

Survey of rhyme reveals a new possibility for one of the essential units of language

May 4 2015, by Daniel Pritchard, Emily Hiestand



Donca Steriade, professor of linguistics Credit: Jon Sachs/MIT SHASS Communications

It was in grade school classes that most of us first learned about the syllable—the tiny unit of organization for speech sounds, bundles of

which can be combined to construct words, phrases, sentences, paragraphs, mystery novels, biology textbooks, national constitutions, etc.

The humble syllable performs impressive work, and for the field of linguistics it also holds a special analytical importance: It has long been considered to be one of the basic units of language. Speech has many qualities—including sound, meaning, rhythm, and syntax—and for each of those qualities there is a basic building block, a sort of linguistic atomic unit. For many years, the prevailing view in the linguistic field has been that the syllable is the basic building block of language in the area of rhythm.

But MIT linguistics professor Donca Steriade is no longer so sure about that. Along with a number of like-minded linguists, and bolstered by a growing body of research, Steriade believes that the emphasis on syllables is misplaced. Instead she suggests that a different element—known as the "interval"—may be the basic unit of rhythm in [human language](#).

The syllable is put to the test

With formulas that resemble complex mathematics and a highly specialized lexicon, linguistics research can seem daunting. But the underlying ideas are all part of our everyday lives.

Consider how the syllable is formed: Linguistics shows us it is made up of a central sound (usually a vowel) plus secondary sounds (usually consonants) that can sit on either side of the vowel. The word "engineer," for instance, contains three syllables: en–gin–eer.

Intervals, on the other hand, always begin with a vowel, and then include all the consonants through the following vowel. Thus, the syllables of

en–gin–eer become the intervals eng–in–eer.

The subtle distinction between syllables and intervals may seem small, but in the sustained effort to understand how human language works, and how it changes over time, the difference is crucial, and of significant value for language research.

Poetry's notable role in the quest

Linguists are always looking for new tests that can definitively identify the fundamental building blocks of language, and Steriade has been conducting such a test by looking at the way the intervals and syllables function in the portion of poems that rhyme.

She explains that her interest is not in rhyme per se, but in what its characteristics reveal about language as a whole. Linguists need to test their ideas, and for Steriade, rhyming systems present a perfect opportunity to test her hypothesis about the interval against a massive body of existing data: poetry.

For the past seven years, Steriade has worked to compile a survey of rhyming systems, identifying patterns and then using them to generate linguistic models of rhyme. With nearly forty languages assessed and more underway, this is the most comprehensive survey of rhyme ever produced.

The ingenious, scientifically rigorous research project is characteristic of Steriade, who was recently awarded the field's highest honor when she was inducted as a fellow of the Linguistic Society of America.

"Donca is one of the most creative and influential phonologists of our time," notes David Pesetsky, the Ferrari P. Ward Professor of Modern Languages and Linguistics and a Margaret MacVicar Faculty Fellow.

"Again and again she has shown that a phenomenon that we thought we understood pretty well has an entirely different character when examined carefully with eyes wide open."

To find out if the interval's best

Examining systems of rhyme across a tremendous array of languages, from Medieval Latin and Welsh to modern Tagalog and Russian, Steriade has generated linguistic models that reflect the way rhyming operates in each. She and her team have found that basic structures of rhyme vary not only from language to language, but also within languages. Sometimes a single poet will innovate a new model. (Robert Pinsky, for example, uses a novel range of rhyme variations in his 1996 translation of Dante's "Inferno," as described by Kristin Hanson in "Language and Literature.")

"All elaborate poetic systems show this kind of micro-variation," Steriade explains. "The poetic variation is on a par with any other kind of grammatical variation across languages. Rhyming systems are grammars, so they vary in the same ways as grammars do."

In English, for example, rhymes occur at the end of a line of verse, in the last portion of the final word; the vowel sounds must match exactly, as must the consonants. The opening stanza of Karen Volkman's poem "Sonnet [The pearl of interval]"—which, serendipitously, uses the word "interval" in its more familiar meaning—offers a fine pair of examples:

"The pearl of interval, the still of yet,
poises momentarily, balancing the bend
and wave, slip, slope, and sine the seconds send
vertiginous minutes, airy with forget"

The reason the two pairs—"yet/forget" and "send/bend"—rhyme in

Volkman's poem is precisely because rhyming is based on the interval, not the syllable. That is, the portion of the word that rhymes corresponds exactly to the interval. Despite the tremendous diversity of poetic traditions and languages, none of them bases rhyming in the syllable. In every rhyming system surveyed, the interval was the operative unit of rhyme.

"The rhythmic units counted by meter and used by rhymes are always intervals, never syllables," Steriade explains. "That invites a look of the uses of syllables versus intervals in other areas of language as well."

Will the interval also explain word stress?

The shift away from the syllable could potentially affect linguists' understanding of phenomena such as the "duration of vowels" and what linguists call "partial reduplication"—the process of forming new words by repeating some portion of an existing one.

Meanwhile, there's more work to be done before the interval becomes the standard unit of linguistic rhythm, Steriade explains. Certain elements of morphology and phonology are still best described using [syllables](#), and Steriade's most pressing task now is to distill the data from her rhyme survey into an accessible corpus. She is also looking forward to future surveys of word stress and alliteration—both of which, she says, appear ripe for explanation with intervals.

This story is republished courtesy of MIT News (web.mit.edu/newsoffice/), a popular site that covers news about MIT research, innovation and teaching.

Provided by Massachusetts Institute of Technology

Citation: Survey of rhyme reveals a new possibility for one of the essential units of language (2015, May 4) retrieved 25 April 2024 from <https://phys.org/news/2015-05-survey-reveals-possibility-essential-language.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.