

# Sound Assimilation in English and Arabic : a Contrastive Study

By:

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الإدغام الصوتي في اللغتين الانجليزية والعربية: دراسة مقارنة

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## ABSTRACT

This piece of research deals with assimilation as one of the phonological processes in the language. It is a trial to give more attention to this important process in English language with deep explanation to its counterpart in Arabic. In addition, this study sheds light on the points of similarities and differences concerning this process in the two languages. Assimilation in English means two sounds are involved, and one becomes more like the other.

The assimilating phoneme picks up one or more of the features of another nearby phoneme. The English phoneme /n/ has the features alveolar, nasal, voiced. The phoneme /g/ has the features velar, plosive, voiced. The word *language* is pronounced ['lɑŋgwɪdʒ]. In

this word, /n/ has assimilated to /g/ - it comes to have the features **velar**, nasal, voiced instead of **alveolar**, nasal, voiced. (/n/ - [ŋ] before /g/).

Assimilation in Arabic means overlapping of two sounds similar, homogeneous or approximate in features to become one sound. For example. *قد تبين , ميعمل* become *من يعمل*. *قتبين* become *قتبين*. It is of two types, the first happens when the quiescent nun "النون الساكنة" or nunation "التنوين" end a word followed by another begins with one of this group "الميم، النون، الواو، الياء" and called partial assimilation "الإدغام الناقص". The second happens when the quiescent nun "النون الساكنة" or nunation "التنوين" meet each of "اللام او الراء" and called the complete assimilation "الإدغام الكامل"

### Table of Contents

Title	Page Number
1	1.Assimilation in English
1-3	1.1. Types of assimilation
4	1.2. Reasons of assimilation
4	1.3. Assimilation by voicing, place and manner of articulation.
5	2. Assimilation in Arabic
5	2.1.Types of assimilation
6	2.2. Associated sound
7	2.3. Reasons of assimilation

8-10	3. Contrastive analysis
11	4. Conclusion
12	5. Bibliography
13	6. Arabic references
14	7. Arabic abstract

### 1. Assimilation in English:

Assimilation is a common phonological process by which the sound of the ending of one word blends into the sound of the beginning of the following word. This occurs when the parts of the mouth and vocal cords start to form the beginning sounds of the next word before the last sound has been completed. An example of this would be 'hot potato'. The /t/ in 'hot' is dropped as the lips prepare for the /p/ sound for 'potato' (Bloomer et, 247: 2005).

#### 1.1 Types of assimilation:

**1.1.1 Regressive assimilation:** this is leftward assimilation; when a sound changes another sound that occurs before it into one more similar to it, for example:

Have to /hæv/ + /tu/ = it is pronounced [hæf tu]

Used to /ju:zd/ + /tu/ = it is pronounced [ju:s tu]

Ten minutes /ten + minits/ = it is pronounced [tem minits]

This shirt /ðis + ʃɜ:t/ = it is pronounced [ðɪʃʃɜ:t]

Horse-shoe /ho:s ʃu:/ = it is pronounced [ho:ʃʃu:]

Five pence /faiv pens/ = it is pronounced [faɪpens]

Inn-keeper /in ki:pə/ = it is pronounced [ɪŋki:pə]

(Mc Gregor, 280: 2009)

**1.1.2 Progressive assimilation:** this is rightward assimilation; when a sound changes another sound occurs after it into one more similar to it. For example, (English –s) The English plural is either /z/ or /s/ when it occurs after a non-sibilant sound. The voicing feature is taken from the final consonant of the base.(ibid,306)

**These are some of the progressive assimilation cases in the language:**

**/ t / changes to / p / before / m /, / b / or / p /**

Basket maker [bæskpeikə]

Cat burglar [kæpərglə]

mixed bag [mikspæg]

**/ d / changes to / b / before / m /, / b / or / p /**

bad pain [bæbein]

blood bank [blʌbænk]

good morning [gubɔ: niŋ]

**/ n / changes to / m / before / m /, / b / or / p /**

action planning [ækʃmplæniŋ]

American plan [əmerikæmplæn]

brown paper [braumpeipə]

before / k / or / g /      / d / changes to / g /

bad girl [bæɡ3:l]

bird call [b3:ɡa:l]

closed game [kləʊzɡeɪm]

hard cash [hɑ:gæʃ]

**/ n / changes to /ŋ/ before / k / or / g /**

action group [ækŋ gru:p]

common good [kɒmɪŋɡud]

open court [əʊpŋko:t]

**/ s / changes to /ʃ/ before /f/ or /j/ followed by a rounded vowel sound**

bus shelter [bʌʃeltə]

nice yacht [naɪʃjɒt]

space shuttle [speɪʃʌtl]

**/θ/ changes to /s/ before /s/**

bath salts [bæso:ltz]

earth science [ɜ:saiəns]

fifth set [fɪfset]

**(Cole, 173:2004)**

### 1.2. Reasons of Assimilation:

The main reason after assimilation is the homogeneity between the assimilated sounds. They resemble each other in place of articulation or manner of articulation plus other features. for example: [*bad girl*] both of the sounds /d/ and /g/ are stop consonants i.e. they are alike in manner of articulation (plosives) and voicing (voiced).(Katamba, 80: 1989)

### 1.3. ASSIMILATION BY VOICING, PLACE & MANNER OF ARTICULATION

**Voicing.** If the assimilating phoneme is originally voiceless, it picks up the feature (voice) from the other sound.

Example: The change from /s/ to /z/ is an instance of intervocalic voicing.(ibid)

**Devoicing.** If the assimilating phoneme is voiced, it picks up the feature -voice from the other sound

Example. The word *have* ends in the voiced phoneme /v/. The word *to* begins with voiceless /t/. Some speakers devoice /v/ to /f/ when they pronounce the expression *have to* as [*haftu*].(Tathman,362:2004)

**Palatalization.** the assimilating sound moves its place of articulation closer to the palate. This happens when the sound assimilating to already has a palatal or near-palatal place of articulation. Significant triggers include the consonant /j/ and the vowel /i/.

Example. Some English speakers pronounce the word *student* as ['stʃju:dənt]. In rapid speech, the alveolar /t/ assimilates to the palatal /j/ and becomes palato-alveolar /tʃ/, resulting in the pronunciation ['stʃju:dənt].

**Fricativization.** the assimilating sound changes its manner of articulation so that the airflow is closer to a fricative. Less restricted sounds trigger this kind of change including fricatives and vowels. Stops (plosives) often undergo this assimilation.

Example. The mispronunciation /ʌp θru:/ for *up through* fricativizes the plosive /p/ as it assimilates to the fricative /θ/.(Delacy,335:2007)

## 2. Assimilation in Arabic

It is a phonological process by which two sounds are overlapped forming only one sound. The first is Quiescent sound and the second is movent, as it is difficult to pronounce the two sounds together, and to make their pronunciation easier, they tend to be assimilated to become one stressed sound.(المرصفي,1982:231)

## 2.1 Types of assimilation:

There are two types of assimilation in Arabic the great assimilation and the small. By the great assimilation we mean assimilating two sounds in two separate words both of them movent, then delete the vowel from the first sound and assimilated into the second to have one sound, like: "مَفْعَدٌ صَيْنٌ", "يَشْفَعُ عِنْدَهُ".

The small assimilation consists of two types the complete and the partial assimilation, each of which has its own letters where assimilation happens.(ibid)

The first is also called *assimilation without nasal* by which two sounds become one, and it is called so because when the assimilation happens no nasal comes from the nasal cavity. The process takes place when quiescent nun or nunation is at the end of a word meets " اللام و الراء " at the beginning of the following one, becomes " stressedراء" like: مَرَبِهِم - من ربهيم and عَيْشَتْرَاضِيَّة - عَيْشَتْرَاضِيَّة or "لام مشددة" like: مَلْدَنه - ملدنه and وَيَلْكَلْ - و يلكل and هَمْزَةٌ لِكُلِّ هَمْزَةٍ - و يلكل (8: قمحاوي). همزة

The second one is the partial or "assimilation with nasal" where "quiescent nun" or "nunation" comes at the end of a word and " الواو or الميم الياء, النون " starting the coming one the result would be a assimilated sound, i.e. " نون، " associated with a sound comes from the nasal cavity that is why it is called assimilation with nasal, like:

Quiescent nun & nunation with "الياء" البرق يجعلون - برقيجعلون "النون" Quiescent nun & nunation with "النون" وإن يروا - وإيروا، برق يجعلون - برقيجعلون "الياء" إن نحن - إنحن، like:

Quiescent nun & nunation with "الميم" as in: صراط مستقيم - صراط مستقيم يومئذ ناعمة - يومئذ ناعمة. Quiescent nun & nunation with "الواو" as in: 2008:65 (ابن الجزري). ولكل وجهه - ولكلوجه من وال - موال،

## 2.2 The associated sound or "the nasal":

The associated sound or "the nasal" is one of the basic features of "nun" which can never be apart from it, and that is why we have it wherever there is "nun". As for the complete assimilation there is no "the nasal" associated the process because the two letters " اللام، الراء " don not permit to this feature to pass through them in order to appear because when the assimilation takes place "nun" disappears completely inside " اللام، الراء " whereas with " النون، الميم، " it keeps its basic feature which is "the nasal".(القاري، 2006:209)

## 2.3 Reasons for assimilation:

The process of assimilation happens for three reasons, the first is similarity and the second is homogeneity and the third is approximation. The first results from meeting two similar sounds in manner and place of articulation on condition if one of them is "letter of prolongation" or "quiescence" هااء, like: من نار، قد دخلوا (الكبيسي، 2008:26).

The second is caused by having two homogeneous letters, that are similar in place of articulation and differs in manner, like: "التاء الذال"، in ظلّموا (المرصفي، 232). يلهث ذلك، إذ ظلّموا

The letters that are assimilated under this type are divided into two groups the first is assimilated completely, as "التاء والذال" in:

أحطت، فرطت in "التاء والطاء"، The other group is assimilated partially like, "ودت طائفة، أُجيببت دعوتكما

The third cause after assimilation is approximation. If we have two letters approximate each other in manner and place of articulation, we will not assimilate them, as "النون و اللام"، "الذال والجيم"، "الذال والسين" in:

قد سمع، إذ جاءوكم، من لده. Still there are few cases where approximated letters are assimilated, e.g.:

1. "quiescent" لام in "الراء" with "lam" in "الراء".
2. "الشمس، السلام" with its letters as in: "الشمس، السلام".
3. quiescent nun with its letters.
4. quiescent "القاف" assimilated in "الم نخلقكم" الكاف (ibid)

### 3. The Contrastive Analysis:

The process of assimilations on the behalf of English takes place with consonants only. It changes two sounds in two separate words to one which is similar in features to both. Assimilation happens in two directions the progressive, when the sound changes another sound occurs after it, and the regressive by which the sound changes another sound occurs before it.

The following clears up the progressive direction of assimilation:

1. *Bad girl* /bad gɜ:l/ = [bægɜ:l] the /d/ sound changes to /g/ sound because both are similar in manner of articulation and voicing (plosives, voiced). this is partial assimilation.
2. *Cut glass* /kʌt glæs/ = [kʌglæs] the sound /t/ changes to /k/ when it meets /g/ because of the similarity between /t/ & /k/ in manner of articulation and voicing (plosives and voiceless). this is partial assimilation.



3. *Bus shelter* /bʌs ʃeltə/ = [buʃʃeltə] the sound /s/ changes to /ʃ/ when it meets /ʃ/ for they are alike in manner of articulation and voicing (fricatives & voiceless). this is complete assimilation.
4. *Good morning*. /gud mo:nɪŋ/ = [gumo:nɪŋ] the sound /m/ changes /d/ to /b/ because it is similar to /d/ in voicing (voiced) and manner of articulation (plosives) and to /m/ in place of articulation (bilabial). It is partial assimilation.
5. *mixed bag* /mikst bæɡ/ = [mikspæɡ] the sound /t/ changes to /p/ before /b/ because it resembles /t/ in voicing (voiceless) and manner of articulation (plosives) and /b/ in place and manner of articulation (plosives & bilabial). this is partial assimilation.

The following examples clear up how the regressive assimilation happens:

1. *News paper* /nju:z peɪpə/ = [nju:s peɪpə] this is because the letter (s) is pronounced here /z/ and when it meets /p/ changes to /s/ because it shares /p/ in voicing (voiceless) and shares /z/ in manner and place of articulation (fricatives, alveolar). this is partial assimilation.
2. *Have to* /hæv tu/ = [hæf tu] the /v/ sound changes to /f/ because it resembles /v/ sound in manner and place of articulation (fricatives and labio dental) and resembles /t/ in voicing (voiceless). this is partial assimilation.
3. *This shirt*. /ðɪs ʃɜ:t/ = [ðɪʃʃɜ:t] the sound /ʃ/ changes /s/ to /ʃ/ because both are alike in manner of articulation (fricatives) and voicing (voiceless). this is complete assimilation.
4. *ten minutes* /ten mɪnɪts/ = [temmɪnɪts] the nasal sound /m/ changes /n/ to /m/ because they share most of the features (nasal, voiced). this is complete assimilation.
5. *inn-keeper*. /ɪn ki:pə/ = [ɪŋki:pə] the sound /k/ changes /n/ to another nasalized sound /ŋ/ which resembles /n/ in manner of articulation (nasal) and voicing (voiced), and /k/ in place of articulation (velar). It is partial assimilation.

On the other hand, the assimilation in Arabic takes place with just the consonants, only in separate words. By this process the assimilated sound overlaps into the next one which is similar to it to some extent. The process happens progressively. reasons after assimilation are similarity, homogeneity, and approximation in features between the assimilated sounds. The following examples may clarify how does the process go.

1. مَنْ نَشَاءُ → مَنَّاشَاءُ here quiescent nun assimilated in movent nun to get one stressed nun. This happened because of the similarity between them in all the features. This is partial assimilation.
2. مَنْ لَدْنَهُ → مَنَّ لَدْنَهُ here quiescent nun is overlapped in اللام to have assimilated لَام. this is because they are approximate in place of articulation (alveolar) and voicing (voiced). This is complete assimilation.
3. يَلْهَثُ ذَلِكَ → يَلْهَثُكَ ذَلِكَ in this case the يَلْهَثُ meets the ذَلِكَ and becomes one ذَلِكَ as they are homogeneous in place & manner of articulation (fricatives & dental). This is complete assimilation.

4. ودت طانفة → ودطانفة as the التاء is assimilated with الطاء to have one stressed طاء and this is a result from the homogeneity between them in place and manner of articulation (plosives & alveolar). This is partial assimilation.
5. من مال → ممّال here quiescent nun is overlapped in الميم to be one stressed ميم. This is because of the big similarity between them, manner of articulation (nasals) and voicing (voiced). This is complete assimilation.

#### 4. The Conclusion

The recent study has come up with following conclusions:

##### 4.1. Points of Similarities

The points of similarities of assimilation in English with its Arabic counterpart are:

1. The process in both languages deals with consonants sounds only.
2. Assimilation happens between two sounds that are found in separate words in the two languages.
3. Assimilation in two languages takes place according to similarity totally or partially in features between the assimilated sounds.

##### 4.2. Points of Differences

As a result of the current study, the points of differences of assimilation in English with its equivalent in Arabic are:

1. The two languages differ in their way of assimilating sounds, in English the assimilated sounds are changed to another sound differs from them whereas in Arabic are overlapped with each other to have one sound similar to the second.
2. English undergoes assimilation in two directions, the progressive and regressive, Arabic assimilation happens only progressively.

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## المستخلص

الحمد لله رب العالمين والصلاة والسلام على سيد المرسلين محمد الأمين.

يقوم هذا البحث على دراسة الإدغام الصوتي في اللغتين الانجليزية والعربية دراسة مقارنة. وهي إحدى العمليات الصوتية التي تحدث في اللغة لتيسير النطق بصوتين متماثلين متجاورين.

الإدغام الصوتي في اللغة الانجليزية يكون بدمج صوتين متقاربين في الصفات والمخارج متواجدين في كلمتين منفصلتين ليكونا صوتاً مقارباً لكلاهما في الصفات والمخارج. هذه العملية الصوتية تجري باتجاهين احدهما للأمام (تقدمي) والآخر للخلف (تراجعي). الأول يجري عندما يدغم الصوت الأول مع الصوت الثاني الذي يقع على يساره فيصبح صوت ثالث مقارب لهما أو أحياناً يكون مشابه للصوت الثاني. الإدغام الخلفي يحدث بالتقاء صوتين الأول يدغم بالثاني الذي يقع على يمينه ليشكلوا صوتاً واحداً يشبه الثاني أو يكون صوتاً ثالثاً مقارباً لهما.

في اللغة العربية الإدغام يحدث عندما يلتقي حرف ساكن بأخر متحرك فيدغما ليكونا حرفاً واحداً من جنس الثاني. تجري عملية الإدغام في العربية باتجاه واحد وهو التقدمي عندما يلتقي حرفان يكونان متماثلين أو متجانسين أو متقاربين في الصفات والمخرج. للإدغام نوعان احدهما يحدث عندما تلتقي النون الساكنة أو التتوين بأحد الأحرف (ميم، واو، ياء، نون) ويدعى الإدغام بغنة (الجزئي)، أما الثاني فيحدث عند التقاء النون الساكنة أو التتوين باللام أو الراء ويسمى الإدغام بغير غنة (الكامل).

