

Iconicity and its Representation in Japanese Onomatopoeia*

Elena Krivosheeva, Far Eastern State Humanities University
enl77@mail.ru

Abstract

Inherently iconicity is an interdisciplinary phenomenon, involving linguistic and textual aspects and linking them to visual and acoustic features. It is obvious that iconicity can be discovered in all circumstances in which language is created, ranging from language acquisition and processes of language change, to translation and the more literary uses of language.

This paper presents a historical overview of the iconicity arbitrariness and dilemma from ancient times to modern day. The two opposite patterns appear. One holds that language and reality are quite independent, and do not resemble each other, in other words, language is arbitrarily structured. The other claims that language and reality must resemble each other to some extent, and language thus has the iconic nature. In essence, whether there is a natural connection between the form of a linguistic sign and what the sign depicts has been the focus of the dispute.

In addition, through the sociolinguistic experiment we will try to prove the second principal of the iconic theory that the form resemblance does not exclude the acoustics system as such which makes onomatopoeic words sound differently in different languages.

Keywords

Iconicity, arbitrariness, Japanese language, Russian language, onomatopoeia

1. The Iconic Theory: From Socrates to modern day

The relation between words and real-world referents has intrigued scholars since antiquity. Early debates centered on the origin of words (as names for things), specifically, on the nature of their relation to the things they stand for. In Plato's *Cratylus*, the oldest documented of these debates, Socrates is asked to contemplate the question of whether names belong to their objects "naturally" or "conventionally."

It would certainly be inaccurate to claim that the *Cratylus* is primarily concerned with iconicity as Plato's main issue is a debate which emerged during pre-Socratic times and which was concerned with the question whether names, viz. words, are "correct"? Two different views on the matter – generally summarized as *physei* vs. *thesei* [φύσει vs. θέσει] – were already firmly established when

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Plato raised the problem in the *Cratylus*. According to the *physei* view on language names are “natural”, i.e. rendered by nature, which implies that names must be correct. Proponents of *thesei*, on the other hand, contend that referents (objects, persons, qualities, actions etc.) get their names by sheer convention.

The latter of the two possibilities, that form and meaning are linked by convention and tradition alone, has come to dominate modern thinking about language.

Plato is unable to solve the *physei* - *thesei* problem but he realizes, and evidences in his dialogue, that the method which was traditionally deployed to assess the correctness of names was seriously flawed. According to Plato, if it is true that names are or should be correct, this correctness ought to be measured according to their level of imitation of reality. Thus, the former *physei* - *thesei* debate is redefined in terms of iconicity in Plato’s dialogue.

Aristotle introduces a new conceptual level to the sign concept which enables him to discern two different relations within one single sign concept. First, a natural or a likeness relation between so-called “affections in the soul” (concepts or meanings, depending on which interpretation one follows) and reality. Secondly, it is a conventional relation between spoken sounds and the affections. Accordingly, Aristotle’s sign concept already distinguishes all basic elements and relations pertaining to the problem of iconicity in language.

There are two major theories about the way in which signs¹ acquire the ability to transfer information; both theories understand the defining property of the sign as being a relation between a numbers of elements.

In the tradition of semiotics developed by Ferdinand de Saussure the sign relation is dyadic, consisting only of a form of the sign (the signifier) and its meaning (the signified). The connection between them is arbitrary. A phoneme can only exist as it configures into relations with other phonemes in a linguistic system. Because phonemic systems of every language are patterned differently no cross-linguistic comparisons of sounds should be possible in principle.

Saussure acknowledged the existence of onomatopoeic words which seemed to contradict the principle of arbitrariness, but downplayed their role by stating that “such words are never organic elements of a linguistic system. Moreover, they are far fewer than is generally believed” (Saussure, 1959).

Even though, the idea of an arbitrary connection between form and meaning is generally associated with Saussure, John Locke was the first one to establish a firm foothold for the idea much earlier when he argued that the existence of different languages (with very different words for the same objects) is evidence against a “natural” connection between form and meaning. Since everyone perceives the world in the same way, there should be only one human language if properties of objects could in any determine the names given them. The persuasive force of this argument had a significant impact on the linguistics. Unfortunately this notion became dominant for many years in the scientific world. As a consequence, any word meaning gets decoded arbitrary, without any

¹ In modern semiotics, a sign is something that can be interpreted as having a meaning, which is something other than itself, and which is therefore able to communicate information to the one interpreting or decoding the sign. Signs can work through any of the senses, visual, auditory, tactile, olfactory or taste, and their meaning can be intentional such as a word uttered with a specific meaning, or unintentional such as a symptom being a sign of a particular medical condition.

reference to the physical features of the object it represents (which is dramatically opposed to iconicity).

It is important to mention that Locke's and Saussure's theories were in line with the linguistic consensus of the time. In 19th century Europe, linguistics as a field was to a large extent occupied with comparisons and reconstructions within the Indo-European language family. An exaggerated belief in the methods of comparative linguistics led linguists to believe that, through the application of sound changes, human language could be traced back to its very origin. In this pursuit, onomatopoeia was considered too crude to have been able to give rise to the number and variety of related word roots existing across the Indo-European languages. Not only did research focus almost exclusively on Indo-European languages, many also considered these to be superior to other languages. Inflecting languages such as Greek, German, Latin and Sanskrit were thought to be the best tools for expressing human thought, and they were thus placed on the highest stage of linguistic development (Ahlner and Zlatev, 2010).

The second theory was formulated by Charles Peirce as an innovative triadic model of the sign. In his theory Peirce emphasizes that the way we interpret a 'sign' is what allows it to be signified – what gives it its meaning. Peirce offered different principles for how to categorize signs according to their three triadic elements: sign or representamen (expression), object (content) and interpretant (motivated relation). It is crucial that the representamen and the object are related only “in some respect or capacity” and “not in all respects”; otherwise they would be identical and inseparable. This basis of relating the representamen to the object is a fourth entity in semiosis, the ground.

Based on the nature of the ground — that is, in what way a representamen stands for an object — Peirce divided signs into three so-called “ideal types”, the first of which is of central importance for our analysis. When a unit such as a phoneme seems highly motivated or natural with respect to some articulatory or acoustic criteria, it may be called an *iconic sign*, which refers, denotes, or communicates, by its resemblance to a sensation, feeling, or idea. There are also subtypes of iconic signs, depending on whether they communicate through their simple qualities as images, through analogous relations in their component parts as diagrams, or through parallelism with some-thing else as metaphors. The second logically possible relation between a sign and its referent is the *index*, which communicates through physical contingency or symptomatic signaling. The third logically possible sign type is termed the symbol, by which is meant a conventional link between a sound and an idea, without any apparent motivation. An ideal type of sound symbolism would seek to identify iconic and indexical relations, but all types of sound symbolism necessarily involve conventionally symbolic relations as well (Nuckolls, 1999).

According to the Russian linguist Zhuravlyov A.P., the perception of objects with similar acoustic shells gradually establishes a set of conditioned reflex connections between objects and sound which confirms sign's content: sound means object. A great number of those connections have a physical basis: sounds with similar acoustic characteristics escort the objects that evoke similar impressions (Zhuravlyov, 1974).

Anthropocentric approach defines the content of these connections as motivated. In case of onomatopoeic words it is motivated naturally. The natural motivation of “sound pattern” can be defined as the “object” or the sound signification. Consequently, the sign initially has a dual “structure” (Trofimova Elena and Ulyana, 2003).

Benveniste E., one of the anthropocentrism theory follower states that sign's dual structure, represented by acoustic shell and its meaning, is already fixed on the sub-conscience where there is no place for "meaningless" forms and "unnamed" contents (Benveniste, 1974).

Pointing at the connection between sound and meaning, Humboldt recorded, that it is not an "easy task to fully describe the nature of this connection, so often we can only guess" (Trofimova Ulyana, 2003).

In 1836 Wilhelm von Humboldt distinguishes three types of relationships between sound and meaning in language. The first class is what is generally called 'onomatopoeia' throughout the phonosemantic literature. It is based in acoustics rather than articulation and is limited to those referents which emit a sound: "The directly imitative, where the noise emitted by a sounding object is portrayed in the word..." (Magnus, 2001).

His second type most closely resembles Socrates' notion of phonosemantic imitation of a semantic 'essence' by the actual articulation of the phoneme. The linguist emphasizes the fact that objects evoking the same impressions are assigned words with predominantly same sounds: "The designation that imitates, not directly, but by way of a third factor common to both sound and object. It selects for the objects to be designated, sounds which, partly in themselves and partly by comparison with others, produce for the ear an impression similar to that of the object upon the soul" (Magnus, 2001).

This type tremendously influenced primitive word formation ways. Humboldt considers that as a consequence in all existing languages there should be a similarity or resemblance in the way of naming objects. In other words, he suggested the existence of *intralingua iconicity phenomenon*.

The third class is a designation by sound-similarity, according to the relationship of the concepts to be designated. Words whose meanings lie close to one another are likewise accorded similar sounds; but in contrast to the type of designation just considered, there is no regard to the character inherent in these sounds themselves. For its true emergence, this mode of designation presupposes verbal wholes of a certain scope in the system of sounds, or can at least be applied more extensively only in such a system.

In Japanese Linguistics from the language functionality point of view Hideo Kobayashi follows European tradition and supports conventional theory which is based on connection between sound and meaning. Kobayashi introduces a new angle to the theory by pointing out besides having "sign characteristic" onomatopoeic words contain a "hinting aspect" which is very typical for the language.

According to his theory the "hinting aspect" can be seen in sound mimicking while "sign characteristic" is evident only when reflecting a non-sound reality.

In a case of "sign characteristic" the relationship between the object and reflects the structure "object - representamen - interpretant", while in case of "hinting aspect" the sequence is the following: "object - its sound image - interpretant" (Chironov, 2004).

In our research we will stick to the second definition of iconicity Humboldt's classification.

2. Onomatopoeia

It is known that iconicity in any language is widely presented through sound symbolism and onomatopoeia. Both classes besides being phonetically motivated, form the object of phonosemantics study even though they differ by definitions.

The sound shell of *onomatopoetic* words is based on acoustic characteristics of living nature sounds (however, it is important to mention that phonetic toolkits used for sound imitation are often not the same in languages) while the *sound symbolic* class is based on NON – acoustic characteristic of denotation – an optical effect.

Sound symbolism is based on the synesthesia phenomenon², while onomatopoeia is a simple mimicking process of sounding reality without incorporating its internal sensations.

Though there have been certain opinions, stating that onomatopoetic words are the “artificial flowers” without roots. They are sterile, and unfit to express anything beyond the one object which they imitate” (Ahlner and Jordan, 2010), onomatopoeia is still considered to be the ideal material for identifying the connections between the form and sound as it was, and it is positioned very close to the universal substrate underlying all languages.

In the light of iconic theory the group of onomatopoetic words presents an interest for our research as they possess a primary motivation (direct dependence between sounds and acoustic characteristics of denotation).

The sounds imitated in onomatopoeia are typically animal sounds or the living nature sounds. Some of the words made by objects in motion or upon impact on other objects (particularly those referring to object motion and impact) also exhibit another type of iconic mapping called phonesthesia. In phonesthemes, a similarity of form, typically in word-initial or word-final consonant clusters, is correlated with a similarity of meaning.

Traditionally, the sound symbolic system of the Japanese language consisted of 擬音語 (*giongo*) group that refers to sounds made by living things and 擬態語 (*gitaigo*) group words depicting psychological states or bodily feelings.

More detailed classification incorporates 擬声語 (*giseigo*) group which refers to sounds made by living things. Only the sounds produced by organs of articulation can be represented in this category, excluding from this category woodpecker’s rattling (Chironov, 2004).

It is considered that human language can imitate all of the existing sounds. However, the Japanese language is considered to be very inflexible when it comes to phonetic variations. It is therefore interesting to observe the interpretation of onomatopoetic words of phonetic invariants and their place in systems of two languages (Japanese and Russian).

3. Experiment

In order to define the perception level of iconicity of Japanese onomatopoetic words (擬音語

² Synesthesia is a condition in which a sensory stimulus presented in one modality evokes a sensation in a different modality. See Ramachandran, 1999.

(*giongo*) / 擬声語 (*giseigo*) groups) a psycholinguistic experiment was conducted at various Universities in Russia and involved the survey of 64 non-Japanese speaking students from the age group 18 to 22 y.o. Experiment material represented 17 Japanese onomatopoeic words from two thematic groups: inanimate nature sounds and wildlife sounds. The primary criterion used for words selection for the experiment was the existence of the “onomatopoeic couples” in both languages. Students were instructed to listen to the material only once and select the analogue from the list of Russian sound symbolic words.

4. Results

	Transcription	Russian Analogue	Transcription	Recognizability
擬音語	sounds made by inanimate objects			
ちよきちよき	chokichoki	чик-чик	chik-chik	81%
りんりん	rinrin	дзинь-дзинь	dzin-dzin	98%
とんとん	tonton	тук-тук	tuk-tuk	70%
ちくたく	chikutaku	тик-так	tik-tak	83%
ぽたぽた	potapota	кап-кап	kap-kap	25%
とかつと	tokatto	бац	bats	13%
ぼんぼん	bonbon	бум-бум	bum-bum	19%
擬声語	sounds made by living things			
があがあ	gaagaa	кря-кря	krya-krya	40%
もーもー	mo:mo:	му-у	mu:u:	43%
からから	karakara	ха-ха-ха	ha-ha-ha	19%
こけこっこ	kokekoko	кукареку	kukareku	91%
ちゅうちゅう	chu:chu:	пи-пи-пи	pi-pi-pi	8%
わんわん	wanwan	гав-гав	gav-gav	47%
ぶうぶう	bu:bu:	хрю-хрю	hryu-hryu	9%
にゃーにゃー	nyanya	мяу-мяу	myav-myav	45%
かっこ	kakko	ку-ку	ku-ku	34%
けろっ	kero'	ква	kwa	21%

Table 1. Japanese onomatopoeic words recognized by Russian listeners (%)

5. Discussion and results

According to the results in Table 1 the percentage of Japanese onomatopoeic words recognized by Russian students was relatively high. The most widely recognized words were りんりん *rinrin* (analogue in Russian динь-динь), ちくたく *chikutaku* (analogue тик-так) and こけこっこ *kokkokko* (analogue in Russian кукареку). A high degree of recognizability can be explained by certain similarities in the phonetic systems of the two languages.

Interestingly, those Japanese onomatopoeic words that are not phonetically similar to the Russian analogues were also identified correctly. This can be largely explained by such linguistic phenomenon as intralingua iconicity that tends to preserve the quality of nature sounds by using various linguistic technics to transfer them between languages.

Nevertheless, there were a few words that caused difficulties with recognition. We can assume in these cases the specific, not typical for the Russian language phonetic shell of Japanese onomatopoeia prevented those words from being recognized by the listeners. That proves that the level of iconicity can be different even in onomatopoeic words.

Thorough analysis of the experiment results indicates that the recognizability of sound symbolic words from different systems languages occurs as a result of the following factors:

1. Due to the external phonetic similarity that exists between onomatopoeic words of different systems languages. This phenomenon is called *Universal Language Iconicity*;
2. The preserved natural-born sounds quality of onomatopoeic words of unrelated languages regardless of the difference between the phonetic methods (technics) used for its denotation. This phenomenon is called *Intralingua iconicity*.

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About the Author

Elena Krivosheeva is postgraduate student in the Shukshin State Academy of Education, Byisk Russia. The research lies in a Language Theory area with the focus on the iconic representation in Japanese and Russian onomatopoeia.

Currently working as a lecture in Japanese language history at Far Eastern State Humanities University, Khabarovsk, Russia.