

Bunning Heuristic Prototype Greek New Testament

Preliminary Draft

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Introduction

The Bunning Heuristic Prototype (BHP) Greek New Testament was created by Alan Bunning in November 2012 for the Center for New Testament Restoration (CNTR)¹ as a preliminary template to approximate the results of the first computer-generated Greek New Testament described in the CNTR Project Description.² The BHP was not originally intended to be publicly released, but was made available at the request of Unfolding Word for use in their translationCore Bible program.³ The BHP will eventually be superseded by the CNTR's computer-generated New Testament text upon its completion.

Methodology

The BHP uses a reasoned eclecticism method to approximate the results of a computer-generated algorithm which weighs earliness and reliability of witnesses based solely on the CNTR collation of every known extant Greek manuscript containing portions of the New Testament up to year 400 AD.⁴ The collation contains both class 1 data (consisting of copies of Greek New Testament books that were continuous texts), and class 2 data (consisting of quotations of the Greek New Testament from amulets, ostraca, inscriptions, and other writings). These texts were analyzed from scratch without reliance on any previous base text by using external data alone, giving priority to the earliest witnesses, but also factoring in some manuscript reliability. Such textual decisions were made to anticipate what the computer-generated algorithm might select, which was done for the purpose of discovering any potential problems that might arise with the computer-generated method. Surprisingly, the resulting BHP text ended up being about 500 words different from the Nestle-Aland 28th edition,⁵ with the BHP better accounting for the corpus of earliest extant manuscript evidence in those cases. A more detailed analysis of the reasoning behind scientific based textual criticism is described in the CNTR Project Description.⁶

Advantages

While the BHP merely represents yet another effort to approximate the original autographs of the New Testament, it offers some improvements over other modern critical texts in several regards:

1. The BHP does not contain any theological bias because its textual decisions were based solely on external evidence in a scientific manner. The meaning of words was not considered when making textual decisions, but the date and reliability of all manuscript evidence were considered instead. Thus,

no guesses were made about an author's intent, nor were variants selected based on the bias of an editor or committee, which is the subjective method used by many modern critical texts.

2. The BHP is based on a rational heuristic which attempts to make *consistent choices* using the best and earliest manuscript data currently available. Thus, when given the exact same external conditions, the same textual choice is made. Since the BHP is based solely on extant manuscript, it does not contain any conjectural emendations or "oddball" readings often found in the other critical texts.⁷
3. The BHP takes into consideration all the latest early extant manuscript evidence, including the most extensive set of class 2 data which was not readily available to textual critics until the creation of the CNTR collation. While the class 2 data is lacking in volume, it represents early extant manuscript evidence which does make a difference in the evaluation of several textual variants.
4. The BHP better reflects the original Koine orthography than other modern critical texts (although there is still room for improvement). Every character is important in the realm of textual criticism, but that information is not reflected in most critical texts because they have changed how words were spelled. For example, there are numerous places where *every* early manuscript is in agreement with how a word is spelled, yet every modern critical text has changed that spelling. The BHP also includes *nomina sacra*⁸ which often give clear indication to the deity of Christ, but have been replaced by the modern critical texts. Indeed, the name of Jesus ("IHCOYC") does not even appear fully written out in the New Testament until after 300 AD because it was *always* shown in the abbreviated form.

Disadvantages

While the BHP offers some improvements over other critical texts, it also has some deficiencies:

1. The BHP was only meant to be an unreleased prototype for the CNTR computer-generated text, so the heuristic was not applied with the most rigorous precision as the entire text was created in about one week. The weighing of dates and manuscript reliability was still subject to human error, so it is expected that the results of the future computer-generated text would be more precise, although not greatly different. The BHP also did not take into account geography, scribal effort, or textual affinity which are additional parameters that will be taken into account by the computer-generated text.
2. The BHP was only based on class 1 and class 2 data, which is the best data currently available electronically, but predominantly reflects only one geographical region (Egypt) and is relatively sparse in a few places.⁹ While

several “Byzantine” readings are included, the resulting text tends to be more “Alexandrian” in nature like other modern critical texts which heavily weigh the significance of the earliest extant manuscripts. This deficiency will later be addressed by the inclusion of class 3 data including church father quotations, and class 4 data which are early foreign translations of the New Testament.¹⁰ While class 3 and class 4 data is of lesser value, it contains early readings from multiple geographical regions which are necessary for understanding the nature of the original text and its transmission. The sheer volume of the class 3 and class 4 data would add several orders of magnitude to the current data in the CNTR collation and without a complete collection, textual criticism is being done somewhat in the dark.

3. The BHP is always supported by at least one other modern critical text at any given reading, but there were a small number of cases where a deviation from all modern critical texts may have been warranted. These places were not recorded, but will be modified when the CNTR computer-generated text is released.

While the BHP is by no means perfect, it offers perhaps the closest reflection of the earliest extant manuscripts using a scientific method thus far, and therefore, presumably the closest reflection of the original autographs. *The BHP is not an end, but merely a starting point to a process that will be improved with additional data and better scientific processing.* Despite these disadvantages, any shortcomings of the BHP should be weighed against the well-known deficiencies and “oddball” readings already present in the other modern critical texts.¹¹

Additional Features

In addition to the advantages offered by the BHP text itself, perhaps a greater advantage comes from several new and improved features which accompany the BHP text:

1. Enhanced Strong Numbers (ESN) which are somewhat “backward compatible” with the Strong’s numbering system,¹² but include the additional words found in the Greek New Testament and use lemmas normalized to their proper lexical forms.
2. More detailed syntax categories including the various types of determiners, verb transitivity, and subtypes for adjectives and conjunctions.
3. Accurate morphological parsing scheme that was cross-checked against both Robinson’s¹³ and Tauber’s¹⁴ parsing schemes.
4. Capitalization justification field which allows for capitalization to be customized based on different preferences.

5. Enhanced punctuation including quotation marks that indicate where a quotation starts and stops, as well as the source of the quotation.

Most of these features are discussed in the CNTR Project Description¹⁵ as they apply to other CNTR texts and continue to be improved as a *work in progress*. Several areas still need checking for consistency, but the overall work was deemed good enough to be released as an initial starting point. Unlike the other CNTR manuscripts, diacritical marks, punctuation, and capitalization have been included along with the BHP as an aid to the reader, with the caution that these features can sometimes bias the text towards one particular interpretation, when other interpretations are also possible. In the near future, the following features are also planned for release with the BHP in upcoming editions:

1. A full set of context-sensitive English glosses will be added for each word and tied to the correct semantic domain of each associated lexical entry.
2. Lowercase letters will be added to the morphological parsing scheme to distinguish which categories are morphologically determined and which are supplied by context.
3. A universal critical apparatus will be added, comprehensively showing *all* variants readings from *all* manuscripts contained in the CNTR database.

Contributions to improve any of these additional features will not only benefit the BHP text, but will be eventually transferred to all CNTR texts (including all the other critical texts) which will be displayed in the collation and made available for download.

This preliminary draft of the BHP text and all of its additional features are being released as under the Creative Commons Attribution-ShareAlike 4.0 International License (CC-BY-SA 4.0)¹⁶ which will allow others to build on the work and contribute other improvements. This is particularly significant in that it satisfies the need to provide an open modern critical text based on the best manuscript evidence available where the process is fully transparent and accessible. As updates are made to the BHP, subsequent editions will be indicated by their later release dates.

Data Format

The BHP text is currently released in tab-delimited format with one word per row containing the following fields:

- Verse – verse in book/chapter/verse format (BBCCVV).
- Word – the word rendered in a form closer to its original orthography.
- Medieval-Word – the word rendered in the traditional medieval form.
- Syntax – syntax code assigned to the word.
- Morphology – morphology code assigned to the word.

- Medieval-Lemma – the lemma rendered in the traditional medieval form.
- ESN – Enhanced Strong’s number.
- Punctuation – any punctuation assigned before and/or after the word.
- Capitalization – code allowing for customized capitalization options.
- Reference – Biblical reference of a quoted passage.

Most of these fields are described in more detail in the CNTR Project Description.

Credits

- Jesus Christ, who is the Lord of my life and if it were not for Him, none of this would have ever transpired.
- My wife Joanne and children Regan and Anna, who patiently allowed me the time to commit thousands of hours on such a massive project.
- Dr. David Dilling ThD, PhD of the Kensington Theological Academy, who not only taught me Greek, but also proofed much of the morphology.
- Volunteers from Unfolding Word and Wycliffe Associates, who assisted in checking many of the additional features.

¹ <http://greekcntr.org>.

² Alan Bunning, “CNTR Project Description”, §5.2, Lafayette, IN, May 18, 2017; <http://greekcntr.org/downloads/project.pdf>.

³ <https://unfoldingword.org>.

⁴ <http://greekcntr.org/manuscripts.htm>.

⁵ Aland, Barbara, et al., eds., *Nestle-Aland – Novum Testamentum Graece*. 28th revised ed., Deutsche Bibelgesellschaft: Stuttgart, 2012.

⁶ CNTR Project Description, §5.2.

⁷ CNTR Project Description, §1.2.1, 5.1.

⁸ Nomina sacra is Latin for “sacred names” and was a scribal practice where frequently occurring divine names were represented by an abbreviation of two or more overlined letters.

⁹ There are some verses in 1 Timothy, 2 Timothy, Titus, Philemon, and Revelation that are limited to only two early witnesses.

¹⁰ CNTR Project Description, §2.2.

¹¹ CNTR Project Description, §1.2.1, 5.1.

¹² James Strong, *Strong’s Exhaustive Concordance of the Bible*, Abingdon-Cokesbury Press: New York, NY, 1890.

¹³ Robinson, Maurice A, PhD. “The Online Greek New Testament Declension Codes For Nouns, Adjectives, Prepositions, Conjunctions And Particles” and “The Online Greek New Testament Parsing Codes For Verb-Related Forms”, 27 July 2004; <http://kotisivu.dnainternet.net/jusala/RP2005/PARSINGS.TXT>.

¹⁴ J. K. Tauber ed., MorphGNT: SBLGNT Edition, version 6.12 [Data set], 2017; <https://github.com/morphgnt/sblgnt>, accessed April 26, 2017. Tauber parsing scheme was originally derived from Center for Computer Analysis of Texts, University of Pennsylvania. “United Bible Societies 1992 3rd Ed.”

¹⁵ CNTR Project Description, §4.

¹⁶<https://creativecommons.org/licenses/by-sa/4.0/>