Including Hebrew and Greek Characters in *Ordained Servant*

Hebrew and Greek characters present a unique set of difficulties, both for displaying articles on the web and for preparing print editions. These difficulties are due to differences in computers, operating systems, word processors, and human error.

The old way of displaying Hebrew and Greek was to use a special font. If a Hebrew or Greek font is used, then the "g" key will trick the computer into displaying a gimel or gamma. In order for this to work correctly, the writer must switch to a Hebrew or Greek font, then switch back to the default font to continue writing. Moreover, the reader must have the same font installed on his computer. Sometimes the point size of the Hebrew or Greek font must be increased or decreased to match the surrounding English text. Sometimes the font baseline must be raised or lowered. If the word processor does not accommodate right-to-left text, Hebrew words and phrases must be entered in reverse order.

The new way of displaying foreign language characters is to use Unicode fonts, which are large enough to assign a specific position to each character in each language. Hebrew or Greek characters match the surrounding English letters without switching fonts. Even if the reader's computer lacks the identical font, the Hebrew and Greek may still be readable, even if the characters are not uniform (for example: κατὰ πνεῦμα ἁγιωσύνης).

Below is a method of preparing documents that include Hebrew and Greek that is relatively simple and virtually cost-free. It involves three elements:

1. Using a word processor which supports Unicode fonts and right-to left text. One option is the free word processor OpenOffice.org Writer (http://download.openoffice.org/2.3.0/index.html). It runs in Windows, Mac OS X and Linux. It opens Word documents and saves them in Word format. It supports right-to-left text. It has the ability to export documents to PDF.

Word 97 supports Unicode and can display polytonic Greek, but it does not support right-to-left text. Word 2000 (and later) supports right-to-left text.

On a Mac the word processor Pages and Word for Mac 2004 support Unicode. Pages supports right-to-left text, but Word for Mac 2004 does not. Mac users can use OpenOffice.org Writer and save their documents in Word format.

2. Using a Unicode font (such as Cardo, in which this document is set) that correctly displays polytonic Greek and pointed Hebrew, as well as Roman characters. Cardo is available for free download at http://scholarsfonts.net/cardofnt.html. It is a serif font, suitable for scholarly papers. It works on a variety of platforms (such as Windows, Mac or Linux) and easily displays Hebrew: הָלְלוּ אֶת־יהוה כָּל־גּוֹיִם, or Greek: αἰνεῖτε τὸν κύριον πάντα τὰ ἔθνη. The OS Style Guide requires Cardo for all submissions.

3. Pasting the Greek and Hebrew characters into the document. There is no need to switch to a special font. If the word processor supports right-to-left text, Hebrew words display correctly and wrap automatically at the end of the line.

If these three steps are followed, OS staff (including editor, proofreaders, website personnel and typeset page composer) will be able to correctly view and print articles. Moreover, articles can be easily converted to HTML for publishing on the web, and will be able to be read on virtually any computer. Below are some resources to help authors.

1. Greek and Hebrew words can be easily and accurately cut and pasted from a Bible program. Logos Bible Software (http://www.logos.com) has long used Unicode fonts. BibleWorks (http://www.bibleworks.com/content/new.html) was late to catch up but now supports Unicode as well. Its website states: "BibleWorks now supports both Unicode and non-Unicode Greek and Hebrew. Exporting Unicode is as simple as dragging highlighted text from BibleWorks to your word processor." Accordance 6.2 and above (for Macintosh) can export Greek and Hebrew as Unicode (http://www.accordancebible.com/resources/support/unicode.php).

2. Authors can also access Unicode Bibles on the Web, and cut and paste from them. A useful Hebrew Bible online containing the consonants and vowels only is http://bhcv.hebrewtanakh.com/ (this site will probably be most useful for OS articles).
The URL for the Westminster Leningrad Codex (Old Testament), containing the cantillations, is http://www.tanach.us/Tanach.xml (on a Mac, this site may not work with the Safari browser, but it does work in Firefox). A useful Unicode Greek New Testament (Greek Orthodox Patriarchal

text, Byzantine textform) is http://www.ellopos.net/elpenor/greek-texts/new-testament/default.asp. The Nestle-Aland 26th edition text may be accessed at http://www.zhubert.com/bible (be sure to paste unformatted).

3. If there is a need to display a word (such as a dictionary form) that does not occur in the biblical text, polytonic Greek and pointed Hebrew may be entered using one of the following methods.

a. In Windows XP one can choose Polytonic Greek in Control Panel, Regional and Language Options. This adds a button to the lower-right taskbar allowing the user to choose either the English or Greek keyboard. For further information and a handy keyboard map see the page http://www.biblicalgreek.org/links/fonts/keyboard.html.

b. An easier way, for short phrases, is to use BabelMap (free, but donations accepted; http://www.babelstone.co.uk/Software/BabelMap.html). BabelMap runs in Windows or Linux but is unnecessary on a Mac (see below). Pointing at a table of available characters with the mouse puts characters into a workspace from which they can be copied into a document. Choose "Greek and Coptic" for monotonic Greek, "Greek Extended" for polytonic Greek, or "Hebrew" for pointed Hebrew. Hovering the cursor over a character brings up a description (such as "Hebrew point hataf qamats"). Hebrew characters display backwards in the workspace but paste into supported word processors in the correct right-to-left text orientation.

c. In Mac OS X one can select the desired character from the Character Palette (for further information see http://www.accordancebible.com/resources/support/unicode.php).