one can run a search across all four Gospels or even throughout the entire New Testament to see if Luke's word order in this case is representative of New Testament usage or whether it is unique to his Gospel. To perform the first search in Luke I limited the search range to Luke, selected

primary as the clause level and unchecked immediate child of parent. Next, I added the first clause component, the predicator, specifying that it must be the first child of the parent. Finally, I added the second component, the complement, specifying that it must be the last child of the parent—this gives me the order I want. For the second search I just

Search Results: PC Order in the New Testament
([larger view](#))

changed the order of the clause components. In order to get the same patterns for the entire New Testament I just need to change the search range to 'entire database'. As it turns out, the results for New Testament are similar to those from Luke, though not quite as pronounced. There are 460 **PC** orders occurring in primary clauses through-out the New Testament where only the predicator and complement are present in the clause, compared to only 236 **CP** orders. This indicates a clear tendency in the New Testament for a predicator to precede its complement in primary clauses where only these two constituents are grammaticalized, confirming that this aspect of Kwong's study of Luke is fairly representative of constituent order in the New Testament.

The search interface is well designed, easy to use and intuitive once one is acquainted with the basic functions. The search engine itself is very efficient and fast for the types of results it produces. The results are also linked into various other displays. For example, if one clicks the forked arrow, the OpenText.org clause displays appear and if one clicks the down arrow at the top of the screen, the OpenText.org syntactic Greek New Testament pulls up with highlighting on the relevant structures. There are also helpful graphing and exporting features. So if, for example, one wanted to see how Luke compares in its use of **CP** orders to other individual New Testament books, one simply graphs the results according to book per 1,000 words in order to account for books of differing lengths. As can be seen in the graph above, the Gospels have similar distribution phenomena as Luke, but in Acts this structure is much less frequent. It is most frequent in 2 Timothy and least frequent in Ephesians.

Another example of the syntactic search capabilities in Logos can be illustrated through performing a search designed to find epistolary formulas. The full disclosure formula serves as a good example. A disclosure formula is an epistolary convention often used at significant

transition points in ancient Greek letters (including those in the New Testament), expressing the desire of the author that his audience know something. The full version of the formula consists of a verb for desire (domain 25), an embedded verb for knowing (domain 28) in the infinitive, the content of the knowledge and usually has an addressee component as well. The search involves using semantic domain and morphological components available in association with the OpenText.org database (the same syntax search interface displayed above). Because the order of the full formula is not fixed in the New Testament, several possible orders are created using the OR command. A GAP command is also needed to account for possible discontinuities among the components. The search returns eight results: Rom. 1.13; 11.25; 1 Cor. 10.1; 12.1; 2 Cor. 1.8; Phil. 1.12; 1 Thess. 4.13 and Jas 2.20. So it hits on all of the right formulas in the New Testament and generates no false hits. The only thing users should be wary of (for now) in using domain based searches is that the domain classifications have not been disambiguated yet. In other words, the engine hits on every word with the relevant domain within its semantic field, not the semantic domain of the word in its context. Hopefully, we can look forward to a disambiguated database from Logos some time in the future.

The program also comes with several convenient ways of organizing and generating data, including a topic browser, passage guide, exegetical guide and parallel versions tool. Each of these focuses on gathering

Exegetical Guide
(larger view)

data from a different collection of resources. The topic browser functions a lot like a topical dictionary, organizing articles from the digital library according to theme. The passage guide collects a large assortment of material associated with particular passages including genre information, cross-references, key words and a list of links to commentaries on the pas-sage. The exegetical guide gives helpful grammatical (links to Wallace and other grammars the user has in their library), text-critical (Tischendorf's apparatus—though it is disappointing that Metzger is not included here as well), lexical (word counts across the New Testament, links to lexicons and dictionaries) and syntactic information (visualization from syntactic databases). And the parallel versions tool allows the user to generate a sequential list of preferred translations and texts for

convenient comparison. All of these resources, furthermore, are customizable. The user can set up source and interface preferences for just about every feature in the program.

Logos has made several significant advancements with the new Gold Edition of Scholar's Library. From an impressive list of commentaries, lexicons, grammars, text-critical tools and dictionaries, to an assortment of syntactic databases and search engines, Logos has gone far beyond anything produced so far in the arena of digital tools for biblical scholarship. The New Testament scholar will be particularly pleased with the abilities provided by the Logos 3.0 software to search above the word level, a function only currently available within the Logos platform. The academically informed pastor will also benefit greatly from this tool, especially through functions like the passage and exegetical guides, which collect loads of data on particular verses or passages—ideal for sermon preparation. Scholars preparing a commentary or writing an article on a particular verse or passage may also find these features useful. The price may seem a bit high at first, but for the quality and quantity of resources, the benefit and value of the product by far outweighs its cost. If these books were purchased new in paper form, they would be close to ten times the cost—and in many instances (as shown above), the digital form is preferable! It is hard, therefore, to be critical of a program like this which, in many ways, is still in its embryonic stages, and attempts to combine multiple approaches to collecting resources and approaching the Greek text. Perhaps a bit more focus in organizing the packages could increase the maximum benefit that scholars get out of the software. More non-biblical Greek texts, annotated at the word level and above, would also be welcome. These points notwithstanding, Logos's new Gold Edition of Scholar's Library is an indispensable tool for all who are serious about academic research of the New Testament (especially the Greek text) at any level.

Andrew W. Pitts
McMaster Divinity College