

Phonosemantic Expression Of Size

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Received: 15 October 2025; **Accepted:** 08 November 2025; **Published:** 13 December 2025

Abstract: This article analyzes the characteristics of phonosemantics in expressing the category of volume measurement. The study highlights the role of acoustic and articulatory properties of vowel sounds in symbolically representing the size features of objects, based on theoretical and experimental sources. Summarizing the research of S.V. Voronin, O. Jespersen, E. Sapir, J. Ohala, A. Shinohara, and S. Kavahara, it is shown that phonosemantic regularity has universal characteristics inherent in different languages. The opposition of big - small in the Uzbek language and semantically related adjectives such as large, huge, tiny, and minute are analyzed from the perspective of their phonetic composition. The tendency of wide vowels to express the meaning of largeness and narrow vowels to express smallness is substantiated. Additionally, the presence of phonosemantic exceptions such as mayda (small), yirik (large), big, and small indicates the probabilistic, statistical nature of volume measurement meaning. The research results confirm the existence of phonosemantic foundations for the category of volume in the lexicon of the Uzbek language and highlight the importance of acoustic factors in the formation of meaning in language units.

Keywords: Phonosemantics, volume measurement, vowel sounds, large-small opposition, acoustic motivation, Uzbek language lexicon.

Introduction: In the process of naming objects in the external world, their volumetric characteristics play a crucial role. The category of "volume" manifests itself as features perceived through human visual sensation, indicating the size of an object in terms of length, width, and height, its position in space, and generally the degree of abundance or scarcity of the object. These features are noted as one of the important motivating factors in the nomination process. The attribute of volume also holds a significant place in phonosemantics as one of the indicators of the connection between sound and meaning. S.V. Voronin, the Russian linguist who established the school of phonosemantics, notes that the symbolic relationship between sound and meaning is based on the properties of objects perceived by human senses, with features perceived through visual sensation occupying the primary position. Specifically: size - large / small; movement characteristics - fast / slow, various types of walking; distance - near / far; shape – round/pointed, elongated, and so on. In numerous studies in the field of phonosemantics, the semantic properties of sounds are primarily substantiated based on names expressing volume. In this context, the main focus is on vowel

sounds. In phonosemantics, it is often noted that units expressing volume align with the acoustic and articulatory properties of sounds. This is because sounds, due to their acoustic and articulatory nature, have given rise to certain semantic associations in the human mind.

Looking at the history of phonosemantic views, a linguistic analysis of the idea that sounds represent certain volume measurements is reflected in O. Jespersen's work "Symbolic Value of the Vowel I." He notes that the symbolic designation of the sound 'i' for small volume and the sound 'a' for large volume is reflected in the phonosemantic law of volume in Jonathan Swift's work "Gulliver's Travels," where the country of dwarfs is called "Lilliput," and the country of giant people is called "Brobdingnag." Jespersen observes that the narrow and thin form of the sound 'i' is actively used in naming small, light, insignificant, weak, and fragile things, and he proves this through words that reflect these meanings. This study presents words expressing the meaning of smallness with the sound "i" in various languages. For example, in English, little - small, few; mini - tiny - wee/weeny - tiny; skimpy/scrimp - flimsy - slim - slinky - are listed

alongside words petit in French and chico in Spanish, which denote the seme of smallness. These words deserve special attention as they encompass all lexemes related to the semantics of smallness involving the sound "i."

A psycholinguistic experiment conducted in 1929 by the American linguist E. Sapir experimentally proved that vowel sounds are an important indicator of volume measurement meaning. Participants in the experiment were presented with invented (nonsense) stimulus words "mal" and "mil," distinguished by a wide and narrow vowel, and were asked, "Which one denotes a large object, and which one denotes a small object?" More than 90% of the survey participants associated the word containing the sound "a" with a large object, and the word containing the sound "i" with a small object. This experiment in the field of phonosemantics is noted not only as important evidence that revealed the psychological foundations

of the connection between volume measurement semantics and certain speech sounds, but also as the first experimental test proving the connection of certain sounds with semantic meaning. It subsequently served as a fundamental study for similar experiments.

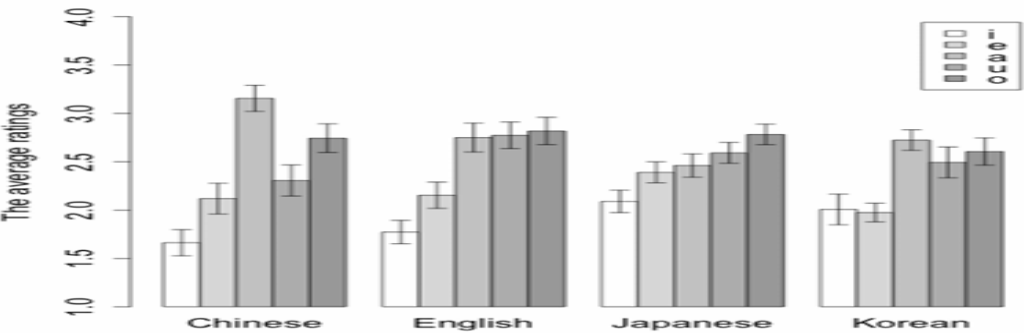
The ability of vowel sounds to express volume meaning is more clearly demonstrated in the research results of Azuko Shinohara and Shigeto Kawahara. These researchers involved speakers of Chinese, English, Japanese, and Korean in a survey to verify that phonosemantic regularity is common across different languages. The research conclusions are based on the survey results. For the experiment, words were created using a combination of four voiced consonants [b, d, g, z] and their corresponding voiceless counterparts [p, t, k, s], as well as five vowel sounds [i, u, e, o, a] that are present in the languages of all experiment participants. Below are the stimulus words used in this study:

(1) Table 1. List of stimuli.

Voiced	b	d	g	z
i	ibib	idid	igig	iziz
u	ubub	udud	ugug	uzuz
e	ebeb	eded	egeg	ezez
o	obob	odod	ogog	ozoz
a	abab	adad	agag	azaz
Voiceless	p	t	k	s
i	ipip	itit	ikik	isis
u	upup	utut	ukuk	usus
e	epep	etet	ekek	eses
o	opop	otot	okok	osos
a	apap	atat	akak	asas

Survey participants are presented with words and asked to evaluate the meaning of these words on a size scale (1. very small; 2. small; 3. large; 4. very large). Specifically, each participant is sequentially presented with the above stimulus words through a randomization program, and the participants

intuitively evaluate these words. According to the results, words containing the sound (i) received the lowest score across all languages, while words with the sounds (a) and (o) were rated larger compared to other vowels. You can see the diagram below that illustrates the results:



J. Ohala explains this phenomenon with the "physiological motivation theory." In his view, processes such as acoustic pressure, resonance, and voice timbre that occur when a person articulates a sound evoke certain emotional connotations in perception. For example, in the pronunciation of the broad vowel "a," the wide opening of the oral cavity and the intensification of low-frequency vibrations result in the sound being associated with "broad," "heavy," or "large." Conversely, the narrow articulation of the "i" sound produces a high frequency and conveys the semantics of "delicate" or "small." Therefore, Ohala interprets the sound-meaning relationship not only as a linguistic but also as a physiological phenomenon.

It is noted that vowel sounds are acoustically based on the frequency code hypothesis. According to this hypothesis, the resonant frequency is related to the size of resonant cavities. That is, low frequencies are generated in large resonant cavities. The smaller the resonant cavity, the higher the frequency. For example, the pronunciation of the sound "a" produces a low frequency due to the large oral cavity, while the pronunciation of the sound "i" has a high frequency. The resonant frequency is inversely related to its size. In the following sequence, as the resonant cavity increases from small to large, the frequency code decreases from high to low: [i] < [e] < [a] < [u] < [o]

Based on the idea that the aforementioned vowel phonosemantic processes expressing volume measurement are a general rule inherent in all languages, lexical units denoting volume measurement in the Uzbek language were analyzed.

As the main and neutral indicators of volume, the adjectives big - small are actively used in the Uzbek language. In particular, according to its phonetic structure, the word "katta" (big) contains a broad vowel in both syllables and semantically expresses the following main meanings.

Big - 1. Volume or size exceeding the norm or relatively large; enormous; opposite:small. O'roz brought a big watermelon from somewhere and put it in the middle. (Oybek, "Selected Works").

2. Excessive in composition, greater in quantity; opposite: small. A large army. A large team, and so on.

3. High in power, degree, or significance; great; magnificent. A great victory. A grand celebration. Great skill

4. Elder in age, older. As in eldest son, elder brother.

Additionally, in the Uzbek language there are lexical units such as large, great, grand, high, thick that express the meaning of bigness. All of these are stylistically marked words with connotative meaning, reflecting

"excess of volume measurement." The majority of these words also involve back-row rounded vowels and broad vowels.

We continue the analysis with the word "kichik" (small), which expresses a volume less than the norm. Both syllables contain a narrow and unrounded i and have the following meanings:

Small - relatively small in structure, volume, and size. Small forest. Small town. Small building, and so on.

2. Small in capacity or surface area; narrow. Small courtyard. The coat was too small for him.

3. Age below average, not reaching middle age; the opposite of elderly, young. Show kindness to the young, respect the elders. (Proverb)

4. Relatively younger (lesser in age). Such as younger son, younger uncle, two years younger.

5. Not significant or substantial in importance; trivial, insignificant. A small mistake, a minor observation, and so on.

In the Uzbek language, alongside the words kichik, kichkina (small), there are also adjectives denoting less than normal size, such as mitti, jimit, jajji, jikkak, jichcha, all of which contain the vowel i. While the lexeme kichik is a neutral word, mitti, jimit, jajji, jikkak are words with stylistic coloring and add intensifying or emphasizing meanings when expressing the concept of smallness. In particular, the word jajji is mainly used in reference to young children and has a positive connotation.

The words "big" and "small" always serve to express contrasting situations in speech. For example, you can see a vivid expression of this in the proverb "Listen to an elder, listen to a younger one." Just as these words create opposite meanings semantically, there is also a contrast in their sound composition. That is, the word "katta" (big) is formed with two broad vowels, while the word "kichik" (small) consists of two narrow vowels. Consequently, these words express size contrast not only semantically but also from a phonosemantic point of view.

However, not all words expressing volume or measurement necessarily adhere to this phonosemantic pattern. For example, the word "yirik" (large) expresses a large volume but is based on narrow vowels, while the word "mayda" (small) expresses smallness but is based on broad vowels. Such exceptions are also found in other languages. For instance, in English, words like "large" and "grand" express the meaning of bigness, and words like "little," "bitsy," and "minor" correspond to the phonosemantic pattern expressing smallness. However, the word denoting bigness, "big," and the word expressing the

meaning of smallness, "small," are noted as exceptions to this pattern. 1982.

CONCLUSION

In conclusion, it can be emphasized that the acoustic and articulatory properties of vowels play a crucial role in expressing volume and measurement meanings. Research conducted by S.V. Voronin, O. Jespersen, E. Sapir, J. Ohala, A. Shinohara, and S. Kavahara confirms that the tendency of wide vowels to convey largeness and narrow vowels to convey smallness in various languages is a universal phonosemantic trend.

The phonetic structure of the big-small opposition in the Uzbek language also supports this general pattern: the presence of wide vowels in the word *katta* (big) and narrow vowels in the word *kichik* (small) is directly related to their semantic content. In lexemes denoting largeness, such as *yirik* (large), *ulkan* (huge), *buyuk* (great), *yo'g'on* (thick), the prevalence of back and wide vowels is also observed. The majority of adjectives denoting smallness, such as *mitti*, *jimit*, *jajji*, *jikkak* are based on the narrow vowel "i," which reinforces the phonosemantic association.

However, words such as *yirik-mayda* in the Uzbek language are exceptions that do not follow this phonosemantic pattern, similar to words like big-small in English. Consequently, while a large portion of the lexicon expressing volume and measurement meanings in the Uzbek language conforms to general phonosemantic regularities, some lexical units may deviate from this trend due to specific trajectories of historical-phonetic or semantic development.

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