

THE PHONOLOGICAL ANALYSIS OF ANIMAL SOUNDS IN ENGLISH AND INDONESIANS

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ABSTRACT

People in different countries have their own methods on how they imitate the sounds of the same animals. The real example is that Englishmen imitate the sound of cat as /mi:'aʊ/. On the other hand, Indonesians imitate the sound of the same cat as /meɔŋ/. Those sound, in term of linguistics, are considered as onomatopoeic words. This study is about animal onomatopoeic word where the objective of the study is to find both the similarities and differences between how Englishmen and Indonesians imitate the sound of the same animal in term of phonetic features. To achieve the objective of the study, the writer compiles list of twenty animal onomatopoeic words both from English and Indonesian languages. Then the sounds are analyzed in terms of phonetic and phonological theories. As the result, there are similarities as well as differences in both consonants and vowels.

Keywords: Phonological Analysis, Onomatopoeia, Animal sounds, English and Indonesian language.

Human have an ability to sense what is happening around them. With the use of their auditory system, they are able to hear useful and useless sound. Useful sounds are desired sounds while useless sounds are unwanted sounds named noise.

The easiest way to understand the term useful sound is to see it as a unit of speech which is produced by the human speech organs. The sounds are represented by symbols as in the International Phonetic Alphabet (IPA). International Phonetic Association (Ann, 1999: 3) states that IPA refers to a set of symbols which would be convenient to use, but comprehensive enough to cope with the wide variety of sounds found in the languages of the world in written form. For example, the symbol /i:/ represents the vowel sounds in the following words see (/si:/), sea (/si:/), and bee (/bi:/). In a contrast, noise (ambient noise or background noise) is a distraction and is also often meaningless.

Human need an action of identification process in order to know something new. They will not know the word 'bang' until they know about the context it refers to. In English, the word 'bang' can be used to represent a harsh noise as in the sound gun made, and the sound produced when people hit table or door.

In English, the sound /miaʊ/ (meow) can be used to imitate the sound of a cat, the sound /baʊwaʊ/ (bow-wow) can be used to imitate the sound of a dog, as well as the sound /mu/ (moo) can be used to imitate the sound of a cow. Those examples show us that human use sounds to imitate the sound of something. This sense, where human use natural sound to name something, is considered as onomatopoeia.

Onomatopoeia is generally known as a branch of linguistics related to the study on how people imitate the sound. Pharies in Sobkowiak (1990: 16) describes Onomatopoeia as a word that is considered by convention to be acoustically similar to the sound, or the sound produced by the thing to which it refers. Further, Bredin in Dofs (2008: 1) states that onomatopoeia is a universal possibility in all languages. As in Indonesia, the sound of cats can be imitated by the word 'meong' while in the US, cats can be imitated by the word 'meow'. Moreover, a word which straightly reflects the concept it convey is considered to be iconic.

Iconicity refers to a certain condition when sounds and meaning are identical, when there is a natural resemblance between a sign and the concept it refers to. Moreover, full iconicity will be a word which can be recognized by everyone despite languages. There is an exception towards iconic named arbitrary.

The simplest way to know arbitrary is to see it as the words which are used only have meaning for other speakers of the same language. For example, the animal which is called "frog" by English native speaker would be "grenouille" for a Frenchman and "katak" for an Indonesians, and none of these words would make sense for speaker of German.

As far as the researcher's knowledge, research that analyzes the sounds of the animals in different countries is still difficult to find. Based on those idea, the writer comes to conduct an investigation

related to the onomatopoeia, in this case, the animal sounds imitated by English native speakers and Indonesians.

LITERATURE REVIEW

Onomatopoeia

Languages generally are arbitrary. It is because the words that are used only have meaning for other speakers of the same language. The animal which is called “frog” by English native speaker would be “grenouille” for a Frenchman and “katak” for an Indonesians, and none of these words would make sense for speaker of German. One exception to arbitrariness, however, is onomatopoeic words: they are imitations of natural sounds. Further, Bredin in Dofs (2008: 1) states that onomatopoeia is a universal possibility in all languages. In the sense of definition, Pharies in Sobkowiak (1990: 16) describes Onomatopoeia as a word that is considered by convention to be acoustically similar to the sound, or the sound produced by the thing to which it refers.

Phonetic and Phonology

There are two sub-disciplines in linguistics which deal with sound, namely phonetic and phonology (McMahon, 2002: 1). Phonology is a branch of linguistics closely associated with phonetics. Dealing with language hierarchy, ‘Phonetics’ comes first and it is followed by ‘phonology’.

Discussing about phonology, Lass (1988: 1) writes that phonology refers broadly to the sub discipline of linguistics concerned with the sounds of language, while in more narrow terms, they argued that phonology is concerned with the function, behavior and organization of sounds as linguistic items. In term of phonetic, Lass (1988: 1) also says that phonetic concerns with the physical production, acoustic transmission, and perception of the sounds of speech (see also McMahon, 2001: 1).

Speech Sounds

In relation to the discussion above, speech sound can be symbolized using International Phonetic Alphabet. International Phonetic Association (1999: 3) states that IPA refers to a set of symbols which would be convenient to use, but comprehensive enough to cope with the wide variety of sounds found in the languages of the world in written form.

In term of phonetic, speech sound can be classified in to consonants and vowels. Based on Idris (2011: 7), Consonant is defined as a speech sound where the air stream from the lungs is either completely blocked (as in plosive or stop consonant /p/ or /t/), partially blocked (as in lateral consonant /l/) or where the opening is so narrow that the air escapes with audible friction (as in fricative /f/ or /z/).

English has two classes of consonant sound: one of the /t k s/ type with stronger and voiceless articulation named fortis and another of the /b d z/ type whose articulation is weaker and potentially voiced named lenis (see Indriani, 2001: 8). Further, there are two important features used to describe speech sounds, they are place and manner of articulation. Discussing about place and manner of articulation, Collins and Mees (2013: 45-46) states that place of articulation tells us where the sound is produced while manner of articulation tells us how the sound is produced. In more detail, place of articulation names the speech organs that are primarily involved in the production of particular sound while manner of articulation refers to the type or degree of closure of the speech organs involved (Skandera and Burleigh, 2005: 13-14).

As opposed to Consonant, Idris (2011: 15) also describes vowel as a speech sound produced by which air-stream from the lungs is not blocked in any way in the mouth or throat, and which is usually pronounced with vibration of the vocal cords. Further, it can also be defined as any speech sound produced without any obstacle anywhere in the mouth or throat. This is in line with Ogden (2009: 56) that describes Vowels as syllabic sounds made with free passage of air down the mid-line of the vocal tract, usually with a convex tongue shape, and without friction.

In addition to vowel or monophthong, English vowel has 8 sequences consisting of two sounds. More precisely, Skandera and Burleigh (2005: 38-39) explains that the sequences start with a monophthong, and the quality then changes, but never quite reaches, another monophthong through a gliding movement of the tongue. Those vowel sequences are called diphthong. In this sense, some people say there are 9 in English, but some others say there are only 8, because the diphthongs /ɔə/ can be replaced by the vowel /ɔ:/. Further, Skandera and Burleigh (2005: 40) says that English also has

typical vowel sequences that consist of three sounds. They are called triphthong. So triphthong is start with monophthong, then glides to another monophthong, and glides to the third. In relation to the consonants and vowels, there are some sounds that are not found in English but they are used in Indonesians, and vice versa. These phenomenon are known as phonotactics of English and Indonesian consonants and vowels (Pallawa, 2007: 126).

RESEARCH METHOD

The study uses qualitative descriptive as research design. Concerning a qualitative descriptive research, Bogdan and Taylor, in Moleong (2002: 3), argue that qualitative method as research procedure, produce descriptive data in the form of written or spoken words from people and observable behavior. In one way, this research is descriptive because it attempts to describe the imitations of animal sounds made by Englishman and Indonesians. In the other way, the research is qualitative because it is not dealing with numbers.

Source of Data

The data of this research is the onomatopoeic words named by English native speakers and Indonesians. The researcher collected the data from various websites as listed below.

1. Derek Abbott's animal noise page at The University of Adelaide's website. It was retrieved at <http://www.eleceng.adelaide.edu.au/Personal/dabbott/animal.html>, accessed on March 7, 2015.
2. Woodward English website at http://www.vocabulary.cl/Lists/Animal_Sounds.htm, accessed on March 8, 2015.
3. My English Pages website at https://www.myenglishpages.com/site_php_files/vocabulary-lesson-sounds-animals.php, accessed on March 7, 2015.
4. Tatyana's writing at Kompasiana website retrieved at <http://muda.kompasiana.com/2011/09/23/suara-binatang-dalam-bahasa-jepang-indonesia-jerman-dan-italia-397781.html>, March 7, 2015.
5. Ari Julianto's writing at his blog. It was retrieved at <http://skripsi-fkip-inggris.blogspot.com/2013/12/onomatopoeia-in-english-and-indonesian.html>, accessed on March 7, 2015.
6. Organisasi website at <http://www.organisasi.org/1970/01/nama-suara-yang-dikeluarkan-atau-dihasilkan-oleh-hewan-suara-hewan-binatang.html>, accessed on March 8, 2015.
7. Friend Blogger's blog at <http://friendblogger.blogspot.com/2013/04/suara-binatang-menurut-bahasa-indonesia.html>, accessed on March 8, 2015.
8. Ririen Dias' writing at her blog at <http://riendias.blogspot.com/2011/05/onomatopoeia-suara-bahasa-bahasa-suara.html>, accessed on March 8, 2015.

Data

The data used in this study is twenty animal onomatopoeic words in English and Indonesians.

Data Analysis Technique

The researcher divides it into three stages. In first stages, the collected data is transcribed using International Phonetic Alphabet terms. In the next stage, transcribed data then analyzed using phonetic and phonological terms. In the final stage, the analyzed data is reflected in form of text that describes and explains the data.

ANALYSIS

Onomatopoeic word for bee

No.	Name of animal	Imitated by Englishmen	Imitated by Indonesians
1	Bee	Buzz	Ngung

At the table above, Englishmen imitate the sound of bee made as /bʌz/ while Indonesians imitate it as /ŋʊŋ/. Thus English people say that the bees are buzzing while Indonesian people say that the bees are berdengung. For Englishmen, they use vocal sound /b/ as initial sound. In term of place of

articulation, where in the vocal apparatus a sound is produced, the /b/ sound is categorized as bilabial sound (Indriani, 2001: 8-14). In term of manner of articulation, how speech sounds are produced based on the type of closure made by the vocal organs, the /b/ sound is categorized as plosive sound in complete oral closure (Roach, 1991: 30-33). In a contrast, Indonesians use /ŋ/ sound as initial sound. In term of place of articulation, this sound is categorized as velar sound while in term of manner of articulation the sound is categorized as nasal sound (Skandera and Burleigh, 2005: 20-23). Further, in relation to the position of the vocal cords, the sound /p/ and /ŋ/ are considered as voiced consonants.

When it comes to the medial sound, both Englishmen and Indonesians use vowel respectively as in /ʌ/ and /u/. Based on the shape of the mouth, /ʌ/ sound is back open-mid vowel while /u/ sound is back close vowel (Ogden, 2009: 56-60). Further, based on lip shape, /ʌ/ sound is categorized as unrounded vowel while /u/ sound is rounded vowel (Widiati 1998: 23-25).

In the final sound, the Indonesians use the same consonant as in initial sound while Englishmen use consonant sound /z/. Further, Indriani (2001: 8-33) classifies the sound as alveolar fricative sound. In term of phonotactics of the English and Indonesian consonants and vowels, English do not use /ŋ/ sound in initial as in /ŋuŋ/. On the other hand, Indonesians do not use the /ʌ/ sound in initial, medial, or even final. Even though there are differences, both English and Indonesians use the same pattern to imitate the sound of be made. The pattern is the sound made by fast vibration of bees' wing. From those description above, it can be concluded that the sound of bee made in English and Indonesian language have differences on initial, medial and also final positions of phoneme.

Onomatopoeic word for dog

No.	Name of animal	Imitated by Englishmen	Imitated by Indonesians
2	Dog	Bow-wow	Guk-guk

/bau.wau/ is what Englishmen use to imitate the barking sound of dog made. Thus English people say that the dogs are barking. They use bilabial plosive consonant /b/ as initial sound then followed by /a/ and /ʊ/ vowels. According to the tongue position, the /a/ sound is considered as front open vowel while /ʊ/ sound is a short, half- close, back vowel (Widiati, 1998: 23-25). In the second syllable as in Bow-wow, Englishmen use bilabial semi-vowel consonant /w/ then followed by /a/ and /ʊ/ vowels. Those two combination of vowel, in a single syllable, are considered as a diphthong (Roach, 1991: 20-22).

On the other hand, /guk.guk/ is imitation making sound used by Indonesians to represent the barking sound of dog made. Thus Indonesian people say that the dogs are menggonggong. As can be seen in the table, the imitation making sound of dog in Indonesian language has two syllable. The first and second syllable share the same sounds. Indonesians use consonant /g/ as initial sound, followed by rounded vowel /u/, then continued with consonant /k/. Further, in relation to place and manner of articulation, Ogden (2009: 96-98) classifies both /g/ and /k/ as velar plosive sound. Furthermore, the vowel /u/ is classified by Widiati (1998: 23-25) as a close back vowel sound. From those description above, the differences happens in the initial position as in term of place of articulation, medial position, and final position.

Onomatopoeic word for duck

No.	Name of animal	Imitated by Englishmen	Imitated by Indonesians
3	Duck	Quack	Kwek

In the table above, Englishmen imitate the sound of duck made as in /kwæk/. Thus English people say that the ducks are gabbing. They use voiceless consonant /k/ as initial sound. In terms of place and manner of articulation, the /k/ sound is categorized as velar plosive sound (Roach, 1991: 30-33). In relation to the vocal cords, however, the /k/ sound is considered as voiceless consonant (Indriani, 2001:

8). When it comes to the medial sound, Englishman use phoneme /w/ then followed by unrounded vowel /æ/. The phoneme /w/, in term of place and manner of articulation, is considered as bilabial semi-vowel sound (Skandera and Burleigh, 2005: 20-25). In the final sound, they use the same /k/ consonant sound as in the initial one.

In the other side, Indonesians imitate the sound of duck made as in /kwek/. Thus Indonesian people say that the ducks are bersuara. Here, Indonesians use velar plosive consonant /k/ as Englishmen do in the initial sound. In the medial sound, Indonesians use bilabial semi-vowel /w/ followed by unrounded vowel /e/. Further, in relation to the position of the tongue, Widiati (1998: 23-25) classifies the /e/ phoneme as front half-close sound. Then, in the final sound, they use the same voiceless consonant /k/ as in the initial sound. According to those description above, the differences happens just in the medial position as in /e/ and /æ/. In term of phonotactics of the English and Indonesian vowels, Indonesians do not have vowel /æ/ as in English.

Those similarities and differences are caused by the nature of English and Indonesians language. In general, language is arbitrary. To make it simple, in order to imitate the sound of bee, Englishmen use the word 'buzz' is correct as well as Indonesians use the word 'ngung' is also correct. This is in line with Dofs (2008: 1) that shows the arbitrariness of language as follows,

Languages are in general arbitrary because the words that are used only have meaning for other speakers of the same language. The animal which is called "horse" by an Englishman would be "cheval" for a Frenchman and "häst" for a Swede, and none of these words would make sense for a speaker of German.

Furthermore, in terms of phonetic and phonology, there are some sound used in English but the sound are not found in Indonesians, and vice versa. It happens because other languages have their own ways of representing sounds in the world (Okrent, 2013). Let's consider the sound of duck as an example. To Englishmen, they use /kwæk/ in order to imitate the sound of duck while Indonesians use /kwek/ in order to imitate the same animal. The differences happens in the medial position where Englishmen use the vowel /æ/ while Indonesians use vowel /e/. It is different from each other because Indonesians does not have vowel /æ/ as in English (Pallawa, 2007: 126). Another example is the sound of bee where English speaking country imitate it as /bʌz/ while Indonesians imitate it as /ɲuŋ/. In relation to the imitation, English do not use /ɲ/ sound in initial as in /ɲuŋ/ while Indonesians do not have the /ʌ/ sound in initial, medial, or even final (Ibid).

In relation to the above issue, Abbot in Nunn and Rosen (2014) says that the differences happened because of cultural linguistics matter. Further he said that English speaking countries have rather more sound words for dogs (woof, yap, bow wow, ruff, growl) than in any other language since they tend to have the highest dog ownership per capita. As to Indonesians, since the ownership of dog per capita is not as much as English speaking countries they just imitate the sound of dog as /guk.guk/. The Abbots view is the same as Coren view which states that science has shown that virtually all dogs also can understand the barks of other dogs regardless of where they come from, however the way that humans hear those barks differs depending upon the language that people speak and the culture that they live in (2012).

CONCLUSION

The same animals produce similar sound, no matter where they are. That is, a bird in Indonesia is chirping, and a bird in America is also chirping. To Indonesians people, however, the sound of chirping is imitated as "pit". American people, however, the sound of chirping is "tweet".

Based on the twenty animals imitated by Englishmen and Indonesians, most of them have different sounds in all positions (initial, medial and final), such as bee (/bʌz/ vs /ɲuŋ/), dog (/baʊ.waʊ/ vs /guk.guk/), goat (/na:/ vs /mbek/), horse (/nei/ vs /hɪhɪk/), lion (/ra:/ vs /aum/), mouse (/i:k/ vs /tʃɪt/), owl (/hu:t/ vs /kuku/), wolf (/həʊl/ vs /au:/), and monkey (/wu:p/ vs /u.uk.a.ak/). The rest of them have differences in diverse position.

The sound of crow (/ka:k/ vs /gak/) has a different sounds in initial position while the sound of chick (/tʃi:p/ vs /tʃɪap/), duck (/kwæk/ vs /kwek/), and frog (/krəʊk/ vs /krɒk/) have a difference in medial position. Further, the sound of bird (/twi:t/ vs /pɪt/) and pig (/ɔɪŋk/ vs /ɲɒk/) have differences in initial and medial positions. Furthermore, the sound of cat (/mi:'aʊ/ vs /meɔŋ/), hen (/kækl/ vs /kɒtek/) and rooster (/kɒk.ə.du:dl.du:/ vs /ku.ku.ru.juk/) have differences in medial and final positions. From those differences above, there are still similarities in another position of the phonemes, e.g. the sound duck

made has similarities as in initial and final position (/kwæk/ vs /kwek/). Further, the sound rooster made is not only has similarity in initial phoneme but also in term of syllable. Both Englishmen and Indonesians use the long syllable respectively as in 5 and 4 syllables.

In a contrast, there are two animals that imitated the same way by Englishmen and Indonesians. They are the sound of cow (/mu: /) and snake (/f:/). For the sound cow made, even though the imitation sound is the same, the onomatopoeic words is a bit different as in 'muu' and 'moo'.

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