

PHONETIC STYLISTIC DEVICES AND THEIR FUNCTIONS IN ENGLISH TONGUE-TWISTERS

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FONETIK STILISTIK VOSITALAR VA ULARNING INGLIZ TILIDAGI FUNKSIYALARI

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ФОНЕТИЧЕСКИЕ СТИЛИСТИЧЕСКИЕ ПРИЕМЫ И ИХ ФУНКЦИИ В АНГЛИЙСКИХ СКОРОГОВОРКАХ

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Abstract. The article is dedicated to the analysis of phonetic stylistic devices in tongue-twisters of the English language. The ways of using four types of phonetic stylistic devices — onomatopoeia, alliteration, rhyme and rhythm, as well as the reasons for their appearance in the tongue-twisters have been revealed. An overview of the ideas of the previous studies on these devices in and outside tongue-twisters, explaining how they can influence the genre itself has been included. As part of the analysis, an explanation has been provided regarding the influences of phonetic stylistic devices on the creation of difficulties in enunciation — the primary goal of tongue-twisters. The article also examines anti-euphonic effect created by alliteration opposed to the musicality and flow that are reached through the presence of rhyme and rhythm. There has been a quantitative analysis of onomatopoeia in tongue-twisters used to emphasize the role of it in creating difficulty. The research highlights the intricacy of the relationship between phonetics and linguistic creativity, particularly in the context of tongue-twisters. The results obtained might be used in further studies while exploring the phonological structure of tongue-twisters, as well as the ways of using them as a tool for pronunciation training.

Keywords: tongue-twisters; stylistic devices; onomatopoeia; alliteration; rhyme; rhythm.

Annotatsiya. Maqola ingliz tilidagi tez aytishlar matnlarida qo'llaniladigan fonetik-stilistik vositalarni tahlil qilishga, ularning funksional rolini va janrning o'ziga xosligiga ta'sirini aniqlashga bag'ishlangan. Unda to'rt turdagi fonetik stilistik vositalar —

onomatopeya, alliteratsiya, qofiya va ritmdan foydalanish usullari, shuningdek, tez aytishlar matnlarida ularning paydo bo'lish sabablari ochib berilgan. Bundan tashqari, maqolada ushbu stilistik vositalarni tez aytishlar kontekstida ham, kengroq lingvistik aspektda ham oldingi tadqiqotlarda olingan ma'lumotlarning umumiy ko'rinishi keltirilgan, ushbu elementlarning umuman tez aytish janrining o'ziga xos xususiyatlarini shakllantirishga ta'siri tahlil qilingan. Tahlil doirasida fonetik stilistik vositalarning talaffuzdagi qiyinchiliklarning mavjudligiga ta'siri — tez aytishlarni yaratish va qo'llashning asosiy maqsadi tushuntirilgan. Maqolada, shuningdek, alliteratsiya tomonidan yaratiladigan antievfonik effekt, unga qarama-qarshi o'laroq, qofiya va ritmning mavjudligi hisobiga erishiladigan musiqiylik va ravonlik ko'rib chiqilgan. Tez aytishlardagi tovushga taqlid qiluvchi so'zlarning miqdoriy tahlili o'tkazildi, u ularning qiyinchiliklarni yaratishdagi rolini ta'kidlash uchun ishlatildi. Tadqiqot fonetika va tez aytishlar kontekstida taqdim etilgan lingvistik ijodkorlik o'rtasidagi murakkab munosabatlarni ta'kidlaydi. Olingan ma'lumotlar va nazariy xulosalar kelgusidagi tadqiqotlarda tez aytishlarning fonetik va fonologik tuzilishini, shuningdek, ularni talaffuzga o'rgatish vositasi sifatida qo'llash usullarini o'rganishda qo'llanilishi mumkin.

Kalit so'zlar: tez aytishlar; stilistik vositalar; onomatopeya; alliteratsiya; qofiya; ritm.

Аннотация. Статья посвящена анализу фонетических стилистических приемов, применяемых в текстах скороговорок английского языка, с целью выявления их функциональной роли и влияния на специфику жанра. В ней раскрыты способы использования четырех типов фонетических стилистических приемов — ономапеи, аллитерации, рифмы и ритма, а также причины их появления в текстах скороговорок. Кроме того, статья включает обзор данных, полученных в предыдущих исследованиях этих стилистических приемов как в контексте скороговорок, так и в более широком лингвистическом аспекте, а также анализируется воздействие данных элементов на формирование характерных особенностей жанра скороговорки в целом. В рамках анализа было дано объяснение влияния фонетических стилистических приемов на наличие трудностей в произношении — основной цели создания и использования скороговорок. В статье также рассматривается антиэвфонический эффект, создаваемый аллитерацией, в противопоставление к которому рассматриваются музыкальность и плавность, которые достигаются за счет наличия рифмы и ритма. Был проведен количественный анализ звукоподражательных слов в скороговорках, который был использован, чтобы подчеркнуть их роль в создании трудностей. Исследование подчеркивает сложность взаимоотношений между фонетикой и лингвистическим творчеством, представленным в контексте скороговорок. Полученные данные и теоретические выводы могут быть использованы в дальнейших исследованиях при изучении фонетической и фонологической структуры скороговорок, а также способов их применения в качестве инструмента для обучения произношению.

Ключевые слова: скороговорки; стилистические приемы; ономапея; аллитерация; рифма; ритм.

Introduction

Phonetics, being a science of speech sounds, is reflected in many genres of literature. One of the most noticeable examples is tongue-twisters in which the authors consciously use various phonetic techniques to create a special sound picture and make pronunciation difficult.

Contrary to the belief that tongue twisters are a test of articulation, folk performances of tongue twisters actually anticipate and lead to the speaker's inevitable failure to articulate clearly, resulting in an inability to flawlessly pronounce the phrase or word combination [Somoff 2014]. This anticipation does not only come from the words used in the text of the tongue-twisters, but rather from a combination of techniques, the majority of which are based on intricate organization of sounds, as tongue-twisters are an oral genre of folklore

Furthermore, as tongue-twisters are a product of linguistic creativity, they will contain language play which has been defined as actions that include morphological and derivational processes and activation of creative mechanisms of speech production that use the phonetic potential of the language. These mechanisms are aimed at creating an unusual and difficult to pronounce form of speech, which is characteristic of tongue-twisters [Mul' 2014]. Even though there are various types of stylistic devices in tongue-twisters like in any creative text, phonetic stylistic devices are the main instruments used in tongue-twisters for the purpose of creation of obstacles for the enunciator.

Tongue-twisters stand out as unique and intriguing constructions among vast quantities of linguistic phenomena. Their inner difficulty usually comes out of the positioning of words that contain similar sounds inside a piece and the presence of phonetic stylistic devices implies their active participation in the process of making tongue twisters what they are — a piece of text that is difficult to enunciate. Not only that, but also the combination of various types of phonetic devices in tongue-twisters creates a specific stylistic effect which enhances the emotionality of perception, actualizes the vocabulary and stimulates the intellectual activity aimed at understanding the hidden meaning, which, in its turn, contributes to the development of speaking skills and linguistic competence of those using the tongue-twisters [Semerdzhidi 2021, Ayom 1987, Musdalifah, M., Widiastuty, H. & Deramae, 2025, Aleksandrova 2011].

The paper aims to explore and analyze the fundamental role of phonetic stylistic devices in creating of English tongue-twisters as well as the influence they have on the structural integrity, complexity and communicative function of this genre of folklore.

Tongue twisters presented by web-resource www.ongue-twister.net were chosen as a material for this research because this is one of the biggest collections of the most common tongue-twisters which includes both the classic examples and newer ones, that got into oral tradition just recently. Qualitative and descriptive research methods were used in the paper to identify the phonetic stylistic devices in tongue-twisters and their

function in this folklore genre. Quantitative analysis was implied when working with onomatopoeia.

For this article, the classification of stylistic devices by Galperin will be used. He took a layered approach and identified three groups of stylistic devices:

1. Phonetic expressive means and stylistic devices;
2. Lexical expressive means and stylistic devices;
3. Syntactic expressive means and stylistic devices [Galperin 1977].

We are interested primarily in the first group, as tongue-twisters can only serve their primary function when they are uttered (i.e. said aloud), so studying their sound component helps to understand the way they are built. Galperin includes four elements in the group of phonetic stylistic devices: onomatopoeia, alliteration, rhyme and rhythm.

Main part

Onomatopoeia. Onomatopoeia is the result of a deep connection between language and people's perception of the world. This notion appeared as a result of our ability to associate certain sounds with specific phenomena. This process occurs at the level of our brain where the sound signals that we hear are transformed into language codes expressed with the help of linguistic means.

In the 18th century, onomatopoeia started to be seen as one of the fundamental and initial ways of word formation. Leibniz considered that onomatopoeia was mainly the property of *lingua adamica*, or primordial language — the imitation of sounds of nature seems a direct response to the environment in the form of new words being formed [Roinila 1997; Losonsky 2023]. As attested languages started to develop on their own, a symbolist approach to word formation started being implemented alongside onomatopoeia as well as later more than it.

Zhuravlev agrees that the phonetic build-up of a word is an important factor of its existence. He believes that a word has more chances to survive and remain in active vocabulary if its phonetic meaning corresponds to the lexical one. Tongue-twisters, being based mainly on sounds, represent a great source for the analysis of the connection and interdependency of phonetic and lexical meaning [Zhuravlev 1974].

Sound imitation was also a catalyzing element in the attempts to classify the vocabulary of the language. In particular, researchers tried to classify vocabulary based on the characteristics of the relationship between a word that involves sound-imitation and its denotative meaning. For instance, it was proposed that particular sounds at the end or in the beginning of the word describe particular actions or properties of the words.

As a result of being the direct connection between the sound and meaning, onomatopoeia is often studied using the sound symbolism approach. Johansson, Anikin, Carling and Holmer [Johansson, Anikin, Carling & Holmer 2020] offered a comprehensive investigation of sound symbolism across 245 language families. By examining phonetic and

semantic properties of 344 near-universal concepts, the authors uncovered 125 sound-meaning associations. These associations were categorized into 20 macro-concepts rooted in four distinct types of sound symbolism, one of which is onomatopoeia, or what the authors also call unimodal imitation. The findings showed a deep connection between sound symbolism and human perception, particularly as it relates to the body and its interactions with the environment. The authors hypothesize that onomatopoeia has been instrumental in the emergence and evolution of language. As a mechanism for creating basic lexical categories and representing sensory perceptions, onomatopoeia may have provided a foundational framework for linguistic development [Johansson N.E., Anikin A., Carling G. & Holmer A. 2020].

Galperin differentiates two classes of onomatopoeia — direct (natural sound imitating words) and indirect (also referred to as *echo-coding* — a combination of sounds used to create an auditory impression that mirrors the meaning of the statement). It is quite difficult to extract examples of the latter from the tongue-twisters corpora as they are primarily built on the repetition of a particular sound which is there not to create a sense or impression, but to challenge the one attempting a piece, so it seems more reasonable to look at direct onomatopoeia, its frequency and function in tongue-twisting texts. By looking at the chosen corpora, we identified that out of 593 tongue-twisters, there were 28 that contained onomatopoeic words. That comprises $\approx 4,72\%$, or every twentieth tongue-twister. Each of them contained at least one example of onomatopoeia, however, there were some with several words of this nature.

Almost half of all tongue-twisters with onomatopoeia in them contained one onomatopoeic word only (13 of them, or 46 %). As it is not unnatural for the tongue-twisters to contain repetition, there were 7 cases identified where one onomatope was repeated two or more times in one tongue-twister (25 %). There were only two tongue-twisters that contained two onomatopes, which is the smallest share in the whole group (7 %). The rest (5 examples, 17 % percentagewise) contained three or more onomatopes.

If looking at onomatopoeia from the point of view of meaning, Tishina identifies five groups of it — onomatopes for linguistic, zoological, anthropological, natural and technological phonations. In the table below, all tongue-twisters that contained an onomatope were divided into these groups [Tishina 2010].

Thematic group	Example
Onomatopes denoting linguistic phonations (human speech, its activities, manner of speech)	Sneeze, Boo, babble, mumbling, hiccup, howl, whistle, yelling
Onomatopes denoting zoological phonations (birds, animals, insects and their phonations)	Groaning, growling, roaring, bumble, hum, buzzing, toot, quack
Onomatopes denoting anthropological phonations (emotions of a person, sounds)	Thunk, slap, flip flop, clap, bump, bang(x2),

produced while changing body position, human work, unconscious body sounds)	flippers, crush, flick, itch, squish, stump
Onomatopes denoting nature phonations (sounds of natural phenomena)	drip drop, glip glop, cling, slapping (about sea)
Onomatopes denoting technological phonations (sounds of technical constructions, instruments, signals)	Knock-knock, flip, click, pluck, crisp, rattle, ring, ding, Ra-ta-ta-ta-ta-ta-ta-too

As can be seen from the table above, there were 41 onomatopes in these tongue twisters. They were spread among categories quite equally, with 19 % each denoting sounds produced by humans and animals and 22 % being imitation of constructions and other inanimate objects. The majority of onomatopes fell under the category of anthropological phonations, indicating 29 %, while the smallest share was illustrated by the words that imitated sounds of nature, the number of which was only 4 and it corresponded to 9 % only.

Regarding the function of onomatopoeia in tongue-twisters, such a deep presence of this stylistic device indicates the fact that onomatopes can work as an instrument for creating the obstacle that causes difficulties in production. This is caused by the sounds onomatopes contain. When defining tongue-twisters, Cowdell says that they are a specialized form of spoken sentences or phrases that exploit the difficulties in pronunciation arising from the clustering or alternating of groups of similar sounds. Onomatopes also correspond to this definition — there are consonants in them that either oppose to each other or are accumulated in one word [Cowdell 2011]. Two tongue-twisters were identified that consist solely of onomatopoeic words:

— *Click, clap, pluck, ...* (it is suggested that these three words are repeated several times in a row) (1).

— *Mumbling, bumbling. Bumbling, mumbling* (2).

This shows that onomatopoeic words themselves, without any assistance, can create the necessary effect of ‘obstacles’ that make tongue-twisters difficult to pronounce and, in essence, what they really are. The reason why that happens lies in the opposition of consonants used in the onomatopes in the examples above.

In (1), there is alternation between palatal [k], alveolar [l] and bilabial [p]. Such frequent change in the place of articulation, taking into consideration the fact that tongue-twisters must be pronounced fast, makes it hard to enunciate it correctly for those who attempt.

In (2) the situation is opposite. Somoff presents Dundes’ view, who proposes that tongue twisters employ phonemes that not only pose the greatest challenges during language learning, but also those sufficiently alike to lead to mutual confusion [Somoff 2014]. The words *mumbling* and *bumbling* are based on consonants that have the same place of articulation — [m] and [b] are both bilabial consonants. When repeated several times in a row, it provokes confusion for the enunciation.

Thus, when onomatopoeia is implemented in tongue-twisters, the sources for it are the sounds surrounding people daily, and it functions as a tool for enhancing the twisting effect.

Alliteration. Alliteration, the repetition of initial consonant sounds in closely positioned words, is a stylistic device that adds rhythm and musicality to language. It is particularly prominent in tongue-twisters, where it serves both an aesthetic function and a practical one, challenging the speaker's dexterity.

Sedelkina believes that alliteration in nursery rhymes helps children to memorize letters of the alphabet more easily. Being one of the sub-genres of nursery rhymes, tongue-twisters are often used as a didactic material, so this peculiarity of alliteration may be one of the main reasons why it is implemented in them so often [Sedelkina 2006].

The study of alliterative tongue-twisters uncovers their dual role as both a linguistic exercise and a form of entertainment. Alliteration has been the most researched trait of tongue-twisters as even the term itself is of an alliterative nature. Cowdell suggests that it is uncommon to encounter a tongue twister that does not employ alliteration while presenting perhaps the most comprehensive overview of the genre. He discusses the historical roots of tongue twisters, noting their popularity in Victorian diction and pronunciation guides. He highlights how tongue twisters continue to be used in language learning and elocution training today. As this is a chapter in the book *Alliteration in Culture*, Cowdell's work also highlights how tongue-twisters reflect the cultural situation through the use of alliteration. This chapter explores the enduring presence of alliteration in contemporary tongue twisters, a genre that tests verbal skill through the repetition and alternation of similar sounds [Cowdell 2011].

Scholars have highlighted the limitedness of focused studies on alliteration, despite its dominance across languages and cultures [Roper 2011]. This gap in research underscores the potential for further exploration into how alliteration shapes and is shaped by the linguistic landscape. Tongue-twisters, often thought of as simple linguistic puzzles, actually offer insights into cultural differences and complexities, as they frequently incorporate culturally specific elements and ideas. It seems that alliteration's appeal lies in its ability to help us remember information better and to enjoy the playful challenges of language.

The reason why alliteration is such a common device in tongue-twisters lies in its contribution to anti-euphony. Anti-euphony is a linguistic term that describes speech that is difficult to pronounce or unpleasant to the ear. It's often characterized by a clustering of sounds that are hard to articulate together. Alliteration, on the other hand, is the repetition of the same initial sound in a series of words. While alliteration can sometimes be used to create euphonic and pleasing sounds, in the context of tongue-twisters, it is often employed to create anti-euphonic effects. This is because tongue-twisters are designed to be challenging to pronounce, and the repetition of the same initial sound can make them even more difficult. This idea was supported in the paper "What Makes

Our Tongues Twist? Computational Analysis of Croatian Tongue-Twisters” by Davor Nikolić and Nikola Bakarić, where the authors explore the phonostylistic features of Croatian tongue twisters. The research discusses how the lack of euphony (pleasantness of sound) and the abundance of anti-euphonic patterns, such as alliteration and consonant clusters, lead to speech errors. Taking into consideration the necessity of elocution challenges for tongue-twisters, the anti-euphonic effect works as a facilitator for those challenges. For example, the tongue-twister "*Peter Piper picked a peck of pickled peppers*" uses alliteration of the "p" sound to create a series of difficult-to-pronounce words that are sure to trip up the tongue. This is a classic example of how alliteration can be used to create anti-euphonic effects in language [Nikolić & Bakarić 2016].

Egorova performed a quantitative analysis of repetitive sound patterns in nursery rhymes, including some examples of tongue-twisters as well. The author used the following formula to calculate the quotient:

$$K_{freq} = \frac{Q_i}{Q_s}, \quad \text{where } K_{freq} \text{ is a quotient of the}$$

frequency of the sound, Q_i is the number of repetitions of a particular sound in alliteration, assonance or consonance in the piece and Q_s is the total number of sounds in the corresponding sound repetition in the pieces of one and the same genre. Egorova found that fricative [s], alongside with plosive labial [b], are the most common alliterative sounds in the 45 tongue-twisters that were used as a corpus for the study. They showed the quotient equal to 0.27 and 0.22 respectively [Egorova 2008].

Galperin [Galperin 1977] believes that alliteration is commonly seen as a stylistic device that enhances the author's message. It creates a certain emotional tone that is open to individual interpretation by readers, serving as a subtle musical accompaniment to the underlying idea. He illustrates that by the sound [m] which is frequently used by Tennyson in the poem "The Lotus Eaters" to give a somnolent effect. Alliteration in tongue-twisters can also serve emotional function, for instance, in the following piece, the repetition of the initial [s] creates a snake-like quality, implying slyness and danger:

Seven slick slimey snakes slowly sliding southward.

The repetition of the initial [w] in

While we were walking, we were watching window washers wash Washington's windows with warm washing water.

creates the sense of soft and delicate water flowing. Another example is

*Now the trees are all groaning in growling, rough gales
That with thuds and hoarse roaring roll raging around!*

Here, the alliteration reached through a harsher [r] sound helps the user of this tongue-twister to think of something strong, something much harsher and more forceful.

Taking the following examples into consideration, it is possible to conclude that when used effectively, alliteration can evoke particular emotions and create a sound environment that reflects the setting or purpose of the tongue-twister. For example, soft, hissing sounds may create a feeling of peace, while harsh, explosive sounds can build tension or convey chaos. This technique, originating in oral storytelling, improves the musicality of tongue-twisters in order to enhance the reader's experience. The mood created by alliteration can influence the reader's emotions, increasing their connection to the text and therefore assisting in attempts to utter it fast and correctly. Examining alliteration in tongue-twisters uncovers deeper meanings and intentions, providing insights into the psychological and emotional undercurrents of the pieces, showing that these are not meaningless chunks of language, but, on the contrary, something that can set an atmosphere and reflect the intentions and emotions. Therefore, alliteration is not just a stylistic choice; it is a tool for emotional impacting tongue-twisters.

Rhyme

“Train & Constrain: Phonologically Informed Tongue Twister Generation” by Tyler Loakman et al. (2024) presents a comparatively new approach to generating tongue-twisters using large language models (LLMs). The importance of phoneme overlaps and rhyme in creating effective tongue-twisters is highlighted in the work. Rhyme occurs when the final sounds of two or more words are the same. The study suggests that rhyme can increase the degree of memorability and difficulty of tongue-twisters, as it requires speakers to coordinate their pronunciation of different words in a precise manner [Loakman, Tang, & Lin 2024].

However, looking at the aforementioned corpus of English tongue-twisters, it is possible to notice that only a small number of them contain rhymes. There are always samples that are one line long, let alone the situations when phrases turn into tongue-twisters. The only situation when rhymes are used is in longer tongue-twisters that were created as teaching material for children. The necessity of rhythmic patterns in materials designed for children lies in the fact that rhyme and rhythm aid pronunciation. Elliyuspita conducted the study of the effect of rhyming verse on preschoolers. The study suggests that rhyming poems can be an effective tool for enhancing phonological awareness and pronunciation in young learners. The rhythmic and repetitive nature of rhymes captures students' attention and makes learning more fun [Elliyuspita 2017]. In addition, Grofčíková and Máčajová conclude that rhyming activities are highly beneficial for developing phonological awareness in pre-school children. They recommend integrating rhyming exercises into early childhood curricula to support language development. Rhymes help children understand the sound structure of words, making it easier for them to decode and spell words when they start reading. The study also found that rhyming is a fundamental skill associated with phonological awareness. Children who could recognize and produce rhymes showed

higher levels of phonological awareness. For these reasons, when tongue-twisters involve rhymes, it is usually for educational purposes [Grofčíková, S. & Máčajová 2021].

Galperin [Galperin 1977] suggests that the arrangement of rhymes within a stanza follows specific patterns. For example, a couplet rhymes the last words of two consecutive lines (aa), while a triple rhyme rhymes the last words of three consecutive lines (aaa). In cross rhyme, the first- and third-lines rhyme, as do the second and fourth (abab). Finally, framing or ring rhyme rhymes the first and fourth lines, as well as the second and third (abba). All of them can be found in tongue-twisters:

Couplet rhyme:

*There was a fisherman named Fisher
who fished for some fish in a fissure.
Till a fish with a grin,
pulled the fisherman in.*

Triple rhyme:

*How many boards
Could the Mongols hoard
If the Mongol hordes got bored?*

Cross rhyme:

*Now the trees are all groaning in growling, rough gales
That with thuds and hoarse roaring roll raging around!
Such leaf-rousing, branch-ruining, ripping, raw wails,
Such a terrible, thrashing and tree-wrecking sound!*

Framing/ring rhyme:

*He couldn't please her whim.
From her tree toad bower,
With her two-toed power,
The she-toad vetoed him.*

Rhyme in tongue twisters often relies on homophones—words that sound the same but may have different meanings or spellings—because they challenge the speaker's ability to navigate and articulate the intricacies of language. The use of homophones in tongue-twisters is aimed at enhancing their difficulty and effectiveness as a pronunciation exercise. When reciting tongue twisters, the brain is tasked with processing and producing similar sounds in quick succession, which can be particularly challenging and thus beneficial for improving speech clarity and fluency. The alliterative and rhyming nature of tongue twisters, which often includes homophones, makes them not only a fun activity but also a valuable tool for language learning. They help to highlight the subtleties of sound production in language, drawing attention to the nuances that differentiate words that otherwise appear identical to the ear. For example,

in the following tongue-twister, the rhyme is based on homophones *Fisher* and *fissure*:

*There was a fisherman named Fisher
who fished for some fish in a fissure.*

This focus on phonetic precision can help in the development of clearer and more precise speech patterns, which is why tongue twisters have been used historically in educational settings to improve elocution and diction.

Rhythm

Rhythm refers to the pattern of sounds in speech or writing, created by the arrangement of stressed and unstressed syllables. It is a fundamental aspect of both poetry and prose, contributing to the musicality, flow, and emotional impact of a text.

When regarding poetry, rhythm is seen as a patterned repetition of linguistic peculiarities, especially of a sound [Encyclopaedia Britannica]. This patterned repetition can enhance the emotional reaction and ensure the sense of balance of a poem. Even though tongue-twisters are not solely poetic, they do show a patterned repetition of sounds. The principles of rhythm in poetry, when studied on the material of tongue-twisters, gives the ideas why particular rhythmic patterns are more common and what function they perform — entertainment, creation of difficulty, or facilitation of the repetition of the target sound.

Smus' studied rhythm in nursery rhymes and when examining it in tongue-twisters, characterized their rhythm as "uniform and monotonous", but at the same time lively, which is reached through low duration of pauses compared to the process of active sound enunciation (phonation). Besides, tongue-twisters help to form sense of rhythm in children from an early age when they repeat the tongue-twisters after the adults [Smus' 1988]. According to Pavlovskaya, tongue-twisters teach how to make one's own speech harmonic [Pavlovskaya 2001].

There are 5 types of rhythmic patterns that can be basically divided into two groups — patterns that involve two-syllabic groups (iambic, trochaic and spondaic rhythm) and those that involve three-syllabic groups (dactylic and anapestic). Although tongue-twisters are rhythmically organized verses and one may expect all the patterns to be found in them, it is evident that if tongue-twisters follow the rhythmic patterns, the majority of those are from the two-syllabic groups, which can be seen in the following examples:

1. Iambic (alternation of unstressed and stressed syllables)

I wish to wish the wish you wish to wish

2. Trochaic (stressed-unstressed)

Peter Piper picked a peck of pickled peppers.

Peck of pickled peppers Peter Piper picked.

3. Spondaic (stressed-stressed)

Sheena leads, Sheila needs.

Sometimes a tongue-twister may contain a combination of rhythmic patterns, like this one below where the first line is trochaic, while when moving to the second, iambic pattern can be noticed:

*Birdie birdie in the sky laid a turdie in my eye.
If cows could fly I'd have a cow pie in my eye.*

When it comes to the three-syllabic rhythmic patterns, it is rather easier to find examples that involve the combination of dactylic and anapestic lines, like here:

*How many cans can a cannibal nibble
if a cannibal can nibble cans?*

The first line in the verse is dactylic (stressed-unstressed-unstressed), the second one — anapestic (unstressed-unstressed-stressed).

The reason behind this uneven distribution of rhythmic patterns might lie in the fact that tongue-twisters must be pronounced quickly, as was mentioned above, with a limited duration of pauses that are shorter than the speaking time itself. When the repetition of just two syllables in combination is used, the pronunciation process takes less time than when three syllabic patterns are used.

While there have been no attempts to create a specific categorization of rhythmic patterns of tongue-twisters, examples like "*I scream, you scream, we all scream for ice cream*" and "*Red lorry, yellow lorry*" demonstrate different rhythmic flows. The former has a repetition of the word scream which stands in an unstressed beat position; however, uneven number of words in-between the "screams" creates uneven rhythmic pattern with two-syllable groups in the first part and three-syllable groups in the second. The latter tongue-twisters is based on the repetition of stressed and unstressed syllables with a more straightforward beat. The variety in these rhythmic patterns shows that the success of the speaker's articulation can vary significantly depending on the specific rhythmic structure of the tongue-twister — the more changes in rhythm there are, the more effort one has to put into the attempt to say it without mistakes.

Rhythmic organization of any piece of text, including tongue-twisters, is based on the stress, positioning of which also predetermines the phonic organization of the said chunk. Thus, it can be said that the rhythm of a tongue-twister plays a foremost role in the sound repetition around which it is built. The repetition of vowels (assonance) will be most effective and will reach its peak when the vowel being repeated is in stressed position (stressed syllable). Similarly, when a tongue-twister is built around alliteration, the repetition of consonants is the most effective when they are followed by a stressed vowel, even though the prominence for consonants is sensible in any position. Due to these factors, the rhythm clearly influences other phonetic devices implemented in tongue-twisters.

Conclusion

Analysis of the use of phonetic stylistic devices in tongue-twisters shows that they function as the ultimate mechanism of making this genre of folklore difficult to pronounce. Being a genre of oral folk tradition, they undoubtedly present a source that can vividly reflect the phonetic build-up of a language both from the functional and poetic point of view. They are not just language games, but rather are complex constructions, the phonetic and phonological elements in which are altered, combined and manipulated in order to create unique sound patterns.

Onomatopoeia and sound imitation in tongue-twisters reflects a deep connection between the language, perception and the way we see the world because they have an ability to imitate the world around us. So, when sound imitation is used in tongue-twisters, it usually depicts the types of natural phenomena, animals, objects that surround people who use the tongue-twisters, thus, judgements can be made regarding the lifestyle of a particular culture. Apart from that, onomatopoeic words function as an instrument of obstructing enunciation.

Alliteration, like onomatopoeia, even though at first glance seen solely as a tool for making a tongue-twister difficult through implementation of same or similar sounds, can also be a performer of aesthetic function — the fact that particular sounds represent particular feelings and actions can help to incorporate additional meanings into tongue-twisters. This, in its turn, plays a crucial part in the process of memorization of a tongue-twister by a performer, or at least the atmosphere that is evoked by a particular letter repetition helps to make the utterance more meaningful. When a tongue-twister makes sense for the one attempting it, they have more chances to succeed.

Although less common in the material under study, rhyme has a significant impact, especially in tongue twisters created for teaching. The targeted use of rhyme, using its various types, such as couplets, triple rhymes, cross and framing constructions, contributes to the development of articulation skills and phonetic literacy in young children. Homophones in rhymed tongue twisters create additional complexity, requiring the speaker not only to pronounce clearly, but also to understand the nuances of vocabulary.

The musicality and ease of tongue twisters are largely determined by the rhythm, which is created by the alternation of stressed and unstressed syllables. The study of rhythmic structures, often built on two-syllable units, such as iambs, trochaics and spondees, demonstrates how rhythm gives tongue twisters a lively, yet even intonation. The combination of rhythm with other phonetic elements, such as assonance and alliteration, clearly demonstrates the high level of skill that went into creating these complex linguistic constructions.

So what are the possible benefits of saturating the tongue-twisters with phonetic stylistic devices? The answer lies again in their pedagogical function. As it was mentioned above, they are used as a tool for pronunciation training and it is not uncommon for tongue-twisters to be

created specifically for the purpose of speech education, one of the parts of which is the learner's ability to articulate well and use the correct intonation. When there is rhyme and rhythm in a tongue-twister, they reflect the rhythmic and intonational patterns of the whole language, so the learner will get the understanding of how to build their regular speech. Besides, as this is not the regular listen-and-repeat drill, exercises and activities involving tongue-twisters turn into an entertaining form of studying. The repetition of sounds in tongue twisters is a phenomenon that causes a specific emotional response. Alliteration and consonance provide musicality, forming a clear rhythm. The use of onomatopoeia and sound symbolism adds expressiveness and imagery, making the text understandable and interesting for children. In order to work with a tongue-twister effectively, it is important to comprehend and understand it [Nikolayeva & Portnova 2020]. Onomatopoeia clearly performs the function of words that bring meaning in its essence because these words are direct imitations of sounds that exist around us. Onomatopoeia, besides meaning, also conveys the mood of a saying — happiness, sadness, surprise. When the right emotions can be expressed with the help of voice in a tongue-twister, it would be clear how to do that in real life, and the person will feel free and open in real-life conversation as well due to the received training.

In conclusion, this study of the phonetic stylistic devices of English tongue twisters has not only highlighted the importance of said devices but also emphasized the diversity of their functions. These devices are crucial to creating the inherent complexity of tongue twisters, increasing the degree of their memorability, and enhancing their aesthetic and emotional impact. As the analysis of onomatopoeia, alliteration, rhyme, and rhythm has shown, tongue twisters are much more than just sophisticated arrangements of words with similar sounds; they are evidence of the power of phonetics to shape language and to challenge its speakers.

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