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Verbal art across language and culture: Poetry as music

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Abstract
The following proposal for research begins with the observation that in specific contexts of performance poetic language appears to allow for varying degrees of access across language boundaries. This cross-language access, if it can be verified empirically, might be attributed to distinguishing features that differentiate poetic from prosaic discourse, on the one hand, and from musical structure on the other, an important problem in its own right. To approach this research question it is recommended to begin with poetic works as they are performed for a listening audience and to prioritize, at the beginning of the research project, composition and performance from the popular culture, broadly defined, and from the traditional genres of the oral tradition. Another point of reference for this discussion, which follows from the above recommended approach, is the Lerdahl-Jackendoff proposal of analyzing poetry as a kind of musical form.

Key terms Cross-cultural poetics, Bilingualism, Hip-hop, Tonality, Oral tradition, Popular culture

Introduction: a focus on vernacular art forms

Research on theoretical problems in the study of poetic language is enriched with the inclusion of observation cross-linguistically and cross-culturally. Increasingly in an interconnected world, listening audiences today are internally more diverse along these two dimensions; and performances might be able to cross boundaries of language and culture (i.e., actually received) more widely and with greater effect than ever before. Specifically, the phenomenon of cross-language access to works of poetry is the topic of this proposal for further study. How do audiences attend to and appreciate (can they even appreciate) certain sub-genres of poetry composed in a language different from the one they understand?

In approaching the question from the fields of poetics and musicology, popular culture should be at the center of the discussion, although, of course, not exclusively. For every example of analysis, researchers need to put aside: (1) their personal preference, and (2) considerations regarding the thematic content of poems and songs. These suggestions are applicable to the study of literature in general; but they bear keeping in mind as we integrate new realms of literary creation into our research program. Considerations (1) and (2) are by all means acceptable, and in many cases interesting, perspectives in the commentary and critique of creative writing. But for the purposes of the present suggestion for future study, the assessment of performance and the underlying competence of participants is best served, for now, with a focus on the patterns of sound. This last recommendation brings us back to the need to focus on popular culture—modern, historical and ancestral. For example, if the only record remaining of an important example has been reduced to its written form, we ask the question: how might it have been recited? The study of poetic traditions and trends today that attain widespread popularity (for example among young people and among

audiences that have not been influenced by formal instruction in literature or music) might help us better understand foundational properties shared by all human cultures. Aspects of underlying competence shared by all individuals is another question that we might come to better understand.

A theory for poetics based on studying the patterns of sound

With the idea of the previous section in mind, one of the purposes of this discussion is to assess the usefulness of the Lerdahl-Jackendoff proposal that the essential or defining properties of poetry overlap with music (Lerdahl 2003; Jackendoff and Lerdahl 2006; Jackendoff 2009)–elaborating slightly: that musical features of poetry are what distinguish it from the prosaic genres, prose narrative being the most informative contrast. As it then appears, their hypothesis is potentially relevant to the problem of cross-language and cross-cultural appreciation, the theme of this paper. A distant historical antecedent to the poetry-as-music research method, highly relevant nonetheless, is the short-lived attempt, during the early years of the 20th century to study poetic language scientifically (Eikhenbaum 1995; Jakobson 1987; Shklovsky 1985). A theoretical continuity, tenuous and therefore not widely recognized, can be traced back to these early pioneers of the field. In a major study of the sound patterns of poetry, *El arco y la lira,* Octavio Paz (1956) made extended reference to this antecedent calling attention specifically to the music connection. On this point, we could consider his (1956) essay, as well as subsequent published discussion, an important advance over the theoretical speculation of the Russian Formalists.

On one hypothetical account, song (set to a tonal scale of one kind or another) and poem were once integrated, song and poem forming part of the same vocal/verbal moment of expression, especially during the long period in history prior to widespread literacy. It is possible that the two even emerged in the distant past from an archaic proto-music and proto-language integration (Brown 2000; Mithen 2006). According to this hypothesis, which Lerdahl (2003) takes as plausible, it would have been the human voice, not musical instruments, to where the primary origin of music (and therefore also poetry) might be traced. Over evolutionary time, the separation of proto-music and proto-language coincided with the emergence in *homo sapiens* of a fully formed language faculty. In recent historical time, again hypothetically, a second divergence occurred: recited poetry, either read from a manuscript or from memory, with time became independent from melody, and would normally not be performed melodically. Today, poems are sometimes only read from the page, and may not even come to be recited. Poetry nonetheless retained, and retains to this day, the foundational musical features from its hypothetical origin, minus composition and performance within a tonal (or atonal in the special case of modern concert music) pitch space. This kind of recital could have been, or could be today, performed with instrumental accompaniment (as in spoken-word performance), but it would typically no longer be sung, to a melody. Today we call verses set to a melody the lyrics of a song.

According to Lerdahl's (2003) analysis, focusing on the subset of musical structures in which cognitive properties of music and language are shared is a useful way of understanding the essential properties of poetic competence. Applying this idea, the prosodic patterns of grouping and stress in poetry can be recast into an equivalent musical format, even though as a rule poetic patterns show more variability.

Thus, music and language coincide on the features, or component structures (most clearly revealed in recited poetry), of:

- rhythm,
- contour, and
- timbral parallelism.

The cognitive networks that correspond to these components, however they are eventually categorized theoretically and identified empirically, would be the same. The regularity of poetic rhythm, over ordinary speech rhythm, allows for the inference of a metrical grid, then correlating with the characteristic verse-like (regular) patterns of sound repetition. The latter are often dispensed with entirely in modern literary poetry, posing the question of whether the former (a marked, aesthetically motivated, non-prosaic, rhythm when recited) can present itself as the remaining distinctive feature. This is a question that is implicitly posed by Pinsky in the concluding chapter of his (1999) "brief guide" *The sounds of poetry*, continuation of the discussion in *El arco y la lira* of Paz (1956), mentioned above.

In contrast to the above shared features, the exclusively musical domains, not shared with language, would be those that underlie the processing of pitch space:

- perception of pitches as part of a scale,
- melody patterned upon scales, and
- attraction toward a tonal center (tonic).

In verses that are recited, not sung, these aspects of musical cognition would simply not be implemented.

Exclusively linguistic structures that are not shared with music, include:

- syntactical categories and relations,
- direct interface with semantic knowledge through the lexicon, and
- distinctive features of phonemes.

Linguistic competence, unlike music, places itself at the service of understanding and expressing meaning (propositions). Verses that are composed and performed in a language, of course, incorporate the linguistic structures. From the point of view of describing cognitive organization, Lerdahl proposes for future research the hypothesis that the domains that represent and process pitch structures are autonomous from the domains that represent and process linguistic structures. For example, the capacity to perceive contour (not purely musical, but shared between music and language) can be preserved in speech among patients who suffer from amusia (impaired musical pitch processing). On a related observation, among competent speakers of a given tone language, some individuals will suffer from impaired musical pitch processing (pp. 351-353).

Poetic language in the oral tradition

From the surviving examples of poetic works accessible today in traditional, vernacular, religious and popular culture settings we could infer that in the regions of the world where languages came into contact, a number of these verse forms were able to cross linguistic boundaries in a way that prose could not have. While for prosaic text readers and listeners depend on a translation, performed poetry is not always bound by this requirement. According to the proposal presented here, the dimension that accounted for this limited cross-language capability was its underpinning in the components that

music and language share: rhythm, contour, and timbral repetition. In the performance of poetry today, these aspects of musical patterning in creative language still account for the same capability, in some contexts more than others, to cross language, and thus cross culture more widely. Cross-language access/engagement, unless listeners are bilingual, is almost always partial, as an approximation. Prosaic narrative and exposition must find a different solution in all cases.

One line of reasoning attributes the specialization of poetry for aesthetic purpose to its systematic altering and even transformation of expected language patterns—a shift from attention to propositional meaning toward patterns of perception and sensation. In this sense, poetic language is *marked*; conversational discourse and prosaic text are unmarked.

In the *Science of Art* study (Francis 2017), a paradox presented itself when considering the question about how language used aesthetically can be distinguished (marked) in this way; that: the discourse form that most depends on the linguistic patterns of the language in which it is composed (poetry) is the one that most strives to reshape and even radically alter these same patterns. As it turns out, if the hypothesis of the previous section turns out to be correct, the modifications that verbal art implements, the bending and reordering, derive from its appropriation of musical features. Music-like patterns affect contour, rhythmic patterning and other aspects of prosody; and additional (marked) regularity is applied to tone and timbral repetition (alliteration, vowel assonance, rhyme, and so forth). In literary language, it is a kind of repetition that does not, for some important reason, lead to desensitization (Lawson 2009). In this regard we also want to acknowledge that the poetic function appears in many examples of art-narrative, in contrast to narrative discourse of the information transmission type. The important distinction here is between literary narrative and prosaic/expository narrative. Given that listeners' attention shifts to sonorous qualities rather than new information and coherent exposition, cross-language capturing of (attending to) poetry is a possibility. With examples from the present day in mind, listeners' attention to poems recited in a different language would be possible even if they are not sung to a melody.

One exception to the language-crossing capability that *Science of Art* neglected to point out (underscoring the paradox) belongs to the language-writing interface. The omission stands out because the relationship between the oral tradition and written literature is one of the themes of the study. The clearest historical example of this interaction can be found in East Asia, in the great wave of adaptations of the Chinese writing system in the countries and cultures that had adopted the characters, along with the language itself as lingua franca for literature (analogous to Latin in Europe). In the kingdoms and nations bordering China of the Han to the Ming dynasties literacy spread along with the Chinese language itself. Japanese, Korean, Vietnamese and Zhuang scholars became bilingual, studied the classic texts from China, and wrote in Literary Sinitic for many years, even long after formal independence. With time, as writing in the native languages began to emerge as a necessity, during the periods of Chinese-rule (similarly as in Europe, for example), adaptations of the Chinese characters to each language/culture evidenced language-specific orthographic features in addition to notable commonalities despite the linguistic differences. Vastly simplifying, an

interesting contrast across the languages and cultures in adapting the Chinese characters appeared in an alternative between:

- preserving the orthographic form and semantic value of characters while pronouncing them in the native language, and
- forging new autonomous character sets (e.g., taking characters only for their pronunciation to represent vernacular language morphemes, in addition to creating entirely new characters).

While the latter alternative results in texts illegible to monolingual literate Chinese speakers (unlike in the case of the former), it would eventually lead to the development of an orthography aligned more closely with the phonology and morphosyntax of the native language. In this regard the literary genres pose an interesting problem for researchers today. Historical evidence suggests that native poetry (for example when reading aloud) benefitted to a greater degree from the closer alignment afforded by the second alternative. In turn, the possibility of a higher fidelity encoding of poetic language may have incentivized the tendency to adapt and recreate characters in such a way as to form independent systems: *chữ nôm* in Vietnam, *man'yōgana* in Japan, *hyangch'al* in Korea, and so forth (Handel 2019; Marr 1981; Phan and Francis 2019). The recording of poetic language in writing faced the requirement to represent the language-specific patterns of sound and grammar so as to preserve the different kinds of parallelism, in rhyme, for example (specific to Vietnamese, Korean, Japanese, the Tai languages of Guangxi, etc.). Thus, we have a counter example, of how poetry doesn't cross language boundaries, but rather requires (in the case of writing poems) a closer correspondence between a given form of expression and language-specific features of composition and representation.

During the same years, the growing diffusion of translated Buddhist texts throughout East Asia also motivated script innovation, for similar reasons. Within China proper the corresponding emergence of vernacular writing, for literature, began long before the great language-writing reform of the 20th century (Mair 1994; Tranter 2001).

But in the language-contact interactions independent of writing, of the different contexts, audiences and participants probably engaged aesthetic genres in different ways, typically motivated less by the need to understand the meaning of messages and concepts. The preferred format for the practical purposes of understanding messages is usually the prosaic type anyway. Judging from modern day examples of artistic verbal expression in contexts of direct presentation of recital, we can consider the possibility of cross-language transmission, not of meanings but of forms and genres.

Hip-hop as poetry

Among the expressions of verbal art in popular culture today, we find the clearest example of how poetic forms travel across culture and across languages in particular: how the different styles of *hip-hop* emerging in the United States during the 1970s have taken root around the world. Prominent exemplars of English-language *hip-hop* are perceived and appreciated ("apprehended" in the sense of "grasped") by speakers of other languages independent of the processing of meaning. Its wide popularity can be accounted for by the structural attributes of poetic expression. Similarly to how listeners receive related artistic genres not performed in a language they understand (e.g. other

kinds of aesthetic language, ritual and ludic speech, religious recital), English-language *hip-hop* became popular because of the sound pattern features that poetic language shares with music. In the example we are considering here, it draws heavily on these shared components, (significantly) more so than typical modern literary poetry, written for print publication.

Importantly, the critical medium can be none other than the human voice regardless of whether or not the audience understands the language of the text and independently of whether or not instrumental accompaniment is involved. Without exception, local rappers began at the same time to compose in their native language. No other poetic genre in modern times has generated a similar level of participation internationally, especially taking into account the creative activity of non-professional performers. Indirect evidence of the latter can be found in the audio and video uploads on the various internet platforms, readily available to researchers.

The study by Bradley (2009), in its second edition, is the most comprehensive analysis of this popular verbal art form that takes the approach that it is best understood as poetry.[1] Specifically, the main idea of the book, taken as a whole, goes further: that *hip-hop* can be studied as a poetic form from the point of view of how poetry is customarily perceived and defined, both historically and in the modern day. The historical legacy is an important starting point to which subsequent chapters return: the European poetic traditions in convergence with their counterparts in the African diaspora from their point of contact during the 17th century. While *hip-hop* itself emerges during the same years of modern experimentation in the (written) literary tendencies of the 20th century, it appropriates closely the cultural inheritance of traditional verse beginning with that of the early bards as it has been preserved in the ancient manuscripts, canonical anthologies, recorded oral tradition and ethnographic transcription.

Strong stress meter and the prolific use of the different types of sound repetition are recovered from previous epochs to serve the requirements of composing for direct performance. As a recovery of "ballad meter" or "common measure", according to the study's argument, it resonates with *listeners* in all cultures because these traditional features of poetry are fundamental in some way. Extending the argument slightly (i.e. not explicitly proposed in the study, but compatible with its theoretical approach), "fundamental" here implies a universal access among individuals in all cultures to underlying competencies specific to poetic language. The regularity of *hip-hop* sound repetition in close synchrony with its rhythms, in the correlation of voice and the beat of the instrumental track, accounts for the driving energy of compositions when they are performed. Taking the example, for comparison, of the nineteenth-century poem "Annabel Lee," it could be said that Edgar Allan Poe "…has to be both the rapper and

[1] McWhorter (2008) and Rose (1994) are studies of *hip-hop*, among many others, that focus on the thematic content of compositions, a topic that needs to be deferred for another occasion. In both cases, nevertheless, the authors call attention to its defining poetic features. On a different note, the interesting case of visual poetry (also known as concrete poetry), notably not restricted to experimental works of the present day, we also need to set aside (especially the special case of pieces that cannot normally be recited), also for different reasons (Francis 2015, 2017b).

his own beatbox all at once" (p. 28). Predictability, then, provides a platform for innovation on other levels, composers experimenting with the limits of syncopation for example (pp. 5-6). If most of these observations can be shown to be empirically plausible, the genre deserves attention in future cross-cultural and historical research, one starting point being the vestiges of griot narrative poetry and the continuing influence of traditional poetry in general (Finnegan 2012), composed not primarily for publication but for recitation, today, more often, for an online audience.

Rhyme in cadence is the central feature that *hip-hop* poetry appropriates from music, the most common form of the early composers being the couplet (rhyming scheme: aabb). From a foundation in predictable sound pattern, with time, verses came to contravene expectation with greater and greater variation –"balance" of one kind licensing "imbalance" of another. But in all cases, the regularity of rhyme and rhythm are preserved in a way that sets it apart from almost all of modern literary poetry. While the latter is also distinguished from prosaic language by its recourse to musical features, the former exploits these resources so explicitly and comprehensively that we usually call it rap *music*. The concluding sections of the chapter on rhyme describe how recent trends among composers implement the many different categories and sub-types of this class of repetition, with examples that are typically processed by listeners, perceived, below awareness (pp. 44-71). Parallelism, implemented in all the relevant domains where language and music overlap, is an ever-present aspect of poetic language (Fox 2014). It comes forward more proximately in verses composed with performance in mind.

Hip-hop verse, when it is not sung, typically recited (with, for example, instrumental accompaniment that is sometimes composed to a scale) would then form part of the larger family to which spoken-word poetry belongs. Authors of spoken-word poetry have alluded to this family relationship. At the same time we should take into account the combined form (analogous to codeswitching in bilingual speech), in which rap composers and performers insert, or switch to, melodic phrases, as in the following example from Brazil featuring the indigenous *hip-hop* group Oz Guarani (insertion at 3:17). Thus the broader genre, to which *hip-hop* belongs, includes *recitativo secco*, *Sprechstimme* and *scatting*. A comprehensive survey internationally, in particular counting the vast corpus of unpublished performance by young people, solo, duo or trio without accompaniment, will probably show that the greater part of the total production is exclusively spoken-word style recital, as in a (poetry) *reading*: consider the examples of *raperos* with access to fewer technological resources than Oz Guarani, reciting in Pemon (Venezuela) and Nahuatl (Mexico). Thus, the important distinction would lie in the quality of the performer's vocal production, typically non-melodic recital, allowing of course for hybrid or bi-modal expression incorporating melodic insertion.[2]

[2] While notable examples of *hip-hop* incorporate melody (singing of tonal passages set to a musical scale—recall the insertion of melodic singing in the piece by Oz Guarani), the focus of discussion in this section is on the more typical metered speech pattern of rappers' recitation. The aspect of *hip-hop* composition that is of interest here is the formal structure of poetic language that makes it "suited for chanted cadence as opposed to singing" (Bradley 2009: xxxiii).

Ceremony and ritual

Another relatively neglected field of research in poetics is the study of religious discourse and related ritual speech. Relevant to our topic are its properties in performance when, aside from explicitly melodic chant and song—but including strictly monotonic chant—these styles unambiguously draw from the aesthetic resources of verbal art (Tedlock 1976). The poetic aspects of prayers, incantations, invocations and so forth, readily cross language boundaries. They are familiar to participants in recent religious traditions, today often reformed, where part of the ceremony is pronounced in a foreign or archaic language. In other contexts the sacred language might take the form of a bilingual mixed language, pidgin-type variety or specialized jargon/register, partially or completely unintelligible to the participants. The practice spans a wide range of cultures internationally, taking many forms. Again, the affective/aesthetic effect for listeners proceeds from the non-prosaic contour features and rhythmic patterns of the elevated discourse forms presented vocally. According to this idea, no other musical "instrument" provides for the same effect; none other, on average, captures the attention of listeners in similar contexts more directly as the human voice. Hypothetically, the music-like passages, of vocal origin perceived aurally, engage the affective networks of the neurological system through a kind of dedicated route. From a different, but coinciding, perspective, Pinsky (1999) places emphasis on the primacy of the vocal-aural pathway for poetry in general.

Research on glossolalia, cross-culturally, has sought to identify common characteristics such as regular phrasing effected by intonation, non-random segmentation, syllables taken from the phonological inventory and phonotactic patterns of the performer's native language (Savarin 1972). "Lines" tend to be of equal duration, with primary stress placed on the first "pulse," following a pause. Intonation patterns are regular: onset in the medium range, followed by a peak, concluding with a "sloping gradient leading to an often precipitous decay" (Goodman 1972, p. 122). The characteristic meter and intonation pattern of glossolalic speech by the priest, shaman, or healer, along with the use of sound repetition, places performances squarely within the genre of poetic recital when the session is one of recognized or authoritative presentation. At the same time, as an interesting comparison, field researchers of glossolalia call our attention to literary and vernacular poetic styles that deliberately shift to the use of nonwords, with entire passages or full texts that are unintelligible. These genres actually emerged as experimental in the modern period from possible precursors in ancient and medieval popular culture (Perloff 2009). Shklovsky (1985[1916]), for his part, in a discussion of *zaum* (trans-sense poetry), made reference to what he termed "pure forms" of unintelligible verse in 19th and early 20th century religious practices as relevant for further study and theoretical reflection (p. 18):

> Here what helped was that the [mystical sects] identified trans-sense language with glossolalia, with the gift of tongues, which according to the *Acts of the Apostles* they received on the Fiftieth Day (Pentecost). Thanks to this they had no shame about trans-sense language; they were proud of it and wrote down examples of it. There are many examples in D. G. Konovalov's wonderful book *Religious ecstasy in Russian mystical sects*.

An important point of comparison are the findings from field studies of traditional aesthetic discourse in ritual and ceremonial contexts (Montemayor 1993). These go under the category of intelligible poetry or speech in poetic style,[3] with the occasional exception of passages inserted in a foreign language or standard formal variety (Aztatzi 1991; Hull 2017), as mentioned above. To reiterate, their importance as an object of study lies in the processes of creation and learning that are often, still today, independent of literacy and formal academic literary instruction.

In concluding this section on the connection between literary experimentation and traditional unintelligibility, it's important to mention that the Futurist poetry of Khlebnikov and trans-sense colleagues formed part of broader experimental tendencies throughout Europe at the time. The spirit of Futurism and Dada was aptly summarized by Hugo Ball: "[All] living art will be irrational, primitive, and complex; it will speak a *secret language* and leave behind documents not of edification but of paradox." (1974[1915]: 49) …[the] phonetic poems…totally renounce the language that journalism has abused and corrupted (p. 71) (emphasis added). After World War II, the early Futurist tradition was taken up in sound poetry by proponents and practitioners even in the popular culture, including a celebrated performance of Ball's *zaum* poem "I Zimbra" by the Talking Heads (1983), in this case a musical version of it. Sound poetry continues today to participate in the wider avant-garde current with the idea of a special attention to aspects of the language itself.

Prospects for continuing research on memory and affect

Cognitive science oriented investigation should be able to present findings that can be compared to the work of field-based projects in the humanities focused on literary analysis. The comprehensive review of the research on memory and poetic form is Rubin (1995). For many years scholars of the classical literature have suggested that there was an interesting relationship to better understand. On the most basic level, regular sound repetition provides a strong cue for the recognition of successive occurrences. For example, in experiments, words prime other words within their rhyme category. Participants judge strings of letters as words faster if primed with a printed word that rhymes than if it doesn't. The more interesting result is that priming effects are significant even if the previous word is presented auditorily instead of visually. On recall studies, rhyming improved verbatim recall and recall of original sequence, but not paraphrased recall, result consistent with the specialized use of synchronized repetition and parallel patterning in oral tradition narrative poetry, the more regular and predictable the more effective for memory purposes (pp. 75-85).

Across a number of studies, Tillman and Dowling (2007) compared the processing of music, prose-narrative and poetry. In a previous experiment on memory

[3] "Speech in poetic style" – for lack of an adequate term for the category of narrative, extended ritual greeting, and related context-specific speech that is primarily prosaic with varying frequency of inserted poetic pattern. Rather than the idea of "hybrid," this style could be taken as a kind of "register-switching." See examples from fieldwork associated with the *Science of Art* project (Francis, 2017a, chapter 2).

for musical phrases embedded in ongoing instrumental pieces (Dowling et al. 2001), discrimination between exact target phrases and similar lures (same melodic and rhythmic contour, pitch level or musical texture changed) was strong for short delays and even improved for longer delays. This result contrasted, surprisingly, with the well-known rapid decay of verbatim memory for prose-narrative text in contrast to superior recall of paraphrased foils. To try to account for this difference between music and prose-narrative, the authors then compared poetry and narrative given that poetry exploits the rhythmic structures of music. One hypothesis for the music-narrative contrast was that the improved exact recall for music could have been attributed to the difference between:

- non-verbal, non-semantic, information for music, and
- verbal, semantic, information for narrative.

The second possibility was that the relevant difference lies in the temporal organization of music. If poetry and prose-narrative also contrast in verbatim memory, the difference could be attributed to the music-like temporal organization of poetry, a component that prose-narrative lacks. If the time course of memory for poetry would show a similar pattern to narrative (decay of verbatim memory), the first hypothesis (music-nonverbal, narrative-verbal) could not be discarded. But contrary to the first hypothesis, results from a series of four experiments supported the second explanation: the features that poetry shares with music that are *not a feature of prose-narrative*, appear to account for improved verbatim recall. Results showed that there was no decline in discrimination performance in any of the four tests between verbatim and paraphrased passages *for poems*. Similar to cadences in music, traditional poetry marks phrases with recurring closure schemes, correlated in turn with organized rhythmic patterns. Rising tension is resolved by a return to relative stability in both music and poetry. Listeners attend to surface patterns of sound repetition and rhythm; thus, memory of the wording itself, closely linked to these sonorous regularities, is enhanced.

In an unrelated project, as part of a major ongoing investigation on aspects of tonality and the sound patterns of spoken language, researchers focused on how affective states, in how they are expressed in speech, are related to major and minor tonal patterns in music. An analysis of the fundamental frequencies of excited and subdued speech showed a correlation with the implied fundamentals of tonic thirds and sixths that distinguish, respectively, major and minor modes. The hypothesis suggested by the study is that the ability to perceive tonal patterns, corresponding to emotional response, is subserved by a special attraction and sensitivity to patterns in vocalization and music acquired automatically and without awareness by young children (Bowling et al. 2010). Evidence was studied of a close acoustical relationship between the pitch space of tonal music and the sound patterns of speech. The vocal organs happen to be specialized for producing tonal patterns - the production of vowels gives speech its tonal quality. When the vowel sounds were analyzed they aligned with the common intervals that form musical scales cross-culturally (Ross et al. 2007).

What these studies comparing music and the sound patterns of language have pointed to is the importance of continued research on the unique qualities of human vocalization in general. Thus, an extension of this line of work to poetry could focus on, instead of tonality, on the features that are shared between music and language. Recall that tonality is not a relevant dimension in recited poetry. Rather than tonal features

(that are specific to music), an interesting comparison might be between features of contour/intonation in poetic performance and measures of affective states as they are revealed in prosaic and conversational discourse (e.g., applying the same measures from the Bowling et al. and Ross et al. studies). The comparison would be informative because in music tonality is not the only component associated with affective response either. Hypothetically, all of the other components are shared between music and poetic expression. Then it should be kept in mind that "affect" is a broad and heterogenous factor, still not well understood, that plausibly might form part of the underpinning, in one way or another, of all aesthetic response.

Returning to the findings of Rubin, Tillman and Dowling, the research on aspects of memory also addresses the question of specialized competencies that distinguish poetic ability. These include the ability to apprehend poetic language aesthetically, especially on the part of individuals without literary training (i.e., the "average person" in contact with popular culture). The specialized cognitive properties of the expressive (vocal)–receptive (aural) channel might emerge as a key factor in understanding the auditory processing of poetic forms.[4] Memory and affective response are two aspects of this processing; and perhaps there are others. For all of these lines of investigation the comparison with findings from research on the corresponding musical competencies will be a necessary point of reference.

Conclusion

Returning to the theme of cross-language access in popular culture, readers will take note of a similar phenomenon in the vast vocal music sharing across the continents and within highly diverse multilingual regions (primarily in Asia and Africa). For many populations of young listeners the lyrics of the most celebrated songs are often not recorded in a familiar or comprehensible language, having little or no consequence for their acceptance and popularity. While interesting and related to the question that we are considering, for now, we should set it aside for a separate, and necessary, discussion—set aside because the song genre in question is fully musical-melodic, but necessary because it also belongs to the category of vocal artistic expression.

In this regard, the assessment of the poetry-as-music proposal selects, so to speak, poetic texts as these are, or would be, performed. This approach, thus, takes what we call traditional forms as its starting point. Interestingly, this methodological recourse

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[4] As Jakobson observed once, even in the most mundane of everyday conversation or other kind of prosaic discourse, we are drawn to sonorous patterns of the human voice. In the following sentence, 他的電話號碼是五五五三九八四 (in Mandarin Chinese: "His phone number is 555-3784.") the lexical tone (falling-rising) on the repeated

"…五五 五…" ["…wǔwǔwǔ…"] evidently contributes to the unintended aesthetic effect (striking in this case); but ordinary language use is replete with similar examples. The exceptional patterning, of aesthetic potential, always involves one of the different kinds of repetition, in poetry, the "echo of sound across words" (Bradley 2009, p. 44). For students and non-speakers of Mandarin Chinese, to listen (slowed down very slightly if possible), copy and paste to: https://translate.google.com/

is similar, as we saw, to the approach to studying *hip-hop* in Bradley (2009), one that could be possibly extended to all popular culture verbal art genres. Again, we might set aside, at this stage of the research, some modern and experimental literary categories because while they obviously correspond to valid literary expression, they may not clearly reveal fundamental or underlying cognitive structures shared by all individuals in all cultures. As in linguistic research, features that hypothetically might reflect constitutive competencies, universally accessible, may simply not be implemented in every possible case. This last proposal also requires empirical confirmation.

References

Aztatzi, P. (1991). *La danza de los vaqueros vasarios*. Thesis (Licenciatura), Escuela de Antropología. Benemérita Universidad Autónoma de Puebla.

Ball H. (1974[1915]). *Flight out of time: A Dada diary*. The Viking Press.

Bowling, D. L.; Gill, K.; Choi, J.D.; Prinz, J., & Purves, D. (2010). Major and minor music compared to excited and subdued speech. *Journal of the Acoustical Society of America*, *127*, 491-503.

Bradley, A. (2009). *Book of rhymes: The poetics of hip hop*. Civitas Books.

Brown, S. (2000). The 'musilanguage' model of music and evolution. In N. Wallin, B. Merker & S. Brown (Eds.), *The origins of music* (pp. 271–300). MIT Press.

Dowling, W.J.; Tillmann, B., & Ayers, D.F. (2001). Memory and the experience of hearing music. *Music Perception*, *19*, 249-276.

Eikhenbaum, B. (1995[1921]). El Principio Melódico del Verso. In E. Volek (Ed.), *Antología del Formalismo Ruso: Volumen II, Semiótica del Discurso y Posformalismo Bajtiano* (pp. 37-42). Editorial Fundamentos.

Finnegan, R. (2012). *Oral literature in Africa*. Open Book Publishers.

Fox, J. J. (2014). *Explorations in semantic parallelism*. Australian National University Press.

Francis, N. (2015). New poetics in China: A review of experimental Chinese literature. *Chinese Language and Discourse, 6*, 205-217.

Francis, N. (2017a). *Bilingual and multicultural perspectives on poetry, music and narrative: The science of art*. Rowman & Littlefield.

Francis, N. (2017b). Review of Edge of Island by Chen Li. *China Review International, 24*, 44-48.

Goodman, F. D. (1972). *Speaking in tongues: A cross-cultural study of glossolalia*. The University of Chicago Press.

Handel, Z. (2019). *Sinography: The borrowing and adaptation of the Chinese script*. Brill.

Hull, K. (2017). The language of gods: The pragmatics of bilingual parallelism in ritual Ch'orti' Maya discourse. *Oral Tradition*, *31*, 293-312.

Jackendoff, R. (2009). Parallels and nonparallels between language and music. *Music Perception, 26*, 195-204.

Jackendoff, R., & Lerdahl, F. (2006). The capacity for music: What is it and what's special about it? *Cognition, 100*, 33-72.

Jakobson, R. (1987). *Language in literature*. Harvard University Press.

Lawson, C. (2009). Between the lines: Exploring the auditory bridge to literacy. Paper given at Australian Association for the Teaching of English/Australian Literacy Education Association National Conference, July 11, 2009. Hobart: https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.528.3237&rep=rep1&type=pdf

Lerdahl, F. (2003). The sounds of poetry viewed as music. In I. Peretz & R.J. Zatorre (Eds.), *The cognitive neuroscience of music* (pp. 413-429). Oxford University Press.

Mair, V. (1994). Buddhism and the rise of the written vernacular in East Asia: The making of national languages. *The Journal of Asian Studies*, *53*, 707-751.

Marr D. G. (1981) *Vietnamese Tradition on Trial 1920-1945*. University of California Press.

McWhorter, J. (2008). *All about the beat: Why hip-hop can't save black America*. Gotham Books.

Mithen, S. (2006). *The singing Neanderthals: The origins of music, language, mind, and body*. Harvard University Press.

Montemayor, C. (1993). Notas sobre las formas literarias en las lenguas indígenas. In C. Montemayor (Ed.), *Situación actual y perspectivas de la literaturas en lenguas indígenas*. Consejo Nacional para la Cultura y las Artes.

Paz, O. (1956). *El arco y la lira*. Fondo de Cultura Económica.

Perloff, N. (2009). Sound poetry and the musical avant-garde: A musicologist's perspective. In M. Perloff & C. Dworkin (Eds.), *The sound of poetry: The poetry of sound* (pp. 97-117). University of Chicago Press.

Pinsky, R. (1999). *The sounds of poetry: A brief guide*. Farrar, Straus and Giroux.

Rose, T. (1994). *Black noise: Rap music and black culture in contemporary America*. Wesleyan University Press.

Ross, D.; Choi, J., & Purves, D. (2007). Musical intervals in speech. *Proceedings of the National Academy of Sciences, 104*, 9852-9857.

Rubin, D. C. (1995). *Memory in oral traditions: The cognitive psychology of epic, ballads, and counting-out rhymes*. Oxford University Press.

Samarin, W. J. (1972). *Tongues of men and angels: The religious language of Pentecostalism*. Macmillan.

Shklovsky, V. (1985[1916]). On poetry and trans-sense language, *October, 34*, 3-24, translated by G. Janecek & P. Mayer.

Phan, T and Francis, N. (2019). Chữ nôm and the cradle of Vietnamese poetry. *Journal of Chinese Writing Systems, 3*, 69-71.

Tedlock, D. (1976). From prayer to reprimand. In W. J. Samarin (Ed.), *Language in religious practice* (pp. 72-83). Newbury House Publishers.

Tillmann B., & Dowling, W. J. (2007). Memory decreases for prose, but not for poetry. *Memory and Cognition*, *35*, 628-639.

Tranter, D. N. (2001). Script borrowing, cultural influence and the development of the written vernacular in East Asia. In T.E. McAuley (Ed.), *Language change in East Asia* (pp. 180-204). Routledge.

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