
Questioning the Terms: “Regular and Irregular Verbs” in English

Yusuf Al Arief*

Universitas Lambung Mangkurat, Jl. Brigjen H. Hasan Basri No.3, RW.02, Pangeran, Banjarmasin Utara, Kota Banjarmasin, Kalimantan Selatan 70124

ABSTRACT

English verbs have unique inflectional markers which show the past tense. There are two inflectional markers that become the categorization of these verbs. The first marker is the additional morpheme [d] or [ed]. All verbs with this marker are categorized as regular verbs. The second marker is the verb morphophonemic change like the word ‘sing’ [+present] and ‘sang’ [+past]. The verbs of this kind are categorized as irregular’ verbs. Simply, the regular verbs are those whose changes can be morphophonemically predicted while irregular verbs are the ones whose changes are morphophonemically unpredictable. This research is aimed to figure out whether there are morphophonemic inflectional patterns for irregular verbs. This paper is descriptive qualitative research. The data were collected using observation with note taking technique. I analyzed the data using distributional method. The result of the analysis shows that there are four additional sounds added to the ‘regular’ verbs such as [d], [t], [ɪd], and [əd]. I also found that the morphophonemic changes in the irregular verbs are influenced by the syllable number, the positions, and the environments of the peak sounds. These findings prove that the term “irregular and regular” is not fully appropriate to classify the verbs.

ARTICLE INFO

Paper type:
Research Research

Article history:
Received: 11 November 2017
Revised: 13 December 2017
Accepted: 15 December 2017
Available online: xxxx

Keywords:

- Regular
- Irregular
- Inflection
- Morphophonemics

1. Introduction

English is one of the most widely spoken languages used by people since it is agreed as an international language. Spoken by more than 340 million people as the first language in the United Kingdom, the United States, and the former British Empire, English is the largest of the occidental (Baugh & Cable, 1978). English has unique or special characteristics that differentiate it from other languages. From grammar books, I found that every part of English has general patterns that may be applied in the language which help the speakers to produce the language and the learners to understand it. However, there was one thing that became my concern. If there is a statement that every part of language has rules which manage them, why could there be uncertain condition in the verbs of American English and British English? As we know, verbs in English are divided into two: regular verbs and irregular verbs. Regular verbs are verbs that follow the general rule by attaching [-d] or [-ed] at the end of the words to form the past verbs (Hariyono & Carthy, 2008) and Irregular verb is group of verbs that has no clear rules in forming the past verbs (Hariyono & Carthy, 2008). Linguistically, the term regular is the categorization for verbs that can be morphophonemically predicted because they have the same additional morphemes and sounds to form the past ones. On the other hand, the term irregular is the categorization for those verbs that morphophonemically unpredictable. At the moment I collected the verbs, I found that irregular verbs that were possible to group by similar sound changes they shared.

* E-mail Addresses: yusufalarief@gmail.com

doi: <http://dx.doi.org/10.14710/parole.v6vi2i.16519>

The objectives of this research are to find the patterns of verb changes and create the morphophonemic rules of the verb changes using the distinctive features and to redefine the term 'regular' which is claimed as morphophonemically predictable and 'irregular' which refers to 'no regularity' claimed to be morphophonemically unpredictable. The theory used in this paper is morphophonemics, which refers to the process of morphology that involves sound in it. The explanation is supported by the distinctive features of generative phonology theory. I expect that this research result will be useful in language research related to morphological process in the English verbs inflection. I also hope that the result will also be useful in teaching English, especially in helping the students to memorize the verb changes more easily and faster.

2. Review of Related Literature

2.1. Previous Studies

Previously, Yusuf (2012) used the same theory, the generative morphology, to talk about the morphological process in Bahasa Indonesia. He viewed the data on his research with item and process and word and paradigm in order to see whether there is correlation between the derivative words with the root *cangkul*. He stated that the derivative word *mencangkul* (with the element *meN-*) has the root *cangkul*, the derivative word *pencangkul* (with the element *peN-*) has the stem *mencangkul* and the derivative *pencangkulan* (with the element *peN--an*) has the stem *mencangkul*. He stated that the derivative elements of [*meN-*], [*peN-*], [*peN--an*] are also related since they have the same stem, *mencangkul*.

Using morphonemics theory, Komenda, Maroko & Ndung'u (2013) tried to study the lengthening sound in South Western Kenya language, the Ekegusii. According to their research, all the seven basic Ekegusii vowels have a compensatory lengthening when the phonetic environments are altered. Compensatory lengthening of vowel which is carried out as a surface realization of the morphemes interacts through tmorphological prefixation. He stated that the first vowel height and the environments determine how the condition of hiatus is dismissed.

Related to the object of this study, there were some studies conducted with various techniques and approaches. The first one was Ling (1994) who conducted research in attempt to find the pattern of English verbs using logarithm. His research ended up finding the pattern of regular verbs. As for the irregular verbs, the logarithm system he used was not able to identify or to make the regular pattern. This research was continued by Bagci (2005) from Turkey University who used the different logarithm. Based on his research, using inductive machines algorithms such as ID3 and C4.5, he stated that there was possibility of regularities in English irregular verbs. Both Ling (1994) and Bagci (2005) presented the result in numerical data showing the possibility of the patterns.

Unlike the previous studies, I tried to analyze the verb changes more deeply. I analyzed the data using the same theory, generative morphology-morphophonemics to find the patterns and give the concrete patterns of the verb change. Therefore, I do not only propose that there are morphophonemic patterns of the verb but also give the patterns of the verb which are not numerical description as the previous studies.

2.2. English Verbs

English sentence has a rule that sentence must consist of at least two words: Subject and Verb. From grammar books available at school, library or any other resources, it is common that verbs are divided into two categories: Regular Verbs and Irregular Verbs. The distinction between regular verbs and irregular verbs is a very simple one. Orthographically, regular verbs are those verbs that to form the past, [-d] or [-ed] are used as the inflectional markers. These verbs do not undergo substantial changes while changing forms between tenses. Morphophonemically, these verbs are claimed to be predictable because they always change to the same form with the same additional sounds. The other category, the irregular verbs, are those verbs that undergo substantial changes when changing forms between tenses. The changed forms of these verbs are often orthographically unrecognizably different from the originals. Morphophonemically, irregular verbs are issued as having unpredictable changes. These changes are classified as inflectional process with various markers of tense. This research was about the sound involved in verbs changes. Therefore, we are not separated from the syllable of English verbs. One of the experts, Katamba (1996), said that syllable is a unit composed from consonant and vowel that becomes the sequence organization in a certain language. Every syllable has a peak which makes the

sequencing systematic. Peak is the main part of sound in a syllable. It is the center of a syllable in any languages and the orientation of the sound sequencing. In English, vowel is commonly taken as the peak. Let us see some examples of English syllable. ['dri:m] is one-vowel word with sound [i] as the peak. As for [br'gm], it has two syllables. The first syllable is [br] with vowel [ɪ] as the peak and the second syllable is [gm] with vowel [ɪ] as the peak. In summary, syllable has the function to constraint the combination of consonants and vowels, regulate the sub-segmental structure, and serve the unit of phonological hierarchy like stress, tone, and duration (Katamba, 1996).

Based on the grammar books (Azar, 1999), there is no way to tell what form an irregular verb is going to take in a changed tense; the only option for an English speaker is to commit the changes to memory. It will become a matter of habit. This was the point I wanted to change through the research I conducted.

2.3. Inflection and Generative Morphology

According to Lieber (2009), morphology is the study of word formation, including the ways new words are coined in the languages of the world, and the way forms of word are varied depending on how they are used in sentences. One of the study objects in morphology is inflection. Inflection is the properties of morphological marking on a lexeme (Booij, 2005). This marking makes the lexeme have various forms which refer to the grammatical use of the words. This marking of English verbs I am discussing is the tense inflection. The inflection makes two commonly known categories I stated above: regular and irregular verbs.

One of the theories talking about morphology is Transformational Generative suggested by Chomsky. Principles of generative morphology, according to Chomsky, generally can be described in some explanations. First, generative morphology is a theory about competence which refers to knowledge owned by native speaker about his own language and not about performance which refers to the use of language in daily life of the native speaker. Generative morphology is based on competence and not performance because linguistic theory is created to find the mental realization that becomes basic of someone's behavior. Second, language is creative and innovative, meaning that a speaker can create various and new sentences, understand them and analyze the acceptance of those sentences in daily life. Third, generative morphology is a tool to analyze and formulate the rule of forming a sentence, interpreting the sentence, and pronouncing it. Fourth, language is the mirror of one's thought, meaning that language helps people to understand others' thought (Ba'adulu & Herman, 2004).

2.4. Morphophonemics

In morphology, there are some aspects which are related to phonology. These aspects occur when the morphological process involves the sounds in it. The study on this event is known as morphophonology or morphophonemics (Aronoff & Fudemen, 2011). It has analysis that often involves an effort to create the formal rules which are used to predict the regular sound changes that happen to certain morphemes of a certain language. These rules convert a theoretical underlying representation to be the realization form which is actually heard. The segment changes of this morphemes composing from the underlying representation are called morphophonemes. They consist of morphemes which are combined and they affect each other's sound structure. This results in various pronunciations while the morpheme is the same.

An example of this phenomena in English (Hayes, 2009). He explained that we can see an example of this morphophonemic alternation in the plural morpheme, written as "-s" or "-es". The pronunciation alternates between [s], [z], and [ɪz], as in 'books', 'bags', and 'houses' respectively. A phonological analysis would assign to these three ending sounds of the phonemic representations /s/, /z/, /ɪz/ (Aronoff & Fudemen, 2011). However, on a morphophonemics level, they may all be considered as forms of the underlying object /z/, the morphophoneme. The various forms it takes are related to the segment at the morphemes end where it is attached. These dependencies are explained by the rules of morphophonemics. Another example of the English behavior is the past tense marker in form of ending "-ed". It can be pronounced [t], [d] or [ɪd], as in 'wished', 'dragged' and 'planted'.

2.5. Item and Process Approach

"Item and Process" is a morphological approach to the morphological process from simple words to complex words (Aronoff & Fudemen, 2011). There was a proposal of an idea that this approach, or said it as theoretical

framework, morphemes are as part of rules (Lieber, 2009). He stated that it is because the morphological rules contain the processes or operations that act on free morphemes.

An example of this approach works in word ‘books’ which results at the time the lexeme ‘book’ undergoes the function of ‘plural making’ (Aronoff & Fudemen, 2011). Regularly, this kind of process add segment /-z/ that is realized as /-s/ after most of the voiceless segments, and as /-↔z/ following the sibilants and affricates like in ‘roses’. In the orthographic form, we may see that it will always be written as [-s] or [-es]. The problem is when it is applied in daily life speaking, we find that there are more than just those two allomorphs. Using IP approach, we can distinguish whether the allomorph used is [-s], [-es], [-z], or [ez].

This approach can also see the inflectional and derivational processes like zero inflection or zero derivation since it sees the process from the phonological aspect. We can see the example of this case in the verb ‘overflow’ that transforms into ‘overflow’ in the noun form. When someone reads the words, they may not find the difference. However, when he sees it from the phonological view, he will be able to find that those two words are different in the stressing position. This kind of formation can only be seen when someone applies the phonology within the morphology. The approach to analyze it is called the item and process approach. It was proposed that this approach can probably be used to see the changes of vowel in irregular verb tenses like the sound /ɪ/ in [sɪN] that changes into /æ/ in [sæŋ] (Lieber, 2009). He gave an example of the sound change:

C ɪ N → C æ N
 [- past] [+ past]
 C: Consonant, N: Nasal

2.6. Distinctive Features

This research is talking about the phonological view in the approach. It cannot be separated from the distinctive features theory that has the smallest meaningful set which makes a phoneme different from the others. The distinctive features do not only define the possible phonemes of human languages, but also define the phonological rules (Katamba, 1996).

While in traditional phonology the smallest meaningful unit is the phoneme, the smallest meaningful unit in generative phonology is the distinctive feature. This feature allows a linguist to differentiate a sound from the others and make it possible to create universal rules for phonological events. He summarized the distinctive features as follows:

Table 1. Distinctive features matrix for vowels

	i	ɪ	y	u	ɛ	ɜ	ə	ɨ	ɘ	ʌ	ø	ɑ	ɔ	æ	a	ʊ	ɒ	ɔ̃	ɯ	ɤ	
high	+	+	+	+	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	+	-
low	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-
back	-	-	+	+	-	-	-	-	-	+	-	-	+	+	-	+	+	+	+	+	+
tense	+	-	+	+	-	+	-	-	+	-	+	-	+	-	-	-	+	-	+	+	+
round	-	-	+	+	+	-	-	-	-	+	-	+	+	+	+	-	-	-	+	-	-

Table 2. Distinctive features matrix for sonorants

	m	n	ɳ	ɲ	ŋ	N	l	ɭ	ʎ	r	ɾ	j	w
cons.	+	+	+	+	+	+	+	+	+	+	+	-	-
cont.	-	-	-	-	-	-	+	+	+	+	+	+	+
nas.	+	+	+	+	+	+	-	-	-	-	-	-	-
lat.	-	-	-	-	-	-	+	+	+	-	-	-	-
lab.	+	-	-	-	-	-	-	-	-	-	-	-	+
ant.	+	+	-	-	-	-	+	-	-	+	-	-	-
cor.	-	+	+	+	-	-	+	+	+	+	+	+	-
high	-	-	-	+	+	-	-	-	+	-	-	-	+
back	-	-	-	-	+	+	-	-	-	-	-	-	+

Table 3. Distinctive features matrix for obstruent

	b	β	d	ɗ	ɗ	ʄ	g	g	G	β	v	ð	z	z	ʒ	j	ɣ	ʁ	ʃ	fi	bv	dz	dʒ	
+voice																								
-voice	p	p'	t	t'	t	c	k	k'	q	ʔ	ɸ	f	θ	s	ʂ	ʃ	ç	x	χ	ħ	h	pf	ts	tʃ
cont.	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+	+	+	+	+	+	-	-	-
strid.	-	-	-	-	-	-	-	-	-	-	-	+	-	+	+	+	-	-	+	-	-	+	+	+
distr.	-	-	-	-	-	-	-	-	-	-	+	-	+	-	+	-	-	-	-	-	-	-	-	-
ant.	+	+	+	+	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	-	-	+	+	-
lab.	+	+	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	+	-	-
cor.	-	-	+	+	+	+	-	-	-	-	-	-	+	+	+	+	+	-	-	-	-	-	+	+
high	-	-	-	-	-	+	+	+	-	-	-	-	-	+	+	+	+	-	-	-	-	-	-	+
low	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	+	+	-	-	-
back	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-
constr.	-	+	-	+	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
spread	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-

These features have some values that can be predicted because the values basis are preceding each other (0). The matrix of the features, consequently, contains certain redundancy amount. This redundancy becomes the basic of the redundancy rules. Let us take sound [n] as an example. This sound has features such as [+cons], [+nas], [+son], [+cor], [+ant], [-cont], [+voi]. Some features contain the same values, therefore some other features are possible be omitted to avoid repetition. The feature [+nas] has contained [+cons], [+son], [-cont] and [+voi]. It makes those four features are no longer necessary to use.

2.7. Phonological Processes

In phonology, Scane (1973) said that there is also study about the sounds used or omitted when two or more morphemes are adjoined. This joining of morphemes has probability to make some changes to the close segments. This phenomena is called “phonological processes”. There are four phonological processes such as assimilation, syllabic-structure, weakening and strengthening, and neutralization (Scane, 1973). Assimilation is the process where segments become more alike because a segment gets values from the other segments close to it. Syllabic-structure is the process where there is alteration in consonants and vowels distribution. Weakening and strengthening is the process where there is modification on the segments and it depends on their positions in the word. Neutralization is the process where there is merging of segments in certain environments or positions.

3. Research Method

This research is a descriptive qualitative. I attempted to figure out the patterns of verb changes and describe them in a systematic way based on the relevant theories. I collected the data by using observation method and note-taking technique. I listed the American English verbs from grammar book written by Azar (1999) and compared to the verbs list in dictionaries and web sources. After that, I made the phonetic transcription of the verbs using Pho TransEdit V.17 software and consulted the transcriptions to the Oxford Dictionary to make sure that they were correct. As for the pronunciation, I consulted to Longman dictionary for the American and to Oxford dictionary for the British. This action was aimed to make sure that the transcription and the pronunciation are matched. In addition, consulting to the dictionaries above helped me to keep my researched focused on the Standard English of American and British. Based on the transcriptions, I continued to analyze the sound environments and the tendency of sound changes or sound additions using the distributional method since this method is the appropriate one to analyze this kind of data (Sudaryanto, 1993). I classified them based on the peak sounds of each word and put them in group. Having done with the thorough analysis, I created the rules of sound change and sound addition and made generalization based on the research result.

4. Findings and Discussion

Having done a thorough reading on the irregular and regular verbs, I discovered some new things that had been different from what I have learned at school and college. These findings are different from the findings presented

in the previous study where [Ling \(1994\)](#) and [Bagci \(2005\)](#) only stated that there is possibility of verb changes regularity and showed numerical data only. In this paper, I present the regularity in more clear ways and show why the verbs are stated as having changes regularity.

Beginning by taking the peak vowel as base of analysis, I listed 16 vowels and 6 diphthongs which are located in the peak of English verb syllables. This number is smaller compared to the whole vowels and diphthongs found in English in general. All vowels of American English are as seen in chart 1 and the vowels found in American English and British English verbs are in chart 2 below:

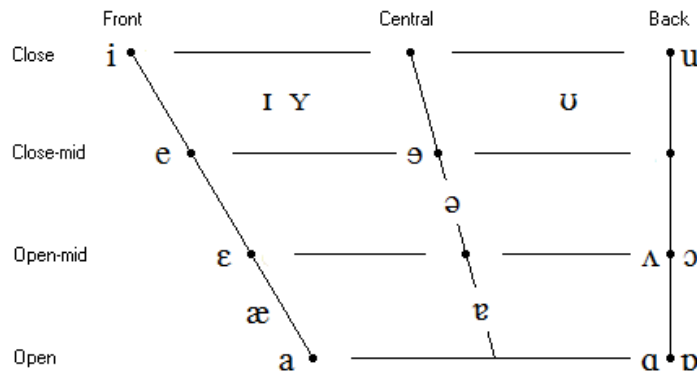


Chart 1. English Vowel ([Odgen, 2009](#))

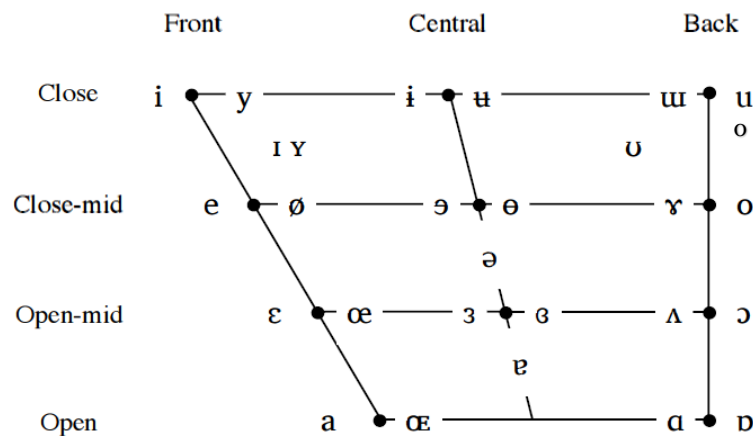


Chart 2. English Consonants ([Odgen, 2009](#))

Later, I analyzed the data based on the sound change environments in irregular verbs compared to the environments in regular verbs. Based on the thorough analysis on irregular and regular verbs, I found two types of change: sound changes and sound additions. These sound changes appear in some ways when they form past verbs. Some peak vowels change and some of them stay in the same sounds. Instead, additional sounds are added. These phenomena are influenced by the number of the word syllables, the position of the sounds and the environments of the sounds.

4.1. Four Additional Sounds in 'Regular' verbs

In the analysis, I found that there are four additional sounds in regular verbs formation such as [d], [t], [ɪd], and [əd]. However, there is difference in pronunciation between American and British English in pronouncing '-ed'. In American English, most of '-ed' sound is pronounced [əd] while in British English, most of '-ed' sound is pronounced [ɪd]. Having classified the environments of those sounds, I could find three basic rules in regular verbs formation. The first rule is that if the ending sound is voiceless (except [t]), it is followed by the sound

[t]. The second rule is that if the ending sound is voiced except [d]), it is followed by the sound [d]. In addition, the third rule is that if the ending sound is ended with sound [t] or [d], it is followed by [ɪd] or [əd]. These are caused by the voicing system of the sound in those verbs. There are assimilation processes that make the additional sound to be similar. In this case, they get the feature [+voiced] or [-voiced] from the ending sound of the verbs.

These rules can be summarized in the chart follows:

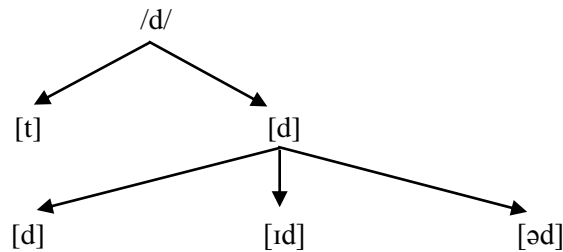


Chart 3. Summary of Sound Assimilation

Seeing the sound environments, I took sound /d/ as the phoneme since it has the largest distribution among the other three sounds. The rule of these additional sounds changes can be described as below.

$$\left(\begin{array}{l} +\text{cons} \\ -\text{son} \\ +\text{cor} \\ +\text{ant} \\ -\text{cont} \\ +\text{voi} \end{array} \right) \rightarrow [-\text{voi}] / [-\text{voi}] _ \#$$

This first rule shows that there is assimilation process when phoneme /d/ is preceded by sound with feature [-voiced]. The feature [+voiced] of sound /d/ will be [-voiced] because it gets the values from the segment that precedes it. This rule is applicable for American and British English. As for the second rule, they have differences. The differences can be seen in the following second rule.

4.4.2. *Second Rule (American)*

$$\emptyset \rightarrow \left(\begin{array}{l} -\text{high} \\ -\text{low} \\ +\text{back} \\ -\text{round} \\ -\text{tense} \end{array} \right) / \left(\begin{array}{l} +\text{cons} \\ -\text{son} \\ +\text{cor} \\ +\text{ant} \\ -\text{cont} \end{array} \right) \left(\begin{array}{l} +\text{cons} \\ -\text{son} \\ +\text{cor} \\ +\text{ant} \\ -\text{cont} \\ +\text{voi} \end{array} \right)$$

The second rule above explains that when the end of the sound is [t] or [d], there is additional sound [ə] before sound /d/. This sound appears because it is necessary to link the ending sound with the inflectional marker.

The second rule is followed by sub rule:

$$\left(\begin{array}{l} -\text{high} \\ -\text{low} \\ +\text{back} \\ -\text{round} \\ -\text{tense} \end{array} \right) \rightarrow \left(\begin{array}{l} +\text{high} \\ -\text{back} \\ -\text{round} \\ -\text{tense} \end{array} \right) / [\text{ou}] [\text{t}] _ [\text{d}], \\ [\text{k}] [\text{eɪ}] [\text{t}] _ [\text{d}]$$

This sub-rule explains that the additional sound *c* will change to be [ɹ] when the sounds come before [t] are [ou] and [eɪ]. It is because both diphthongs [ou] and [eɪ] have feature [+high]. It causes the vowel sound [ə] that follows those sound also get [+high] feature.

4.4.3. Second Rule (British)

Different from American, British English basically has no second rule for real. It is because sound [əd] is not really added. As commonly known, sound [ɹ] in standard British English is not pronounced clearly. The sound [ə] in [əd] appears as the realization of sound [ɹ] which is located at the end of a verb. Since sound [ə] is a [+voiced] sound, it is followed by [d] which is also [+voiced sound] as has been explained in the first rule.

4.2. The Syllables of Regular and Irregular Verbs

Most of the irregular verbs are one-syllable words. From Azar (1999), I found that there are only eleven irregular verbs that have two syllables and two irregular verbs that have three syllables. The peak sounds in the irregular verbs are all in the stressed position. This makes the peak sounds have the tendency to change instead of being in the same form when they form past verbs. It is different from the regular verbs which have no vowel changes, whether they are in the stressed position or not. It appears that this occurs because of the places of articulation of the peak vowel and the environments that make the constraints.

The examples of this phenomena are as follows[†]:

begin	[br'gɪn]	began	[br'gæn]
forbid	[fər'bid]	forbade	[fər'bæd]
forgive	[fər'gɪv]	forgave	[fər'geɪv]

We can see that the changing sound in irregular verbs only occurs when they are in the stressed position. However, the regular form is not affected either the sound is in the stressed position or is not the peak sound. We can see it in the examples below.

Table 4. Regular Verb examples

<i>Word</i>	<i>American</i>	<i>British</i>	<i>Word</i>	<i>American</i>	<i>British</i>
notice	['nəʊtɪs]	['nəʊtɪs]	noticed	['nəʊtɪst]	['nəʊtɪst]
practice	['præktɪs]	['præktɪs]	practiced	['præktɪst]	['præktɪst]
continue	[kən'tɪnju:]	[kən'tɪnju:]	continued	[kən'tɪnju:d]	[kən'tɪnju:d]
predict	[prɪ'dɪkt]	[prɪ'dɪkt]	predicted	[prɪ'dɪktəd]	[prɪ'dɪktəd]

4.3. The Ending Sound of All Verbs

All past verbs in English ends with consonants except the ones of past tense with ending [u:]. There is no difference of rule between American and British English. Both have the same regularity as proven in the data below.

Table 5. Irregular Verb examples

<i>Word</i>	<i>American</i>	<i>British</i>	<i>Word</i>	<i>American</i>	<i>British</i>
blow	['bləʊ]	['bləʊ]	blew	['blu:]	['blu:]
grow	['grəʊ]	['grəʊ]	grew	['gru:]	['gru:]
know	['nəʊ]	['nəʊ]	knew	['nu:]	['nu:]
throw	['θrəʊ]	['θrəʊ]	threw	['θru:]	['θru:]
fly	['flaɪ]	['flaɪ]	flew	['flu:]	['flu:]
draw	['drɒ]	['drɒ:]	drew	['dru:]	['dru:]

[†] The pronunciation of the words above is the same in American and British English

We can see from the table above that although the present verbs are pronounced differently, the past verbs are all the same.

4.4. Neutralization Process in the Additional Ending Sound of 'Irregular' Verbs

The ending sounds such as [n], [m], [p], [f], [k], and [l] in the 'irregular' changes are followed by sound [t]. When the sounds in the present of irregular ends with [t], there is no additional sound. These processes are categorized as neutralization, where all additional sounds which have [+voiced] or [-voiced] feature will only be [-voiced]. The rule of this neutralization is applied both in American and British English. This can be seen in the following examples[‡].

Table 6. Irregular Verbs with the Assimilation process

Deal	['di:l]	dealt	['delt]
Dream	['dri:m]	dreamt	['dremt]
Lean	['li:n]	leant	['li:ənt]
Mean	['mi:n]	meant	['ment]
Leap	['li:p]	leapt	['lept]
Feel	['fi:l]	felt	['felt]
Kneel	['ni:l]	knelt	['nelt]
Creep	['kri:p]	crept	['krept]
Keep	['ki:p]	kept	['kept]
Sleep	[s'li:p]	slept	[s'lept]
Sweep	['swi:p]	swept	['swept]
Weep	['wi:p]	wept	['wept]
Leave	['li:v]	left	['left]

Based on the data above, we can see that there are two phonological processes. The first process is the change of sound [i:] to be [e] and the second process is the additional sound of [t]. Sound [t] itself is attached to all sound, whether it has [+voiced] or [-voiced] feature when sound [i:] has been changed to [e]. This rule is different from the regular change where if the ending sound has [+voiced] feature, the sound added is [d] and if the feature is [-voiced] the sound added is [t]. In this case, all sounds like [n], [m], [p], [f], [k], and [l] are only followed by [t].

4.5. The Regularity of Sound within the Word 'Irregular'

The term irregular is often related to the idea that there is no pattern or rule that makes the word changes unpredictable. Having seen the findings and explanation above, this claim is not fully acceptable because when we see the word changes from phonological view, they do have pattern. The patterns of the sound change are affected by the syllable numbers, the positions and the environments of the sounds. Here are some examples[§] as more evidences that the word 'irregular' is not fully appropriate to use.

Table 7. The sample of sound regularity within irregular verbs

	Present	→	Past
swim	['swim]	swam	['swæm]
Ring	['rɪŋ]	rang	['ræŋ]
sing	['sɪŋ]	sang	['sæŋ]
spring	['sprɪŋ]	sprang	['spræŋ]
sting	['stɪŋ]	stang	['stæŋ]
swing	['swɪŋ]	swang	['swæŋ]
shrink	['ʃrɪŋk]	shrank	['ʃræŋk]
sink	['sɪŋk]	sank	['sæŋk]
stink	['stɪŋk]	stank	['stæŋk]
begin	[br'gɪn]	began	[br'gæn]

[‡] There is no difference between American and British English in the words pronunciation

[§] Idem

Environments of sound:

[ɪ] → [æ] / [s] [w] __ [m]
 [r] __ [ŋ]
 [s] __ [ŋ]
 [s] [p] [r] __ [ŋ]
 [s] [t] __ [ŋ]
 [ʃ] [r] __ [ŋ] [k]
 [g] __ [n]

In the table and rule above, we can see that sound [ɪ] in all verbs is changed to [æ] when it is preceded by sounds [sw], [r], [s], [spr], [st], [ʃr], and [g] and followed by nasal sounds like [ŋ] and [ŋk]. When this group of irregular verbs is compared to the regular one, there is no exactly similar environment. It means that this rule can be taken as general rule for the sound change.

The other regularity of sound changes can be seen in the following example.

Table 8. The sample of sound regularity within irregular verbs

Word	American	British	Word	American	British
cling	[ˈkɪŋ]	[ˈkɪŋ]	clung	[ˈklʌŋ]	[ˈklʌŋ]
fling	[ˈflɪŋ]	[ˈflɪŋ]	flung	[ˈflʌŋ]	[ˈflʌŋ]
string	[ˈstrɪŋ]	[ˈstrɪŋ]	strung	[ˈstrʌŋ]	[ˈstrʌŋ]
spin	[ˈspɪn]	[ˈspɪn]	spun	[ˈspʌn]	[ˈspʌn]

Environments of sound:

[ɪ] → [ə] or [ʌ] / [k] [l] __ [ŋ]
 [f] [l] __ [ŋ]
 [s] [t] [r] __ [ŋ]
 [s] [p] __ [n]

Based on the data above, we can see if the sound [ɪ], which is the peak sound of the word, is preceded by [kl], [fl], [str], and [sp] and followed by nasal sound, it will change into [ə] in American English and into [ʌ] in British English.

Both examples above can be described in the rules as follow:

4.5.1. American English

and $\left(\begin{array}{c} +\text{high} \\ -\text{back} \\ -\text{round} \\ -\text{tense} \end{array} \right) \rightarrow \left(\begin{array}{c} +\text{low} \\ -\text{back} \\ -\text{round} \\ +\text{tense} \end{array} \right) / _ [+nasal]$

$\left(\begin{array}{c} +\text{high} \\ -\text{back} \\ -\text{round} \\ -\text{tense} \end{array} \right) \rightarrow \left(\begin{array}{c} -\text{low} \\ -\text{high} \\ +\text{back} \\ -\text{round} \\ -\text{tense} \end{array} \right) / _ [+nasal]$

4.5.2. *British English*

$$\begin{pmatrix} +\text{high} \\ -\text{back} \\ -\text{round} \\ -\text{tense} \end{pmatrix} \rightarrow \begin{pmatrix} +\text{low} \\ -\text{back} \\ -\text{round} \\ +\text{tense} \end{pmatrix} \quad / _ [+nasal]$$

and:

$$\begin{pmatrix} +\text{high} \\ -\text{back} \\ -\text{round} \\ -\text{tense} \end{pmatrix} \rightarrow \begin{pmatrix} -\text{low} \\ -\text{high} \\ +\text{back} \\ -\text{round} \\ +\text{tense} \end{pmatrix} \quad / _ [+nasal]$$

Sound [ɪ] will stay in the same sound only if it is preceded by lateral sound [l] and ended with nasal sound [ŋ] and plosive velar sound [k] like in word ‘link’ [lɪŋk] that changes into ‘linked’ [lɪŋkt].

The other examples** are in the verb list below.

Table 9. The sample of sound regularity within irregular verbs

	Present	→	Past
meet	[ˈmi:t]		met [ˈmet]
beat	[ˈbi:t]		bet [ˈbet]
bleed	[ˈbli:d]		bled [ˈbled]
breed	[ˈbri:d]		bred [ˈbred]
feed	[ˈfi:d]		fed [ˈfed]
flee	[ˈfli:]		fled [ˈfled]
lead	[ˈled]		led [ˈled]
speed	[ˈspi:d]		sped [ˈsped]

Having seen the data above, we can see if one syllable words with sound [i:] as the peak are followed by sound [t] or [d], the peak sound changes into [e].

4.6. *Redefining the Regular and Irregular Terms in English Verbs*

The regular verbs are those that follow rule in general by attaching morpheme ‘-d’ or ‘-ed’ at the end of the words to form the past (Hariyono & Carthy, 2008). This inflection of past markers is separated from the root words and considered as two different morphemes. As for irregular verbs, it is said that this group of verbs has no clear rules in forming the past. The inflectional markers showing the past are not in form of separated morphemes but in form of sound changes. Since the changes are claimed to be unpredictable, those verbs are defined as irregular verbs formation.

However, this definition of regularity and irregularity is no longer applicable. This has been proven that basically the verbs categorized as irregular also follow certain patterns. The patterns are visible when we view the verb changes in morphophonemic approach. These verbs actually have patterns to follow in forming the past verbs. In other words, the changes of irregular verb are predictable if we see the changes based on number of the syllables, environments and positions of the peak sounds. It is suggested that the term regular and irregular verbs should be redefined. It is supposed to be no longer based on the attachment of morpheme ‘d’ or ‘ed’. It would be better if we define the verbs regularity based on the sounding groups. As for the major classification, we can categorize the verbs by the types of the inflection: by adding sounds or changing the sound instead of using regular and irregular term because it has been proven inappropriate to use.

The findings of this research also prove that item and process approach that are used to discover morphological processes involving sounds is applicable to analyze the inflectional system in English verbs. Based on the research result, the inflection as past tense markers in English verbs apply sound changes as well.

** There is no difference between American and British English in the words pronunciation

These findings can be very useful for linguists who are interested in conducting research about English verbs because they give more detailed description. They will also be useful for teachers and lecturers who often feel confused about how to make the students memorize the changes more easily when they use the patterned-word groups created based on the findings.

5. Conclusion and Suggestion

Based on the finding of this research, I can draw some conclusions. The first is that there are 3 basic rules in regular verbs formation. If the ending sound is voiceless (except [t]), it is followed by the sound [t]. If the ending sound is voiced except [d], it is followed by the sound [d]. And if the ending sound is ended by sound [t] or [d], it is followed by [ɪd] or [əd]. Sound /d/ is taken as the phoneme because it has the largest distribution among the other three sounds. The second conclusion is that there are four additional sounds in regular verbs formation. They are [t], [d], [ɪd], and [əd]. The third conclusion is that most of the verbs claimed as irregular are one-syllable words and the sound of irregular verbs change when they are in the stressed position. There is a big possibility that this occurs because of the place of articulation of the main vowel and the environments. The fourth conclusion is that all irregular verbs are ended with consonants except the ones whose ending is [u:]. When the ending sounds are vowels, except [u:], the sound [d] will be added as the final sound. The fifth is that the ending sounds such as [n], [m], [p], [k], and [l] in irregular formation are followed by sound [t] and when the sounds in the present of irregular are ended by [t], there is no additional sound such as [t], [d], [ɪd], and [əd] added. Finally, all those findings can prove that there are some morphophonemic patterns behind the 'irregular' verbs past formation. All those proves can break the assumption that there is a group of verbs which was commonly claimed as having no rules at all and fully unpredictable when one sees more deeply not only at the written form but also at how the verbs are pronounced. The regularities of sound change are affected by number of syllables, the place of the sounds and the environments of the sounds. These three aspects cause some processes such as assimilation, syllabic-structure, and neutralization in the changes of the present to be the past verbs.

There are some points that I can suggest from this research addressed to the other researchers, readers, and the users such as teachers and lecturers. It is suggested to the next researchers investigate more deeply and add more data like the Past Participle. This will lead the next researchers to reveal the patterns of the three types of verb change seen from morphophonemic view. This research report will also be very useful for the readers who seek for a reference of English verbs theory since there has never been any research deeply conducted on the verb change patterns. It is suggested to the readers to have other theories compared to my research report, therefore they may have a better understanding about the patterns and rules I have found. As for the users, I suggest that it would be better if the explanation of the verb change patterns are given differently based on the students' level. For the junior high and senior high, it would be better if the teachers give the groups of the verb based on the change patterns only. It may be fine to explain the patterns using the environments for the undergraduate university students. As for the higher education, it is possible to explain the patterns making using the generative theory like the distinctive features.

References

- Aronoff, M and Fudeman, K. (2011). *What is Morphology?* UK: Blackwell.
- Azar B. Schramfer. (1999). *Understanding and using English grammar*. New York: Pearson Education.
- Ba'dulu, A.M. & Herman. (2004). *Morfosintaksis*. Jakarta: PT. Rineka Cipta.
- Bagci, H. (2005). Classifying English verbs according to the inflection forms. http://www.cs.bilkent.edu.tr/~guvenir/courses/CS550/Workshop/Hakki_Bagci.pdf. [28 December 2014 at 08.00 pm].
- Baugh, C. Albert and Cable, T. (1978). *A history of the english language*. London: Prentice Hall inc.
- Booij, G. (2005). *The grammar of words*. New York: Oxford University Press.
- Hariyono, R and Mc. Carthy A. (2008). *ABC plus English grammar*. Surabaya: Gitamedia Press.
- Hayes, B. 2009. *Introductory Phonology*. UK: Blackwell.
- Katamba, F. (1996). *An introduction to phonology*. New York: Addison Wesley Longman Publishing.

- Komenda, S., Maroko, Geoffrey M, and Ndung'u, Ruth W.. (2013). The morphophonemics of vowels compensatory lengthening in ekegusii. *Journal of Education and Research Vol. 1*.
- Lieber, R. (2009). *Introducing morphology*. New York: Cambridge University Press.
- Ling, C. (1994). Learning the past tense of English verbs: The symbolic pattern associator vs. connectionist models. *Journal of Artificial Intelligence Research Vol 1*, 209-229.
- Odgen, Richard. (2009). *An introduction to English phonetics*. Edinburgh: Edinburgh University Press.
- Schane, Sanford A. (1973). *Generative Phonology*. New Jersey: Prentice Hall, Inc.
- Sudaryanto. (1993). *Metode dan aneka teknik analisis bahasa*. Yogyakarta: Duta Wacana University Press.
- Yusuf, Cahyo. (2012). Korelasi bentuk dan pertalian makna kata turunan *meN-* + *D(-i/-kan)*, *pen-* + *D*, dan *pen--an* + *D*. *Jurnal Penelitian Inovasi Vol. 37 No. 1*: 64-80.