Visual Representations of Biblical Poetic Parallelism

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Abstract

Within a broader context of visual and musical symmetry patterns, we explore biblical parallelism, the poetic symmetry patterns of the Bible. We present six frequently occurring parallel forms – *simple, chiastic, elliptical, sequential, unequal length, and repeated words*. These six forms are broad enough to include many known examples of biblical parallelism. Our major contribution is a system of visual representation based on four attributes - *column position, shading, use of blanks and caps*. The visual representation system compactly represents and indicates diverse parallel styles at a glance. Many illustrations are presented including a complex parallelism using four parallelism methods

Symmetry – in Sight, Music and Speech

The purpose of this paper is to give an introductory expository description of biblical poetic symmetry patterns and also, to provide a visual representation system for these patterns. Prior to outlining our approach and novelties, we lightly review visual and musical symmetry patterns.

Visual Symmetry. The literature on visual symmetry is extensive, comprehensive, formulated abstractly, and contains many beautiful theorems as well as intriguing applications [2] [11]. In a very rough sense, symmetry refers to sameness. More specifically, a visual pattern is said to possess symmetry if it remains the same under some length preserving transformation. Mathematicians have enumerated all possible one, two and three-dimensional symmetries. Although, initially, the application of these results was a technical scientific application, to crystal structures in chemistry, in the last 20 years results on symmetry have fruitfully been applied more broadly, for example, anthropological studies show that distinct cultures typically use distinct visual patterns [11]. We will see below this relationship between distinct cultures and distinct patterns in poetic symmetry also.

Musical Symmetry. The application of symmetry to music is well established and is skillfully used by both composers and researchers. Some have studied musical symmetry in the context of a single composer (e.g. [10]), while others have comprehensively studied musical symmetry generally (e.g. [8], who in footnote 3, gives an excellent snapshot of the vast literature on the subject). Although there is no purely *abstract* mathematical classification of musical symmetry starting out from theoretical definitions and then deriving all possible symmetry types, there are powerful automated symmetry formalisms which allow machine identification of the *representative melodies of a* piece [1]. [4] presents a recent, interesting, theoretical approach by showing a one-one correspondence between each visual one-dimensional symmetry pattern and a corresponding musical symmetry.

Poetic Symmetry. Although visual symmetry is the most *abstractly* developed of all mathematical symmetries, poetic symmetry is the oldest. Each culture has developed a unique approach to symmetry and rhetoric. [9] studies Hebrew rhetoric and symmetry. The general intertwining of rhetoric and poetry is vast and we only lightly illustrate it in this subsection. Greek poetry is characterized by the presence of meter and rhyme. By contrast, biblical poetry is characterized by the presence of parallel structure [7]. Parallel structure simply means that the half-verses of the verse basically express the *same* idea with *different* words. Here we see the main ingredients of symmetry: *sameness* in *difference*. In the visual area, the difference was accomplished by a transformation which nevertheless left the pattern the same. In the poetic area, difference is accomplished by different words which nevertheless leave the idea the same. Parallelism as a marker of poetry also occurs in Chinese, Japanese, Finnish, Old Turkish, Mongolian, Rumanian, Sanskrit, and Ugaritic poetry. Even among these different cultures parallel style is developed differently. For example, Ugaritic parallelism is characterized by three-clause (vs. the biblical two-clause) phrases, word repetitions and use of complementary word stock pairs (we illustrate this below) [7, pp 23-27]. We should also mention the additional intricacy that the musical nature of the poetry, such as the Psalms which were sung, affects the parallel form used – for example [7, pp 109-127] a responsive antiphonal singing naturally motivates a two vs. a three-clause parallelism.

Figure 1 illustrates this idea of sameness of idea with different words. It is reasonable that *God* and *My Lord* are different words for the same thing. Similarly, *praise* and *sing* while technically different concepts both refer to a positive emotional perspective. Finally, *in my life* and *while I continue* are both adverbial phrases indicating a long time. To highlight the idea of parallel repetition, note that the Psalmist could have communicated his idea with only one half-verse. By using the parallel form, which is the characterizing trait of biblical poetry, the Psalmist poet engages in creation of symmetry patterns.

Source: Psalm 146:2	Subject-Verb	Object/Indirect Object	Adverbial Phrase
Half-Verse #1	I'll praise	God	in my life
Half-Verse #1	I'll sing	to my Lord	while I continue.

Figure 1: *Parallel representation of verse, Psalm 146:2, "I'll praise God in my life, I'll sing to my Lord while I continue"* [7, pg. 3].

Throughout the paper we use the term half-verse to refer to the parallel components of verses even though technically there might be three or more half-verses [7, p. 2]. The Figure 1 table is read left to right and top to bottom. The meanings of the column and row headings are obvious. We follow traditional grammar in classifying an adverbial prepositional phrase answering the questions *to whom* or *for whom* as an **indirect object**. The table format with its column and row headings and shadings illustrates a visual representation of the verse parallel structure. Most of the features of this visual representation should be obvious. They will be fully explained in the last two sections of the paper.

Since this paper is introductory we have not gone into further depth on the relation between rhetoric and symmetry in biblical poetry. We should however at least mention Kugel's deep thesis on biblical symmetry and rhetoric: parallel half-verses are not intended by the author as exactly identical but rather have both a retrospective and prospective quality with respect to each other: The second half verse often particularizes, defines or expands the meaning of the first half-verse (prospective) and yet it also must harken back to the first half-verse in an obvious way to connect it [7, pg. 8].

This important idea is illustrated in Figure 1. *Lord* expands on the term *God* since *Lord* emphasizes the

God-man relationship (prospective); clearly, however, *Lord* and *God* refer to the same concept (retrospective and commonality). Similarly, *sing* expands on the term *praise* because the praise is communicated by music as well as by words (prospective); clearly however *sing* and *praise* both indicate a positive emotional perspective (retrospective and commonality) [9, pp. 97-111].

Paper Outline. We can now outline the rest of this paper. The varieties of parallel poetic structure appear endless. [7, pg. 15]. Hastings [5] and Geller [3] list a variety of intricate symmetries and attempt to complete a comprehensive scheme. In the next section we present six techniques. These six techniques were selected because of their frequency of occurrence, because of their simplicity, and because they can be combined to describe more complex parallel forms, a point illustrated in the final section of the paper. The section of the paper following the description of these six forms contains our main novelty, a method of visually representing biblical poetic parallel form. Although throughout the paper we exclusively use examples from the Psalms, our results apply to any biblical book. The Psalms were selected because of their primarily poetic nature, their multiple authorships, the multiple periods they span, as well as the rich literature on their parallel form.

Six Frequent Biblical Poetic Symmetry Forms

Repetition. Since symmetry is defined as sameness in repetition, it follows that repeated words are the most obvious type of symmetry. As example is presented in Figure 2. The repeated word *secretly* creates a pattern symmetry. Repetition is a frequently used biblical parallel device. A famous example is Psalm 136 which contains 26 verses with the second half of each verse containing the repeated phrase *for his grace is forever*. This magnificent Psalm is partially illustrated in Figure 3.

Source: Psalm 35:7	Adverb	Verb	Indirect Object	Object
Half-Verse #1	For SECRETLY	they hide	for me	their death-trap
Half-Verse #2	SECRETLY	they dig	for my soul	

Figure 2: *Parallel structure of verse Psalm 35:7, illustrating the technique of word repetition* [7, pg. 5]

It is natural to inquire what interpretive affects each particular symmetry form indicates. Most such associations are conjectural (and will therefore not be further pursued in this paper). The classical symmetry classification works, [3],[5],[7], generally study the *form* of parallelism without providing corresponding interpretive affects. This seems to be a rich but open problem.

Simple parallelism. We have already seen an example of simple parallelism in Figure 1 in Section 1. Another example is presented in Figure 4. Simple parallelism means that both half-verses have the same number and sequence of grammatical functions with each grammatical function met by one or two words.

Sequential Parallelism. Sequential parallelism refers to half-verses which present a sequence of component actions. Sequential parallelism is used when no particular component stands out dramatically but rather, each component has independent dramatic significance. An example is presented in Figure 5. Notice how each component action is equally dramatic and important: a) it is dramatic that God saves the vine (the Jewish people) from Egypt, and it is equally dramatic that b) while in the wilderness God banished attacking nations from the Jews and it is equally dramatic that c) God enabled settlement of the Jews in Canaan despite the presence of powerful military powers and nations.

Source: Psalm 136	Half Verse #1, Word #1	Half Verse #1, Word #2	Half Verse #1, Word #3	Half Verse #2
Verse 1	[Give] Thanks	to God	for [He is] good	FOR HIS GRACE IS FOREVER
Verse 5	Who makes	the heavens	with understanding	FOR HIS GRACE IS FOREVER
Verse 16	Who leads	His nation	in the desert	FOR HIS GRACE IS FOREVER
Verse 25	Who gives	bread [food]	to all flesh	FOR HIS GRACE IS FOREVER

Figure 3: *Selected verses from Psalm 136 illustration repetition parallelism. Note that biblical Hebrew uses one word (or one hyphenated word) for each cell in half-verse #1 (while English may use more words).*

Source: Psalm 135:13	Appositive	Noun	Adjective
Half-Verse #1	God	Your name	is forever
Half-Verse #2	God	Your memory	is in each generation.

Figure 4: *Simple parallel form of verse, Psalm 135:13. Note especially the use of "stock pairs" – name/memory and forever/each generation – characteristic of simple parallelism* [7, pg. 6, 27-40].

Source: Psalm 80:9			
Half-Verse #1	A-vine	from-Egypt	you-carried
Half-Verse #2	You-banished	nations	
Half-Verse #3	You-planted-it		

Figure 5: *Sequential parallel form of verse Psalm 80:9. Further elaboration is found in the article. The hyphenations of "from-Egypt", "You-carried", "you-banished" and "you-planted" reflect that Biblical Hebrew uses one word for these phrases (English however uses several words)* [7, pg. 4].

Ellipsis. Elliptical parallelism refers to parallel half-verses where one half-verse omits the word(s) corresponding to specific grammatical functions which in turn are elliptically transferred from another half-verse. A simple example is presented in Figure 6. The second half-verse should really say *God harken to the words of my mouth*. However, the word *God* is absent in the second half-verse and must be transferred from the first half-verse.

A more sophisticated example is presented in Figure 7 where each half-verse contains an ellipsis. The second half-verse omits whom they spoke against while the first half-verse omits the citation. We see here a further affect of ellipsis: By forcing the listener to participate and fill in omissions, the listener acknowledges a possibly unpleasant fact: The Jews were ungrateful and spoke against God.

Source: Psalm 54:4	Subject	Verb	Object
Half-Verse #1	God	hear	my prayers
Half-Verse #2		harken	to the words of my mouth

Figure 6: *Elliptical parallel structure. Note the omission of the subject in half-verse #2* [7, pg 5].

Source: Psalm 78:19	Verb	Adverbial Phrase	Citation
Half-Verse #1	They-Spoke	against-God	
Half-Verse #2	They-said		can God spread a table in the desert

Figure 7: *Verse Psalm 78:19 illustrating elliptical parallelism with complementary omissions* [7, pg. 4].

Unequal-Length Parallelism. Figure 8 gives a typical example. Each of the two units in the first half-verse is one Hebrew word in length while the single unit in the second half-verse is five Hebrew words. The unequal length can be either in the number of words per unit (1 vs. 5) or the number of units per half-verse (1 vs. 2).

Source: Psalm 80:5	Subject	Appositive	Citation
Half-Verse #1	God	Lord of Hosts	
Half-Verse #2			How long will you ignore the prayers of your nation

Figure 8: *Verse, Psalm 80:5, illustrating unequal length parallelism using a citation* [7, pg. 4].

The term *unequal length parallelism* is our own and not standard. However, it unifies various forms of parallelism such as mere comma (Figure 9), citation (Figure 8), subordination (that is, subordinate clauses), blessing (Figure 10), or a second half-verse appositive to one component of the first half-verse. These examples have in common that either the number of units and/or the number of words per unit in the two half-verses is blatantly unequal.

Source: Psalm 31:25	Subject	Verb	Object
Half-Verse #1		Strengthen and firm	your hearts
Half-Verse #2	All who hope for God		

Figure 9: *Verse, Psalm 31:25, illustrating unequal length parallelism using mere comma* [7, pg. 4].

Source: Psalm 28:6	Adjective	Subject	Clause-Verb	Clause-Object
Half-Verse #1	Blessed	be God		
Half-Verse #2			because He has heard	the voice of my supplication

Figure 10: *Verse, Psalm 28:6, illustrating unequal length parallelism, using a blessing* [7, pg. 6].

Chiastic parallelism. Chiastic parallelism resembles simple parallelism: two half-verses repeat the same idea using different words. However, in chiastic parallelism, unlike in simple parallelism, the sequence of grammatical functions of the two half-verses is different. Figure 11 presents a typical example.

Visual Representation of Parallelism

In this section, we summarize the principles for the visual representations of the various parallel forms illustrated in Figures 1-11 of the previous sections. Three structural assumptions govern these

representations:

1)-The vehicle of representation is the table

2)-Each half-verse receives a distinct (labeled) row

3)-Each distinct grammatical unit – *subject, verb, direct object, indirect object, adverbial or adjectival phrases* – receives a distinct column.

Four attributes are used to represent different parallel styles.

1)-Column positions

2)-Black and white shading (color enhances visualization but is sometimes not available)

3)-Caps

4)-Blank words, Blank shading.

Table 1 summarizes the visualization methods for six parallel forms presented in this paper and cross references illustrative examples from earlier sections.

Source: Psalm 29:11	Subject	Direct Object	Adverbial phrase	Verb
Half-Verse #1	God	strength	to His NATION	He-gives
Half-Verse #2	God	blesses	his NATION	with peace.
	Subject	Verb	Object	Adverbial phrase

Figure 11: *The Psalmist uses chiasmus, different word-sequence orders, for the two grammatically parallel sentences,* (#1) "God (**subject**) gives (**verb**) strength (**direct object**) to his nation (**adverbial phrase**)"*, and* (#2) *"God (**subject**) blesses (**verb**) his-nation (**direct object**) with peace (**adverbial phrase**)".* *Grammatical functions of the two half-verses are indicated on the top and bottom rows*.

A Complex Parallel Example

In this, the final section of the paper, we illustrate a complex parallelism using four parallel techniques. The example is summarized in Figure 12. Note the compact powerful presentation of diverse parallel techniques within just two verses. The following techniques are illustrated:

1) -Repetition. Each half-verse opens with the repeated word phrase *for how long?*

2)-Ellipsis. The subject of half-verses #1,#2 is *God*, of half-verses #3,4 is *myself*, and of half-verse #5 is *the enemy*. The verb *will-I-place* in the verb-object-indirect-object columns in half-verses #3 and #4 also illustrates ellipsis. The subject column of half-verse #2 is shaded and blank to indicate the elliptical repetition of *God*. Similarly, the verb column of half-verse #4 is shaded to indicate the elliptical repetition of *will I place*. Note that cells not indicating ellipsis are shaded blank.

3)-Simple parallelism. The verb-object-indirect object columns of half-verses #2 and #3 illustrate simple parallelism.

4)-Sequential parallelism. This is conjectural but the five verbs possibly illustrate dynamic sequence:

   i)   God (accidentally) forgets me

   ii) Then He willfully hides his face, and as a consequence

   iii) I try and counsel myself (that this is temporary), only to find out that

   iv) I have perpetual anguish that eventually materializes in

   v)   my real dread, the triumph of my enemies.

Source Psalm 13:1-2	Repeated Word (Adverbial Phrase)	Subject	Verb	Object	Adverbial Phrase	Temporal Adverb
Half-Verse #1	FOR HOW LONG	God	Will you forget me			Forever
Half-Verse #2	FOR HOW LONG		Will you hide	Your face	From me	
Half-Verse #3	FOR HOW LONG		Will I place	Self advice	In my soul	
Half-Verse #4				anguish	In my heart	Daily
Half-Verse #5	FOR HOW LONG	Will my enemy	triumph		Over me	

Figure 12: *A complex parallel example, Psalm 13:1-2, simultaneously using four parallel methods.*

Parallel Technique	Visualization Method	Example
Simple parallelism	• One grammatical unit per column • Words with identical grammatical functions are aligned. • One distinct shading per column	Figures #1,4
Chiastic Parallelism	• One grammatical unit per column • One distinct shading per column • Words in one column may have dissimilar grammatical functions but • Words with similar grammatical functions have identical shadings • Two column labels may be used for each half-verse	Figure #11
Repetition	• Upper case is used to indicate repeated words	Figures #2,3,11
Sequential Parallelism	• One action per row • Words with distinct grammatical functions receive distinct columns and shading but • Words in the same column need not have distinct identical function • Identical shadings are used for identical grammatical functions	Figure #5
Unequal length	• One grammatical unit per column • Distinct shadings are assigned for each grammatical unit • The cells for non-parallel grammatical functions are left blank and unshaded	Figures #8,9,10
Ellipsis	• One grammatical unit per column • Distinct shadings are assigned to each grammatical unit • Grammatical units not paralleled are left blank but shaded (to indicate the ellipsis)	Figure #6,7

Table 1: *Table 1 summarizes the six parallel styles presented in this paper, the principles of visual representation governing them as well as cross-references to illustrative examples.*

References

[1] K. Adiloglu, T. Noll and K. Obermayer, *A Paradigmatic Approach to Extract the Melodic Structure of a Musical Piece*, Journal of New Music Research, Vol. 35.3, pp. 221-236, 2006.

[2] S. Garfunkle, Project director for COMAP, *For all Practical Purposes; Introduction to Contemporary Mathematics*, 2nd edition, Arlington, Ma: W. H. Freeman and Company, 1991.

[3] S. Geller, *Parallelism in Early Biblical Poetry*, Harvard Semitic Monographs 20, Chico. Ca., 1979.

[4] V. Hart, Symmetry and Transformations in the Musical Plane, in *Bridges Banff, Mathematics, Music, Art, Architecture, Culture*, C. Kaplan and R. Sarhangi, Editors, Tarquin Books, pp. 169-176, 2009.

[5] J. Hastings (ed.), *Dictionary of the Bible*, New York ,1902.

[6] R. J. Hendel, *Pedagogical Principles for Teaching Art in Mathematics Courses*, in Renaissance Banff, Mathematics, Music, Art, Culture: Conference Proceedings*, R. Reza Sarhangi and Robert Moody, Central Plain Book Manufacturing, Winfield, Kansas, pp. 119-120, 2005.

[7] J. Kugel, *The Idea of Biblical Poetry: Parallelism and Its History*, Yale University Press, 1981.

[8] R. P. Morgan, *Symmetrical Form and Common-Practice Tonality*, Music Theory Spectrum, Vol. 20.1, pp. 1-47, 1998.

[9] J. Muilenberg, *Hebrew Rhetoric: Repetition and Style,* Supplements to Vetus Testamentum, 1 Leiden, 1953

[10] S. Peles, *Ist Alles Eins: Schoenberg and Symmetry,* Theory Spectrum, Vol. 26.1, pp. 57-86, 2004.

[11] D. K. Washburn and D. W. Crowe, *Symmetries of Culture: Theory and Practice of Plane Pattern Analysis*, Seattle, Washington: University of Washington Press, 1988.