



How Zarathushtra Generated the Gathic Corpus: Inner-textual and Intertextual Composition

M A R T I N S C H W A R T Z

In this article I shall set forth my most recent discoveries concerning the principles of Gathic composition. After summarizing the observations I had made in earlier publications¹ as concerns (I.1) ring-composition, (I.2) proto-poems, and final poems, I shall (I.2) update the latter exposition as to both principles and examples. Then (II) I shall briefly explain the principles of cross-textual recursive composition whereby Zarathushtra generated the sequence of his poems. This will be followed (III.1 and 2) by illustration of these principles with instances involving the etymology of Gathic personal names.

I.1

Each of the poems of the Gathic corpus belongs to one of three basic patterns of systematic concatenation. These govern relations between concentrically related (a) single stanzas; (b) consecutively paired stanzas; and (c) single stanzas regularly alternating with consecutively paired stanzas. In addition, the central stanza or stanzas of each poem are in some instances concatenated formally, i.e. by words showing the inflected form, or by stems or roots (sometimes the concatenation pertains to a phrase consisting of such words); these features also serve in the consecutive pairing of stanzas in concatenation-types (b) and (c). In other instances, the concatenation consists of semantically, rather than formally, related words. Frequently the concatenations consist of words related by form, and words related by meaning. Rarely, the concatenation is based on paronomasia, e.g. Y(asna) 50.6a' *māθrā* /manθra'ā/ 'mant(h)ra' and Y50.1b'' *mā.nā θrātā* /mana θrātā/ 'my protector'. More than one concatenation is often found between the two related stanzas.

In some poems, the concatenations are throughout formal, whereas in other poems, a few stanzas are concatenated only semantically. However, in all poems in which some stanzas are merely concatenated semantically, there is a long sequence of stanzas (totaling to a comparative majority in the poem) which themselves show the criteria of a completed poem: systematic concatenation of concentrically related stanzas (in these instances, single stanzas), and concatenation of central to first and last stanzas. These instances are to be regarded as proto-poems, i.e. the first stage of poems which were later expanded by the addition of more stanzas to form the final poems of our Gathic canon, each of which has an overall concatenation, whether or not all of the concentrically related stanzas are concatenated formally (as e.g. Y46) or semantically.

I.2

My list of proto-poems now consists of the following (subsequent expansions are indicated by "+"): Proto-Y28 (yielding Y28.1–8, + 9–11); Proto-Y31 (> Y31.1–18, + 19–22); Proto-Y32 (> Y32.1–13, + 14–16); Proto-Y33 (> Y33.2–10, + 10–14, + 1); Proto-Y34 (> Y34.1–11, + 12–15); Proto-Y43 (> Y43.3–13, + 14–16, + 1–2); Proto-Y44 (> Y44.2–11, + 12–16, + 1); Proto-Y45 (> Y45.1–7, + 8–11); Proto-Y46 (> Y46.1–10, + 11–19); and Proto-Y49 (> Y49.4–11, + 1–3, + 12). It should now be observed that in all of these instances, the last line of the proto-poem acts as the first line of a second technically complete (i.e. systematically concatenated) poem (see Chart I). By contrast, Y48 consists of two complete poems (1–6 + 7–12) joined without overlap; similarly Y51 (1–11 + 13–22).

All of this shows that formal relatedness is the primary basis of Gathic concatenation with concentricism. The same formality in concatenation holds true for the other Old Avestan Yasna poems, each of which is also concentrically oriented, but where single lines, rather than stanzas, are the compositional unit; thus, on the one hand, the “great prayers” (Y27.14, Y54.1, and probably Y27.15), all of which I attribute to Zarathushtra; and on the other hand, the Yasna Haptaṅhāiti (Y35–Y41), which I doubt is of Zarathushtra’s authorship.²

In connection with the term *haptaṅhāiti* ‘consisting of seven *hāitis*’, the compound, as well as the term *hāiti*- for ‘complete Old Avestan poem’ were canonized in Young Avestan. However, the etymological sense of *hāiti*- ‘(poem characterized by) concatenation’ is already illustrated by Y32.9b” *hāitīm*, which refers to Zarathushtra’s inspired speech, and, since it occurs in the second central stanza of the poem, concatenates with the finale, Y32.16c” *aṅhaiiā* */ā *hāyayā*/ ‘I would fetter’, which, like *hāiti*-, comes from *√hāi* ‘to tie, chain’, whence ‘concatenation’.

Y27.13, traditionally reckoned among the “great prayers”, is instead the original last (11th) stanza of Y29,³ for which the present Y29.11 is a late substitute by Zarathushtra. One other textual modification, this a matter of transmission after Zarathushtra’s lifetime, must also be observed: In order to obtain a systematic set of concatenations, the present Y31.15 should be reckoned as originally Y31.*13 (and consequently the present Y31.13–14 should be counted as originally Y31.*14–15).⁴

The concatenating forms of Y31, with stanzas rearranged as suggested, may be stated concisely: 1a” and 22b” *vacah*- ‘word’; 2b” and 20a” *āii*- ‘to come’; 3b’ and 21c” *uruuat*/θ- ‘(bound by) solemn declaration’; 3b’ and 21c’ **vazd*- ‘solidity, nourishment, (cultic) support’;⁵ 4c’ and 19b” *√xšāi* ‘to rule’; 5b’ and 17b *bis* *√vid* ‘to know’; 6b’ and 18a” *māθra*- ‘manthra, poetic formulation’; 7b’ and 16a” **xšaθra*.⁶ ‘dominion’; 8b” and *14c’ (= 13c’) *cašman*- ‘eye’; 9b” and *15b’ (= 14b’) *dādā*- ‘to set, give’; 9c’ and *15a” (= 14a’) *āi(t)*- ‘come’; 9c” and *15c” (= 14c”) *aṅh*- ‘to be’; 10a” and *13c’ (= 15c’) *vāstriia*- ‘pasturer’. In the central stanzas, 11c” (*y*)*aθrā* ‘where’ and 12a’ *aθrā* in a continuous reference to right and wrong speech; 11c’ and 22b” *šiiāoθanācā* ‘and actions’; 12a” and 1a” (-)*vacā* ‘words’.

The above-suggested reconstructions for Y29 and Y31, based on the exigencies of Gathic ring

structure, are confirmed by details of the cross-textual correlations which result from the compositional process, the basics of which are set forth in II.1.

II

Every Gathic poem composed by Zarathushtra (by which I mean not only the seventeen Gathic Yasnas of our corpus, but also the proto-poems on which they are based) may be accounted for according to the following process(es) of serial recursive composition: Beginning with a single complete *hāiti*-, words from each stanza in forward consecutive order, and then in backward consecutive order from the last stanza to the first, were recast to appear in every stanza, in both directions, in a second poem under construction, which was filled out according to the overall message(s) to be conveyed, and in conformity to ring-composition. The same process was repeated, this time using every stanza, in both directions, of the two completed poems, toward the generation of a third poem. All three completed poems were then subjected to the same process toward the production of a fourth poem, and so on, until the last poem of the corpus was produced. On the basis of this analysis, it is possible (but beyond the scope of this paper) to state the precise order in which the poems were composed, and to produce scores of charts showing the interrelationships between the various poems (as I already have, in the course of my research during the last few months). Suffice it to say for now that I am convinced that Y29 was the first poem composed (its lexical material being, in effect, reflected in all the other poems), and that Y53 was the last poem composed.

The interrelationship between the forms involved in the recasting process is identical to the formal criteria for concatenation within any poem: A word (or phrase) may be recast as another word (or phrase) showing the same inflected form, stem, or root. The one recurrent banal correspondence in the recasting is the phrase *vohu*- *manah*- ‘Good Mind’, used only sparingly in the ring-composition. In many instances the recasting is based on paronomasia (even, apparently, at the level of the root).

The lexicological and textual information gained by the charting of the various recastings is great, but must be addressed elsewhere.

III.1

In illustration of the foregoing compositional principles, we shall now consider the remarkable formal vicissitudes of the name Yima in the Gathas. I have already shown that at Y32.8a'' *vīuuāṅhušō . . . yimascīṭ* 'Indeed Yima, son of Vīuuāṅ^vhan' represents the first element in Zarathushtra's series of pejorative recastings of textual material originally in honor of Haoma in an Old Avestan protoform of Yasnas 9–10.⁷ My various speculations as to the various Gathic transformation of *yima-* /*yama-*/ will now be corroborated through the facts of Gathic recursive composition.

Of my proposals of the various recastings of /*yama-*/, the most surprising, and thus most in need of corroboration, proceeds from the etymological sense of the antihero's name 'Twin' (of prehistoric origin, in allusion to the Indo-Iranian myth of the twin pair *Yama and his sister *Yamī, attested, in radically variant accounts, in the RgVeda and in Pahlavi; for reflexes of this word for 'twin' in later Iranian languages, see de Blois 2003, p. 7). My suspicion that Y32.8 *yimascīṭ* (in which the form of the personal name, *yima-*, is due to Young Avestan influence) prompted the application of the word 'twin' in Y30.3, where *yāmā* (with *yāma-* as the expected Gathic realization of /*yama-*/) refers to the two primordial twin Spirits (*mainiiū*), one benign and one malign, arose from my discovery that the forward course of Proto-Y32 (Y32.1–13) produced stanza-by-stanza lexical recastings in Y30 (Chart IIA).⁸ However, the occurrence of *yāma-* at Y30.3 would be out of order in the forward recasting of lexical material from Y32. The expected location for the correspondence is now seen from the backward recasting (Chart IIB), in which the obligatory lexical correspondence between Y32.8 and Y30.3 is satisfied by Y32.8a'' *srāuuī yimascīṭ* 'indeed Yima was heard' vis-à-vis Y30.3a'' *yāmā . . . asruuātəm* 'the two twinned [Spirits] were heard'.⁹

I also suggested that, in effecting the obligatory concatenation of the two central stanzas of Y32, Zarathushtra, playing on the etymology of Yima's name (*vyam*), linked Y32.8 *yimascīṭ* and Y32.9 *apō . . . apaiiaṅtā* (**/apa . . . yanta/ < */apa . . . yam-ta/*) 'robbed'. He thus imparted a pejorative nuance to Yima's name and associated his false claim to divinity with the speech of poet-priests who honored Yima through the Haoma

cult and meant to co-opt Zarathushtra's advocacy of Mazdā, an act paralleled by their patrons' robbery (*apaiieiti*) of inheritances as per Y32.11, in which *apaiieiti* - **/apa-yati-* 'robbery' repeats /*apa vyam*/ (cf., for further correlations between Y32.8 and 11, *mōrəṅda-* 'make go astray', *jiīātu-* 'life, vitality', and *vaṅhəuš/vahištāt manəṅhō* 'from Good/Best Mind').

Y30.3 *yāmā* itself, via the recasting of its lexical material in the backward course of the composition of Y31 (from the final stanza Y31.22 to Y31.12) has the obligatory correspondence of Y32.*14, with *ā . . . (a)iiamaitē* 'takes (hold of), receives':

Y31.*14 *yā vā kasəuš aēnaṅhō ā mažištəm aiiamaitē būjəm*

'or who, for a minor violation, receives the greatest penalty'.

Here the noun /*yama-*/ 'twin' and the verb /*ā yama-*/ 'take' are connected through their root *yam* (cf. the play at RgVeda 10.14.10 on Yama [*yamāya*] and *ā yamat* 'will take [escort]'). The relationship of noun /*yama-*/ to verb *ā vyam* across our Gathic texts parallels that of /*yama-*/ to *apa vyam* at Y32.8–9. Furthermore, the cross-textual connection is confirmed by the parallelism between the collocation of *aēnah-* 'violation' and *ā . . . (a)iiamaitē* in Y31.*14b vis-à-vis the collocation of *aēnah-* and the noun *yima-* in Y32.8a. The implicit intertextual relationship between the verbs *apō . . . apaiiaṅtā* (*apa vyam*) and *ā . . . aiiamaitē* is shown by the reverse recasting of the second half of Proto-Y32 in the second half of Proto-Y31 (Y31.18–10) in reverse (see Chart VI).

In addition, via the recasting of Y30.1–10 in Y53 backwards (see Chart IV), we have the correspondence Y30.3a'' *yāmā* 'the two twins': Y53.6c'' *āiiesē* 'I will take' from *ā vyam*. Finally, via the reverse recasting of Y32 in Y53, it is Y32.8a'' *yimascīṭ*, i.e. the name Yima, which has as its correspondent Y53.6c'' *āiiesē*. This is the final corroboration for the concatenation of *yimascīṭ* with *apō . . . (apa)iiāṅtā* at Y32.8–9, whereby Yima's name is etymologically pejorized through association with robbery.

This pejoration may have other resonances in Y53.6b–c. Y53.6c *āiiesē *hōi¹⁰ piθā tanuuō parā* 'I shall take his protections away from *his person/body' must be construed as continuing Y53.6b *drūjō hacā rāθəmō yāmə spašuθā frāidīm*

'he whom you see as prospering(?) is an adherence of Wrong'. The somewhat syntactically unusual *yēmə* 'whom' (with an exceptional spelling in *-ə*) is quite possibly a paronomastic recasting of Y32.8 *yimascī* (for **yēmascī*), so that the latter form would be doubly represented in Y53.6.

I had also proposed that Yima's patronymic at Y32.8, *vīuuāḡhušō* is a pejorative neologism, formed as though an *-a*-stem adjectival derivative from a perfect stem in Indo-Iranian **-vans-* (of the type nom. Vedic *vidvān*, Av. *vīduuā*, obl. Vedic *viduṣ-*, Av. *vīduš-*), as against the stem in **-vant-* in Vedic *vīvasvant-*, Y9.3–5 *viuuāḡhaṅt-*, the latter form therefore having occurred in the text of the OAv. Haoma hymn. I explained *vīuuāḡhuša-* as a wordplay from *vī-* privative (as in YAv. *vījuua-* 'without life, not living') and *vaḡhuša-* 'earning something good' (cf. Vedic *paśu-śá-* 'winning cattle'); thus *vīuuāḡhuša-* as a pejorative pun 'not earning anything good', referring to Yima himself. This interpretation was grounded in the fact that the mention of Yima's violation (*aēnah-*) in Y32.8 prefaced at Y32.6 by Mazdā being addressed as *hātā.marānē* (**/hātāmarnai/*) 'accounter of things earned/deserved' specifically in reference to 'the many, countless, violations (*aēnah-*) committed for the sake of gaining fame (*srāuuahīeitī*). Here *hātā-* 'things earned/deserved' is from *√han* 'to earn, merit' (whence *-śa-* in **vaḡhuša-*, cf. Vedic *-śá-* < *√san¹*), similarly *hāiti-* 'merit, earning' in Y32.9, in the context of misdirected attributions of fame (*srauuā*): *apō . . . apaiiantā . . . hāitīm* 'robs merit'. I concluded that through the substitution of the pejorative adjective *vīuuāḡhuša-* for Yima's traditional designation **vīuuāḡata-* 'Son of Viuuāḡhaṅt-', Zarathushtra, as throughout the Gathas, avoided calling a denizen of Wrong by the real name. For *hāiti-* also as 'concatenation, poetry', see p. 54, para. 2.

My interpretation of *vīuuāḡhuša-* is now confirmed by the relationship between Y32.8a'' *vīuuāḡhušō* and Y53.5d'' 'may you win (*vīuuāḡhatū*, *√van*) each other with Rightness, for that will be its good earning (*hušānəm*)' (see Chart V). Here, in a context of contrast, the phonic and semantic elements of *vīuuāḡhatū* and *hušānəm* are equivalent to those of *vīuuāḡhušō*. The words *vīuuāḡhušō* and *vīuuāḡhatū* phonically share [*viva(N)h-*], and both *vīuuāḡhušō* and *hušānəm* are parallel as compounds with */vahu-/* ~ */hu-/* 'good' and */-ša-/* ~ */šana-/* 'earning', *√han*.

III.2

The Gathic cross-textual correspondence of a name to forms of its constituent elements, as seen for both *yimascī* and *vīuuāḡhušō*, has numerous parallels. A simple instance is Y53.2c'' *fārašaoštrascā*, where the etymology of *fārašaoštra-*, 'having splendid (*fāraša-*) camels (*uštra-*), correlates with Y30.9a'' *fārašām* (see Chart IV). The name of Zarathushtra's daughter, *pouru.cistā* 'much (*pouru-*) insightful (*cista-*)' at Y53.3a' correlates with Y30.9c'' *cistiš* 'insight' in establishing the obligatory correspondence between Y53.3 and Y30.9 in the backwards recasting of lexical material of Y30 in the forward course of Y53.¹¹ The same attestation of *pourucistā* also corresponds to a cognate of *cista-* (i.e. another derivative of *√cit* 'to perceive'), *ciθra-* 'bright, clear, visible' in the compound Y34.4b'' *ciθrā.uuuāḡhəm* 'having visible help'.¹²

The name *maidiiōi.māḡha-*, attested in the vocative Y51.19a' *maidiiōi.māḡhā*, is a thematic adjective 'pertaining (by birth) to the midmonth' from *maidiiā-* 'middle' and *māh-* 'moon, month'. The name corresponds to Y44.3d' *mā* 'moon' (nominative of *māh-*) via the lexical recasting of Y44.1–12 in the backwards course of the second half of Y51 (Y51.12–22).

The recasting of Y46.1–13 in the second half of Y51 (Y51.12–22) contains the correspondence of Y46.4b' *gā* 'bovines', *e' frō.gā* 'leading-bovines' and Y51.14b'' *gauuōi* 'cow' (dat.).¹³ In addition, in the recasting of Y46 in the backwards course of Y51,¹⁴ Y46.17b'' *huuō.guuā* (vocative of the family name *huuō.guua-* /*hauguva-* 'having good bovines', with *-guva-* thematic adj. from *gau-* 'bovine, cow') has as correspondence Y51.7a' *gam* 'cow' (acc.). A parallel correspondence is found in the ring composition of Y46, where the obligatory concatenation between stanzas 4 and 17 is only supplied by Y46.4b' *gā* 'bovines', *e' frō.gā* 'the leading bovines' and the name Y46.17b'' *huuō.guuā*. The same series of correspondences is seen for Y44.6e'' *gam* (accusative of *gau-*) 'cow' and Y51.18a'' *huuō.guuā*.¹⁵ The same words are found in an identical relationship for Y46.16b'' *huuō.guuā* vis-à-vis Y51.5a'' in the recasting of lexical material from Y46 backwards in the forward composition of the first half of Y51.¹⁶

The name *tūra-friiāna-* 'Tūra, of the Friiāna family/clan' (*friiāna-* 'descended from Friiāna-) is attested in the genitive Y46.12b *tūrahīiā . . . friiānahīiā*. By backwards recasting of Y46,

Y46.19–7 yields lexical material in the forward composition of the first half of Y51 (Y51.1–11) whereby Y46.12b' *tūrahiiā* has as its correspondent Y51.7c'' *təuuīšī* 'strengths' (dual), from $\sqrt{tū}$ (PIE \sqrt{teuH}) 'be strong, be able'. Thus we recover for Iranian an adj. **tūra-* 'strong', the equivalent of Vedic *turá-* (with *u* from compd. form *tuvi-* < **tuHi-*) alongside *tavīyas-* 'stronger' etc. (Bthl. s.v. *tūra-* cites Kurd. "*tūr*" for *t'or* etc. 'wild', which however is from Arab. *tūr*, *tūrī*).

As for *friiāna-*, the etymon *friia-* 'intimate, dear' is represented through the verbal root *frī* 'be/make intimate' = 'propitiate' in the correspondence Y46.12b'' *friiānahiiā*: Y49.12c'' *frīnāi* 'I shall propitiate' at the end of the forwards recasting of Y46.1–11 in Y49(1–12).¹⁷

Several proper names are attested in the last five stanzas of Y46, which in its backward course (Y46.19–14) supplied lexical material in the reverse course of the stanzas which were added to Proto-Y32 to finalize the poem (Y32.16–14): In addition to the non-onomastic correlations,¹⁸ we have Y46.15a' *haēcaṭ.aspā*, voc. pl. 'descendants of **hicaṭ.aspa-*', the latter name = 'who moistens horses (in grooming)', cf. RV 4.43.6 *siñcad ásvān*. The first element, **hicaṭ-*, represents the participle of the attested stem *hica-* (= Vedic *sicá-*) 'to pour, moisten'. The fem. equivalent of *haēcaṭ.aspa-* is Y53.3a'' *haēcaṭ.aspanā*, which corresponds to Y46.15a' via the reverse recasting of Y46 (Y46.19–8) in the progressive course of Y53 (Y53.1–9). Just as Y46.15a' *haēcaṭ.aspā* has as its correspondent Y32.14b' *hīcā*, instr. of **hic-* 'a pouring (of *haoma*)', so corresponding to this *hīcā* is Y53.3a'' *haēcaṭ.aspanā*, the latter via the backward recasting of Y32 in the forward course of Y53 (see Chart V). These data confirm Geldner's reading in Y32.14b' two separate words, *varəcā hīcā*, which has received independent support from Vedic comparisons by Gippert.¹⁹ The name **hicaṭ.aspa-* was proposed by Kellens and Pirart 1988, p. 8.

For Y46.14c, the title plus name Kauui Vištāspa (nom. *kauuā vištāspō*) each has a correlation in the corresponding stanza Y32.14. Y32.14a'' *kāuuaiiscīṭ* 'the *kauuis*' (here as throughout in the pl., a pejorized collective) matches the inherited title *kauuā-*. Following Szemerényi, etymologists have taken *vištāspa-* as a hippological compound with *višta-* = Vedic *viṣita-* 'untied, unharnessed', with *ásva-* 'horses', RV 6.6.4, 3.33.1, whereby Av. *vištāspa-* could represent an Indo-Iranian name 'he who has unrestrained (i.e.

impetuous) horses', with O1r. \emptyset alongside OInd. *i* from **H*. If this is so, the ptc. **višHta-* would have been replaced in Avestan by **višāta-* (cf. Av. *hāiti-* 'concatenation', MPers. *wišād* 'open(ed)', but Av. *hita-* 'tied, attached' [e.g. pn. *hitāspa-*!] from **sHita-*, cf. Av. *haēθa-* 'trap'; thus Vedic *viṣita-* < *višHita*, not *višHta-*?) so that *višta-* would be prone to association with \sqrt{vis} . Indeed, for the name *vištāspa-* we now have Zarathushtra's own etymology, via Y32.14b'' *višəṇtā* 'they ready themselves'; *vištāspa-* is to be understood as 'having ready (*višta-*) horses (*aspa-*)'. This correlation is not accidental, as shown by Y53.2c' *kauuācā vištāspō* 'and Kauui Vištāspa' corresponding respectively to Y32.15a'' *kəuuītāscīṭ* 'indeed, the *kauuidom*' and Y32.14b'' *višəṇtā* 'ready themselves'. The name *vištāspa-* was taken as an OAv. compound, with the past participle preserving the active voice of \sqrt{vis} , which is prominent in the Vedic cognate *viśāti*, *viṣtā-*, against the generalization of the middle voice for \sqrt{vis} in Avestan. From the basic active mg. 'enter' (Vedic *viśāti*), Iranian developed the mg. 'be ready', whence middle voice mg. 'to ready oneself, position oneself for'. The older situation may be found in Yt10.46, in which *višaiti* (*miθrō*), paralleled by (*miθrō* . . .) *jasaiti*, '(M.) comes', thus need not be emended to *višaitē*. The persistence of the active form in Old Avestan is implicit in Zarathushtra's etymological connection of *vištāspō* and *višəṇtā*. [A reinterpretation of *vištāspa-* as 'having ready horses' < 'having horses let loose' would be easy semantically; as Garcia Ramon (2006, p. 83) on *vištāspa-* < **višHta-*), Vedic *viṣita-* *ásva-*, stresses, "le cheval est relâché pour se mettre à la course".]

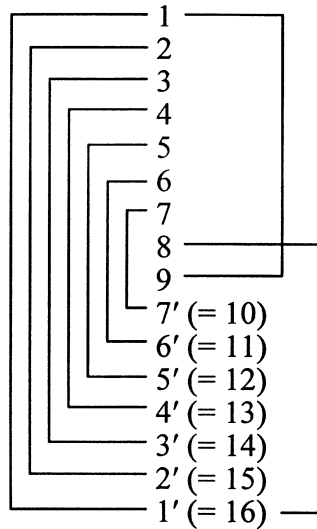
Finally, we come to the name *zaraθuštra-* itself. I had long ago suggested²⁰ that in the richly and intricately linked stanzas Y44.17–18, Y44.17b'' *zarəm* 'old age' and Y44.18c'' *uštrəmcā* 'and a camel' refer to the elements of the name *zaraθuštra-* 'having old (**zaraṭ-* from **zaraṇt-*, \sqrt{zar}) camels (*uštra-*)'. This is now proven by the lexical correspondence between the aforesaid forms at Y44.17b''–Y44.18c'', and Y46.19b'' *zaraθuštrā*.²¹

IV

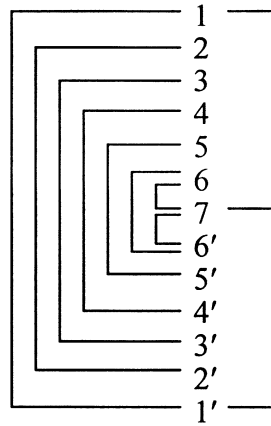
It is difficult at present to say why Zarathushtra chose such a complex means of generating his corpus. Parallels are yet to be sought in ancient literature (e.g. in the Vedic poems). For modern

Chart I

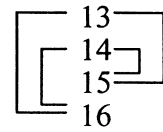
Concatenations of Y32 (schema)²²



Proto-Y32



Y32 Finalizing Coda



The Concentric Concatenations of Proto-Y32 (32.1–13)

1. *dūta-* ‘messenger’ and ‘smoke’ (*dūtāḡhō*); *√ah* ‘to be’; *θβa-* ‘Thy’
2. *aēibiiō mazdā . . . (paiti.)mraoṭ* ‘Mazdā speaks (back) . . . to those’; *√var* ‘to choose’ (*varəmaidī*); *xšaθra-* ‘Dominion’
3. *√cit* ‘perceive’ (*ciθra-*); *maz-* ‘great’ (*maš*)
4. *acišta-* ‘worst’; *√dā* ‘to establish, make’ (*danṭō*)
5. (*hu-*)*jiiātōiš* ‘from (good) life’; *mainiiu-* ‘spirit’; *√vac* ‘to speak’ (*vacəḡhā*)
6. *aēnah-* ‘violations’ (*aēnā*); *√sru* ‘hear’ (*srāuuahiieitī*); *√sanh-* ‘to proclaim’ (*səḡghō*); *√vid* ‘to know’ (*vōistā*); *θβahmī* ‘in Thy’
7. *aēnah-* ‘violations’ (*aēšqam aēnaḡhqm*); *√sru* ‘hear’; *√sanh-* ‘to proclaim’ (*səḡghaitē*); *√vid* ‘to know’ (*vīduuā, vaēdištō*); *√han* ‘to earn’ and *√hāi* ‘to tie’; *√ah* ‘to be’ (*ahī*)
8. *aēnah-* ‘violations’ (*aēšqam aēnaḡhqm*); *√sru* ‘to hear’ (*srāuuī*); *θβahmī* ‘in Thy’; *√ah* ‘to be’ (*ahmī*)
9. (*huuō*) *jiiātēuš* ‘(he . . .) from/of life’; *mainiiu-* ‘spirit’; *√vac* ‘to speak’ (*uxdā*)
10. *acišta-* ‘worst’; *√dā* (*dadāt*) ‘establish, make’
11. *√cit* ‘to perceive’ (*cikōitərəš*); *maz-* ‘great’ (*mazbīš*)
12. *aēibiiō mazdā . . . mraoṭ* ‘Mazdā speaks . . . to those’; *√var* ‘to choose’ (*varatā*); *xšaθra-* ‘domin(at)ion’
13. *dūta-* ‘messenger’ and ‘smoke’ (*dūtēm*); *θβa-* ‘Thy’

Proto-Y32, Ties from Central to Outer Stanzas

1. *√ah* ‘to be’ (*āḡhāmā*)
7. *√ah* ‘to be’ (*ahī*)
7. *tū* ‘Thee’; *vahišta-* ‘best’
13. *θβahiiā* ‘of Thy’; *acišta-* ‘worst’

The Concentric Concatenations of the Finalizing Coda of Y32

13. *√hāi* ‘to tie’ (*hīšasaṭ*); *dəmənē* ‘in the house’; *√xšāi* ‘rule’ (*xšaθra-*)
14. *√hāi* ‘to tie’ (*hōiθōi*); *drəguuaṇt-* ‘wrongsome’
15. *dəmənē* ‘in the house’; *√xšāi* ‘to rule’ (*xšaiiamnēḡ*)
16. *√hāi* ‘to tie’ (*aḡhahiā*); *√xšāi* ‘to rule’ (*xšaiiqs*); *drəguuaṇt-* ‘wrongsome’

Chart II

A Proto-Y32 (forwards) > Y30

32.1c' <i>uruuāzəmə</i>	30.1c' <i>uruuāzā</i>	√ <i>uruuāz</i> '(have) bliss'
32.2c'' <i>varəmaidī</i>	30.2b <i>ā-uuarəṅā</i>	√ <i>var</i> 'choose'
32.3b' <i>maš</i>	30.2c <i>mazə</i>	<i>maz-</i> 'great'
32.3c' <i>asrūdūm</i>	30.3a'' <i>asruuātəm</i>	<i>a-√sru</i> 'to have been heard'
32.3c' <i>šiiəoməṅ</i>	30.3b'' <i>šiiəoθanōi</i>	'action'
32.4a' <i>acišta-</i>	30.4c' <i>acišta-</i>	'worst'
32.5a'' <i>(hu-)jiiāti-</i>	30.4b' <i>(a-)jiiāti-</i>	'life'
32.5b'' <i>mainiiuš</i>	30.5b' <i>mainiiuš</i>	'spirit'
32.5a' <i>dəbənaotā</i>	30.6a'' <i>dəbaomā</i>	√ <i>dbu</i> 'deceive'
32.5a' <i>mašim</i> (*/ <i>martiyam</i> /)	30.6c'' <i>marətānō</i>	'mortal(s)'
32.5c'' <i>daēuuā-</i>	30.6a'' <i>daēuuā-</i>	'demons'
32.6b'' <i>manah-</i>	30.6b'' <i>manah-</i>	'mind'
32.6c' <i>xšaθra-</i>	30.7a' <i>xšaθra-</i>	'dominion'
32.7b'' <i>aiaṅhā</i>	30.7c'' <i>aiaṅhā</i>	'by metal'
32.8a'' <i>aēšqəm aēnaṅhəm</i>	30.8a <i>aēšqəm . . . aēnaṅhəm</i>	'of those violations'
32.9c'' <i>(duš-)sastiš</i>	30.8c' <i>sastē</i>	'proclaiming'
32.9c'' <i>ašāi(-cā)</i>	30.8c'' <i>ašāi</i>	'to Rightness'
32.10b'' <i>dada-</i>	30.8c'' <i>dada-</i>	'establish, put'
32.11a <i>taē(-cīṭ) . . . yōi</i>	30.9a <i>tōi . . . yōi</i>	'those who . . .'
32.11a'' <i>cikōitərəš</i>	30.9c'' <i>cistiš</i>	√ <i>cit</i> 'perceive'
32.12a' <i>srauuah-</i>	30.10c'' <i>srauuah-</i>	'*being heard' = 'fame'
32.12a'' <i>marətānō</i>	30.11a'' <i>mašiiāṅhō</i>	'mortals'

B Proto-Y32 (backwards) > Y30

32.13c'' <i>darəsāt</i>	30.1c'' <i>darəsātā</i>	√ <i>d(a)rs</i> 'see'
32.12c <i>varatā</i>	30.2b' <i>āuuarəṅā</i>	√ <i>var</i> 'choose'
32.11a'' <i>mazbiš</i>	30.2c' <i>mazə</i>	<i>maz-</i> 'great'
32.10b'' <i>(dāθəṅ drəguuatō) dadat</i>	30.3c <i>hudāṅhō.. duzdāṅhō</i>	√ <i>dā</i> 'establish'
32.9c' <i>mainiiu-</i>	30.3a' <i>mainiiu-</i>	'spirit'
32.8a'' <i>yimascīṭ</i>	30.3a'' <i>yəmā</i>	'twin'
32.8a'' <i>srauuī</i>	30.3a'' <i>asruuātəm</i>	'have been heard'
32.7a'' <i>naēcīṭ</i>	30.3c'' <i>nōiṭ</i>	'not'
32.6b <i>vahištā . . . manəṅhā</i>	30.4c'' <i>vahištəm manō</i>	'Best Mind'
32.5b'' <i>mainiiu-</i>	30.4a' <i>mainiiu-</i>	'spirit'
32.5a'' <i>(hu-)jiiāti-</i>	30.4b' <i>(a-)jiiāti-</i>	'life'
32.4a'' <i>acišta-</i>	30.4c' <i>acišta-</i>	'worst'
32.3c'' <i>šiiəoməṅ</i>	30.5c'' <i>šiiəoθanāiš</i>	'actions'
32.3a' <i>daēuuā</i>	30.6a'' <i>daēuuācinā</i>	'demons'
32.2c'' <i>varəmaidī</i>	30.6b'' <i>vəranātā</i>	√ <i>var</i> 'choose'
32.2c' <i>ārmaiti-</i>	30.7b'' <i>ārmaiti-</i>	'Regulative Mind'
32.2b' <i>xšaθra-</i>	30.8b' <i>xšaθra-</i>	'Dominion'
32.2a' <i>aēibiiō</i>	30.8c' <i>aēibiiō</i>	'to those'
32.1c' <i>āṅhāmā</i>	30.9a' <i>xiiāmā</i>	√ <i>ah</i> 'be'

Chart III

Proto-Y32 (backwards) > Proto-Y31 (second half, backwards)

32.13c''	<i>mθrānō</i>	31.18a''	<i>mθrascā</i>	'manthra'
32.12c	<i>ašāt. . . drujəm</i>	31.17a	<i>ašauuā vā drəguuā vā</i>	'Right(-)' vs. 'Wrong(-)'
32.12c	<i>varətā</i>	31.16c''	<i>vərənuuaitē</i>	√ <i>var</i> 'opt for, believe'
32.12a''	<i>šiiəθanāṭ</i>	31.*15b''	<i>(yā.)šiiəθanascā</i>	'action'
32.11c'	<i>ašaonō</i>	31.*15b''	<i>ašaonō</i>	'righteous' (acc. pl.)
32.11a''	<i>drəguuəntō</i>	31.*15c'	<i>drəguuō.dəbiiō</i>	'wrongsome' (pl.)
32.10a'	<i>vaēnaṅhē</i>	31.*14c''	<i>(aibī.)vaēnahī</i>	'see'
32.9b	<i>(apa)iiəntā</i>	31.*14b''	<i>(a)iiəmaite</i>	√ <i>yam</i> 'takes'
32.9a'	<i>jiiātəuš</i>	31.*13b''	<i>jiiōtūm</i>	'life'
32.8a'	<i>aēnaṅhəm</i>	31.*13b'	<i>aēnaṅhō</i>	'violation'
32.7b''	<i>vīduuā</i>	31.12b'	<i>vīduuā</i>	'knowing'
32.6c''	<i>səṅghō</i>	31.11c'	<i>səṅghascā</i>	'proclamation'
32.6b'	<i>(hātā.)marānē</i>	31.10c''	<i>(hu)mərətōiš</i>	√ <i>m(a)r</i> 'to account'

Chart IV

Y30 > Y53 (backwards)

30.1a'	<i>išəntō</i>	53.9b'	<i>aēšasā</i>	√ <i>iš</i> 'to seek, *crave'
30.2b''	<i>tanuiiē</i>	53.9b''	<i>(pəšō.)tanuuō</i>	'body'
30.2b'	<i>(ā)uuarəṅā</i>	53.9a'	<i>(duž)uuarəṅāiš</i>	'choice'
30.2c'	<i>mazē</i>	53.8d''	<i>mazištō</i>	'great(est)'
30.3a'	<i>mainiiū</i>	53.7b''	<i>mainiiuš</i>	'spirit'
30.3a''	<i>yāmā</i>	53.6c'	<i>(ā)iiēsē</i>	√ <i>yam</i> *'clasp; take'
30.4b''	<i>aṅhaṭ</i>	53.5d'	<i>aṅhaṭ</i>	'will be'
30.4b''	<i>aṅhuš</i>	53.5c''	<i>ahūm</i>	'existence'
30.5a'	<i>varətā</i>	53.4a'	<i>(ni)uuarānī</i>	'choose'
30.6b'	<i>vərənātā</i>	53.3d''	<i>varəšuuā</i>	'choose'
30.7b''	<i>ārmaitiš</i>	53.3d''	<i>ārmətōiš</i>	'Regular Thought'
30.7b''	<i>dadāt</i>	53.2d'''	<i>dadāt</i>	'gives'
30.8c''	<i>dadən</i>	53.2d'	<i>dāṅhō</i>	√ <i>dā</i> 'deliver, give'
30.9a''	<i>fərašəm</i>	53.2c''	<i>fərašə(oštrascā)</i>	'splendid'
30.10c''	<i>vaṅhāu srauuahī</i>	53.1a'	<i>vahištā . . . srāuuī</i>	'good(+)' + *'hear'

Chart V

Y32 (backwards) > Y53

32.16c''	<i>išiiṅg</i>	53.1a'	<i>īštiš</i>	√iṣ 'send/seek'
32.16a'	<i>vahištā(-cīṭ)</i>	53.1a'	<i>vahištā</i>	'best'
32.15a''	<i>kəuuūtās(-cīṭ)</i>	53.2c'	<i>kauuā(-cā)</i>	<i>kauui-</i> 'feudal ruler'
32.14b''	<i>visəṇtā</i>	53.2c'	* <i>višta-</i> (in name <i>vīštāspō</i>)	√vis 'ready (oneself)'
32.14a''	(<i>nī . . .</i>) <i>dadāt</i>	53.2d''	<i>dadāt</i>	'put, establish'
32.14b'	<i>hicā</i>	53.3a''	<i>haēcaṭ.aspanā</i>	√hic 'pour (on)'
32.14a''	<i>xratu-</i>	53.3d'	<i>xratu-</i>	'intelligence'
32.13a''	<i>manaṇhō</i>	53.4c''	<i>manaṇhō</i>	'of/from . . . Mind'
32.12b'	<i>mraoṭ</i>	53.5a'	<i>mraomī</i>	√mrū 'speak'
32.11c''	<i>vaēdəm</i>	53.5c'	<i>vaēdō.dūm</i>	√vid 'possess'
32.11c	(<i>aṇ^vhīš-cā</i>) <i>aṇhauuas-cā</i>	53.5c''	<i>ahūm</i>	pun: <i>ahu-</i> 'milord'/'existence'
32.10c''	<i>yas-cā vadarə</i>	53.5b'	(<i>xšmaib</i>) <i>iiācā vadəmnō</i>	paronomasia: <i>vadar/n-</i> 'weapon'; <i>vadəmna-</i> 'addressing'
32.9b''	<i>vaṇhəuš manṇhō</i>	53.5c''	<i>vaṇhəuš manṇhō</i>	'of Good Mind'
32.8a''	<i>vīuuəṇhušō</i>	53.5d''	<i>vīuuəṇghatū hušəṇəm</i>	paronomasia; puns <i>√han</i> 'earn'; <i>(vo)hu-</i> 'good'
32.8a''	<i>yimas-cīṭ</i>	53.6b''	<i>yəmə . . . āiiesē</i>	paronomasia: * <i>yəmə(-)</i> 'whom/' 'twin', <i>√yam</i> 'clasp'
32.8b''	<i>x^varəmnō</i>	53.6d''	(<i>duš.</i>) <i>x^varəθəm</i>	paronomasia: (<i>/x^var/</i>) 'swear'/'eat'
32.7c''	<i>ahī</i>	53.7a'	<i>aṇhaṭ</i>	√ah 'be'
32.6c'	<i>və (mazdā)</i>	53.7a'	<i>və (miždəm)</i>	'you' + paronomasia: 'Mazdā/' 'prize'
32.5b''	<i>mainiiuš</i>	53.7c''	<i>mainiiuš</i>	'spirit'
32.5c''	<i>drəguuaṇt-</i>	53.7c''	<i>drəguuaṇt-</i>	'wrongsome'
32.4c''	<i>nasiiəṇtō</i>	53.7c''	<i>anəsaṭ</i>	'go astray'
32.3b'	<i>maš</i>	53.8d'	<i>mazištō</i>	<i>maz-</i> 'great'
32.2c''	<i>varəmaidī</i>	53.9a'	(<i>duž-</i>) <i>uuarənāiš</i>	√var 'choose'
32.1b''-c'	<i>mazdā θβōi</i>	53.9d'	<i>mazdā tauuā</i>	'Mazdā to Thee'/'Thy'

Chart VI

Y30 (backwards) > Y31 (second half, backwards)

30.11c''	<i>aṇhaitī</i>	31.22c''	<i>aṇhaitī</i>	'will be'
30.11a''	<i>uruuātā</i>	31.21c'	<i>uruuaθō</i>	'commitment(-)'
30.10b'	<i>vaṇhəuš manṇhō</i>	31.21c'	<i>vaṇhəuš . . . manṇhō</i>	'Good Mind'
30.9a''	<i>ahūm</i>	31.20c'	<i>ahūm</i>	'existence'
30.8b''	<i>vōi.vīdāitī</i>	31.19c''	<i>vīdātā</i>	<i>vi vđā</i> 'allot'
30.7c''	<i>ādānāiš</i>	31.18b	<i>ā . . . (ā)dāt</i>	<i>ā vđā</i> 'give over, consign'
30.6a''	<i>dəbaomā</i>	31.17c'	<i>dəbāuuaiiaṭ</i>	√dbu 'deceive, deceit'
30.5c''	<i>šīiaəθanāiš</i>	31.16c'	<i>šīiaəθanāasca</i>	'action'
30.4a''	<i>dazdē</i>	31.*15b'	<i>dadəṇtē</i>	'bring about'
30.3a''	<i>yəmə</i>	31.*14b''	<i>ā . . . (a)iiamaitē</i>	√yam 'clasp, take'
30.2b''	<i>narəṃ narəṃ</i>	31.*13b''	<i>hanarə</i> (as though <i>ha-nar</i> 'a man singly?'; but = Vedic <i>sanutás</i> 'separately')	<i>nar-</i> 'man'
30.1a''	<i>vīdušē</i>	31.12b''	<i>vīduuā</i>	'knowing'

literature, one is reminded of the Oulipo, a French group of authors who endeavor to produce literary works through artificial constraints and mechanical means. Apart from the recursive means of poetic production endowing the corpus of interconnected poems with an overall unity and constancy, this technique of composition may be regarded as yet another aspect of Zarathushtra's crypticism of style.

Notes

1. See Schwartz 2003a, pp. 196–99 *et passim*, with bibliography 196, n. 2.

2. Schwartz 2006a. [For ring composition in general, see Mary Douglas, "Thinking in Circles" (Yale University Press, December, 2006), pp. 483–89.]

3. Schwartz 2003a, pp. 199 seq.

4. Y31, like Y44, shows concatenation-type (c).

5. Y31.3b' **vazdōṅhhuadābiō* in place of *cazdōṅhhuadābiō*, confirming an independent suggestion by Werba. (See Werba 1986.) Note also that in the backwards recasting of Y45 in the forwards course of Y31, Y31.3 *cazdōṅhhuadābiō* corresponds to Y49.10 *vazdanhā*.

6. For the reading Y31.7b' **xšaθrā* for mss. *xraθβā*, cf. the parallel Y45.7e with Y45.8b, Y31.8b–c', and Y45.4b'–c. Probable influence of Y31.9a'–b *xratuš*, as at Y31.7 with *mainiiu-* and *mazdā*.

7. See Schwartz 2006 for all aspects of the relationship of Y32 to the Haoma hymn.

8. Cf. Schwartz 2004, pp. 16–17; 2003b, p. 389, with Schwartz, 2006a.

9. For Zarathushtra's heuristic application of 'twin' to the two Spirits, and their origin in a single, problematically ambiguous term *mainiiu-*, see Schwartz 2004, pp. 15–16. The eventual equation of Mazdā Ahura with Spənta Mainiiu set the stage for the Sasanian Zurvanite myth of Ohrmazd and Ahriman as (twin) brothers within the womb of a single parent Time. See Schwartz 2004, pp. 15–16. For the meaning of *mainiiu-* in the Gathas, see Shaked 2003, esp. pp. 392–95 for Y30.3 and the 'twin' Spirits, *contra* Kellens' interpretations (note also pp. 395–96, on *xšaθra-* and *vdā*).

10. Mss. *hōiš*. Emendation as **hōi īš* would introduce a problematic plural object. I suggest that the -š of *hōiš* has incorporated Pahlavi 3rd pers. sg. enclitic -š, a gloss of Av. *hōi*.

11. The other correspondences are: Y30.11a' and Y53.1d' *saša-*; Y30.10b'' and Y53.2a' *manaṅhā*; Y30.8b'' and Y53.4c'' *manah-* + *vohu-*; Y30.7c'' and Y53.5d'' *aṅhaṭ*; Y30.6c'' and Y53.6e'' *ahūm*; Y30.5b'

and Y53.7c'' *mainiiuš*; Y30.4c' and Y53.7c'' *drəguuat-*; Y30.4b'' and Y53.7d'''' *aṅh(a)t(i) apəməm*; Y30.3b' and Y53.7d'''' *vacah-*; Y30.2b'' and Y53.8c' (-)narVm (-)narVm; see Chart I for rest.

12. The other correspondences are: Y34.1a' and Y53.1d'' *šiiāoθanā*; Y34.2a'' and Y53.2b'' *yasna-*; Y34.3c'' and Y53.2c'''' *saošiiāntō*; Y34.5c'' and Y53.3c'' *vanhəuš . . . manaṅhō*; Y34.5c'' and Y53.3c'' *dāt(ā)*; Y34.6b'' and Y53.4d'' *vīspā-*; Y34.7c' and Y53.5d' *ainiiām/ainīm*; Y34.8c'' and Y53.6e'' *manah-*; Y34.9c' and Y53.7b' *yauuat*; Y34.9c' and Y53.8d'' *maz-*; Y34.10c' and Y53.9d' *tu- ('thee/thy') + *xšaθra-*.

13. Other correspondences: Y46.1a' and Y51.12a'' *nōit . . . xšnāuš*; Y46.1d'' and Y51.13b' *drəguua(ṅ)tō*; Y46.2a'', b'' and Y51.13b'' *vaḥ*; Y46.3c' and Y51.14b'' *səṅghāiš*; Y46.3e'' and Y51.14c' *vsanḥ* or *vsanḥ*; Y46.4c'' and Y51.14b'' *xvāiš šiiāoθanāiš*; Y46.5a'' and Y51.14c'' *āvdā*, etc. down to Y46.13 and Y51.22a' *aša- + vḥac*. Note Y46.8b'' *frōšiiāt* and Y51.16a'' *nqsaṭ*, at-testing *vas* and *vnas* 'to reach' as variant outcomes of PIE **Henk* and **Hnek*.

14. For this recasting, cf. Part of I, on the role of paronomasia.

15. The other correspondences in the series are the phonically related Y44.1b (*nəmaṅhō . . .*) *nəmə* and Y51.22c' **nāmənī* (both paronomastic recastings of Y46.1 *nəmōi . . . nəmōi aiieni*); Y44.1d and Y51.22a *aša- + vḥac*; Y44.2d'' and Y51.21a' *spəntō*; Y44.2d'' and Y51.20a'' *vīspa-*; Y44.2e'' and Y51.19a' *nā*; Y44.5b'', c'' and Y51.18c' *daidī*; Y44.7b' and Y51.17a' *bərəxədm*; Y44.8a' and Y51.16b'' *vman*; Y44.9e' and Y51.15b' quasi (-)dm-a- 'house'; Y44.10d'' and Y51.14b'' *šiiāoθana-*; Y44.10d' and Y51.14a'' **arəm*; Y44.11c'' and Y51.13a'' *daēnā*; Y44.12e'' and Y51.12a'' *nōit*.

16. The other correspondences: Y46.19a'' and Y51.1c'' *varəša-*; Y46.18b' and Y51.2b'' *ištōiš*; Y46.17c'' and Y51.2c'' *vahma-*; Y46.16d and Y51.3b'' *vanhəuš manaṅhō*; Y46.16 and Y51.4b repeat respectively the interrogative and relative directional forms is -*θrā* (whereby the statements of Y46.16 concerning the location of the five pentadic divine entities are posed as questions in Y51.4); Y46.15b' and Y51.5c' *dāta-* pl.; Y46.14b' and Y51.5a'' *gau-* (see below); Y46.14e'' and Y51.6a' *vanhəuš*; Y46.13c'' and Y51.7a *vdā* redup. pres.; Y46.12e'' and Y51.7c'' *vsanḥ*; Y46.12d and Y51.7c'' *vohū + manaṅhā*; Y46.11b' and Y51.8b' *aka-*; Y46.10b'' and Y51.8c' *vīd*; Y46.9c'' and Y51.9c'' *ašauuanəm*; Y46.8a'' and Y51.10b'' *dazdē/duž-dā (vdā)*; Y46.7a; and Y51.11a *kə(m)(. . .)nā*.

17. The other correspondences are: Y46.1 and Y49.1 *vxsən(a)u*; Y46.2d' and Y49.1c'' *vrap*; Y46.3b' and Y46.3b' and Y49.2c' *vdar*; Y46.3e'' and Y49.3a'' /v(V)rnVi/ (*vvar*); 46.4a' and Y49.4d'' *drəguuaṅt-*; Y46.5b'' *huzəntuš* and Y49.5c'' *vmrū*; Y46.5d'' and Y49.7c'' *xvāetu-*; Y46.6e'' and Y49.8a'' *dā*; Y46.7b' and

Y49.9b" *drəguuant-*; Y46.7e" and Y49.9c' *daēnā*;
Y46.8d" and Y49.10a" *√pā*; Y46.9c" and Y49.10b"
ašauuan-; Y46.10c" and Y49.11a' *-xšaθra-*; Y46.11e
and Y49.11d *drūjō *dāmānē (. . .) astaiiō*.

18. Y46.19a' and Y32.16b" *ma-*; Y46.18a" and
Y32.16a' *vahištā*; Y46.17e" and 32.16a" *√danh*;
Y46.16d" and Y32.15b" *√xšāi*.

19. Gippert 2002, pp. 184–86.

20. Schwartz 1986, pp. 375–79.

21. The surrounding correlations are Y46.19d" and
Y44.20b' *gau-*; Y46.19d' and Y44.19e' *√vid-*; Y46.19c
and Y44.19b, 18b" *mīzdəm han-*; Y46.18d" and
Y44.17c' *xšmāka-*; Y46.17c" and Y44.16d" *səraoša-*;
Y46.17a" and Y44.16b" *səngħa-*. The further corre-
lations, which include notably Y46.9b" and Y44.7c'
uzəma-, end in the series Y46.5b" and Y44.4b'
**/dr(i)ta/*, Y46.4a" and Y44.3b" *ašahiiā*; Y46.3b" and
Y44.2c' *√sū*; Y46.3b' and Y44.2b' *aḡhəuš*; Y46.2d' and
Y44.1c'–d" *friiāi . . . friia- √dā*; and finally the phoni-
cally similar Y46.1a *nəmōi (zqm kuθrā) nəmōi* and
Y44.1b' *nəmaḡhō (ā yaθā) nəmā*.

22. For the details, see Schwartz 1998, pp. 133–34,
to which add Y32.7b" and 10a" **/(-)vainā-/ 'see, sight'*.
The evidence for relocation of Y32.7c" *irixtəm* to
Y32.6, in concatenation with Y32.11b" *raēxənāḡhō*
(both *√ric* 'to leave over') will be discussed elsewhere.

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