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Towards a typology of poetic rhyme*

With observations on rhyme in Egyptian

Abstract: Rhyme, like other characteristics of poetic language, belongs to the least explored fields within linguistics. I suggest that these topics would profit from being explored by linguists and that information on them should be routinely included into the grammatical description of any language.

This article attempts to outline a typology of poetic rhyme. “Rhyme” is defined as the phonetic identity of sections within text strings (“lines”). Languages vary in whether the identity is conventionally located in the beginning, the middle or the end of lines. The latter choice (end rhyme) is now the by far most common type, but its present near-global distribution seems to be the result of recent language contact.

Major typological parameters of end rhyme include the size of the sections at the line ends that are required to be identical, as well as the partition of the sound space implied in the notion of “identity”, here called “rhyme phonology”, which can differ from the partition of the sound space by ordinary phonology.

Finally, end rhyme in Egyptian is discussed, where this technique became current only by the Late Coptic period. Being a tradition relatively independent from the better known European rhymes, Coptic rhyme provides some exotic features which are of considerable typological interest.

1 Terminology and definitions

1.1 Rhyme and metre

Rhyme and metre are characteristics of poetic texts. The general features of rhyme and metre are largely constant for mainstream poetry of a given synchronic state of a language, although composers of poems may have some room for individual choices or alteration of the accepted rules. The investigation of these features should therefore be part of the grammatical description of a language. They have, however, rarely been objects of linguistic investigation, and grammar books typi-

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cally fail to provide any information on rhyme and metre. There do exist some cross-linguistic or (in the widest sense) typological studies on metre (e.g., Gaspárov 1996; Kiparsky 1975; Kiparsky & Youmans 1989; Küper 2002; Kuryłowicz 1976; Lotz 1960; Molino & Tamine 1982; O'Connor 1982; Stella 1995a; Watkins 1963; West 1973; Wimsatt 1972), but none of them with a world-wide approach, and none at all on rhyme, to my knowledge. What follows here cannot claim to be an exhaustive typology of rhyme, but is rather intended as a spur for further exploration of the topic and for grammar writers to collect such data for more languages than has been done so far.

Rhyme and metre are two distinct concepts. They can and should be analyzed independently from one another. Metre can appear without rhyme ("blank verse"), as in (1) from English:

- (1) Now is the winter of our discontent
 Made glorious summer by this sun of York;
 And all the clouds that lour'd upon our house
 In the deep bosom of the ocean buried.
 Now are our brows bound with victorious wreaths;
 Our bruised arms hung up for monuments;
 Our stern alarums changed to merry meetings;
 Our dreadful marches to delightful measures.
 (...)
 (William Shakespeare, King Richard the Third, beginning)

As can rhyme without metre, as in (2). (Here and in subsequent examples in this paper, the rhyming parts are underlined.)

- (2) Über allen Gipfeln
 Ist Ruh,
 In allen Wipfeln
 Spürest du
 Kaum einen Hauch;
 Die Vögelein schweigen im Walde.
 Warte nur, balde
 Ruhest du auch.
 (Johann Wolfgang von Goethe, Ein Gleiches)

Metre will no longer be considered in what follows.

1.2 Defining rhyme

Rhyme can be defined as the phonological¹ identity of substrings of lines. A language-independent definition of what a line is will not be attempted here. In a given poetical tradition, an independent justification of the entity “line” is often provided by metre. In all languages, line breaks normally coincide with word breaks, with very few exceptions (“broken rhyme”, humoristic or experimental), as in (3):

- (3) The Eurydice – it concerned thee, O Lord:
 Three hundred souls, O alas! on board,
 Some asleep unawakened, all un-
 warned, eleven fathoms fallen
 (Gerard M. Hopkins, The Loss of the Eurydice)

I will discuss first where the identical substring is located, and then how identity is defined (“rhyme phonology”). In principle, the identity can be located in the beginning, in the middle or in the end of lines, which constitutes the three subtypes of initial rhyme, internal rhyme, and end rhyme. All these three types are attested in the world’s languages.

1.3 The position of the identical segments

1.3.1 Initial rhyme

Initial rhyme (sometimes called “inverse rhyme”) is not frequent but does exist. It is the norm for classical and largely still for modern Mongolian poetry.² I give an example from the *Sayang Sečen* (1662 CE), cited from Poppe (1970: 164), who explains: “The typical Mongolian verse consists of a quatrain, i.e., a stanza of four lines [...]. Each line of a quatrain begins with the same syllable.”

- (4) Arban nasutai dayaluyai bi
Aliya mayui-ban ese uqaydaluyai
Arajan-dur dašiyuraysan minu ünen büllüge
Alus buruyu sanaysan ügei bolai

1 With further qualifications, for which see below.

2 Very similar specimens of rhyme are found in Old Turkic texts.

Qorin nasutai dayaluyai bi
 Qolčirqan mayu-ban ese medegdelügei
 Qorojan-dur daşıyuraysan minu ünen bülüge
 Qoortu sedkil bariysan ügei bolai
 (...)

Another example of much earlier date is the *Babylonian Theodicee* (Lambert 1960: 63–91) written in the Akkadian language (ca. 1000 BCE). Each stanza contains 11 verses, all of which begin with the same segment (V, CV, VC or CVC) (as also with the same cuneiform sign). I am citing the stanza with *li-* as an example. It should be noted that this is a unique text, rhyme not being a regular feature elsewhere in Akkadian poetry.

- (5) Li-’u-u₂ pal-ku-u₂ šu-e ta-šim-ti
[L]i-it-mu-um-ma šur-ra-ka ila ta-da-a-a-aš
[L]i-ib-bi ili ki-ma qe₂-reb šamê^e ne₂-si-ma
Le(Li)-e₂-a-us-su šup-šu-qat-ma nišⁱmeš la lam-da
Li-pit qāt ‘a-ru-ru mit-ha-riš na-piš-ti
Li-il-li-du min₃-su ka-liš la HAR-ri
Li-it-tu bu-ur-šu reš-tu-u₂ ša₂-pil-ma
Li-gi-mu-ša₂ ar-ku-u₂ ma-ši šit-tin-šu
Li-il-lu ma-ru pa-na-a i-al-lad
Li-’u-um qar-du ša₂ ša₂-ni-i ni-bit-su
[L]i-’i-id mi-na-a pak-ki ilim-ma nišⁱmeš la lam-da

1.3.2 Variations on initial rhyme: Alliteration, alphabetic acrostic

The alliterating verse of Old-Germanic and other languages could be considered a subtype of initial rhyme, although the identity is located here at the beginning of smaller segments than what is conventionally considered a “line”:

- (6) Hwæt we gardena in geardagum
 þeodcyninga þrym gefrunon
 Hu ða æþelingas ellen fremedon
 Oft scyld scefing sceapena preatum
 Monegum mægþum meodosetla ofteah
 (...)
 (Beowulf, Old English, beginning)

Alliteration is also typical for Somali epic poetry, which is characterized by “alliterating (...) the initial sound of at least one word in each line (...). The alliterating sound must be the same throughout the whole poem (...). A poet must take care not to use grammatical words such as particles or pronouns for alliteration, and has to avoid repeating the same word in nearby lines.” (Banti & Giannattasio 1996: 84f.).

- (7) Ma sidii galowga
Oo guluf meel ku dareemay
Yaan gam'i waayay habeen
Sidii aarkiyo goosha
Oo gabnihii laga laayay
Gurxan maygu batay
(...)

A poetic phenomenon which used to be very common in the Eastern Mediterranean area during Late Antiquity are *alphabetic acrostics*, in which the lines begin with the letters of the alphabet in a sequence.³ By their nature, they can only be formed in written languages and appeal to the eye more than to the ear. The earliest known examples are from Biblical Hebrew, ex. Psalm 111:

- | | |
|------------------------------|-------------------|
| (8) ʾŌdāh jəhwāh bəkāl-lebāb | אודה יהוה בכל־לבב |
| Bəsōd jəšārīm wəʿsedāh | בסוד ישרים ועדה |
| Gədolīm maʿšāšē jəhwāh | גדלים מעשי יהוה |
| Dərūšīm ləkāl-ḥəpṣēhām | דרושים לכל־חפציהם |
| Hūd-wəhādār pāʿālō | הודו־והדר פעלו |
| Wəšidqātō ʾomādāt lāʿad | וצדקתו עמדת לעד |

A sportive variety on this is a Coptic reverse alphabetic acrostic, which is based on the Greek, not the Coptic alphabet (Kuhn & Tait 1996: No. 4; Sahidic dialect):⁴

³ I am stretching the definition of rhyme here, since alphabetic acrostics do not show identity of segments with each other, but identity with an externally defined pattern, namely the alphabet.

⁴ Here and throughout this paper, Coptic is given in a traditional transliteration, which should not be taken as a straightforward representation of phonemes.

- (9) Q̄ t̄cōt epeoou mnptaio / ntapensōtēr nagathos / kharize mmof nnefpet-
ouaab / apa biktōr mnklaudios
Psōtēr ōš ebol efjō mmos / jenaiaiou nnentaupōt nsōou / etbetdikaiousunē
/ jetōoute tmntero nmpēue
Khere nemarturos etouaab / khere nathlētēs njōōre / khere nentaui
nteklēronomia / ntmntero nmpēue
Phiereus napostolos paulos / ōš ebol efjō mmos / jenehoplon ntmntma-
toi / nhensarkikon anne
Ui petsēh afjōk ebol ejōtn / ō apa biktōr mnklaudios / jeounoueīōt
naparadidou mpefšēre / auō ouson mpefson
Taueid prro ōš ebol jepepsaltērion efjō mmos / jeapaiōt metamaau kaat
nsōou / pjois de pentafšopt erof
(...)

1.3.3 Internal rhyme

The idea that sections at some place in the middle of verse lines should need to be identical may seem unexpected but is in fact realized in certain poetic traditions. Classical Tamil poetry requires the identity of the second syllable and sometimes subsequent elements in verse lines (here underlined). Example: Tiruvalluvar, *Thirukkural* (probably early 1st millennium CE; additional tendency towards alliteration in this text) (Manickavasagam 2003: 3–7).

- (10) Akara mutala eluttellām āti / pakavan mutarrē ulaku
Karratanā lāya payanenkol vālarivan / narrāl tolā'ar enin
Malarmicai ēkinān māṇaṭi cērntār / nilamicai niṭuvāl vār
Vēntutal vēṇtāmai ilāṇaṭi cērntārkku / yāntum iṭumpai ila
Irulcēr iruvinaiyum cērā iṛaivān / porulcēr pukaḷpurintār māṭtu.
Porivāyil aintavittān poytir oḷukka / nerininrār niṭuvāl vār
Tanakkuvamai illātān tāḷcērntārk kallāl / manakkavalai māṛral aritu
Aravāli antanān tāḷcērntārk kallāl / piṛavāli nīntal aritu
Kōḷiḷ poriyil kuṇamilavē enkuṇattān / tāḷai vaṇankāt talai
Piraviṭ perunkaṭal nīntuvar nīntār / iṛaivān aṭicērā tār
(...)

Internal rhyme is also found in several Old Norse texts, e.g., Sigvatr Þórðarson, *Erfdrápa Óláfs helga* (early 11th cent.; internal rhyme underlined, + alliteration in bold type):

- (11) Tolf frá tekna elfar
 Tállaust við þála.
 Olli Áleifr falli,
 Eirsamr konungr, þeira.
 Svía tyggja leit seggi
 Sóknstriðs firum riða
 Böl vas brátt til Heljar
 Búið mest Sigars hesti
 (...)

2 Geographical distribution and evolution of end rhyme

2.1 Introduction

The identity of verse ends, in other words *end rhyme*, is much more common in modern times than the types described above, amounting to a practically universal distribution. I cannot demonstrate this in full breadth here, but I want to refer to the web-site <http://www.mamalisa.com/> which hosts childrens' songs and nursery rhymes from all over the world, most of which display some form of end rhyme. Rhyme is also ubiquitous in texts of pop songs which are nowadays produced by mainstream cultures in most corners of the world. Judging from its modern distribution, end rhyme would seem to be universal, innate, or inherited from the world's proto-language. It was, however, largely unknown to most major literary traditions of the ancient world (Egyptian, Ancient Near Eastern languages recorded in Cuneiform writing, Classical Greek and Latin, Classical Sanskrit, Older Iranian, Classical Japanese, traditional Balto-Slavic folk verse, etc.). This suggests that end rhyme is actually a contact phenomenon which must have spread from one or few sources to the whole world only in relatively recent times.⁵

The investigation of the diachrony of end rhyme is hampered by a methodological problem. A strict borderline between rhymed texts and unrhymed texts is

⁵ An alternative explanation, which was proposed by an anonymous reviewer, could be that end rhyme used to be much more common in the past than suggested by textual evidence but was restricted to stylistical domains (such as children's or nursery language?) which were not usually put into writing.

harder to draw than one might assume. Since most human languages use grammatical affixes, the initial and/or final phonemes of sentences are not a random selection from the phoneme inventory, but certain phoneme sequences are statistically overrepresented at the sentence edges. When verse lines coincide with clauses, which is normal for most poetic traditions, verse beginnings or ends may come to be identical even if rhymes are not intentionally sought by the composer. In addition to this, the fact that parallelism and repetition in very general terms belong to the universal stylistic means of poetic language further increases the frequency of rhymes even in traditions where it is not a constitutive poetic principle. The borderline between unrhymed poetry and rhymed poetry is therefore a fluid one, and it may very well be that also the emergence of end rhyme was a fluid or stochastic process, so that a fixed time and place of origin would never have existed.

Nevertheless, I think that a differentiation between “sporadic rhyme” and “systematic rhyme” is useful at least for presentational purposes. I will use the term “sporadic rhyme” where rhymed verses occur more frequently than could be expected by chance but still belong to the inventory of optional stylistic effects, whereas “systematic rhyme” means that rhyme has become a mandatory feature of poetry. The existence of “systematic rhyme” in this sense can be affirmed if (1) a longer poem shows exceptionless rhyme, (2) a rhyme pattern (such as ABAB...) is recognizable, or (3) not only grammatical suffixes but also parts of lexical stems participate in rhyme.

So where did end rhyme originate? The famous German poet Johann Wolfgang von Goethe seems to have been on the right track when he took it to be an Oriental (as he says, Persian) invention:

Behramgur, sagt man, hat den Reim erfunden.

Er sprach entzückt aus reiner Seele Drang;

Dilaram schnell, die Freundin seiner Stunden,

Erwiderte mit gleichem Wort und Klang.

(Goethe, *Westöstlicher Divan*: Suleika Nameh)⁶

I will now give examples of early attestations of sporadic and/or systematic end rhyme from several regions, roughly in chronological order.

6 ‘Behramgur [a Sassanide king of Persia], they say, invented rhyme. Ecstatically he spoke, from his pure soul’s inspire; and Dilaram, the darling of his hours, quickly replied with matching word and sound.’

2.2 Hittite

A fragment of a song from the time of Hattusilis I (16th cent. BCE) shows a repetition at the end, but the preserved portion consists of no more than three lines:⁷

- (12) nesas [wasps] nesas waspes tiya-mmu tiya
 nu-mu annas-mas katta arnut tiya-mmu tiya
 nu-mu uwas-mas katta arnut tiya-mmu tiya
 '[Clothes from] Nesa, clothes from Nesa bring me, bring!
 My mother's (gifts) take down for me, bring me, bring!
 My nurse's (gifts) take down for me, bring me, bring!' (Haas 2006: 280).

This is an example of great antiquity, but the fragment does not suffice to prove that end rhyme was a regular poetic instrument of the Hittite language, the less so as other extant Hittite poetic texts do not use rhyme.

2.3 Chinese

The *Shi Jing* (詩經) "Book of Odes" (said to originate from the early 1st millennium BCE; first fragmentary manuscripts from the Han dynasty, 206 BCE–220 CE) shows clear instances of end rhyme, but with various degrees of consistency throughout the opus. One of the best examples is Ode 305 (Karlgren 1950: 265f.), the last (and latest?) one, which at present constitutes the earliest known example of clearly intentional, systematic end rhyme in the world. The rhymes are obvious but imprecise in the contemporary Mandarin pronunciation as given here. They start on the vowel of the last syllable.

- (13) 攷彼殷武、奮伐荊楚、 tà bǐ yīn wǔ / fèn fá jīng chǔ
 突入其阻、裒荊之旅、 shēn rù jī zǔ / póu jīng zhī lǚ
 有載其所、湯孫之緒。維女荊楚、 yǒu jié jī suǒ / tāng sūn zhī xù /
 wéi nǚ jīng chǔ
 居國南鄉、昔有成湯、 jū guó nán xiāng / xī yǒu chéng tāng
 自彼氏羌、莫幹不來享、 zì bǐ dì qiāng / mò gān bú lái xiǎng
 莫敢不來王、曰商是常。 mò gān bú lái wáng / yuē shāng shì cháng
 天命多辟、設都于禹之績、 tiān mìng duō bì / shè dōu yú yǔ zhī jì

⁷ I owe the reference to this text to Francis Breyer (Berlin).

歲事來辟、勿予禍適、稼穡匪解。 suì shì lái bì / wù yú huò shì / jià sè
fěi xiè

天命降監、下民有嚴、 tiān mìng jiàng jiān / xià mín yǒu yán
不僭不濫、不敢怠遑、 bú jiàn bú làn / bú gǎn dài huáng
命于下國、封建厥福。 mìng yú xià guó / fēng jiàn jué fú
商邑翼翼、四方之極、 shāng yì yì yì / sì fāng zhī jí
赫赫厥聲、濯濯厥靈、 hè hè jué shēng / zhuó zhuó jué líng
壽考且寧、以保我後生。 shòu kǎo jǔ níng / yǐ bǎo wǒ hòu shēng
陟彼景山、松柏丸丸、 zhì bǐ jǐng shān / sōng bǎi wán wán
是斷是遷、方斲是虔、 shì duàn shì qiān / fāng zhuó shì qiān
松栢有榱、旅楹有閑、寢成孔安。 sōng jué yǒu chān / lǚ yíng yǒu xiān /
qǐn chéng kǒng ān

In the reconstructions of Old Chinese pronunciation by Karlgren (1950: 266) and Baxter (1992; see his appendix “The rhyme words of the Shījīng”: 745–812), the rhymes become better and sometimes appear to include consonants of the syllable onset as well. The first rhyme groups in Baxter’s reconstruction:

- (14) line 1–3: 武 Np(r)ja? = 楚 tsrhja? = 阻 tsrja? = 旅 grja? = 所 s(k)rja?
= 緒 zja? = 楚 tsrhja?
line 4–6: 鄉 xjang = 湯 hlang = 羌 kh(l)jang = 享 xjang? = 王 wjang
= 常 djang
line 7–8: 辟 pjek = 績 tsek = 辟 pjek = 適 drek = 解 kreks

In Karlgren’s reconstruction:

- (15) 武 mǐwo = 楚 ts’jo = 阻 tsjo = 旅 glio = 所 sjo = 緒 dzjo = 楚 ts’jo
鄉 xjang = 湯 t’āng = 羌 k’jang = 享 xjang = 王 giwang = 常 djang
辟 piěk = 績 tsjěk = 辟 piěk = 適 d’ěk = 解 g’ěg

2.4 Hebrew

The Hebrew Bible (1st millennium BCE) contains examples of sporadic rhyme, i.e., identity of verse ends at much more than random rate but with no consistency and no obvious alternation patterns. One of the best examples is Psalm 146:

- (16) Haləlū-yāh
 Haləlī napšī 'āt-yəhyāh / 'āhaləlāh yəhyā bə ḥayyāy 'āzammərāh
 lələhay bə'ōrī
 'Al-tibtəhū bindībīm / bəbān-'ādām šā'eyn lō təšū'āh
 Teše rūḥō yāšūb lə'admātō / bayyōm ha-hū 'ābdū 'āštonotāw
 'Ašrē šā'el ya'āqob bə'āzrō / šibrō 'al-yəhwāh 'ələhāw
 'Ošāh šamayim wā'ārāš / 'āt-hayyām wə'āt-kāl-'āšār-bām
 Haššomer 'ēmāt lə'ōlām / 'ošāh mišpāt lā'āšūqīm
 Noten lāhām lār'ebīm / yəhwāh mattir 'āsūrīm
 Yəhwāh poqeāh 'iwrīm / yəhwāh zoqep kəpūpīm
 Yəhwāh 'oheb šadiqīm / yəhwāh šomer 'et-gerīm
 Yatōm wə'almanāh yə'oded / wədārāk rošā'im yə'awwet
 Yimlok yəhwāh lə'ōlām / 'ələhayik šiyyōn lədor wādōr
 Haləlū-yāh

Sporadic rhyme of this kind is generally frequent in post-biblical Hebrew liturgical texts, e.g., in Tfilat ha-Amida (thought to have been composed in the 1st century CE). Kuhn (1950) postulated that rhyme in such texts was originally exceptionless and phrases violating the rhyme are later insertions or text corruptions, a hypothesis I would not follow.

Rhyme becomes undisputably systematic by the works of Yannai, as exemplified here by his poem *Aḥar ham-midbār*, ascribed to the 6th century (from Carmi 1981: 219f.). The rather strict rhyme of the last syllable is often preceded by a section of less strict identity, which makes it difficult to determine where exactly the rhyme starts. This text is an early example of the *piyut* genre, which is characterized by both end rhyme and an alphabetic acrostic pattern:

- (17) Aḥar ham-midbār šir nihag šōn / aḥar ham-midbār hinhig 'ammō
 kaššōn
 Bəlō raglayim rāš wə-heriṣ mar'itō / lālākāt limqōm ḥāzyōn mar'itō
 Giddulē dāšā ḥayū nibrā'im lə-pānāw / wə'aḥar kāk ḥayū niblā'im
 milpānāw
 Dārāk gədōlāh lə-yōm 'āḥād hillek / kī 'oheb mēšārīm yiššar lō helāk
 Har hā-'ələhim 'et pī huggā' / miṭṭārḥō hūnaḥ u-migī'ō hurgā'
 U-ṭillāh nir'ah lō kidmūt mal'āk / la'āsōt dāmūtō kidmūt mal'āk
 Zāh ləkī darkō ḥinnəkō lir'ōt / lihyōt bāqī bə-kāl mar'e mar'ōt
 Ḥuzzaq libō kəšār labbat 'eš / ba'ābūr ləlabbābō bə-kāl minē 'eš
 Ṭāhūr bəṭūk ṭum'ah yəqārō hōpīā' / gāboāḥ 'al sənāh kəbōdō hōdīā'
 Ya'an kī šarat 'ammō hī šārātō / w-išū'ātām hī yəšū'ātō

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fěi xiè

天命降監、下民有嚴、 tiān mìng jiàng jiān / xià mín yǒu yán

不僭不濫、不敢怠遑、 bú jiàn bú làn / bú gǎn dài huáng

命于下國、封建厥福。 mìng yú xià guó / fēng jiàn jué fú

商邑翼翼、四方之極、 shāng yì yì yì / sì fāng zhī jí

赫赫厥聲、濯濯厥靈、 hè hè jué shēng / zhuó zhuó jué líng

壽考且寧、以保我後生。 shòu kǎo jǔ níng / yǐ bǎo wǒ hòu shēng

陟彼景山、松柏丸丸、 zhì bǐ jǐng shān / sōng bǎi wán wán

是斷是遷、方斲是虔、 shì duàn shì qiān / fāng zhuó shì qián

松栢有榱、旅楹有閑、寢成孔安。 sōng jué yǒu chān / lǚ yíng yǒu xián /
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In the reconstructions of Old Chinese pronunciation by Karlgren (1950: 266) and Baxter (1992; see his appendix “The rhyme words of the Shījīng”: 745–812), the rhymes become better and sometimes appear to include consonants of the syllable onset as well. The first rhyme groups in Baxter’s reconstruction:

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(15) 武 mǐwo = 楚 tɕ’io = 阻 tɕio = 旅 glio = 所 ɕio = 緒 dzio = 楚 tɕ’io

鄉 ɣiang = 湯 t’âng = 羌 k’jang = 享 ɣiang = 王 giwang = 常 ɖjang

辟 pjěk = 續 tsjěk = 辟 pjěk = 適 d’ěk = 解 g’ěg

2.4 Hebrew

The Hebrew Bible (1st millennium BCE) contains examples of sporadic rhyme, i.e., identity of verse ends at much more than random rate but with no consistency and no obvious alternation patterns. One of the best examples is Psalm 146:

(16) Haləlū-yāh

Haləli napši 'āt-yəhyāh / 'āhaləlāh yəhyā bə ḥayyāy 'āzammərah
 ləlohay bə'ōri
 'Al-tibṭəhū bindībīm / bəbān-'ādām šā'eyn lō təšū'āh
 Teše rūḥō yāšūb lə'admātō / bayyōm ha-hū 'ābdū 'āštonotāw
 'Ašrē šā'el ya'āqob bə'āzrō / šibrō 'al-yəhwāh 'əlohāw
 'Ošāh šamayim wā'ārāš / 'āt-hayyām wə'āt-kāl-'āšār-bām
 Haššomer 'ēmāt lə'ōlām / 'ošāh mišpāt lə'āšūqīm
 Noten lāhām lār'ebīm / yəhwāh mattir 'āsūrīm
 Yəhwāh poqeāh 'iwrīm / yəhwāh zoqep kəpūpīm
 Yəhwāh 'oheb šadiqīm / yəhwāh šomer 'et-gerīm
 Yatōm wə'almanāh yə'oded / wədārāk rošā'im yə'awwet
 Yimlok yəhwāh lə'ōlām / 'əlohayik šiyyōn lədor wādōr
 Haləlū-yāh

Sporadic rhyme of this kind is generally frequent in post-biblical Hebrew liturgical texts, e.g., in Tfilat ha-Amida (thought to have been composed in the 1st century CE). Kuhn (1950) postulated that rhyme in such texts was originally exceptionless and phrases violating the rhyme are later insertions or text corruptions, a hypothesis I would not follow.

Rhyme becomes undisputably systematic by the works of Yannai, as exemplified here by his poem *Aḥar ham-midbār*, ascribed to the 6th century (from Carmi 1981: 219f.). The rather strict rhyme of the last syllable is often preceded by a section of less strict identity, which makes it difficult to determine where exactly the rhyme starts. This text is an early example of the *piyut* genre, which is characterized by both end rhyme and an alphabetic acrostic pattern:

- (17) Aḥar ham-midbār šir nihag šōn / aḥar ham-midbār hinhiḡ 'ammō
 kaššōn
 Bəlō raglayim rāš wə-heriš mar'itō / lālākāt limqōm ḥāzyōn mar'itō
 Giddulē dāšā ḥāyū nibrā'im lə-pānāw / wə'aḥar kāk ḥāyū niblā'im
 milpānāw
 Dārāk gədōlāh lə-yōm 'āḥād hillek / kī 'oheb mēšārīm yiššar lō helāk
 Har hā-'əlohim 'et pi huggā' / miṭṭārḥō hūnaḥ u-miḡ'ō hurgā'
 U-ṭhillāh nir'āh lō kidmūt mal'āk / la'āsōt dəmūtō kidmūt mal'āk
 Zāh ləkī darkō ḥinnəkō lir'ōt / lihyōt baqī bə-kāl mar'ē mar'ōt
 Ḥuzzaq libō kəšār labbat 'eš / ba'ābūr ləlabbəbō bə-kāl minē 'eš
 Ṭāhūr bəṭūk ṭum'āh yəqārō hōpiā' / gāboāh 'al sənāh kəbōdō hōdiā'
 Ya'an kī šarat 'ammō hī šārātō / w-išū'ātām hī yəšū'ātō

2.5 Old South Arabian

The earliest known text with systematic end rhyme outside China appears to be the Sun Hymn of Saba from ca. 200 CE (Abdallāh 1988).⁸ It is written in the Old South Arabian script. The text is not readily translatable, as the language is not precisely determined. According to Beeston (1994: 236–238), the text contains Old North Arabian traits as well. The text consists of 27 verses all of which terminate in *-ḥk* (*-k* being a grammatical suffix, *-ḥ-* belonging to the stem):

- (18) Nštrn ḥyr kmḥḍ ḥqḥk
 Bšyḍ ḥnwn m't nšḥk
 Wqrnw š'b ḍqsd qshk
 Wlb 'lhn ḍyḥr fqḥk
 W'ylt 'db šl' fḍḥk
 W'yn mšqr ḥnbḥr wšḥk
 Wmn ḍrm wtd' ḥslḥk
 Wmhš' yḥn 'ḥgy kšḥk
 (...)

2.6 Aramaic

Kuhn (1950: 30–40) provides a reconstruction of the hypothetical Aramaic original of the *Pater noster* (early 1st century CE) that has systematic end rhyme, but this is highly speculative. Many examples of early Syriac hymnody have sporadic rhyme to various degrees, as in Hebrew. The following text brings end rhyme almost to perfection, but it is largely restricted to *-e* and *-o* as grammatical suffixes and still has no regular pattern of alternation:

- (19) 'Ayno bnahiro / metdakyo bneqpe
 Wmetnašḥo bzayne / wmeštapyo bdenḥe
 Wmezdahyo bziwe / wmeštabto bšupre
 Maryam broz 'ayno / nuhro šro bgawo
 Wamraq lta'ito / wšapi lmaḥšabto
 Daki lmernito / wšalel btuluto
 Nahro da'mad ho be / brozo hpak baṭne

8 I owe the reference to this text to Stefan Weninger (Marburg).

'Ubo ragyo dmayo / baṭne bdakyoto
 Wyalde bzahyuto / w'asqe btešbuḥto
 B'ubo dakyo dnahro / 'ilap lbart anošo
 Dbeṭnat dlo gabro / wyeldat dlo zar'o
 Rabyat bmawhabto / Imoro dmawhabto
 Denḥo bgaw nahre / šemḥo bgaw qabre
 'Azleg briš ṭquro / wadnaḥ bgaw karsō
 W'apreg b'uloye / w'anhar bsuloqe
 (...)

(Poem ascribed to Ephrem the Syrian, 4th century CE; manuscript 522 CE; Brock & Kiraz 2006: Text no. 7)

(Sporadic) rhyme and other possibly poetic sound patterns in the Syriac gospel translation are discussed by Falla (1977).

2.7 Arabic

The Arabic *Qur'an* (early 7th century) is characterized by systematic rhyme with the same end section typically stretching over a long sequence of lines, often a whole Surah. Example: Surah 81 with rhyme in *-at*.

- (20) Idā š-šamsu kuwwirat
 Wa-idā n-nuḡūmu nkadarat
 Wa-idā l-ḡibālu suyirāt
 Wa-idā l-'iṣāru 'uṭṭilat
 Wa-idā l-wuḥūšu ḥuṣirat
 Wa-idā l-biḥāru suḡḡirat
 Wa-idā n-nufūsu zuwwiḡat
 Wa-idā l-mau'ūdatu su'ilat
 Bi-'ayyi ḍanbi qutilat
 Wa-idā š-ṣuḥufu nuṣirat
 Wa-idā s-samā'u kuṣiṭat
 Wa-idā l-ḡaḥīmu su'irat
 Wa-idā l-ḡannatu 'uzlifat
 'Alimat nafsun mā 'aḥḍarat
 (...)

2.8 Latin

Sporadic rhyme (*homoioтелеuton*) is one of the established stylistic patterns of Classical Latin literature. The intentionality of such rhymes is, however, often hard to assess. One of the most convincing passages is the following from Ovid, *Amores* I,1 (ca. 0 CE):

(21) (...)

‘Nec mihi materia est numeris levioribus apta,
Aut puer aut longas compta puella comas.’
Questus eram, pharetra cum protinus ille soluta
Legit in exitium spicula facta meum,
Lunavitque genu sinuosum fortiter arcum,
‘Quod’ que ‘canas, vates, accipe’ dixit ‘opus!’
Me miserum! certas habuit puer ille sagittas.
Uror, et in vacuo pectore regnat Amor.
Sex mihi surgat opus numeris, in quinque residat:
Ferrea cum vestris bella valete modis!
Cingere litorea flaventia tempora myrto,
Musa, per undenos emodulanda pedes!
(...)

The first systematic rhyme appears in Augustinus, *Psalmus contra partem Donati*, 393 CE, earliest manuscript 9th century, composed of 295 verses all of which end in -e or -ae (from Finaert & Congar 1963: 150ff.):

(22)

Vos qui gaudetis de pace, modo verum iudicate.
Foeda est res causam audire et personas accipere.
Omnes iniusti non possunt regnum dei possidere.
Vestem alienam conscindas nemo potest tolerare:
Quanto magis pacem Christi qui conscindit dignus morte?
Et quis est ista qui fecit quaeramus hoc sine errore.
(...)

2.9 Celtic

The earliest known specimen of rhymed Irish poetry is Colmán mac Lénéni, *Poem for King Domnall* (dated to 565/6 by Carney 1989: 42f.; extant manuscripts are medieval). The text makes also use of alliterations (here in bold type). It has been claimed (e.g., by Stella 1995b) that Old Irish verse was the initial model for end rhyme in the other European languages.

- (23) Luin oc **elaib** / **ungi** oc **dírnaib**
 Crotha ban n-athech / oc **ródaib** **rígnaib**
 Ríg oc **Domnall** / **dord** oc **aibse**
 Adand oc **caindill** / **calg** oc mo **chailg-se**
Dún maic **Daim** / **doe** ós **roi**
 Ronn **tart** / **tacht** **coi**
 Ó ba mac **cléib** / **caindlech** **ser**
 Sirt cach n-ainm / ainm gossa **fer**
 (...)

The first examples of Welsh rhyme appear no later than those of Irish. A rhyme of a remarkably intricate pattern is used by the poet Taliesin, *Marwnad Owain ab Urien* (Parry 1962: 3f.), ascribed to the 6th century, manuscripts medieval, which also contains alliterations (in bold type).

- (24) Enaid Owain ab Urien / gobwyllid **Rheen** o'i **raid**.
 Rheged udd ae cudd trom**las** / nid oedd **fas** ei gywydd**aid**.
 Isgell gŵr cerddglyd clodf**awr**, / esgyll **gwawr** **gwaywawr** llif**aid**,
 Cany **cheffir** cystedly**dd** / i udd **Llwyfenydd** llathr**aid**.
 Medel galon, gefeil**ad**, / Eislud ei **dad** a'i **daid**.
 Pan laddawdd Owain Fflamdd**wyn** / nid oedd **fwy** **nogyd** cysg**aid**.
 Cysgid **Lloegr** llydan nifer / Â lleu**fer** yn eu llyg**aid**;
 A rhai ni ffoynt **hae**ach**** / a oeddynt **hy**ach**** no rh**aid**.
 (...)

2.10 German

The *Merseburger Zaubersprüche* (the only pre-Christian German text; believed to have been composed before 750 CE; manuscript 10th century) may be considered to show sporadic rhyme. Spell 1:

- (25) Eiris sazun idisi
 Sazun hera duoder.
 Suma hapt heptidun,
 Suma heri lezidun,
 Suma clubodun
 Umbi cuoniouuidi:
 Insprinc haptbandun,
 Inuar uigandun.

Rhyme becomes systematic in the *Liber evangeliorum* by Otfrid von Weissenburg (ca. 860 CE; note the equivalence of -n- and -l-, which is no longer valid for modern German):

- (26) Lúdownig ther snéllo, / thes wísdwames fóllo,
 Er óstarrichi ríhtit ál, / so Fránkono kúning scál;
 Ubar Fránkono lant / so gengit éllu sin giwált,
 Thaz ríhtit, so ih thír zéllu, / thiú sin giwált ellu.
 Thémo si íamer hélli / joh sálida giméini,
 Druhtin hóhe mo thaz gúat / joh frewe mo émmizen thaz múat;
 (...)

2.11 Old Norse

It was not much later that end rhyme came into use in Old Norse as well. The first example is found in Egill Skallagrímsson, *Höfuðlausn* (936 CE) (+ alliteration, in bold type):

- (27) Vestr komk of **ver**, / en ek Viðris **ber**
 Munstrandar **mar**, / Svá's mitt of **far**;
 Drók **eik** á flot / við ísabrot,
 Hlóðk **mærðar** hlut / **munknarrar** skut.
 Buðumk **hilmi** löð / ák **hróðrs** of kvöð

Berk Óðins mjöð / á Engla bjöð;
 Lofat vísa vann, / víst mærik þann,
 Hljóðs biðjum hann, / þvít hróðr of fann.
 (...)

2.12 Iranian

End rhyme is a mandatory feature of Persian poetry of the Islamic period. This was not so in earlier stages of the language. Henning (1950: 646f.) states: "(...) in the whole of the Western Middle Iranian Material so far recognized as poetical there is not a single rhyme in the strict sense. There are accidental rhymes and assonances; but the principle of the rhyme as such, the deliberate rhyme, seems to have been unknown." As the only counter-example he cites (p. 647) a passage of 12 lines in a Pahlavi text all of which end in *-ān* (the manuscript is very late, 956 CE):

- (28) Dārom andarz-ē az dānāgān / az guft-i pēšēnīgān
 Ō šmāh bē wizārom / pad rāstih andar gēhān
 Agar padirēd / bavēd sūd-i dō-gēhān
 Pad gēti vistāxw ma bēd / was-ārzōg andar gēhān
 Čē gēti pad kas bē nē hišt-hēnd / nē kūšk ud xān-u-mān
 (...)

The *Tārīḫ-i Sistān* ("History of Sistān", 1053 CE) quotes a few rhymed verses said to go back to ca. 700 BCE (cited from Elwell-Sutton 1975: 88, who tries to argue that Persian end rhyme was a native tradition not imported from Arabic):

- (29) Ābast u nabidhast / 'uṣārāt-i zabībast / u dunba farbih u pīyast / sumaiya
 rūsbidhast
 Az ḥutlān āmadhiya / ba-rū tabāh āmadhiya / āvār bāz āmadhiya /
 bi-dil farāz āmadhiya

2.13 Sanskrit

Rhyme is unknown to the bulk of classical Sanskrit literature. Jayadeva, *Gīta govinda* (12th cent. CE) is considered the earliest example, or one of the earliest examples, of systematic end rhyme in this language (on this text see also Gerow 1989):

- (30) Pralayapayodhijale dhṛtavānasi vedam
 Vihitavahitracaritramakhedam
 Keśava dhṛtamīnaśarīra java jagadīśa hare
 Kṣīrativipulatare tava tiṣṭhati prṣṭhe
 Kharanidharanakinacakra~~garīṣṭhe~~
 Keśava dhṛtakacchaparūpa java jagadīśa hare
 Vasati daśanaśikhare dharanī tava lagnā
 Śaśini kalaṅkakaleva nimagnā
 Keśava dhṛtasūkararūpa java jagadīśa hare
 (...)

2.14 Conclusion

We have seen that the use of end rhyme in several languages expanded considerably during their observable history, making end rhyme by now a feature with a practically global distribution. I believe that two factors have contributed to this fact: (1) Poetic principles are easily borrowed. They are almost inevitably borrowed when a powerful literary language comes into contact with a language that has not yet developed firm literary traditions. This favours a world-wide spread of a limited number of literary principles out of many more that would be possible in theory. (2) Since, typologically, inflectional suffixes are more frequent than prefixes (Dryer 2005), equal word-ends must be globally more frequent than equal word-beginnings. This made it more probable that end rhyme would prevail over other types of rhyme, as it in fact did.

It remains hard to decide whether a single origin of systematic end rhyme or rather a polygenetic origin should be assumed. For the time being, two major, perhaps independent nuclei can be recognized which have contributed to the world-wide spread of end rhyme, namely China and the Near East. The first undisputable examples of systematic end rhyme are attested from China, a country whose literacy and literature had a strong influence on several cultures of the Far East. Rhyme in the Near East, whether ultimately imported from China or not,

joins a short time later, and it is from here that end rhyme entered the literary traditions of Christianity and Islam, through which it spread to most remaining regions of the globe.

It appears that, in several traditions at least, rhyme was introduced gradually during an extended period in which rhyme became more and more frequent and regularized, i.e., the emergence of rhyme was a statistical process (thus D'Angelo 1995 for Latin). This makes it difficult to determine exact migration paths.

Modern European rhyme has repeatedly, and in my view rightly, been argued to be derived from Hebrew or Semitic languages, e.g., by Kuhn (1950: 51), who also suggests that rhyme arose from identical suffixes in parallel clauses and would thus originally have been restricted to grammatical morphemes. An origin from Hebrew is also asserted by Hrushovski (1981: 62): "The rhyming system of the Hebrew *piyut* was the earliest known massive, systematic and obligatory use of rhyme in poetry, and it is very plausible that through the Christian Syriac church employing Aramaic (a cognate language to Hebrew), and via Latin liturgy, the principle of rhyme was transferred to European poetry".

Other authors prefer to believe in independent inventions (e.g., Schweikle 1967 for German). See also the contributions in Ernst & Neuser (1977) on the issue. Norden (1898.2: 810–908, appendix "Über die Geschichte des Reims"), who gives a detailed description of the rise of end rhyme in Latin and Greek, tries to take an intermediate position in arguing that rhyme exists "potentially" in all languages, being based on the idea of parallelism which he believes to be universal, but that cultural contact was needed to bring rhyme into "actual" usage.

2.15 Rhyme outside of poetry

Features more or less comparable to rhyme can be found also outside the domain of poetry. The existence of such features in a language might have facilitated the selection of the same principle for poetic use. Some miscellaneous features of this kind are the following:

- Partial reduplication, which appears as a morphological process in several languages, can be regarded as a non-poetic correlate either of initial rhyme or alliteration (Greek *πειθω* 'to convince', perfect participle *πε-πεισμένος*), of internal rhyme (Samoan *alofa* 'he loves', *alolofa* 'they love'), or of end rhyme (Somali *dab* 'fire', plural *dab-ab*), depending on where the reduplica-

⁹ Cited from Moravcsik (1978: 310) where many more examples of reduplication are to be found.

tion is located. This parallelism has been commented on e.g., by Kiparsky (1975: 242f.).

- Several languages have so-called “echo compounds” (Turkish term: *mühmele*), which are formed from nouns and introduce a notion of plurality, “et cetera”, or add some kind of emotional colouring. They are relatively productive in languages such as Turkish: *kitap mitap* ‘books and the like’ (Marchand 1952); Egyptian Arabic: *fī šal’aṭ mal’aṭ* ‘everywhere’ (Woidich 2006: 15); Yiddish: *gelt-šmelt* ‘money – who cares?’; Lezgian: *sik’-mik* ‘fox and other wild animals’ (Haspelmath 1993: 109); Hindi: *pānī vānī* ‘water et cetera’; Tamil: *paampu-kiimpu* ‘snakes and similar reptiles’. Less prototypical examples are also found in English: *itsy-bitsy*, *boogie-woogie*, *hobson-jobson*, *hodgepodge*, *baby-shmaby* (the *shm*-type being a borrowing from Yiddish, see Spitzer 1952); German: *Hokuspokus*, *Kuddelmuddel*, *Techtelmechtel*, *holterdi-polter*; French: *pêle-mêle*. The origin of such compounds has been claimed to lie in Dravidian (Kane 2001: 58) or Turkic (Southern 2005: 26–30) languages, but there are examples already from Hittite (*karnan marnan* ‘nach besten Kräften’, Haas 2006: 292) and Coptic (magical formulas such as *thalal malal*, Vycichl 1984: 103 with reference to possible Egyptian examples).
- Semantically related words may influence one another so that they acquire the same end rhyme, e.g., Bulgarian *oktômbri* ‘October’ (with unetymological *-m*) – *noémbri* ‘November’ (the same in some other Slavonic languages); French *grammaire* (irregularly < *grammatica*) – *vocabulaire*; English *female* (irregularly < French *femelle*) – *male*; Mehri *hîmel* (irregularly from the root *ymn*) ‘right’ – *šîmel* ‘left’ (Brockelmann 1927: 19, who gives a lot of further examples from Semitic languages).
- It may also be mentioned that between the 11th and the 18th centuries, Arabic book titles were frequently rhymed (Ambros 1990), such as *Mağmaṣ as-surūr wa-maṭlaṣ aš-šams wa-l-budūr* ‘Assembly of Happiness, and Ascent Location of the Sun and the Moons’. Here, a genuinely poetic feature acquired an additional field of use with which it had not originally been associated.

3 Parametric variation of end rhyme across languages

Although, as we have seen, the idea of end rhyme was normally borrowed, its implementation differs greatly across languages. There are several parameters according to which rhyme rules can vary, some of which I am going to sketch in the following.

As is perhaps true for grammatical rules in general, the borderline between “grammatical” and “ungrammatical” utterances is not always a clear-cut one, which means that the attempt to describe the usage of rhyme for a language in the form of strict laws is an oversimplification. In reality, different rhymes may have a different “quality”, with the worse of them being employed less frequently or only by some authors. Holtman (1996) tries to capture this fact by a description of rhyme rules in the framework of Optimality Theory (she considers data from Dutch and English only).

3.1 Rhyme phonology

I want to introduce the concept of “rhyme phonology”, since the partitioning of the sound space implied by rhyme identity may differ from the partitioning of the sound space as normally practised by phonologists (“ordinary phonology”). Both ways of partitioning are distinct but may still turn out to be interrelated in some way. In particular, it seems to be typical that rhyme phonology displays mergers with respect to ordinary phonology, or, in other words, is an underdifferentiated version of ordinary phonology.

The question has been raised which linguistic level of representation provides the input for rhyme. Manaster Ramer (1994) argued that relatively abstract levels of representation are not relevant for rhyme in any language, as against Malone (1982) who took the opposite view that rhyme is based on deep phonology. I believe that this question cannot be settled before further typological research has provided data on rhyme from a wider range of languages. For the time being, I am only defending the weak formulation that “rhyme phonology” is not identical with the ordinary phonological representation.

Another approach to explain discrepancies between rhyme equivalence and ordinary phonemic analysis is taken by Baxter (1992: 88–97). He attributes them to historical factors, namely to the supposed origin of rhyme usage in either past literary traditions or other dialects. But even if this were a common pathway of

how a distinct “rhyme phonology” can come into existence, it is obvious that a strictly synchronic description of rhyme usage is still necessary in its own right.

3.1.1 Underdifferentiation of vowels

In several languages, certain phonological vowel distinctions are ignored for the rhyme. Let us first examine the case of German. A minority of poets seem to distinguish rhyme vowels as in ordinary phonology (e.g., Gottfried Benn; Detlef von Liliencron; Rainer Maria Rilke).¹⁰ However, the large majority of German poets rhyme $\ddot{u} = i$, $\ddot{o} = e$, $/ai/ = /oi/$ (but not $*a = o!$), and most native speakers perceive such rhymes as completely acceptable. The obvious interpretation is that the feature of rounding in vowels is not relevant for rhyme phonology, and that rhyme phonology is in this respect an underdifferentiated version of ordinary phonology. Examples are abundant; I cite only one text here:

- (31) Ich weiß nicht was soll es bedeuten, $/oi/$

Dass ich so traurig bin;

Ein Märchen aus alten Zeiten, $/ai/$

Das kommt mir nicht aus dem Sinn.

(...)

Den Schiffer im kleinen Schiffe

Ergreift es mit wildem Weh; $/\bar{e}/$

Er schaut nicht die Felsenriffe,

Er schaut nur hinauf in die Höh. $/\ddot{o}/$

(...)

(Heinrich Heine, *Loreley*; note also the tendency towards alliteration in this text)

Some authors may, in addition, ignore vowel quantity and other subtleties ($a-o$ -distinction):

¹⁰ Martin Stockburger (Konstanz) helped me in identifying these authors.

- (32) Ein feste Burg ist unser Gott, /ō/
 Ein gute Wehr und Waffen. /a/
 Er hilft uns frei aus aller Not, /ō/
 Die uns jetzt hat betroffen. /o/
 (...)
 (Martin Luther, a popular hymn of the Protestant church)

In Polish, rhyme phonology does not recognize nasal vowels. They are either treated as vowel + N (word internally before stops), which is not striking because this is in agreement with their actual pronunciation. More significantly, they are treated like simple vowels in the other positions, which means that the feature of nasality is disregarded. *ą* counts as equivalent to *o(N)*. Furthermore, *i* and *y* are equivalent.

- (33) Odwraca głowę, odeszła nieto,
 Podniosła w niebo żrenice,
 Nagle na oczach łezki zaświeca
 I róż wystąpił na lice.
 (...)
 Starzec ucisza, podnosi rękę,
 "Słuchajcie, dzieci!" – zawoła –
 "Powieм, od kogo mam tę piosenkę,
 Może on był z tego siola."
 (...)
 Idź, może znajdziesz na brzegach Niemna
 Tę, której już nie obacze,
 Może jej piosnka będzie przyjemna,
 Może nad listkiem zapłacze.
 (Adam Mickiewicz, *Dudarz*)
 (...)
 Ot lepiej pióro wezmę i wśród ciszy,
 Gdy się bez ładu myśl placze,
 Zacznę coś pisać dla mych towarzyszy,
 Zacznę, bo nie wiem, czy skończę.
 (...)
 (Adam Mickiewicz, *Do Przyjaciół*)

In Czech rhyme, vowel quantity is generally disregarded:

- (34) Na stolci seděl kníže pán, / Vojakům kázal rozhněván:
 “Již chopte páže zradné, / Ať hlava jeho padne!”
 To mladou kněžnou zachvělo – / Jí oko mnou se zastřělo
 A hlava mdlá se chýlí: / “Ustaňte ještě chvíli!
 Ó život, což ten člověka / Jen v plaché stíny oblěká –
 I když jej celý prosní, / Jak v růži kapku rosní!
 Na světlech modré oblohy / Stesk duše tá mu nebohý,
 Však sotva v lesk se vesní, / Již mře jak kvítko lesní.
 Mladost, krása, láska – vše, / Ach, jak to jmění prchavé:
 To sotva jednou zkvetá / A již je po všem vetá!
 A květu jara vonný den, / Ach, jak to krátký, krátký sen
 (...) (Vítězslav Hálek, *Knížecí Soud*)

Ultimately, vowels may become completely irrelevant. This is not the norm for any European language but is occasionally found in English and French (here called “contre-asonance”):

- (35) It seemed that out of battle I escaped
 Down some profound dull tunnel, long since scooped
 Through granites which titanic wars had groined.
 Yet also there encumbered sleepers groaned,
 Too fast in thought or death to be bestirred.
 Then, as I probed them, one sprang up, and stared
 With piteous recognition in fixed eyes,
 Lifting distressful hands, as if to bless.
 And by his smile, I knew that sullen hall,
 By his dead smile I knew we stood in Hell.
 With a thousand pains that vision's face was grained;
 Yet no blood reached there from the upper ground
 (...) (Wilfred Owen, *Strange Meeting*)
- (36) By the gate with star and moonn
 Worked into the peeled orange woodd
 The bronze snake lay in the sun
 Inert as a shoelace; deadd

But pliable still, his jaw
 Unhinged and his grin crooked,
 Tongue a rose-colored arrow.
 Over my hand I hung him.
 His little vermilion eye
 Ignited with a glassed flame
 As I turned him in the light;
 When I split a rock one time
 The garnet bits burned like that.
 Bust dulled his back to ocher
 The way sun ruins a trout.
 Yet his belly kept its fire
 Going under the chainmail,
 The old jewels smoldering there
 In each opaque belly-scale:
 Sunset looked at through milk glass.
 And I saw white maggots coil
 Thin as pins in the dark bruise
 Where innards bulged as if
 He were digesting a mouse.
 Knifelike, he was chaste enough,
 Pure death's-metal. The yard-man's
 Flung brick perfected his laugh.
 (Sylvia Plath, *Medallion*)

- (37) Prends ton manteau. Suspend les plaintes éternelles
 Et buvons la splendeur des heures automnales,
 Car la pourpre des bois environne le zèbre
 Qui rue et trotte et mord le feuillage et se cabre.
 C'est le nouvel octobre et la sente où je marche
 Je la foulais naguère en brandissant la torche
 Quand je voulais au sort attacher des entraves
 Et nouer à l'azur les roses de mes rêves.
 Et nous nous oublierons et que notre cœur saigne
 En regardant glisser la souplesse d'un cygne
 Et nous contemplerons, dédaigneux des clepsydres,
 Les paons de cuivre bleu dans le bronze des cèdres.
 (Tristan Derème, *La Verdure Dorée*, Poème no. LXXVIII)

3.1.2 Underdifferentiation of consonants

In German rhyme, consonants are normally distinguished as in ordinary phonology. A minority of authors are liberal with regard to the voiced/voiceless distinction, e.g.:

- (38) Der Prolet wird in den Krieg verladen
 Daß er tapfer und selbstlos ficht.
 Warum und für wen wird ihm nicht verraten
 Für ihn selber ist es nicht.
 (Bertold Brecht, *Lied gegen den Krieg*)

I have found one author (dialectal, Swiss German) who systematically treats plosives and affricates sharing the same manner of articulation as equivalent:

- (39) Morn han ich es wißes Röckli
 Und es Chränzli uf em Chöpfli. (/kx/ = /pf/)
 Darf im Zug i d Chile goh,
 Darf a Taufstei vürestoh,
 Hole dert e neue Franke,
 Goh uf d Schützematt go tanze. (/kx/ = /ts/)
 (Haemmerli-Marti 1950: 72)

Summervögele, Mattenängel,
 Tüend um d Meie tanze:
 Nedere Chrabällestängel
 Lot ech lo gigampfe! (/nts/ = /mpf/)
 (Haemmerli-Marti 1950: 187)

Wenns luegt, wi wenns mi wett verschtoh,
 Mit sine blaue Auge,
 Denn chönnt de Tüfel sälber cho,
 I tet keis Wörtli glau^{be}! (/g/ = /b/)
 (Haemmerli-Marti 1950: 122)

Quäcksilberfüeßli und Rubelchopf,
 S Müli wi Blettli vom Rosechnopf,
 S Züngli so gleitig wi s Mülirad,
 Auge wi Brombeeri usem Hag (/d/ = /g/)
 (Haemmerli-Marti 1950: 210)

Storch Storch Schnibel Schnabel,
 Bisch vom alte Chlapperiadel: (/b/ = /d/)
 Bi de höche Piramide
 Hesch dis Näscht gha, lind wi Side
 (Haemmerli-Marti 1950: 186)

Rhyme phonology of the Arabic Qur'an, which is unique and quite different from rhyme in the classical Arabic literature, is particularly interesting and would deserve further exploration (for the time being cf. Cassels 1983, and Neuwirth 1981: 65–115). Rhyme most typically includes the last non-final vowel alongside the following segments. The rhyme phonology equates $\bar{i} = \bar{u}$; $m = n$; $r = l$; all voiced and emphatic obstruents are equivalent (e.g., $b = d = q = t = \text{ʃ}$); but not so pairs such as $d \neq t$.¹¹ For reasons not yet understood, words of certain syllable structures, though common in the language, are hardly ever employed as rhyme words: $\text{C}^{\text{C}}\text{C}$ (only accepted with geminate: *marra*); $\text{C}^{\text{C}}\text{C}^{\text{C}}$ (*kataba*; only Sura 54); $\text{C}^{\text{C}}\text{C}^{\text{C}}$ (*kātibu*; only Sura 37).

The following example is from Sura 50; the rhyme pattern (long high vowel + voiced/emphatic obstruent) is the same throughout the section:

- (40) Wa-l-qur'āni l-mağīd
 Bal ʕağībū 'an ġā'ahum mundīru minhum faqāla l-kāfirūna hādā
 ʕay'un ʕağību
 'A-'idāmitnā wa-kunnā turāban ḍalika rağṣu bağīd
 Qad ʕalimnā mā tanquṣu l-'arḍu minhum wa-ʕindanā kitābun ḥafīz
 Bal kaḍḍabū bil-ḥaqqi lammā ġā'ahum fa-hum fī 'amrin marīğ
 'Afa-lam yanzurū 'ilā s-samā'i fauqahum kaifa banīnāhā
 wa-zayyannāhā wa-mālahā min furūğ
 Wa l-'arḍi madadnāhā wa-'alqīnā fihā rawāsī wa-'anbatnā fihā min
 kulli zauğī baḥīğ
 Tabşīratan wa ḍikrā li-kulli ʕabdin munīb

¹¹ An attempt to explain this particular pattern of consonant equivalences is found in Peust (2012).

Wa-nazzalnā mina s-samā'i mā'an mubārakan fa-'anbatnā bihi
 ḡannātin wa-ḥabba l-ḥaṣīd
 Wan-naxla basiqātin lahā ṭalṣun naḍīd
 Rizqan lil-ṣībādī wa-'aḥyaynā bihi baldatan maitan kaḍālīka l-xurūḡ
 Kaḍḍabat qablahum qaumu nūḥin wa-'aṣḥābu r-rassi wa-ṭamūd
 Wa-ṣādun wa-firṣaun wa-'ixwānu lūt
 (...)

In Guaraní (Paraguay), rhyme minimally includes final 'V or 'VCV, the identity of -C- not being required. Rhyme phonology ignores vowel nasality, nasal vowels being identified with the corresponding plain vowels. Ex.: Dario Gómez Serrato, *Pedro Marangatu Arape* (from Guasch 1996: 413):

- (41) Tovevéke arai ári, toguahêke opa tetāme
 El Papa rérape ohóva mbyju'ícha che ñe'ẽ;
 Tojuhu py'aguapýpe, Tupao kuarahy'āme
 Pío doce ñahenóiva San Pedro rekoviare.
 Omumúiva yso sa'ícha ha vykua rupi itujúiva
 Pyhare ñemoñaréva mba'e pochy rembiguái
 Rohendúrõ ore retāme Tupao rehe oguahúta
 Romosẽ va'erã jaguáicha ore kuéra Paraguái.
 Ñande Ruvicha jahayhúva kuimba'e hete resáiva
 Ko San Pedro ára guahẽvo javy'a syry va'erã;
 Tojeguáke ñande róga, ha tapére ñamyasáita
 Ñandejára ra'arõvo, yvoty opaichagua.
 (...)

Finally, some traditions go so far as to consider consonants completely irrelevant (so-called "assonance"):

- (42) Old French, e.g., *Chanson de Roland*, ca. 1100, beginning of the 2nd stanza; rhyme in -u-e-:
- Li reis Marsilie esteit en Sarraguce.
 Alez en est en un verger suz l'umbre;
 Sur un perrun de marbre bloi se culchet,
 Envirun lui plus de vint milie humes.
 Il en apelet e ses dux e ses cuntes:
 Oëz, seignurs, quel pecchet nus encumbret:
 (...)

- (43) Spanish, e.g., Ángel de Saavedra, *La buenaventura* (1841); rhyme in *-e-o-*:

Era en punto medianoche / y reinaba hondo silencio
 De Medellín en la villa / sumergida en dulce sueño.
 Desde un trono de celajes / nacarados y ligeros,
 Cándida, apacible luna / brillaba en el firmamento,
 Sobre el pardo caserío / derramando sus reflejos,
 Como sobre los sepulcros / de un tranquilo cementerio.
 (...)

- (44) German rap songs, e.g., Bushido, *Bloodsport* (2006); rhyme in *-/a/-/oa/-/*:

Es ist Bushido Bloodsport ich spreche ein Machtwort
 Egal was ihr sagt ich ruf immer Fuck Torch
 Ich komm im BMW du kommst in nem kack Ford
 Ich will segeln denn ich interessiere mich für Yachtsport
 Es ist Österreich guck ich war im Knast dort
 Ich hänge mit den Gees du hängst mit dem Spaßt Kors
 Ich komm auf die Bühne jedes Mädchen macht boah
 Ihr habt keine Chance ihr Süßen macht euch was vor
 Hertha BSC Berlin wir machen das Tor
 Du Schwuchtel jeden Montag singst du in nem Bachchor
 Jeder quatscht mich voll Junge ich bin fast Ohr
 Guck ich bin der Pate und köpfe dein Prachthorse
 Und ich lege deine Reste in ne Backform
 Ich bin ein Osamafreund und denke du kackst ab George
 Es ist krasscore ich begeh um acht Mord
 Ersguterjunge ist Bushido Bloodsport

3.1.3 Rhyme as a criterion for hierarchizing distinctive phonological features?

It might be a promising idea to use rhyme evidence for hierarchizing distinctive features of ordinary phonology. The assumption would be that distinctions ignored in rhyme take low positions on a feature hierarchy scale. When poets differ in their amount of conflating phonological distinctions, the investigation of multiple poets' usages may result in a more elaborated hierarchy. This seems to work reasonably well for the German vowel system, where, based on the evidence presented above, a scale like the following could be suggested: (1) height /

place of articulation (always distinguished); (2) quantity (mostly distinguished); (3) rounding (rarely distinguished).

Accounts of this kind have been proposed for English (Bauschatz 2003)¹², German (Berg 1990)¹³, and Turkish (Malone 1988).

3.1.4 Transitivity

Another language dependent rhyme parameter could be the question whether the rhyme relation is transitive, i.e., whether from $A = B$ and $B = C$ it follows that $A = C$. While this might seem logical and is assumed to be generally true by Baxter (1992: 89), there seem to be counter-examples such as the vowel equivalences of Bohairic Coptic rhyme treated below. I will not discuss this question in detail.

3.2 Size of identical section

After we have discussed what counts as “identical” in rhyme, the second question arises how long the sections need to be that are identical in this sense.

In many traditions, rhyme starts on the nucleus of a syllable whose selection is language-specific. This is true for German, where rhyme starts on the last stressed vowel, vowels with secondary accent included. It might be a possible alternative formulation to say that it starts on the last vowel $\neq a$.

- (45) Meine Liebe, lange wie die Táube
 Von dem Falken hin- und hêrgeschêucht,
 Wâhnte froh, sie hab' ihr Nest errêicht
 In den Zweigen einer Götterlâube.

(Gottfried August Bürger, *Liebe ohne Heimat*; secondary accents marked with accent grave)

12 In that work, distinctive features of consonants are hierarchized based on imperfect rhymes in a huge corpus of English poetry. It turns out that the voice distinction in fricatives is the one ignored most easily: *noise* = *voice*; *love* = *enough*.

13 Contains statistical analyses of rhymes by Wilhelm Busch. Rounding of vowels is ignored most frequently, in agreement with what has been said above.

For French, the rule is conventionally given that rhyme starts on the last vowel $\neq \text{ə}$. Depending on the analysis of French accent, it might be a possible alternative formulation to say that rhyme starts on the last stressed vowel.

Poetry in Berber languages follows a similar line in that rhyme typically covers final -VC or -V. Since many words terminate in a vowel and there is no additional stress criterion, a single vowel is often the only carrier of rhyme. In the following Kabyle example (from Mammeri 2001: 343f.), the rhymes are in -i and -ər, with the final consonant of the first half verse sometimes being ignored because it is attached to the following word by enjambement:

- (46) Bismilləh annəbdu llsaṣi / lḥəmdulilləh a-t nəškər
 Win ibyan ur iṭmərriṭ Ṭabrid n tṭuba yəṇjər
 Ləfwayəd yur Rəbbi ggwṭiṭ Ṭyas win ur nəby' ad itṭjər
 D şşlaṭə yəfk a nnbi ḥəss-i / fk-i timəjjəṭə anyər
 S lḥəmd ad dək nəsmisi / kulyum ad dək nəşkkər
 Iməns' a-k gəy d iməkḷi / şşbəḥ zik ad yəfk nəftər
 Lmurəd ik ilha i tissi / yif kra yəllan d ḷinsər
 Yif iyi kəčč udi ntrusi / d ššahəd n tizizwiṭ nəy sskwər
 (...)

But there are other possibilities. In Swahili, rhyme affects the last syllable (which is generally unstressed) including its onset. Example: Love song ascribed to the poet Liongo Fumo, who may have lived around 1600 (from Knappert 1979: 82):

- (47) Ewe mwana, nyamaa silie
 Ukaliza wako mlimbizi.
 Ewe mwana nyamaa utue
 Nikutuze nguo za Hijazi
 Nikwambike mikufu 'kupambe
 Na dhahabu kazi ya Shirazi
 'Kuwakie nyumba kuu yumbe
 Ya chokaa na mawe ya kazi
 'Kupambie kwa vyombo vya kowa
 Waowao unyike maozi.
 Natamani mwana kukuowa
 Tukachinje kondoo na mbuzi
 (...)

Still other rules can be found in other languages. Amharic rhyme, as described by Leslau (1990: 158), needs to cover at least final -CV or -VC, i.e., the last two segments:

(48) mälkam säw näbbäräčč bærtukan mäsayə / dägmom əndä lomi
mannəm laṭat wäyə (Leslau No. 14)

əne wäddəšällä^wh yanči mäwdäd yätaḷ / wəha əndä qum nägär səṭṭāṭaw
yanqāññaḷ (Leslau No. 9)

In Russian, the rhymed section starts on a stressed vowel as in many languages, but there is an additional requirement that it needs to cover at least two phonemes. If stress falls on a word-final vowel, the preceding consonant must therefore be included in the rhyme.

3.3 May sections longer than the minimum requirement be identical?

In some languages, rhyme must be exactly as long as the minimum requirement defined in the preceding section. It is true for German that a rhyme longer than that (so-called “rührender Reim”) is not normally accepted, as prescribed already by Opitz (1624: 36): “(...) die letzte sylbe in den männlichen, und letzten zwo inn den weiblichen reimen (wie wir sie bald abtheilen werden) sollen nicht an allen Buchstaben gleiche sein”. This means that *Last* = *Mast*, but *Last* ≠ *Palast*. The same is valid for English (e.g., *greed* ≠ *agreed*).

On the other hand, French, and probably many other languages, tolerate rhymes longer than the minimum requirement. In French, it is not only accepted, but even desirable for a large section to rhyme (“rime riche”), e.g.:

- (49) Gloire du long désir, Idées,
Tout en moi s'exaltait de voir
La famille des iridées
Surgir à ce nouveau devoir.
(Stéphane Mallarmé, *Prose pour Des Esseintes*)

This may ultimately lead to a “vers holorime”, although such rhymes are, of course, very difficult to construct:

- (50) Dans ces meubles laqués, rideaux et dais moroses.
Où, dure, Ève d'efforts sa langue irrite (erreur!)
Ou du rêve des forts alanguis rit (terreur!)
Danse, aime, bleu laquais, ris d'oser des mots roses.
 (Charles Cros, *Le Coffret de Santal*)

3.4 Restrictions against trivial rhymes

Several languages probably reject rhymes made of identical words (among them German, but here already following from restriction § 3.3; according to Baxter 1992: 89f. also true for at least some traditions of Chinese poetry).

In French, rhymes are not allowed whose rhyming portion consists of the same word or the same morpheme: *bonheur* ≠ *malheur*; *donner* ≠ *aimer*, *vendu* ≠ *résolu*. On the other hand, *perdu* = *répandu* is accepted because the rhyme includes a part of the stem in addition to the morpheme *-u*.

Rhyme between (synchronic) homonyms is accepted:

- (51) Quel sera ce bienfait que je ne comprends pas?
 L'illustre Josabeth porte vers vous ses pas.
 (Jean Racine, *Athalie* I,1)

Note the opposite behaviour of German: *spazieren* = *gefrieren* is good in spite of morphemic identity, but *spazieren* ≠ *stolzieren* is not because of the restriction discussed in § 3.3.

3.5 Words not useable in rhyme position

It may follow from the restrictions defined in the preceding sections that certain words are unusable in rhyme position because no rhyme partners happen to exist in the language. Examples:

- English (numerous): *animal*, *breadth*, *empty*, *film*, *monster*, *orange*, *purple*, *sixth*, ...
- German (less numerous): *falsch*, *Frühling*, *Furcht*, *Hoffnung*, *Knospe*, *Mensch*, *Schönheit*, *Zukunft*, ...
- French (few): *belge*, *pauvre*, *quatorze*, *triomphe*

3.6 Additional restrictions or rules

There may be various additional requirements imposed on rhyme other than those discussed so far. I provide only a few examples; there is certainly room for further research here.

German:

- Some older authors avoided foreign words as rhyme words (or generally in poems) even where they would have matched phonetically (thus recommended e.g., by Opitz 1624: 24–27).
- It is considered good style to avoid grammatical words as rhyme words (“und”, “er”).

French:

- Up to the 19th century, a very archaic pronunciation was presupposed for rhyme usage. For example, *-é* did not rhyme with *-ée*, *grand* not with *sang*, *amour* not with *toujours* (details in Coenen 1998: 74–84). One interpretation could be that rhyme phonology here shows a greater differentiation than ordinary phonology. Manaster Ramer (1994: 321) takes a different view that these rules are artificial/orthographic and a description in phonological terms should not be attempted for them.

3.7 Construction of stanzas

The rhyme schemes characterizing the sequence of lines (ABAB, AABB, etc.) are another parameter which is language dependent at least to some degree. I am not going to discuss them here.

4 Rhyme in Egyptian

Although Egyptian cannot boast of a strong literary tradition of rhymed poetry, this language, which has the longest attested history of any language, does provide some observations that are valuable for a general typology of rhyme.

4.1 Alliteration

Alliteration appears sporadically in several Egyptian texts, most strikingly in Ptolemaic temple inscriptions (see Vycichl 1957 who believes in a historical connection with Somali alliteration; Guglielmi 1996: 467–481; Kurth 1994: 84f.; Waterson 1979):

- (52) *ḥ3w.wt=k ḥwd m ḥ3.w n.w ḥ.t ḥm=k jm=sn ḥpry ḥ3ww m-ḥ.t=sn ḥnm=k ḥnm=sn ḥfty=k ḥr m ḥb.t=sn ḥ(3)ḥ.tj r ḥm=k*

(Edfu IV 63.14–17; Ptolemaic period; alliteration in ḥ-)

‘Your altars are enriched with thousands of offerings that you may eat of them, o Winged Beetle. Spices are upon them that you may smell their odour. Your enemies are fallen upon their execution posts as you hasten to your shrine.’

Nnw: nnḯ n=k nnw ḥr npr.(t)

‘Nun: The flood rests on the river bank on your behalf’

Njw: njw n=k nwy ḥr n[.J]ḥ’

‘Niu: The inundation settles down on the n... on your behalf’

Ḥḥ: ḥḥ n=k ḥbb.t ḥr ḥnb.wt

‘Heh: Fresh water flows over the meadows on your behalf’

Šw: š3s n=k šp ḥr šdy.w

‘Shu: The gush rushes over the fields on your behalf’

Dḥwtj: ṯm n=k ṯm ḥr-ḏp t3.w

‘Thoth: The thrust (of water) thrusts over the lands on your behalf’¹⁴

¹⁴ The letter *ḏ* in the divine name *Dḥwtj* (Greek Θουθ) was pronounced similarly or identically to *t* in the Late Period, so that both consonants are here considered as equivalent.

Pth-nfr-ḥr: *pd n=k p3 wr ḥr pp*

‘Ptah-Neferhor: The high one (= Nile) spreads over the mud on your behalf’ (Edfu II 256; subscripts on representations of gods)¹⁵

Slightly less impressive cases can be found already in earlier times such as the following passage, datable to the later 2nd millennium BCE, which shows an alliteration involving the two consonant sequence *wn-*:

- (53) *wnwn* ‘The star-observers,’
wn.w dw3=sn R‘w dp t3 ‘who used to worship the Sun on earth,’
wn.w jrj=sn sntr n ntr.w jmj.w dw3.t ‘who used to offer incense to the
 gods of the netherworld,’
wnn=sn m šms.w n ntr pn ‘will be among the entourage of this
 god.’ (Roulin 1996, II: 140–142)¹⁶

Or the following examples from as early as the Pyramid Texts (24th cent. BCE; see Firchow 1953: 217–220, and Kammerzell 2000):

- (54) *ḥr ḥr=k ḥrj rj.t=f, h3i ḥr tz=k jmj n3.wt=f, ḥm n=(j) ḥkn.t m ḥr.wj sn{n}.w(j)*
 (PT 238; alliteration in *ḥ-*)
 (Spell against snakes:) ‘Onto your face, you who are on your belly’;
 descend on your back vertebra, you who are in your thicket; retreat
 from me while you jubilate as the one with two faces!’

jw dbn.n=f p.tj tm.tj / jw phr.n=f jdb.wj (PT 406c)

‘He traversed the entire two heavens, and he surrounded the two shores’

Longer Egyptian texts displaying a consistent pattern of alliteration, such as in Old Germanic alliterative verse, are missing, however.

15 I owe the reference to this text to Stefan Baumann (Tübingen).

16 I owe the reference to this text to Daniel Werning (Berlin).

4.2 Sporadic end rhyme in Earlier Egyptian?

End rhyme has been suspected in the following text containing puns on the numerals from one to ten (CT V 115h–116e; Sethe 1918; three partly conflicting manuscripts; ca. 2000 BCE):

- (55) *Jt̪i.n=k wˁ.t* [... wđít] ‘You took one,’
Jt̪i.n=k sn.tj{wˁ.tj} [... síntj] ‘you took both.’
ḥm.n=k s m ḏp n Ḥrw [...ḥárw] ‘You extinguished it from the head of Horus,’ (3 = *ḥmtw*)
Fd.n=k s jr=f [... jráf] ‘you plucked it out from him.’ (4 = *fdw*)
D̪i m n=j [... náj] ‘Give me’ (5 = *djw*)
Snsn.t r ḥr=j [... ḥráj] ‘something that joins my face.’ (6 = *sjw*)
M sfḥḥ=k jm=s [... jmás] ‘Do not dissociate from it,’ (7 = *sfḥ*)
M ḥ3tb=k jm=s [... jmás] ‘do not spare(?) it.’ (8 = *ḥmnw*)
Šḥḏ n=k jr.t [... jirt] ‘Illuminate the eye,’ (9 = *psḏw*)
D̪i n=j jr.t [... jirt] ‘give me the eye!’ (10 = *mḏw*)

Sethe (1918: 24) felt very confident in seeing an end rhyme here: “es kann kein Zweifel sein, daß wir es in unserem Fingerzählreim mit dem ältesten Beispiel des Reimes in Ägypten und aller Wahrscheinlichkeit nach auch dem ältesten Reime auf Erden überhaupt zu tun haben”.

The Book of Caverns (ca. 13th cent. BCE) contains a sequence of 24 adjectival invocations all of which end in *-yw* or *-jw*. It is possible but hard to verify at the present state of our knowledge that they agreed also in their final vowels and would thus have constituted an end rhyme:

- (56) *j ntr.w* ‘Oh you gods,’
štzy.w štzy.w ‘you secret ones, you secret ones,’
šḥm.yw šḥm.yw ‘you mighty ones, you mighty ones,’
ḥ3t.jw ḥ3t.jw ‘you corpse-like ones, you corpse-like ones’
qf.yw qf.yw ‘you (?) ones, you (?) ones,’
jm̪n.yw jm̪n.yw ‘you hidden ones, you hidden ones,’
ḥ3p.yw ḥ3p.yw ‘you covered ones, you covered ones,’
nnwt.jw nnwt.jw ‘you idle ones, you idle ones,’ (...)

(*Book of Caverns* 59.10–33, Werning 2011: 226–227)

Another account on suspected Egyptian end rhyme by Ebers (1877) was based on outdated readings and is obsolete.

4.3 End rhyme in Bohairic Coptic

Egyptian end rhyme becomes systematic only by Late Coptic, the earliest example known to me being a text in the Bohairic dialect edited by Youssef (2005; manuscript 1295 CE). This is at the same time an alphabetic acrostic:

- (57) Aitōbh mmok panouti / anok xa pihōb nhēki / je peniōt etxen niphēoui
 / pha piništi nhoti
 Bon ouhelj nran / etsapšōi nran niben / mareftoubo nje pekran / pč(ōi)
 s nouon niben
 Ge gar nthok ph(nou)ti / patimetouro / maresi xen ouhoti / nje tekme-
touro
 Dikeos tinašōpi / eioi natthoti / ešōp aišansaji / pethnak marefšōpi
 Ebol xen tekphe / aksaji xen pekamahi / mphrēti xen tphe / nem hijen
 pikahi
 Zeoš nje thmetništi / nje peknaï nem pekōou / penōik nte rasti / mēif
 nan mphouu
 Ērēnē sou moi nan / ō pīrefjō ebol / kha nēeteron / ph(nou)ti nan ebol
 (...)

I have given an overview of end rhyme in late Bohairic texts in Peust (2009). The minimal requirement for this rhyme is only to cover the last vowel of the line including the following consonant(s), if there are any. Word stress does not play a role, so that the rhyme may be limited to posttonic syllables (as in the first line of the text above, where *-i* is unstressed), and stressed syllables may rhyme with unstressed ones. The following sets of vowels are equivalent with respect to rhyme:¹⁷ *ou* /*u*/ = *ō* /*o*/ = *o* /*ɔ*/; *ō* /*o*/ = *o* /*ɔ*/ = *a* /*a*/; *a* /*a*/ = *e* /*ɛ*/. We observe that the rhyme equivalence is not transitive (cf. § 3.1.4 above). The only vowel which does not normally rhyme with any other vowel is (*e*)*i* /*i*/ (except for rhymes with written *ē* in Greek borrowings, which was probably likewise spoken as /*i*/). As opposed to the vowels, no different consonant phonemes are considered equivalent in Bohairic rhyme.

¹⁷ I give here both the traditional transliteration and my phonemic interpretation.

Modern scholars have not always appreciated the formal aspects of Bohairic poetry: “the rhymes are of the crudest nature (...) No attention is paid to the fall of the accent in the rhyme; if the last two letters are the same, the composer seems content. The number of feet varies, giving as fine a specimen of doggerel as could be conceived.” (Engelbach 1920: 110)

As in most other languages, line boundaries almost always coincide with word boundaries. A rare counter-example is:

- (58) *marenouōšt mmok je Tnthok pha piništi nōou / pčōis alla nahmen / ebol
ha pipet-hōou* (Youssef 2005: 110).

4.4 End rhyme in the Sahidic Triadon

The principle that vowels matter relatively little for rhyme is brought to its extreme in the *Triadon*, the only rhymed text in the Sahidic dialect of Coptic and at the same time the latest literary work in that dialect (ed. von Lemm 1903; translation Nagel 1983; composed in the early 14th century, Nagel 1983: 22f.; bilingual Coptic-Arabic, but no rhyme in the Arabic section which is thereby proved to be secondary). This opus consists of stanzas of four lines (ca. 420 stanzas preserved). The stanzas have the rhyme pattern AAAX, BBBX, CCCX, etc., with X (each 4th line) having the same rhyme through the whole text. The analysis of the rhyme is difficult and seems to require a distinction into two categories:

1. “Narrow rhyme”: This rhyme is similar to the Bohairic type. It starts on the last vowel and presupposes a rhyme phonology as in Bohairic. Here belongs the rhyme of the 4th lines, all of which terminate in *-ōn*, *-on*, or *-an* (stressed or unstressed). Consider the 4th lines of the strophes 692–697:

nthe nta nsabe meh neuhnau on
auō eiōbš hn tameleia nneto nargon
auō psōte ntapsukhē hn tefčom naoraton
eska htēs epefnoč nna mmegan
mpbaros ethorš mmōn
nmman nmma mmoone etsoutōn

The same kind of rhyme is found in the first three lines of a minority of the stanzas (I cite only the rhyme words at the line ends instead of the whole lines here and in the following):

harōtn = *peuouōtn* = *ouaatn* (374)

tōs = *ountas* = *afaas* (480)

ebols = *eols* = *pahēt ouōls* (654)

etrir = *nrir* = *neshir* (676)

2. “Wide rhyme”, which is longer but less restricted than narrow rhyme. This is the predominant type for the first three lines in a stanza. The rhyme starts on a syllable of which it needs to include the onset as well. On the other hand, vowels are largely irrelevant (neither quality, stress, nor position matters; single vowels = double vowels = syllabic consonants), the only recognizable restriction being that rhyme must not be based solely on syllables with unstressed /ə/ (spelled *e*).

iakōbos = *agabos* = *makkabaios* (317)

eršan = *peršōn* = *nšēn* (431)

mmnts črē = *nečra* = *noučro* (521)

nsetmnoueite = *nneite* = *ntenei de* (587)

eurtōr = *ntartōr* = *nntōrtr* (596)

praše = *prōše* = *prē ša* (600)

aftašof = *ntaftošf* = *ntaftočf* (626)

tšeere = *ešare* = *tšourē* (661)

emparadosis = *epparadosis* = *mpefpareideis* (689)

afitf = *afšitf* = *afšbtf* (698)

terēmos = *eterēmos* = *ierēmias* (701)

hnouthumos = *nthe mmos* = *thōmas* (703)

Furthermore, several sets of consonants are regarded as equivalent:

č = *j* = *š* = *s*:

netšōne = *njaane* = *je janē* (510)

ešōpe = *ečōpe* = *ečepē* (631)

nnetmose = *tefmēse* = *mmēēše* (652)

etsēh = *etjēh* = *netjōh* (644)

$p = b = f$:

mpenne = *noubenebene* = *noubnne* (492)

hm psat = *nrefsēt* = *nrefšōōt* (519)

enefnhētf = *etmhethotf* = *ehōth* (457)

$k(h) = g = \check{c}$:

henkhorte = *gar te* = *noučorte* (487)

gar pe = *negrāphē* = *tečrēpe* (583)

$l = r, l = n$:

neiklēma = *noukrīma* = *oukluma* (511)

mmntšna = *oumnthi čla* = *ouhičlō* (526)

Finally, even the order of consonants can vary:

nneulojh = *ntejolh* = *oušolh* (483)

nentaukosf = *pentaksokf* = *eisobk* (499)

nkasma = *sigima* = *sōk mmo* (595)

peuōbš = *tefcinouōšb* = *euouōšf* (637)

nša kham = *sekhēm* = *ngesem* (674)

aišits = *ngiits* = *etreujest* (686)

ntaubise = *apa bēsa* = *nšabē* (688)

Since $j \propto (= /č/)$ was equivalent to a cluster $t + š$, it can rhyme with $št$:

ehah njaj = *panjōj* = *nnšošt* (489).

Although rhyme was only a late import into Coptic from the dominant Arabic environment, the rhyme rules were adapted to the language in a very original and unique way. Coptic therefore contributes to our understanding of the typological variation of rhyme in human language no less than those languages in whose literary history rhyme occupies a much more central position.

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