
The Musical Mode of Writing of the Psalms and its Significance¹

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ABSTRACT

Many of the biblical psalms are characterized by a double anomaly. On the one hand they are considerably less fluent than expected, even for poetical compositions. On the other, the many recurrences attested to in the text generate patterns of symmetry on the entire level. The combination of these contrasting anomalies finds an explanation when assuming that the text of these psalms is written in musical fashion, as two distinct scores designed to be sung by dialoging voices. This mode is defined as complex antiphony because the bonding, during performance, of small fragments of text from the two scores yields a composite text. Three distinct patterns of complex antiphony (steady, cross and canonic responsa) are defined here on the basis of the patterns of global symmetry already identified in the psalms. Their existence is supported by: (i) evidences towards complex antiphony in traditional music, (ii) elements suggesting its occurrence in ANE liturgy, (iii) the literary coherency and the emergent meanings of the composite text of biblical psalms set in such a fashion. It is concluded that many psalms were apparently designed for complex antiphony, so that this dimension cannot be ignored by the literary analysis.

A INTRODUCTION

Two main modes of musical poetry may be identified in Antiquity. The first one, *declamatory poetry*, is a vocalized poetical discourse characterizing blessings, oracles, declarations and inspired speeches. This solemn utterance may be accompanied by musical instruments, and the cantillation of the text may evolve towards a genuine singing. In such a way, the acoustic phenomena promote parallelism, phonic echoes and syllabic repetitions proper to the poetical text. However, in no way this musical dimension is expected to modify the content and/or the sequence of the claims. This is why this musical component is

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generally ignored by the literary analysis of declamatory poetry, despite that these two dimensions are closely interrelated.²

Another type of poetry was specifically designed for choral performance in Antiquity. This type, defined as *psalm poetry*, is especially encountered in the ANE for performance of hymns and liturgies.³ Also in Ancient Greece it is encountered in performance of dithyrambos and tragedies, and hymns.⁴ In Ancient Israel, this choral singing is revealed by the mention of groups of twelve singers affected to the musical service at the Temple (1 Chr 25: 9–31).⁵ It is explicitly acknowledged in the book of Chronicles as an essential component of the cult⁶ and even explicitly mentioned in the text of some psalms.⁷

Psalm poetry is not frequently distinguished from declamatory poetry in modern research.⁸ Accordingly, the absence of substantial influence, in declamatory poetry, of music on the meaning of the text is merely extrapolated to psalm poetry. However, a fundamental difference exists between both. Declamatory poetry is sung by a single voice, so that the text is sung exactly as it may be read. In contrast, the choral mode of singing may promote substantial transformations of the text through individual variations in tempo and in claims.

Few of these changes are attested in Mesopotamia through the mention in the body of the text of hymns, of sonic expressions (vowels and syllables)

² For the analysis of the declamatory poetry and its characteristics in Antiquity, see Maurizio Bettini, "Authority as Resultant Voice: Towards a Stylistic and Musical Anthropology of Effective Speech in Archaic Rome," *Greek and Roman Musical Studies* 1 (2013): 182–186.

³ For the choral performance of hymns and psalms in the ANE, including Israel, see Charles G. Cumming, *The Assyrian and Hebrew Hymns of Praise* (New York: AMS Press, 1966), 11–15; Alfred Sendrey, *Music in Ancient Israel* (London: Vision Press, 1969), 37–46; Peet J. van Dyk, "Music in Old Testament Time," *OTE* 4 (1991): 375.

⁴ See Christopher Carey, "The Victory Ode in Performance: the Case for the Chorus," *CP* 86 (1991): 194; Helen H. Bacon, "The Chorus in Greek Life and Drama," *Arion* 3 (1995): 14; Armand D'Angour, "How the Dithyramb Got Its Shape," *CQ* 47 (1997): 335–336; William D. Furley and Jan M. Bremer, *Greek Hymns: Selected Cult Songs from the Archaic to the Hellenistic Period* (Tübingen: Mohr Siebeck, 2001), 6.

⁵ This is confirmed by post-biblical sources. *Mishna 'Arak.* 2:6 explicitly mentions that the twelve levites constituted together a choir: "Those who contributed to the sanctuary music by playing the instruments rather than by oral singing are not included among the twelve levites."

⁶ See John W. Kleinig, *The Lord's Song: The Basis, Function and Significance of Choral Music in Chronicles* (Sheffield: Sheffield Academic Press, 1993), 125–145.

⁷ See Pss 35:18; 68:27; 109:30.

⁸ See Malcolm Davies, "Monody, Choral Lyric and the Tyranny of the Hand-Book," *CQ* 38 (1988): 58–61.

without semantic meanings.⁹ These "vocables," sung only by some of the singers, disrupt the linear sequence of the text and distort its meaning. Exactly the same features are attested in traditional music. For example, the analysis of the sequence of words audible during the performance of traditional songs of the Kiganda (Uganda) led Catherine Gray to conclude that,

The texts of these songs resemble speech, not because they are, in fact, language in themselves but because they are constantly varied yet subject to distributional patterns. They signify – it is a paradox – in a musical manner, although they are passages of language.¹⁰

These few considerations reveal that, in contrast to declamatory poetry, the text of psalm poetry may be deeply modified by the performance. As long as these modifications are mainly a bursting of the linear text, this latter preserves its primacy in the literary analysis due to its cohesion in regard to what is heard at performance. However, another eventuality should also be theoretically envisaged: the text emerging during the performance displays a high literary cohesion, eventually higher than the edited text of the song. In this case, the edited text, written in close relation to the transformations occurring during choral performance, should be regarded as musically shaped.

These considerations may be especially relevant if the text of songs designed for choral performance remains obscure. And in such a case, the musical performance becomes an essential component of the literary analysis. Such an eventuality is investigated here for biblical psalm poetry, well known for the many problems in approaching these texts in linear fashion, and for their use in the cultic ceremonies.¹¹

B SINGULARITIES OF THE TEXT OF BIBLICAL PSALM-POETRY

A narrative is first of all a succession of sentences with inner cohesion, articulated in a coherent logical and temporal framework. However, beyond this *syntagmatic* dimension of meaning, the recurrences of phonetic and semantic nature generate a subliminal network of relationships. This *paradigmatic* dimension may generally be detected in any discourse.¹² However, in regard to

⁹ See for example Sam Mirelman and Walther Sallaberger, "The Performance of a Sumerian Wedding Song (CT 58,12)," *ZA* 100 (2010): 184–187.

¹⁰ Catherine T. Gray, "Patterns of Textual Recurrence in Kiganda Song," *IRASM* 23 (1992): 99.

¹¹ See John A. Smith, "Which Psalms Were Sung in the Temple?" *Music and Letters* 71 (1990).

¹² The distinction between these two dimensions of the discourse was first emphasized by Louis F. de Saussure, *Course in General Linguistics* (trans. W. Baskin; New York: Columbia University Press, 2001), 122–126. Saussure characterized the dimension in which words acquire relations based on the linear nature of language because

normal speech, its importance is enhanced in literature and especially in poetry.¹³ The syntagmatic and paradigmatic dimensions display however abnormal characteristics in biblical psalm poetry.

1 Under-Expression of the Syntagmatic Component

Biblical psalms are very difficult to read. Their discourse is frequently disrupted by stylistic difficulties, ellipses, abrupt transitions and other incongruities. Furthermore, they are characterized by an important level of redundancy combined with an extreme concision.¹⁴ Finally, the rarity of verbs and actions generates a chronic indeterminacy concerning the identity and specificities of the speakers.¹⁵ The combination of these characteristics transforms the text of psalms into a succession of short segments of relatively autonomous nature, frequently devoid of chronological development and outcome.¹⁶

Many explanations have been proposed to justify such a singular situation. At the beginning of the 20th century, most of the scholars assumed that the literary cohesion of biblical psalm poetry was initially higher than currently observed. Three main processes disrupting this initial cohesion were identified: (i) editing modifications: the identification of autonomous parts in the song led many authors to interpret them as initially independent poems later gathered by

they are chained together, as *syntagmatic*. The relations between distant words, sounds and expressions bonded by memory, being not supported by linearity, were qualified by de Saussure as *associative relations* and later defined as the *paradigmatic* dimension of language.

¹³ This is expressed by Yuri Lotman, *Analysis of the Poetic text* (Belford: Ann Arbor, 1976), 37: "The ordered quality of any text can be realized along two lines. In linguistic terms it can be characterized as ordering in terms of paradigmatics and syntagmatics . . . If in narrative genre the second type predominates, then texts with a strongly expressed modeling function (and it is precisely here that poetry, especially lyric poetry, belongs) are constructed with marked predominance of the first."

¹⁴ See Frederick W. Dobbs-Allsopp, "Poetry," *NID* 4:551–552. As stressed by many authors, the *parallelismus membrorum*, one of the most essential characteristic of the biblical poetry, introduces a recurrence in each verse that chronically disrupts the continuity of the narrative. See Philip J. Nel, "Parallelism and Recurrence in Biblical Hebrew Poetry: A Theoretical Proposal," *JNSL* 18 (1992): 135-139. See also Beat Weber, "Toward a Theory of the Poetry of the Hebrew Bible: The Poetry of the Psalms as a Test Case," *BBR* 22 (2012): 157-188.

¹⁵ As noted by Luis Alonso Schökel, "Poésie hébraïque," *DBSup* 8 (1972): 73, "La phrase syntactique terminée, le poète recommence. Il ne sent pas la nécessité de poursuivre, mais au contraire de retenir sa pensée."

¹⁶ See Alviero Niccacci, "Analyzing Biblical Hebrew Poetry," *JSOT* 74 (1997): 77–78; Epp Talstra, "Reading Biblical Hebrew Poetry: Linguistic Structure or Rhetorical Device?" *JNSL* 25 (1999): 103.

an editor;¹⁷ (ii) poet–editorial modifications: the insertion of glosses in the body of the text was interpreted as the source of many redundancies in claims; (iii) gradual erosion:¹⁸ the many alterations accumulated during the course of transmission of the psalms generated abnormal discontinuities in syntax and claims.

During the second half of the 20th century, more and more authors rejected these explanations.¹⁹ Instead of justifying the anomalies of biblical poetry through post–compositional distorting events, the incongruities of the text became progressively approached as "congenital features." Some scholars considered that many inconsistencies were intentionally introduced in order to emphasize some special claims.²⁰ Others interpreted the lack of fluency of the text as evidence towards co–existence of two dialoging voices, each one with its own coherency.²¹ For others, psalms were composed by continually recycling fragments of liturgy, a process expected to reduce the level of literary coherency of the entire piece at each "cycle" of reusing.²² Another approach suggested that the Hebrew poets emancipated from the esthetical canons of the Near Eastern poetry, and then conceived their songs as free, impressionistic and even "experimental" pieces of work.²³ For instance, the Lamentations, especially characterized by an absence of chronologic development and narrative continuity, have been considered as compositions expressing the fall of Jerusa-

¹⁷ All these assumptions are explicitly detailed by Charles A. Briggs, *A Critical and Exegetical Commentary on the Book of Psalms* (vol. 1; Edinburgh: T & T Clark 1906), 49–52 (in Introduction).

¹⁸ The classical evidence aiming at such changes is the comparison of Ps 18 and 2 Sam 22. These two versions of the same song display many minor variations. See David J. A. Cline, "What Remains from the Hebrew Bible? Its Text and Language in a Postmodern Age," *ST* 54 (2001): 76–78.

¹⁹ This attitude previously dominating the research in biblical poetry is openly denounced by Rolf Rendtorff, "The Paradigm is Changing: Hopes and Fears," *BibInt* 1 (1993): 52: "Scholars still seem to be proud of knowing things better than the final redactors or compilers. This is a kind of nineteenth–century hubris we should have left behind us." Similarly, Terence J. Keegan, "Biblical Criticism and the Challenge of Postmodernism," *BibInt* 3 (1995): 8, recalls that the literary approaches characterizing modern and post–modern researches require considerably more humility than the previous ones.

²⁰ Meir Weiss, *Ideas and Beliefs in the Book of Psalms* (Jerusalem: Mossad Bialik, 2001), 16–17.

²¹ See Hubert Irsigler, "Speech Acts and Intention in the Song of the Vineyard, Isaiah 5:1–7," *OTE* 11 (1997): 47, 57; Terry Giles and William J. Doan, *Twice Used Songs: Performance Criticism of the Songs of Ancient Israel* (Peabody, Mass.: Hendrickson, 2009), 12–16.

²² See Beth L. Tanner, *The Book of Psalms Through the Lens of Intertextuality* (New York: Peter Lang, 2001), 53–56.

²³ See Reuben Ahroni, "The Unity of Psalm 23," *HAR* 6 (1982): 31–33; Ziony Zevit, "Psalms at the Poetic Precipice," *HAR* 10 (1986): 362–363.

lem through the intentional use of chaotic syntax and structure.²⁴ Finally, the inconsistencies were sometimes interpreted as the banal consequence of a low poetical value of some psalms.²⁵

Beyond such a divergence of opinions, all these explanations reveal a general agreement concerning the abnormally low syntagmatic dimension of many of the psalms, even for poetry.

2 Over-Expression of the Paradigmatic Component

Patterns of recurrence have been identified for a long time in biblical poetry. The most famous one is the parallel between the two halves of a verse (internal parallelism). Beyond this general characteristic of the ANE poetry, some patterns of recurrence (identified on the basis of sound, semantic and syntactic affinities) extending to *the entire song* are typically attested to in biblical psalm-poetry.²⁶ The most frequent patterns are (i) the forward symmetry (A–B–C–A’–B’–C’), in which the parallel verse lines from two successive poetical entities are interrelated, (ii) the fixed-interval pattern (A–B–A’–B’–C–D–C’–D’), in which verses positioned at constant interval are bonded, (iii) the chiastic (A–B–C–C’–B’–A’) and concentric (A–B–C–D–C’–B’–A’) structures, in which verse lines symmetrically positioned with regards to the center are interrelated.²⁷

²⁴ See Daniel Grossberg, *Centripetal and Centrifugal Structures in Biblical Poetry* (Atlanta: SBL Press, 1989), 87; Charles W. Miller, "Reading Voices: Personification, Dialogism, and the Reader of Lamentation I," *BibInt* 9 (2001): 394, 397; Benjamin Morse, "The Lamentation Project: Biblical Mourning through Modern Montage," *JSOT* 28 (2003): 119. Cornelius Houk, "Multiple Poets in Lamentations," *JSOT* 30 (2005): 122-123, even suggested that the chaotic nature of the Lamentations reflect their composition by many poets inserting each one his claims.

²⁵ See Walter Brueggemann, "The Psalms and the Life of Faith: A Suggested Typology of Functions," *JSOT* 17 (1980): 7; Stephen A. Geller, "Some Pitfalls in the 'Literary Approach' to Biblical Narrative," *JQR* 74 (1984): 414–415. This eventuality has been already evoked for a long time. See Hermann Gunkel, *Die Psalmen* (Göttingen: Vandenhoeck and Ruprecht, 1986 [1926]), 610. In this interpretative context, Moses Buttenwieser, *The Psalms* (Chicago: University of Chicago, 1938), 849, assumed that Ps 145 belongs to a phase of literary decadence of the biblical poetry.

²⁶ For a recent survey of the history of research and achievements in rhetorical analysis, see Roland Meynet, "Histoire de l'analyse rhétorique en exégèse biblique," *Rhetorica* 8 (1990): 295–310; Kevin G. Smith and Bill Domeris, "A Brief History of Psalms Studies," *Conspectus* 6 (2008): 100–104.

²⁷ For details about the patterns of symmetry, see Alonso Schökel, "Poésie hébraïque," 86–89; Jonathan Magonet, "Some Concentric Structures in Psalms," *HeyJ* 23 (1982): 367; Francis Landy, "Poetics and Parallelism: Some Comments on James Kugel's *The Idea of Biblical Poetry*," *JSOT* 28 (1984): 74; Roland Meynet, *Traité de rhétorique biblique* (Paris: Lethielleux, 2007), 31–112; Weber, "Toward a Theory,"

The concentric pattern of symmetry, first characterized by the German scholar Johan Albrecht Bengel (1687–1752), is now identified in more than a third of the poems edited in the Psalter.²⁸ It is characterized by a special importance of the verse positioned at the mathematical middle of the poem. This central verse generally expresses the main message of the song. It also frequently displays unique characteristics concerning its structure, rhythm and tone.²⁹ Furthermore, the first and last verses, parallel in their claim, generate an *inclusio* expressing a claim closely related to the message carried by the central verse.³⁰

A high level of symmetry is in no way required to generate a subliminal paradigmatic network. This means that the global figures of symmetry, defined here as *patterned paradigmatic dimension*, represent another singularity of the biblical psalm poetry.

3 The Cognitive Dissonance

About thirty years ago, Paul Mosca deplored the lack of cooperation between the scholars approaching biblical poetry through form-criticism and those focusing their attention on rhetorical analysis:

Both form-critical and rhetorical-stylistic studies continue to flourish, but all too often they do in isolation from each other. Even worse, adherents of each method occasionally reveal a latent – and at time not so latent – hostility to each other. This mutual distrust

182–184; Peter van der Lugt, *Cantos and Strophes in Biblical Hebrew Poetry: With Special Reference to the first Book of Psalms* (vol. 1; Leiden: Brill, 2006), 22–29.

²⁸ For a review of the work of Bengel, see Meynet, *Traité*, 44–46. Extending more than two centuries of investigations, Alden identified 56 among the 150 Psalms of the Psalter following this concentric structural pattern. See Robert L. Alden, "Chiastic Psalms: A Study in the Mechanics of Semitic Poetry in Psalms 1–50," *JETS* 17 (1974); Robert L. Alden, "Chiastic Psalms (II): A Study in the Mechanics of Semitic Poetry in Psalms 51–100," *JETS* 19 (1976); Robert L. Alden, "Chiastic Psalms (III): A Study in the Mechanics of Semitic Poetry in Psalms 101–150," *JETS* 21 (1978).

²⁹ These properties have been especially characterized by Albert Condamin, *Poèmes de la Bible* (Paris: Beauchesne, 1933), 29. Peter van der Lugt, *Cantos and Strophes in Biblical Hebrew Poetry* (vol. 2; Leiden: Brill, 2010) stressed the extensive mention of the name of God in the central verse (pp. 508–523), the use of specific rhetorical devices emphasizing the claims of this verse (pp. 537–542) and the specific mention of words of central importance (pp. 543–548).

³⁰ This property of concentric structures was first characterized by Nils W. Lund, *Chiasmus in the New Testament: A Study in Formgeschichte* (Chapel Hill: The University of North Carolina Press, 1942), 41.

between the two enterprises is at once surprising, understandable and deplorable.³¹

This situation has not really changed during the last decades. It is not so difficult to understand why: the form-criticism approach attempts to resolve the problems inherent to the low syntagmatic value of the psalm poetry, while the rhetorical analysis investigates its exacerbated paradigmatic dimension. These two approaches are not easily combined because a damaged or freely-composed poem (as deduced from the low syntagmatic value) is not expected to display a highly organized structure (patterned paradigmatic dimension) and reciprocally. This cognitive dissonance is expressed in the two successive sentences by which Willem van der Meer characterizes Psalm 110:

The present form of the psalm appears to demonstrate a clear cohesion and structure. Nevertheless, there are indicators in the psalm which create doubts as to whether it is simply an original unit.³²

Psalm 110 is far from being the only poem displaying these contrasting realities. For example, some scholars extensively describe the chaotic form of writing of the Lamentations and interpret such a dislocation of the text as an "aesthetic of mourning,"³³ whilst others identify in these poems a skillfully conceived concentric structure comprising all the verses of the song.³⁴ These contrasting features have been justified as a poetical artifice used to enhance the dramatic tension expressed in the Lamentations.³⁵ This explanation is, however, challenged by the identification of the same contrast in psalms devoid of any dramatic tension. For example, Ps 87, considered by many scholars as the most chaotic and awkward text of the Psalter, also displays a whole concentric-like symmetry pattern.³⁶ A similar situation also characterizes Ps 23, simultaneously approached as a free, impressionistic text³⁷ and as a highly structured composition.³⁸ Also Ps 95 is divided in two autonomous entities (initially

³¹ Paul G. Mosca, "Psalm 26: Poetic Structure and the Form-Critical Task," *CBQ* 47 (1985): 213.

³² Willem van der Meer, "Psalm 110: A Psalm of Rehabilitation," in *The Structural Analysis of Biblical and Canaanite Poetry* (ed. Willem van der Meer and Johannes C. de Moor; Sheffield: Sheffield Academic Press, 1988), 220.

³³ See Morse, "Lamentation Project"; Houk, "Multiple Poets."

³⁴ For concentric structures of Lam 1 and 2, see Jan Renkema, "The Literary Structure of Lamentations (I)," in *The Structural Analysis of Biblical and Canaanite Poetry* (ed. Willem van der Meer and Johannes C. de Moor; Sheffield: Sheffield Academic Press, 1988), 294–321. See also Jan Renkema, *Lamentations* (Leuven: Peteers, 1998), 85–89.

³⁵ Grossberg, *Centripetal and Centrifugal*, 87–89.

³⁶ See Nissim Amzallag, "The Cosmopolitan Character of the Korahite Musical Congregation: Evidence from Psalm 87," *VT* (2014): 7–9.

³⁷ See Ahroni, "The Unity."

³⁸ See Ron Tappy, "Psalm 23: Symbolism and Structure," *CBQ* 57 (1995).

considered as the compilation of a poem of hymnic nature with a wisdom song), however some scholars analyze the pattern of forward symmetry existing between them.³⁹

This high global order observed in a psalm challenges all the previously mentioned justifications of its inconsistencies: heavily damaged text, free composition, compilation of fragments of poems, low poetic value. However, at the same time, the existence of a global structure of the psalm is not easy to justify. It was argued that the global concentric pattern is a rhetorical device generating a crescendo towards the center of the poem, and a decrescendo following this climax.⁴⁰ However, perfect mirror symmetry is in no way requested to produce such an effect. The existence of highly organized patterns may be justified by assuming that poets looked for absolute perfection of the song composed to be "offered" to the deity.⁴¹ However, such a quest of perfection is expected to find expression both in the structure and content of the psalm, a feature challenged by the abnormally low syntagmatic value characterizing the psalms.

C THE MUSICAL SHAPING OF PSALM POETRY

Music, exactly as psalm-poetry, is characterized by a patterned paradigmatic dimension resulting from the iteration of few musical themes, and their articulation in a complex network of interactions.⁴² The inability to evaluate a piece of music through its themes and their linear succession should be considered as evidence towards a very low syntagmatic value.⁴³ This means that the

³⁹ See Pieter B. van Petegem, "Sur le Psalme 95," *SJOT* 22 (2008): 240; G. Henton Davies, "Psalm 95," *ZAW* 85 (1973): 184; Georges W. Savran, "The Contrasting Voices of Psalm 95," *RB* 110 (2003): 29–32.

⁴⁰ See William H. Shea, "Chiasmus and the Structure of David's Lament," *JBL* 105 (1986): 21. This device is evoked here in the concentric pattern characterizing the David's lament on Saul and Jonathan (2 Sam 1: 19–27).

⁴¹ See Jacob Bazak, "Structural Geometric Patterns in Biblical Poetry," *PT* 6 (1985): 475–502.

⁴² Fred Lerdahl and Ray Jackendoff, *A Generative Theory of Tonal Music* (Cambridge, Mass.: MIT Press, 1983), 52.

⁴³ The genuine existence of a syntagmatic dimension in music is a matter of discussion. For Patrick McCreless, "Syntagmatics and Paradigmatics: Some Implications for the Analysis of Chromaticism in Tonal Music," *MTS* 13 (1991): 149, the syntagmatic dimension is defined as a "linear distribution or ordering of elements of a paradigmatic inventory in terms of established rules or principles." However, for Joseph P. Swain, "The Concept of Musical Syntax," *MQ* 79 (1995): 281, the musical syntax being founded on intervals between successive notes, it should be considered first as a micro-paradigmatic dimension, distinct in its rules from the rules determining the patterns of recurrence of musical units.

contrasting characteristics of psalm poetry are also specifically encountered in music.⁴⁴ This conclusion is confirmed by the following considerations:

- (i) In psalm poetry, the phenomenon of symmetry is identified at many levels of organization, from the verse (where it defines rhetorical patterns of speech) to the strophe, canto and even the entire song.⁴⁵ Exactly the same hierarchy is found in music, where compact patterns of symmetry are identified alongside larger scales of symmetry, the last one encompassing the whole composition.⁴⁶
- (ii) The two basic patterns of symmetry in music are a parallel succession of the same entities (forward symmetry: A–B–C–A'–B'–C') and a mirror symmetry in which the elements are organized around a center.⁴⁷ Exactly the same basic figures of symmetry are identified in psalm poetry.
- (iii) Inclusio is a pattern of symmetry characterizing the beginning/end of many psalms. The repetition of the opening theme at the end is also a general characteristic of musical compositions.
- (iv) Recurrence in psalm poetry does not mean iteration.⁴⁸ It is rather elaborated on the basis of variations on a theme. The same reality is attested to in music, in which the variations within the pattern of recurrence strengthen the perception of the parallels.⁴⁹

These similarities suggest that music, in psalm poetry, is not superimposed to a text basically conceived as a literary piece of work. It is rather a *constitutive* dimension of the poetical composition.

⁴⁴ Such an affinity between the mode of composition of psalms and musical writing has already been noticed by some scholars. For example, Alonso Schökel, "Poésie hébraïque," 73, wrote: "Dans les genres musicaux plus "formels," les répétitions sont un procédé constant de développement, en particulier ce type de développement musical qui peut légitimement être comparé à une espèce de synonymie. Or la poésie hébraïque emploie ce procédé comme un des procédés dominants de développement poétique."

⁴⁵ See Van der Lugt, *Cantos and Strophes I*, 71–74.

⁴⁶ For micro-symmetry and their identification, see David Meredith, Kjell Lemstrom and Geraint A. Wiggins, "Algorithms for Discovering Repeated Patterns in Multidimensional Representations of Polyphonic Music," *JNMR* 31 (2002).

⁴⁷ See Davorin Kempf, "What is Symmetry in Music?" *IRASM* 2 (1996): 156–160. The most common of these mirror symmetry patterns is the rondo (basically A–B–A pattern), which may be considerably developed into a vast concentric pattern, or even mixed and combined with other symmetry patterns.

⁴⁸ See Nel, "Parallelism and Recurrence," 136–138.

⁴⁹ "Paradoxically," assumes Davorin Kempf, "What is Symmetry," 158, "such a violation of symmetry enforces – through the harmonic attraction – the coherence and unity of the two-part formal wholeness."

The characteristics of biblical psalm poetry have been compared here with those of written music. However, this latter mainly restricts to the western music composed throughout the last five centuries. To confirm the parallel between music and psalm poetry, it is also necessary to identify complex figures of symmetry in non-written music.

Researches in ethnomusicology have revealed that the fundamental patterns of symmetry characterizing western music are already identified in traditional music, even in its so-called "primitive" stages.⁵⁰ They also show that the emergence of complex patterns of symmetry in traditional music is a consequence of the antiphonal mode of performance. Recurrence, the fundamental event of musical composition, finds its basic expression in the variations introduced by the answering voice to the themes sung by the opening voice. Furthermore, the overlapping of the voices generates complex patterns of harmony based upon iteration of simple motives.⁵¹ The canon, a mode of performance directly derived from antiphony, generates patterns of symmetry extending to the entire composition.⁵² Also the structural pattern of rondo, extensively developed in western music, originates from antiphony.⁵³ The use of several figures of variation combined with few rules guiding the interaction between the two voices appears to be sufficient to generate very complex figures of symmetry during an antiphonal performance.⁵⁴ It now appears that many of the basic components of the musical language of western music find their origin in the figures emerging during an antiphonal mode of performance.⁵⁵

⁵⁰ See Serge Pahaut, Simha Arom and Christian Meyer, "Une voix multiple," *CE* 6 (1993); Polo Vallejo, "Forme et texture polyphonique dans la musique des Wagogo de Tanzanie," *CMT* 17 (2004). Identifying complex patterns in music of "primitive" peoples, Kurt Sachs, "Primitive and Medieval Music: A parallel," *JAMS* 13 (1960), 49, concludes that "Nothing could be more impressive warning against the prejudice of a 'plausible' evolution from simple to complicated forms."

⁵¹ See Laz E. N. Ekwueme, "Concepts of African Musical Theory," *JBS* 5 (1967): 58; Charlotte J. Frisbie, "Anthropological and Ethnomusicological Implications of a Comparative Analysis of Bushmen and African Pygmy Music," *Ethnology* 10 (1971): 274.

⁵² See Sachs, "Primitive and Medieval," 49; Ghizela Suliteanu, "Antiphonal Performance in Roumanian Folk Music," *YIFMC* 11 (1979): 45–47.

⁵³ See Frisbie, "Anthropological and Ethnomusicological," 282; Sachs, "Primitive and Medieval," 47.

⁵⁴ For example of complex symmetry patterns generated by these techniques of antiphony in traditional music, see David Rycroft, "Nguni Vocal Polyphony," *YIFMC* 19 (1967); Vallejo, "Forme et texture."

⁵⁵ Kurt Sachs, "Primitive and Medieval," 49, concluded that "every facet in the oldest written music of secular Europe has its parallel in primitive music – melodic organization, structure, rhythm, polyphony." Masataka Yoshioka, "Singing the Republic: Polychoral culture at San Marco in Venice (1550–1615)," Ph.D diss., University of North Texas, 2010), 130, also concluded that the complex patterns of

These considerations reveal that the existence of written music is not a necessary condition to establish a correspondence between the global patterns of symmetry in psalm poetry and music. What is mainly required to justify the "musical interpretation" of the patterns of symmetry identified in psalms is nothing more than evidence towards their antiphonal mode of performance.

Antiphony is the fundamental mode of ritual singing identified by ethnomusicology.⁵⁶ Accounting for its widespread distribution, in both space and time, there is no reason to consider the ANE as an exception. Positive evidences, both epigraphic and iconographic, confirm that antiphony was the prominent mode of performance of liturgy in the ANE.⁵⁷ This conclusion is apparently also valuable in Ancient Israel, where an antiphonal performance is explicitly evoked at the Sichem covenant (Deut 27:11–13), during the ceremony of inauguration of "house of YHWH" at Jerusalem (Ezra 3:10–13) and at the ceremony for the completion of the city wall of Jerusalem (Neh 12:40). From analysis of the musical performances evoked in the Bible, some scholars even suggested that antiphony was the preferential mode of singing at the Jerusalem temple.⁵⁸ A recent study has shown that the choral dimension of meaning, and especially the antiphonal mode of performance, is most likely the primary meaning of *lehodot* from which all other meanings derive. This reveals that, in Ancient Israel, antiphony was approached as the essential mode of praising YHWH.⁵⁹ This opinion is also supported by many post-biblical

the Baroque music (and among them, the *concerto*) emerged from patterns of antiphonal performance (*chori spezzatti*) that knew a great level of development at the Renaissance.

⁵⁶ Antiphony is widely encountered in traditional music from Africa (Ekwueme, "African Musical Theory," 46), from Southern and Central Europe (Suliteanu, "Antiphonal Performance," 41–42) and from Arabia, as noticed by Dieter Christensen, "Vocal Polyphony and Multisonance in South–Eastern Arabia," in *Proceedings of The First International Symposium on Traditional Polyphony* (Tbilisi: International Research Center for Traditional Polyphony of Tbilisi State Conservatoire, 2003), 233–235. It is considered by Sachs, "Primitive and Medieval," 47–48, as one of the most fundamental form of musical performance.

⁵⁷ See Sendrey, *Music*, 44–49, 161; Dominique Collon, "Playing in Concert in the Ancient Near East," in *Proceedings of the International Conference of Near Eastern Archaeomusicology* (ed. Richard Dumbrill and Irvin Finkel; London: Iconea Publications, 2010), 60–62.

⁵⁸ This opinion is continuously expressed throughout the 20th Century. See for example Briggs, *Psalms*, 47–48; Hermann Gunkel, *Introduction to Psalms: The Genres of the Religious Lyric of Israel* (Macon: Mercier University Press, 1998), 310–312; Israel W. Slotki, "Antiphony in Ancient Hebrew Poetry," *JQR* 26 (1936): 199–219; Kurt Sachs, *The Rise of Music in the Ancient World – East and West* (New York: Norton, 1943), 93; Van Dyk, "Music," 377; Kleinig, "Lord's Song," 43, 48–49.

⁵⁹ Nissim Amzallag, "To Praise or to Sing Antiphonally? The Meaning of *lehodot* Revisited," *HebStud* 56 (2015).

testimonies.⁶⁰ The homology between the mode of composition of music and that of biblical psalm poetry now clarifies: it reflects the integration within the text of the poems of the figures of symmetry generated between the two voices involved in an antiphonal performance.

D THE CASE FOR COMPLEX ANTIHONY

Antiphony is generally approached as an echo pattern, in which the second, responsive voice, sings a constant refrain or repeats with variations the claims sung by the first, opening voice. This mode of *simple antiphony* fits the pattern of recurrence between the two halves of a verse (*internal parallelism*), by suggesting that the first half of a verse was sung by the opening voice, while the second is the "echo" sung by the responsive voice. This interpretation is, however, unable to justify the existence of complex patterns of symmetry extending throughout the entire song. If it relates to the antiphonal nature of the performance, as suggested above, we may assume that the pattern of global symmetry reveals both the existence of two distinct scores in the text of the poem, and the way the two voices are expected to intertwine during the performance. This hypothesis enables to justify why the linear reading displays such a reduced syntagmatic value. This text, as it is edited, is no other than the score of the two individual voices. It is unable to reveal the real content and cohesiveness of the psalm exactly as it is impossible to appreciate a symphony by auditioning all the instrumental scores performed one after the other.

The mysterious organization of the text of the psalms as a succession of small autonomous syntactic entities finds, here again, a simple explanation.⁶¹ These entities are no more components of a coherent sentence, but rather antiphonal units designed to intertwine, during the performance, with their counterpart from the other voice. The combination of antiphonal units from the two voices generates a composite text distinct from the linear reading. This is why this mode of performance should be defined as *complex antiphony*.

Such an emergence of a composite text from the combination of small fragments successively claimed by the two voices is attested to in traditional music.⁶² In biblical psalm poetry, it is supported by the correspondence between the autonomous segments identified by literary considerations and

⁶⁰ See Philo, *Contempl.*, 83–85. For Talmudic sources about antiphonal performance at the temple, see Sendrey, *Music*, 177–178; Hanokh Evenary, "Formal Structure of Psalms and Canticles in Early Jewish and Christian Chant," *MD* 7 (1953): 3–5.

⁶¹ See William M. Sol, "Babylonian and Biblical Acrostics," *Bib* 69 (1988): 315; Niccacci, "Analyzing," 77–78, 91–92; Talstra, "Reading," 103.

⁶² This mode of antiphony is attested to in traditional music from Arabia (Christensen, "Vocal Polyphony," 235), and Central Europe (Suliteanu, "Antiphonal Performance," 42–43), where the second voice may complement the claims of the first voice, or may even sing its own poem that mixes with the one sung by the first voice.

those delimited by the pausal indications of the Masoretic Cantillation.⁶³ The latter fits the dialogic character of antiphonal performance, in which a voice is requested to wait at each time the other voice is singing.

The identified patterns of global symmetry in biblical psalm poetry enable us to assume the existence of at least three basic modes of complex antiphony: *steady responsa*, *cross responsa*, and *canonic responsa*. The first two integrate all the verselines in a single figure of symmetry, while the last one expresses the iteration, throughout the entire psalm, of a local pattern of symmetry.

1 Steady Responsa

Steady responsa is a mode of complex antiphony in which parallel verses from the two scores are bonded during the performance. This figure of complex antiphony basically fits the pattern of forward symmetry (A–B–C–D–A'–B'–C'–D'), in which the psalm divides in two entities of equal length, and literary bonds are observed between the parallel verse lines (see Fig. 1a).

This mode of performance has already been tested in Pss 121, 126, 128, all characterized by a global forward symmetry pattern, by a sharp abnormal transition between the two halves and by problems of meaning inherent to a linear reading of the entire text. In all these instances, the steady responsa setting yields a composite text characterized by coherent meaning, structure and narrative development, in which inconsistencies of the linear reading are resolved.⁶⁴

Though ignored today, it seems that steady responsa was a widespread mode of antiphonal performance in Antiquity. It is suggested by the discovery, in Mesopotamia, of hymns characterized by a verse to verse forward symmetry between two distinct parts of equal length.⁶⁵ In some cases, the second "score" is written on the obverse of the table, with the heading indication of *gisgigal*

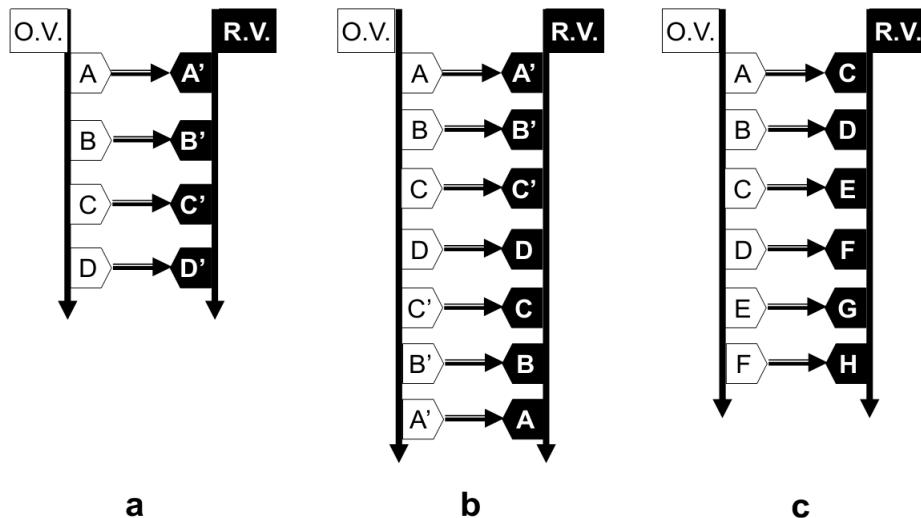
⁶³ See Ernest J. Revell, "The Occurrence of Pausal Forms," *JSS* 58 (2012). This ancientness of the pausal indications of the masoretic cantillation is suggested by Ernest J. Revell, "Pausal Forms and the Structure of Biblical Poetry," *VT* 31 (1981): 186–188; Bezalel E. Dresher, "The Prosodic Basis of the Tiberian Hebrew System of Accents," *Language* 70 (1994): 14; David C. Mitchell, "Resinging the Temple Psalmody," *JSOT* 36 (2012): 365. It is confirmed by the similar use of pausal indications in hymns from Qumran. See Eric Werner, "Musical Aspects of the Dead Sea Scrolls," *MQ* 43 (1957): 22–23.

⁶⁴ See Nissim Amzallag and Mikhal Avriel, "Complex Antiphony in Psalms 121, 126 and 128: The Steady Responsa Hypothesis," *OTE* 23 (2010).

⁶⁵ For examples of these compositions, see Condamin, *Poèmes*, 270–276.

Figure 1:*Three patterns of complex antiphony in biblical psalm poetry.***a:** steady responsa; **b:** cross-responsa; **c:** canonic responsa.

Abbreviations and symbols: O.V.: opening voice ; R.V.: responsive voice. The letters symbolize verselines, the double arrows symbolize the intertwinement of antiphonal units from the related verselines. The vertical arrow in each score symbolizes the linear axis (time).



(antiphony).⁶⁶ Here again, the simplest way to integrate all these singularities is to assume that these poems were conceived to be performed in steady responsa fashion.

A steady responsa mode of antiphonal performance has been identified in KTU 1.65, an archaic song from Ugarit. This text is characterized both in time by a very obscure meaning at linear reading and by the presence of highly structured rhetoric patterns. It clarifies once the parallel cola from the two sides of the tablet become paired.⁶⁷ This finding confirms that steady responsa was a very ancient mode of antiphonal performance in the Ancient Near East.

A steady responsa mode of performance is also likely in Greek tragedies, in which the *choros* frequently split in two half-choirs, each one singing its own score, the strophe and antistrophe respectively. Both are characterized

⁶⁶ See Stephen Langdon, *Sumerian Liturgies and Psalms* (Philadelphia: The University Museum Publications, 1919), 247, 258, 279, 283–284; and Stephen Langdon, "Two Sumerian Hymns from Eridu and Nippur," *AJS* 39 (1923): 176–179.

⁶⁷ See Nissim Amzallag and Shamir Yona, "The Unusual Mode of Editing of KTU 1.65," *UF* 45 (2014).

by an equal length, and by strong literary bonds and similarities in rhythm and accents between verses in homolog position.⁶⁸ In this context, the simplest hypothesis justifying the splitting of the singers in two half choirs is a steady *responsa* mode of performance in which the strophe and antistrophe intertwine.⁶⁹

2 Cross-*Responsa*

A concentric structure is characterized by the inversion, in the second half of the text, of the order of precedence of the verses enclosing themes/literary elements (A–B–C–D–C'–B'–A'). At the extreme case, that of perfect identity between the verses of the two halves, the pattern of concentric symmetry generates a genuine palindrome (A–B–C–D–C–B–A). In such a situation, the text may be read both in *sense* (A–B–C–D) and *antisense* (D–C–B–A) directions. In some psalms, the strong level of literary correspondence identified between symmetrical elements of concentric structures invited scholars to approach them as a palindrome-like structure.⁷⁰ In the perspective of complex antiphony, such a reality enables us to identify the two scores as follows: the first one resulting from the reading of the text of the psalm from the first to the last verse (*sense voice*), and the second one resulting from the reading of the *same* text from the last to the first verse (*antisense voice*). The antiphonal dialog between the sense and antisense voices is defined as *cross responsa* because the central verse is sung in echo by the two voices at the middle of the performance, and because the order of ranking between and even within the couples of antiphonal units is inverted in the second half of the performance, in regard to the first one (see Fig. 1b).

In psalms displaying a concentric pattern of symmetry, the central verse is frequently characterized by its unique structure, hymnic nature and rhythm.

⁶⁸ Concerning the splitting of choirs in Greek tragedies, see Christopher Collard, *Euripides* (Oxford, Clarendon Press, 1981), 23–24; Stephen Esposito, "The Changing Roles of the Sophoclean Chorus," *Arion* 4 (1996): 88, 92, 101; Andrea Fishman, "Threnoi to Moirologia: Female Voices of Solitude, Resistance and Solidarity," *OrTr* 23 (2008): 274, 280–281, 288. Malcolm Davies, "Monody," 52–53, stressed the need to conceive Archaic Greek poetry as pieces of work specifically conceived for choral musical performance.

⁶⁹ Patterns of forward symmetry are also seen out of the context of tragedy, suggesting a widespread use of the steady *responsa* mode of performance in Ancient Greece. See Christopher A. Faraone, "Exhortation and Meditation: Alternating Stanza as a Structural Device in Early Greek Elegy," *CP* 100 (2005): 322–323.

⁷⁰ Martin Mark, *Meine stärke und mein Schutz ist der Herr: Poetologisch-theologische Studie zu Psalm 118* (Würzburg: Echter, 1999), 55, noted that "It is not enough to receive the text only in 'linear' fashion, line by line (the first dimension). Simultaneously, its passages must be read 'palindromically,' from the outer edges to the center (the second dimension) . . ." (quoted and English translated by Weber, "Toward a Theory," 157).

These characteristics find a justification in the context of cross-responsa performance, in which the central verse is the only one to be sung in echo by the two responding voices. This feature authorizes a high level of freedom in its structure. Furthermore, by repeating it in echo, this central verse carries the most emphasized claims of the entire song. These singularities fit the identification of the central verse of a concentric structure as expressing the main themes of the song and showing autonomy in its structure with regards to all the other verses. Also the strong linkage of the inclusio with the theme of the central verse finds a simple explanation: in this context of performance, the bonding of the two verses of the inclusio generates a hymnic aperture/closure presenting the central theme of the psalm, the one sung in echo at the middle of the performance.

Four biblical poems displaying a concentric-like pattern have already been set in cross responsa fashion: the Davis's lament on Saul and Jonathan (2 Sam 1:19–27), the Isaiah satirical lament (Isa 14:4–20), the song of the Sea (Ex 15:1–21) and Ps 87.⁷¹ In all these cases, the composite text issued from the combination of verses from the sense and antisense voices displays a high level of literary coherency. In Ps 87, the coherency of the composite text is even considerably improved in relation to that of the linear text. The composite text of all these four poems expressed composite meanings totally ignored by the linear reading. In the second half of the performance, both the inversion of order of precedence of the couple of verses and the inversion of order of antiphonal units engender a series of new claims complementing those expressed in the first half. Such a series of emergent literary properties of the composite text suggests that these songs were intentionally conceived for performance in cross-responsa fashion.

The cross-responsa mode of antiphonal performance may appear very odd to modern readers. However, it is clearly attested in medieval song-poetry, where it is called *canon cancrizans*.⁷² Exactly as in biblical psalm poetry, poems composed in such a fashion display a concentric symmetry pattern, a prominence of the central verse and an organization of the first and last verses

⁷¹ See Nissim Amzallag and Mikhal Avriel, "Complex Antiphony in David's Lament (2 Sam 1, 19–27) and its Literary Significance," *VT* 60 (2010); Nissim Amzallag and Mikhal Avriel, "Responsive Voices in the Song of the Sea (Ex. 15:1–21)," *JBQ* 40 (2012); Nissim Amzallag and Mikhal Avriel, "The Cryptic Meaning of the Isaiah 14 *Mashal*," *JBL* 131 (2012). See also Amzallag, "Cosmopolitan Character."

⁷² For history of the *canon cancrizans* and its mode of performance, see Virginia Newes, "Writing, Reading and Memorizing: The Transmission and Resolution of Retrograde Canons from the 14th and 15th Centuries," *EMus* 18 (1990).

in inclusio.⁷³ This provides another argument supporting the reality of this mode of performance in biblical psalm poetry.

3 Canonic Responsa

A canon is performed when the second voice reiterates with a constant delay the claims sung by the first voice.⁷⁴ This figure of performance, well-attested to in traditional and ancient music, is suggested in biblical psalm poetry if a specific interval between two verse lines displays more literary bonds than all the other intervals. This pattern of iteration, when observed throughout the entire song, is not easily justified by considerations relative to the linear reading. Here again, the simplest explanation is to assume that this preferential interval of bonding designates the delay between two antiphonal voices singing in canonic fashion. This, therefore, defines a *canonic responsa* mode of complex antiphony. It differs from the "classical" canon by the occurrence of an antiphonal pattern from the beginning to the end of the performance.⁷⁵

The example of a canonic responsa with a 2-verseline lag is illustrated in Fig 1c for a text of eight verse lines (A–B–C–D–E–F–G–H). In this case, the A–B–C–D–E–F group of verses defines the score of the first voice, whereas the C–D–E–F–G–H group generates the score of the second voice. The A–B fragment, belonging only to the score of the first voice, is the *head segment*, while the G–H fragment, belonging only to the score of the responding voice, is the *tail segment*. The verselines sung by the two scores (here, C–D–E–F) define the *body segment*. They are sung twice during the performance, once as an opening claim (first voice) and thereafter as a responsive claim (second voice). However, in contrast with cross responsa, the inversion of precedence is accompanied here by a permutation of the paired verse.

The canonic responsa mode of performance has been identified in Ps 114.⁷⁶ There, the structure A–B–C–D–C'–D'–E–F of the song does not fit the forward or the concentric patterns of symmetry. On the other hand, the sequence C–D–C'–D' is not easily interpreted in a linear context of reading. The setting of this psalm in canonic responsa fashion with a 2-verselines lag generates a highly coherent composite text with its own significance and development. It is divided into three composite strophes of equal length:

⁷³ Elisabeth S. Dallas, "Canon Cancrizans and the Four Quartets," *ComLit* 17 (1965): 203–206.

⁷⁴ Vallejo, "Forme et texture," 56.

⁷⁵ The canonic responsa differs from the simple canon (where the beginning and ending are sung only by a single voice) by a constant dialog between the two voices. This assumption concerning canonic responsa is supported by literary considerations relative to the setting of Ps 114 in canonic responsa fashion. See Nissim Amzallag and Mikhal Avriel, "The Canonic Responsa reading of Psalm 114 and its Theological Significance," *OTE* 24 (2011):308-309.

⁷⁶ See Amzallag and Avriel, "Psalm 114."

(A→C; B→D); (C→C'; D→D'); (C'→E; D'→F), each one with its own theme. Exactly as in cross responsa, the intermediate composite strophe generates an echo-like pattern expressing the main message of the song.

E CONCLUSIONS

Until now, the combination of inconsistencies of the linear reading and of highly organized patterns of symmetry has not received any satisfying explanation. Such a situation results from the contrasting nature of these two properties, as long as psalms are approached in a linear fashion. This problem is resolved here first of all by distinguishing between *declamatory poetry* conceived to be read and/or performed by a single voice following the text as it is written, and *psalm poetry* conceived to be performed by choirs. In this latter case, the lack of fluency of the linear text combined with a highly patterned paradigmatic dimension spontaneously invites us to consider the analyzed psalm as originally designed for complex antiphony. This is currently the only hypothesis enabling the integration of these contrasting properties of biblical poetry in a single coherent framework.

In the declamatory mode, the literary text *pre-exists* the performance, while, in complex antiphony, the text of the song *self-emerges* during the performance, through the intertwinement of voices. This generates an essential difference between them. A declamatory poem contains only one text read in linear fashion. However, three genuine poems coexist in a work conceived in complex antiphonal fashion: the two scores are two linear poetical pieces of work, each one sung by another voice. They should, therefore, be regarded as homolog to the declamatory poems (though their syntagmatic value is frequently lower than expected for a linear poem). Their intertwinement superimposes a new dimension of meaning, that of the composite text. This third poetical piece emerges through the interactions between the claims of the two voices. The literary bonds between the dialogic voices (generating the patterned paradigmatic dimension) transform the two interacting units into a new coherent composite entity differing in nature from the text of a declamatory poem.

The composite text should be approached as a succession of "dialogic metaphors" in which the claim of each voice acts as a figure of metaphor for the other. For this reason, the understanding of the emergent meaning is not the same for the audience, for the singers belonging to the opening choir and for those belonging to the responsive one.⁷⁷ This singular nature of the composite text suggests that the understanding of the emergent dimension of meaning in a composite text requires considerably more attention than the analysis of a text composed in the declamatory mode. Accounting for the widespread combina-

⁷⁷ This property may also explain why the composite text of the second half of a cross responsa performance may differ in its meaning from the first part, though they display the same couples of antiphonal units.

tion of low syntagmatic value with a patterned paradigmatic dimension in the songs edited in Psalter, it seems that a composite text and its emergent meaning are to be rediscovered in many psalms.

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