

Comprehending Assimilation Pattern by Tracing Its Phonological Process: Input, Environment, and Process

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ABSTRACT

Native speakers, English mother tongue, speak naturally. Although they do not think the way how they are pronouncing words, they seem to simplify their speeches. Therefore, it is often difficult to understand what is spoken by them because it is heard like babbling. One of the simplifications of speeches is assimilation.

Assimilation is one of phonological processes. Comprehending its phonological process means understanding its input, environment, and process. Therefore, all phenomena of pronunciation particularly assimilation are collected and then they are classified and described one by one based on its input, environment and process. The result of the research is that to anticipate the preceding word, the first is anticipating the preceding: a) when alveolar is preceded by bilabial, alveolar will anticipate the bilabial by changing alveolar into bilabial, b) when alveolar is preceded by velar, alveolar will anticipate the velar by changing alveolar into velar, c) when alveolar is preceded by palato alveolar, alveolar will anticipate by changing into palato alveolar.

Key words: assimilation, phonological process, pronunciation,

A. Introduction

One of difficulties faced by the English students in understanding what is spoken by the native of English speaking countries is that the words they are saying seem unclear. In fact, it is not unclear as the English students think because the unclearness is caused by the lack of the English students to understand one of ways of the native of English speaking countries speak. Most of the native of English speaking countries want to simplify the articulation process. Quoting McMahon (2002:101), he states that all languages modifying complicated sequence in

connected speech in order to simplifying the articulation process, but the manner how in which this is done varies from one language to another.

From what is stated by McMahon above, it seems that modification of complicated sentence in connected speech is for the ease of pronunciation. Therefore, it would be understandable if the native speakers of English spoke their language naturally. They do not think what they are pronouncing is a process of simplification because it is the way in which they pronounce it. It is often very difficult to understand a native speaker's speech. When we listen to them, it seems what they are saying is like babbling. Even if we could hear, what is in our mental process is different from what is spoken. For example, *I can go* is heard / ai kæn gəʊ/, *I can be there* is heard /ai kæm bi ðe(r)/. It will be interesting to find out why the target (assimilated form/phonetic form) / ai kæn gəʊ/ and /ai kæm bi ðe(r)/ are not heard as the source (ideal form/phonemic form) / ai kæn gəʊ/ and /ai kæn bi ðe(r)/.

In Phonological point of view, a word has a basic underlying phonemic form, which we store in mental process and this phonemic form may be changed by phonological process to become the phonetic form (the real sound occurred/heard). Let consider the following example:

Phonemic Input (UR)	Can be	# kæn bi #
Process:	/n/ is assimilated to the bilabial place of articulation of the following /b/, anticipating the following bilabial consonant /b/ thus becomes /m/	# kæn bi # # kæm bi #
Phonetic Output (Phonetic Form)		# kæm bi #

It is the phonological process involved in the change of the ideal (phonemic form) into the target (phonetic form). Malkjaer (1991:27) states that speech sound, when occurring in connected speech i.e. in a flow of speech, partially blend into each other. The connection of it acquires the process of the so-called combinatory phonetics. In addition, there are many kinds of combinatory articulatory phenomena.

One phenomenon that could involve answering this is what the so-called assimilation process is. Assimilation is an everyday occurrence in every human language and it is particularly common for nasal sounds (McMahon, 2002:4). However, I believe that there is other assimilations people make in daily conversation. Therefore, this paper is intended to describe assimilation from points of view of its input, environment, and process. The description is merely theoretical, not practical.

B. Discussion

Discussion on the phonological process of assimilation in the view point of its input, environment, and process would be classified into 1) Leading/Anticipation/Regressive, 2) Lagging/Perseverative/Progressive, and 3) Voicing/Energy/Laryngeal.

B.1 Leading/Anticipation/Regressive

The idea of leading/anticipatory/regressive is that the second sound in the sequence is the caused of assimilation happened. There are five patterns of assimilations of this classification found and they will be described one by one, as follows.

B.1.1 Alveolar-Bilabial Assimilation.

Collin and Mees (2003) describe alveolar and bilabial as follows. Alveolar is a place of articulation involving the tip/blade of the tongue and the alveolar ridge, e.g. English /t n s/, while bilabial is a place of articulation involving both lips, e.g. /p b m/.

Alveolar would become bilabial in context preceding bilabial. Therefore, /t/ → /p/, /d/ → /b/, and /n/ → /m/ in the case of preceding /p b m/ and less commonly /w/. The phonological process runs as follows.

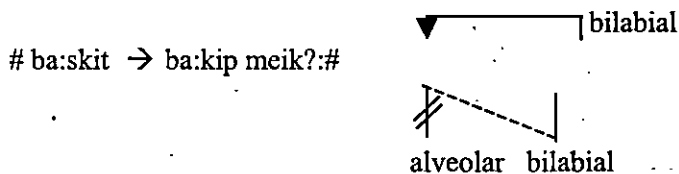
Phonemic Form/ Input	Split personality	# split pê:sênælêti #
Process	Alveolar /t/ is changed into bilabial /p/ to anticipate preceding /p/	<p># split → splip pê:sênælêti #</p>
Phonetic Form/ Output		# splip pê:sênælêti #

From the phonological process above, the input # split pê:sênælêti # is the phonemic form or simply how the words are pronounced and it is called ideal form, the environment is what letter precedes what letter or what letter of place or articulation is in to influence what letter of place articulation should come, and the process is a way how the letter of place of articulation being changed under influence of its environment.

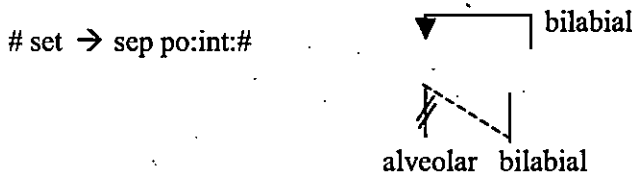
Other examples can be described as follows.

a. /t/ → /p/ before /p/, for examples: basket maker and set point

- Basket maker /ba:skit meikê:/ becomes /ba:skip meikê:/



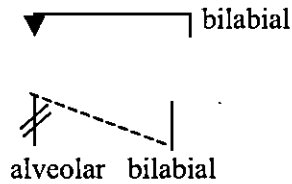
- set point /set po:int/ becomes /sep po:int/



b. /t/ → /p/ before /b/, for examples: front bench and set back

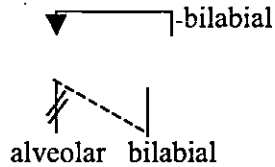
- front bench /frʌnt bɛnt/ becomes /frʌnp bɛnt/

frʌnt → frʌnp bɛnt



- set back /set bæɪk/ becomes /sep bæɪk/

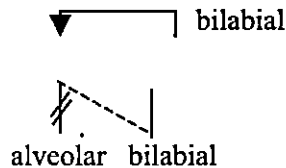
set → sep bæɪk



c. /t/ → /p/ before /m/, for examples: hit man and hot metal

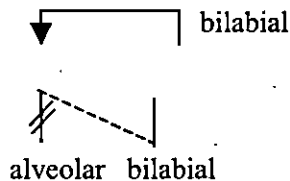
- hit man /hit mæn/ becomes /hip mæn/

hit → hip mæn



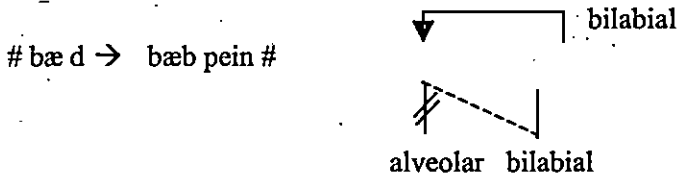
- hot metal /hot metl/ becomes /hop metl/

hot → hop metl#

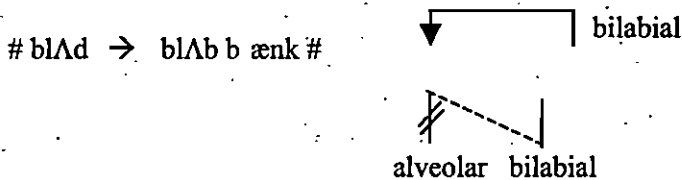


d. /d/ → /b/ before /p/, for examples: bad pain, blood bank, and mud pie

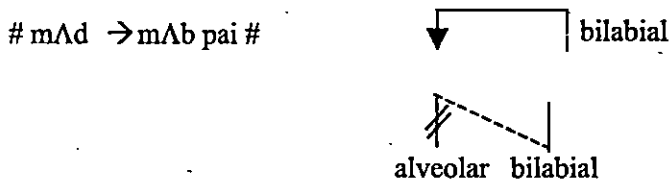
- bad pain /bæd peɪn/ becomes /bæb peɪn/



- blood bank /blʌd b ænk/ becomes /bl ʌb b ænk/

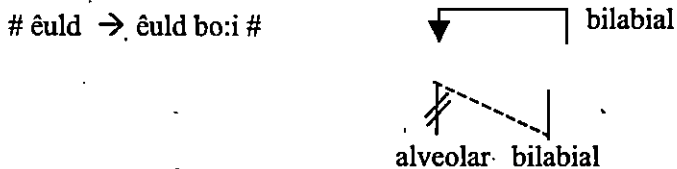


- mud pie /mʌd paɪ/ becomes /mʌb paɪ/



e. /d/ → /b/ before /b/, for example: old boy

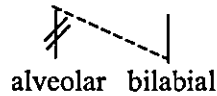
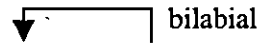
- old boy /əʊld bɔɪ/ becomes /əʊld bɔɪ/



f. /d/ → /b/ before /m/, for examples: old man and grand master

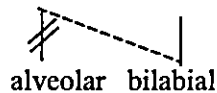
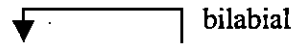
- old man /êuld mæn/ becomes /êulb mæn/

êuld → êulb mæn#



- grand master /grænd ma:st?/ becomes /grænb ma:st?/

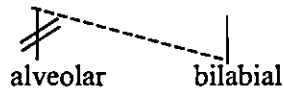
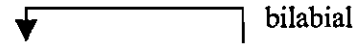
grænd → grænb ma:st?



g. /n/ → /m/ before /p/, for examples: American plan and pen pal

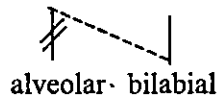
- American plan /êmerikên plæn/ becomes /êmerikêm plæn/

êmerikên → êmerikêm plæn



- pen pal /pen pol/ becomes /pem pol/

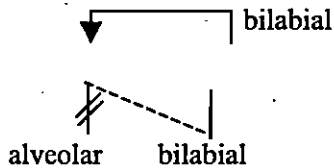
pen → pem pol



h. /n/ → /m/ before /b p/, for examples: green belt and garden party

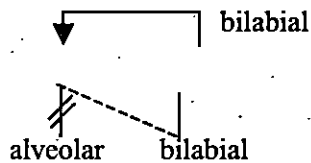
- green belt /gri:n belt/ becomes /gri:m belt/

gri:n → gri:m belt



- garden party /ga:dn pa:ti/ becomes /ga:dm pa:ti/

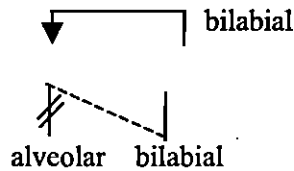
ga:dn → ga:dm pa:ti



i. /n/ → /m/ before /m/, for examples: sun blind and pin money

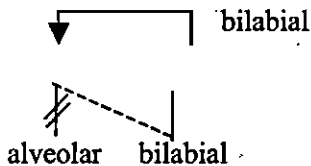
- sun blind /sên blaind/ becomes /sêm blaind/

sên → sêm blaind



- pin money /pin mêni/ becomes /pim mêni/

pin → pim mêni



B.1.2 Alveolar-Velar Assimilation

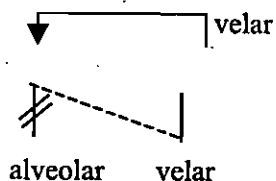
Collin and Mees (2003) describe velar as a place of articulation involving the velum and the back of the tongue, e.g. /k g ŋ/. Alveolar would become velar in context of preceding velar. Therefore, /t/ will change into /k/, /d/ into /g/ and /n/ into /ŋ/ before /k/ or /g/.

The process of change runs as follow.

a. /t/ → /k/ before /k/, for examples: cigarette card and credit card

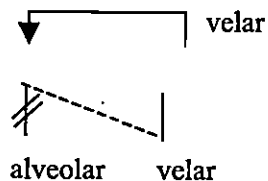
- cigarette card /sigâret ka:d/ becomes /sigârek ka:d/

sigâret → sigârek ka:d



- credit card /kredit ka:d/ becomes /kredik ka:d/

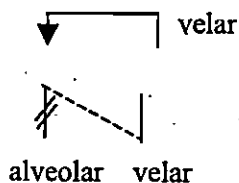
kredit → kredik ka:d



b. /t/ → /k/ before /g/, for examples: fat girl and first class

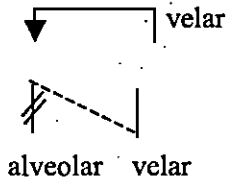
- fat girl /fæt gê:l/ becomes /fæk gê:l/

fæt → fæk gê:l



- first class /fē:st kla:s/ becomes /fē:sk kla:s/

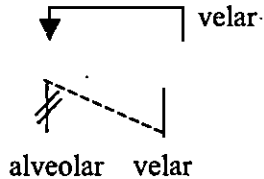
fē:st → fē:sk kla:s



c. /d/ → /g/ before /k/, for examples: hard core and cold cream

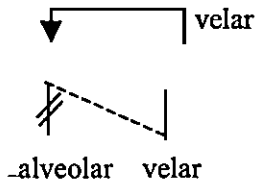
- hard core /ha:d ko:/ becomes /ha:g ko:/

ha:d → ha:g ko:



- cold cream /kêuld kri:m/ becomes /kêulg kri:m/

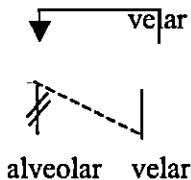
kêuld → kêulg kri:m



d. /d/ → /ñ/ before /g/, for examples: bad girl and slide guitar

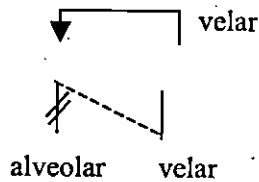
- bad girl /bæd gē:l/ becomes /bæg gē:l/

bæd → bæg gē:l



- slide guitar /slaid gi:ta:/ becomes /slaig gi:ta:/

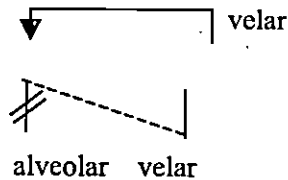
slaid → slaig gi:ta:



e. /n/ → /ñ/ before /k/, for examples: human capital and tin can

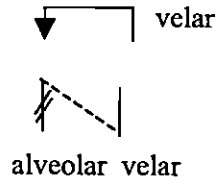
- human capital /hju:mên kêpitl/ becomes /hju:mêñ kêpi:tł/

hju:men → Hju:mêñ kêpi:tł



- tin can /tin kæn/ becomes /tiñ kæn/

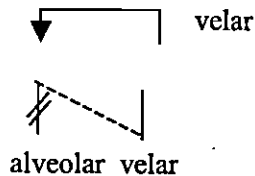
tin → ti? kæn



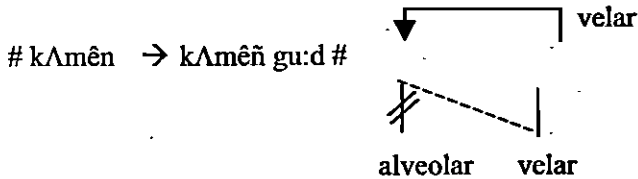
f. /n/ → /ñ/ before /g/, for examples: golden gate and common good

- golden gate /gêuldn geit/ becomes /gêuldñ geit/

fê:st → fê:sk kla:s



- common good /kʌmɛn gu:d/ becomes /kʌmɛ̃n gu:d/

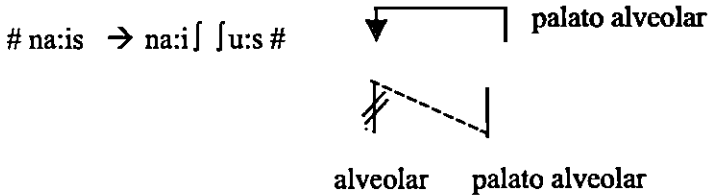


B.1.3 Alveolar-PalatoAlveolar Assimilation

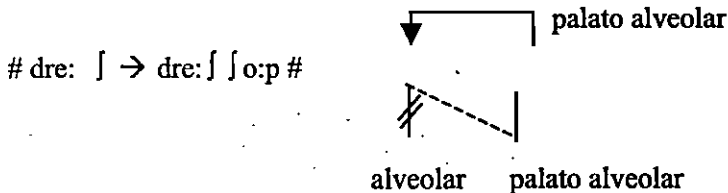
Palato alveolar is a place of articulation involving the blade/front of the tongue and the rear of the alveolar ridge/front of the hard palate, e.g. /ʃ/ as in *shiver* and /dʒ/ in *jeans* (Collin and Mees, 2003).

Alveolar would become velar in context preceding palato alveolar. Therefore, alveolar /s/ change to palato alveolar /ʃ/, alveolar /z/ changes to palato alveolar /ʒ/ before palato alveolar /ʃ/; for example, nice shoes and dress shop.

- nice shoes /na:is ʃu:s/ becomes /na:iʃ ʃu:s/



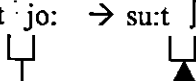
- dress shop /dre:s ʃo:p/ becomes /dre:ʃ ʃo:p/



B.1.4 Reciprocal Assimilation


In many cases, here is a two-way exchange of articulation features. The plosive is a manner of articulation which involves a complete closure in the vocal tract (the passageways above the larynx used in speech) followed by a rapid release of the airstream, e.g. /p b/ in *pie, buy* (Collin and Mees, 2003). The plosives /t d/ merge regularly with *you* and *your* in a process of reciprocal assimilation of place and manner. The fricatives /s z/ has similar reciprocal assimilation with any word-initial /j/. There are four patterns can be encountered in this kind of assimilation.

a. /t/ + /j/ become /tʃ/, for example: suit your self #sut: jo: self#

sut: jo: → sut ʃ o: self


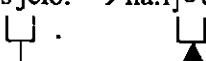
The plosive /t/ merges with /j/ change to /tʃ/

b. /d/ + /j/ become /dɛ/, for example: find your umbrella #faɪnd jo: ʌmbrel ê#

faɪnd jo: → faɪnd ɛ o: ʌmbrel ê#



The plosive /d/ merges with /j/ change to /dɛ/

c. /s/ + /j/ become /ʃɛ/, for example: nice yellow shirt #na:is jelo:ʃ êt#

na:is jelo: → na:iʃ ɛ lo:ʃ êt#


The fricative /s/ merges with /j/ change to /ʃɛ

d. /z/ + /j/ become /zɛ/, for example: where's your cupê #we:z jo: kʌpê#

we:z jelo: → we:iʃ ɛ lo:ʃ êt#


The fricative /z/ merges with /j/ change to /zɛ

In question -tag with *you* this pattern is common, for example:

- a. You didn't cheat, did you? /did ju:/ → /did εu/
b. You shouldn't be honest, shouldn't you? /ʃudnt ju:/ → /ʃudntʃu/

In phrase, *do you*, assimilation is frequently occurring, especially in informal form *d'you*. For example: D'you write it yourself? D'you is pronounced /dεu/.

B.1.5 Nasals Assimilation

Nasal is a manner of articulation involving the soft palate being lowered so that the airstream escapes via the nasal cavity (the space inside the nose), e.g. /m n ñ/.

There are three patterns encountered in nasal assimilation.

- a. Labial nasal /m/ appears only before velar consonant, for example:

Imbalance /i[m]bælêns/ → /imbælêns/

Impossible /i[m]pêsebl/ → /impêsebl/

- b. Velar nasal /ñ/ appears only before velar consonant, for example:

Incoherent /i[n]kêuhiêrênt/ → /iñkêuhiêrênt/

Inconsistent /i[n]kênsistênt/ → /iñkênsistênt/

- c. Coronal nasal /n/ appears before coronal nasal and vowel, for example:

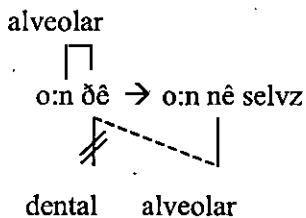
Intolerable /i[n]têlêrêbl/ → /intêlêrêbl/

Inelegant /i[n]eligênt/ → /ineligênt/

B.2 Lagging/Perseverative/Progressive

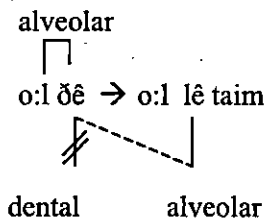
The first segment will cause the assimilation happened. Initial /ð/ in unstressed words may be assimilated following /n l s z/. This kind of assimilation is most frequent preceding *the*. The followings are the examples.

a. on the selves # o:n ðêselvz#



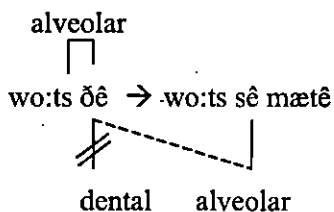
/ð/ is changed into alveolar /n/ to preserve /n/ in the first sequence.

b. all the time # o:l ðê taim#



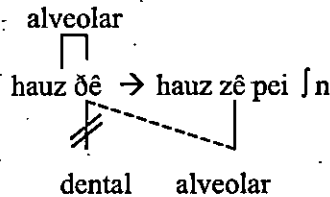
/ð/ is changed into alveolar /l/ to preserve /l/ in the first sequence.

c. what's the matterê # wo:ts ðê mætê#



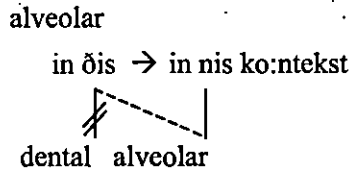
/ð/ is changed into alveolar /s/ to preserve /s/ in the first sequence.

d. How's the patient? #hauz.ðê pei]n#



/ð/ is changed into alveolar /z/ to preserve /z/ in the first sequence.

With word other than *the*, assimilation of this type is less frequent particularly in unstressed contexts, for example, *in this context* # in ðis ko:ntekst#.



/ð/ is changed into alveolar /n/ to preserve /n/ in the first sequence.

B.3 Voicing/Energy/Laryngeal.

It can be seen where voiced consonants become voiceless, or voiceless consonants become voiced, under the influence of neighboring segment, stressed and unstressed syllable. In English, energy assimilation is rare in stressed syllable. It can be seen when voiced consonant become voiceless, or voiceless consonant become voiced, under the influence of neighboring segment. It occurs in the English *used to* and *have to/has to* (where equivalent to *must*).

For examples:

I used to an English teacher /a:i ju:stê ên iŋglɪʃ ti:tʃê/, compare with *I used two* (main verb) /a:i ju:zd tu:/ and *I have to send my frined e-mail* /a:i hæftê send mai frend imel/ compare with *I have two* (main verb possess) /a:I hæv tu:/.

Besides it, there is also some word-internal energy assimilation. It has generally free variation between two possible forms, for examples:

Newspaper /nju:speipê/ or /nju:zpeipê/

Absurd /êbsê:d/ or /êbzê:d/

Absolute /æpsêlu:t/ or /æbsêlu:t/

Energy assimilations occur in unstressed contexts but only in the form lenis to Fortis. This is particularly true of final in flexional /z/ (derived from the s of plurals, possessives, and verb forms), and also with function words such as *as* and *of* and auxiliary verbs, for examples:

Of course /êv ko:z/ → /êf ko:s/

It was stated /it wez steitid/ → /it wes steitid/

As soon as possible /ês su:n êz po:sêbl/ → /ês su:n ês posêbl/

C. Conclusion

Obviously, assimilation is a very complex phonological process. By knowing the patterns of assimilation occurred in its phonological process, the students of English will be more aware of why the source (ideal form) and the target (assimilated form) are different one another. Besides, they will also recognize that human speech is tremendously varies and its way of pronouncing them also varies. Therefore, comprehending the pattern and the phonological process of assimilation will make them easier to enhance their sounds production and receptive skills.

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