

CHAPTER IV

CONCLUSION

For muslim people, *Tajwid* is very important since it outlines the correct method of pronunciation for Arabic letters, the interaction of the letters when they meet, individual words and sentences—in order to recite the Qur'an properly, as close as possible to the original recitation at the time of Revelation. However, apart from religious interest, *Tajwid* in fact contains many interesting linguistic phenomena. One of them is in the field of Phonology, notably the concurrence of nasal assimilation and lengthening processes. We may find the process of nasal assimilation or lengthening only in any other languages, yet the processes of nasal assimilation and lengthening occurring at the same time are distinctive and may only be found in *Tajwid*. By studying *Tajwid* from different viewpoint (other than religious one), we may see that it is not simply a matter of reciting the Qur'an correctly, but the fact that the phonological phenomenon in *Tajwid* may become an interesting linguistic analysis.

From the study conducted, the writer finds that there are several principles in *Tajwid* which contain nasal assimilation and lengthening processes occurring simultaneously. The first principle identified is *Iqlab*. In *Iqlab* we find a process of **regressive homorganic nasal assimilation**, where a consonant (in this case is /n/) becomes more similar to a consonant which shares the same place of articulation (= homorganic) with the consonant following it (i.e. [b]). Based on the data presented, the assimilation seems to occur generally, without any restriction from word boundary. Another process found in *Iqlab* is lengthening. If we view

the homorganic nasal assimilation and the lengthening processes as occurring in two diachronic stages, the /n/ first becomes [m] before [b], then the [m] is lengthened. In times when there was no modern speech device used to measure the duration of length, there were several traditional and manual ways employed. But today it is found that based on normal recitation, the duration of lengthening which accompanies nasalization, ranges from 1.0 – 1.3 seconds. In this inquiry, the lengthening is represented by double over-rings above the affected phoneme ([^{ˆˆ}]). This symbol is specially devised by the writer to represent the occurrence of ‘extra’ lengthening of consonants in *Tajwid*, as there is no symbol yet in IPA transcription that appropriately serves the purpose. The two processes found in *Iqlab* are represented by means of phonological rules as follows:

- *Homorganic nasal assimilation*

/n/ → [m] / __ [b], or

$$\begin{pmatrix} +\text{nasal} \\ +\text{coronal} \end{pmatrix} \rightarrow \begin{pmatrix} +\text{nasal} \\ +\text{bilabial} \end{pmatrix} / _ \begin{pmatrix} +\text{voice} \\ +\text{bilabial} \\ +\text{cons} \end{pmatrix}$$

- *Lengthening*

[m] → [+long] / __ [b], or

$$\begin{pmatrix} +\text{nasal} \\ +\text{bilabial} \end{pmatrix} \rightarrow [+long] / _ \begin{pmatrix} +\text{voice} \\ +\text{bilabial} \\ +\text{cons} \end{pmatrix}$$

The second principle is *Ikhfa' Haqiqi*. In *Ikhfa' Haqiqi*, besides lengthening process, we also find a process of **regressive homorganic nasal assimilation**. In this process, the /n/ becomes several allophones, notably [ŋ, ŋ̄, ŋ̇, ŋ̈, ŋ̉, ŋ̊, ŋ̋, ŋ̌, ŋ̍, ŋ̎, ŋ̏, ŋ̐, ŋ̑, ŋ̒, ŋ̓, ŋ̔, ŋ̕, ŋ̖, ŋ̗, ŋ̘, ŋ̙, ŋ̚, ŋ̛, ŋ̜, ŋ̝, ŋ̞, ŋ̟, ŋ̠, ŋ̡, ŋ̢, ŋ̣, ŋ̤, ŋ̥, ŋ̦, ŋ̧, ŋ̨, ŋ̩, ŋ̪, ŋ̫, ŋ̬, ŋ̭, ŋ̮, ŋ̯, ŋ̰, ŋ̱, ŋ̲, ŋ̳, ŋ̴, ŋ̵, ŋ̶, ŋ̷, ŋ̸, ŋ̹, ŋ̺, ŋ̻, ŋ̼, ŋ̽, ŋ̾, ŋ̿, ŋ̿̄, ŋ̿̇, ŋ̿̈, ŋ̿̉, ŋ̿̊, ŋ̿̋, ŋ̿̌, ŋ̿̍, ŋ̿̎, ŋ̿̏, ŋ̿̐, ŋ̿̑, ŋ̿̒, ŋ̿̓, ŋ̿̔, ŋ̿̕, ŋ̖̿, ŋ̗̿, ŋ̘̿, ŋ̙̿, ŋ̿̚, ŋ̛̿, ŋ̜̿, ŋ̝̿, ŋ̞̿, ŋ̟̿, ŋ̠̿, ŋ̡̿, ŋ̢̿, ŋ̣̿, ŋ̤̿, ŋ̥̿, ŋ̦̿, ŋ̧̿, ŋ̨̿, ŋ̩̿, ŋ̪̿, ŋ̫̿, ŋ̬̿, ŋ̭̿, ŋ̮̿, ŋ̯̿, ŋ̰̿, ŋ̱̿, ŋ̲̿, ŋ̳̿, ŋ̴̿, ŋ̵̿, ŋ̶̿, ŋ̷̿, ŋ̸̿, ŋ̹̿, ŋ̺̿, ŋ̻̿, ŋ̼̿, ŋ̿̽, ŋ̿̾, ŋ̿̿, ŋ̿̿̄, ŋ̿̿̇, ŋ̿̿̈, ŋ̿̿̉, ŋ̿̿̊, ŋ̿̿̋, ŋ̿̿̌, ŋ̿̿̍, ŋ̿̿̎, ŋ̿̿̏, ŋ̿̿̐, ŋ̿̿̑, ŋ̿̿̒, ŋ̿̿̓, ŋ̿̿̔, ŋ̿̿̕, ŋ̖̿̿, ŋ̗̿̿, ŋ̘̿̿, ŋ̙̿̿, ŋ̿̿̚, ŋ̛̿̿, ŋ̜̿̿, ŋ̝̿̿, ŋ̞̿̿, ŋ̟̿̿, ŋ̠̿̿, ŋ̡̿̿, ŋ̢̿̿, ŋ̣̿̿, ŋ̤̿̿, ŋ̥̿̿, ŋ̦̿̿, ŋ̧̿̿, ŋ̨̿̿, ŋ̩̿̿, ŋ̪̿̿, ŋ̫̿̿, ŋ̬̿̿, ŋ̭̿̿, ŋ̮̿̿, ŋ̯̿̿, ŋ̰̿̿, ŋ̱̿̿, ŋ̲̿̿, ŋ̳̿̿, ŋ̴̿̿, ŋ̵̿̿, ŋ̶̿̿, ŋ̷̿̿, ŋ̸̿̿, ŋ̹̿̿, ŋ̺̿̿, ŋ̻̿̿, ŋ̼̿̿, ŋ̿̿̽, ŋ̿̿̾, ŋ̿̿̿, ŋ̿̿̿̄, ŋ̿̿̿̇, ŋ̿̿̿̈, ŋ̿̿̿̉, ŋ̿̿̿̊, ŋ̿̿̿̋, ŋ̿̿̿̌, ŋ̿̿̿̍, ŋ̿̿̿̎, ŋ̿̿̿̏, ŋ̿̿̿̐, ŋ̿̿̿̑, ŋ̿̿̿̒, ŋ̿̿̿̓, ŋ̿̿̿̔, ŋ̿̿̿̕, ŋ̖̿̿̿, ŋ̗̿̿̿, ŋ̘̿̿̿, ŋ̙̿̿̿, ŋ̿̿̿̚, ŋ̛̿̿̿, ŋ̜̿̿̿, ŋ̝̿̿̿, ŋ̞̿̿̿, ŋ̟̿̿̿, ŋ̠̿̿̿, ŋ̡̿̿̿, ŋ̢̿̿̿, ŋ̣̿̿̿, ŋ̤̿̿̿, ŋ̥̿̿̿, ŋ̦̿̿̿, ŋ̧̿̿̿, ŋ̨̿̿̿, ŋ̩̿̿̿, ŋ̪̿̿̿, ŋ̫̿̿̿, ŋ̬̿̿̿, ŋ̭̿̿̿, ŋ̮̿̿̿, ŋ̯̿̿̿, ŋ̰̿̿̿, ŋ̱̿̿̿, ŋ̲̿̿̿, ŋ̳̿̿̿, ŋ̴̿̿̿, ŋ̵̿̿̿, ŋ̶̿̿̿, ŋ̷̿̿̿, ŋ̸̿̿̿, ŋ̹̿̿̿, ŋ̺̿̿̿, ŋ̻̿̿̿, ŋ̼̿̿̿, ŋ̿̿̿̽, ŋ̿̿̿̾, ŋ̿̿̿̿, ŋ̿̿̿̿̄, ŋ̿̿̿̿̇, ŋ̿̿̿̿̈, ŋ̿̿̿̿̉, ŋ̿̿̿̿̊, ŋ̿̿̿̿̋, ŋ̿̿̿̿̌, ŋ̿̿̿̿̍, ŋ̿̿̿̿̎, ŋ̿̿̿̿̏, ŋ̿̿̿̿̐, ŋ̿̿̿̿̑, ŋ̿̿̿̿̒, ŋ̿̿̿̿̓, ŋ̿̿̿̿̔, ŋ̿̿̿̿̕, ŋ̖̿̿̿̿, ŋ̗̿̿̿̿, ŋ̘̿̿̿̿, ŋ̙̿̿̿̿, ŋ̿̿̿̿̚, ŋ̛̿̿̿̿, ŋ̜̿̿̿̿, ŋ̝̿̿̿̿, ŋ̞̿̿̿̿, ŋ̟̿̿̿̿, ŋ̠̿̿̿̿, ŋ̡̿̿̿̿, ŋ̢̿̿̿̿, ŋ̣̿̿̿̿, ŋ̤̿̿̿̿, ŋ̥̿̿̿̿, ŋ̦̿̿̿̿, ŋ̧̿̿̿̿, ŋ̨̿̿̿̿, ŋ̩̿̿̿̿, ŋ̪̿̿̿̿, ŋ̫̿̿̿̿, ŋ̬̿̿̿̿, ŋ̭̿̿̿̿, ŋ̮̿̿̿̿, ŋ̯̿̿̿̿, ŋ̰̿̿̿̿, ŋ̱̿̿̿̿, ŋ̲̿̿̿̿, ŋ̳̿̿̿̿, ŋ̴̿̿̿̿, ŋ̵̿̿̿̿, ŋ̶̿̿̿̿, ŋ̷̿̿̿̿, ŋ̸̿̿̿̿, ŋ̹̿̿̿̿, ŋ̺̿̿̿̿, ŋ̻̿̿̿̿, ŋ̼̿̿̿̿, ŋ̿̿̿̿̽, ŋ̿̿̿̿̾, ŋ̿̿̿̿̿, ŋ̿̿̿̿̿̄, ŋ̿̿̿̿̿̇, ŋ̿̿̿̿̿̈, ŋ̿̿̿̿̿̉, ŋ̿̿̿̿̿̊, ŋ̿̿̿̿̿̋, ŋ̿̿̿̿̿̌, ŋ̿̿̿̿̿̍, ŋ̿̿̿̿̿̎, ŋ̿̿̿̿̿̏, ŋ̿̿̿̿̿̐, ŋ̿̿̿̿̿̑, ŋ̿̿̿̿̿̒, ŋ̿̿̿̿̿̓, ŋ̿̿̿̿̿̔, ŋ̿̿̿̿̿̕, ŋ̖̿̿̿̿̿, ŋ̗̿̿̿̿̿, ŋ̘̿̿̿̿̿, ŋ̙̿̿̿̿̿, ŋ̿̿̿̿̿̚, ŋ̛̿̿̿̿̿, ŋ̜̿̿̿̿̿, ŋ̝̿̿̿̿̿, ŋ̞̿̿̿̿̿, ŋ̟̿̿̿̿̿, ŋ̠̿̿̿̿̿, ŋ̡̿̿̿̿̿, ŋ̢̿̿̿̿̿, ŋ̣̿̿̿̿̿, ŋ̤̿̿̿̿̿, ŋ̥̿̿̿̿̿, ŋ̦̿̿̿̿̿, ŋ̧̿̿̿̿̿, ŋ̨̿̿̿̿̿, ŋ̩̿̿̿̿̿, ŋ̪̿̿̿̿̿, ŋ̫̿̿̿̿̿, ŋ̬̿̿̿̿̿, ŋ̭̿̿̿̿̿, ŋ̮̿̿̿̿̿, ŋ̯̿̿̿̿̿, ŋ̰̿̿̿̿̿, ŋ̱̿̿̿̿̿, ŋ̲̿̿̿̿̿, ŋ̳̿̿̿̿̿, ŋ̴̿̿̿̿̿, ŋ̵̿̿̿̿̿, ŋ̶̿̿̿̿̿, ŋ̷̿̿̿̿̿, ŋ̸̿̿̿̿̿, ŋ̹̿̿̿̿̿, ŋ̺̿̿̿̿̿, ŋ̻̿̿̿̿̿, ŋ̼̿̿̿̿̿, ŋ̿̿̿̿̿̽, ŋ̿̿̿̿̿̾, ŋ̿̿̿̿̿̿, ŋ̿̿̿̿̿̿̄, ŋ̿̿̿̿̿̿̇, ŋ̿̿̿̿̿̿̈, ŋ̿̿̿̿̿̿̉, ŋ̿̿̿̿̿̿̊, ŋ̿̿̿̿̿̿̋, ŋ̿̿̿̿̿̿̌, ŋ̿̿̿̿̿̿̍, ŋ̿̿̿̿̿̿̎, ŋ̿̿̿̿̿̿̏, ŋ̿̿̿̿̿̿̐, ŋ̿̿̿̿̿̿̑, ŋ̿̿̿̿̿̿̒, ŋ̿̿̿̿̿̿̓, ŋ̿̿̿̿̿̿̔, ŋ̿̿̿̿̿̿̕, ŋ̖̿̿̿̿̿̿, ŋ̗̿̿̿̿̿̿, ŋ̘̿̿̿̿̿̿, ŋ̙̿̿̿̿̿̿, ŋ̿̿̿̿̿̿̚, ŋ̛̿̿̿̿̿̿, ŋ̜̿̿̿̿̿̿, ŋ̝̿̿̿̿̿̿, ŋ̞̿̿̿̿̿̿, ŋ̟̿̿̿̿̿̿, ŋ̠̿̿̿̿̿̿, ŋ̡̿̿̿̿̿̿, ŋ̢̿̿̿̿̿̿, ŋ̣̿̿̿̿̿̿, ŋ̤̿̿̿̿̿̿, ŋ̥̿̿̿̿̿̿, ŋ̦̿̿̿̿̿̿, ŋ̧̿̿̿̿̿̿, ŋ̨̿̿̿̿̿̿, ŋ̩̿̿̿̿̿̿, ŋ̪̿̿̿̿̿̿, ŋ̫̿̿̿̿̿̿, ŋ̬̿̿̿̿̿̿, ŋ̭̿̿̿̿̿̿, ŋ̮̿̿̿̿̿̿, ŋ̯̿̿̿̿̿̿, ŋ̰̿̿̿̿̿̿, ŋ̱̿̿̿̿̿̿, ŋ̲̿̿̿̿̿̿, ŋ̳̿̿̿̿̿̿, ŋ̴̿̿̿̿̿̿, ŋ̵̿̿̿̿̿̿, ŋ̶̿̿̿̿̿̿, ŋ̷̿̿̿̿̿̿, ŋ̸̿̿̿̿̿̿, ŋ̹̿̿̿̿̿̿, ŋ̺̿̿̿̿̿̿, ŋ̻̿̿̿̿̿̿, ŋ̼̿̿̿̿̿̿, ŋ̿̿̿̿̿̿̽, ŋ̿̿̿̿̿̿̾, ŋ̿̿̿̿̿̿̿, ŋ̿̿̿̿̿̿̿̄, ŋ̿̿̿̿̿̿̿̇, ŋ̿̿̿̿̿̿̿̈, ŋ̿̿̿̿̿̿̿̉, ŋ̿̿̿̿̿̿̿̊, ŋ̿̿̿̿̿̿̿̋, ŋ̿̿̿̿̿̿̿̌, ŋ̿̿̿̿̿̿̿̍, ŋ̿̿̿̿̿̿̿̎, ŋ̿̿̿̿̿̿̿̏, ŋ̿̿̿̿̿̿̿̐, ŋ̿̿̿̿̿̿̿̑, ŋ̿̿̿̿̿̿̿̒, ŋ̿̿̿̿̿̿̿̓, ŋ̿̿̿̿̿̿̿̔, ŋ̿̿̿̿̿̿̿̕, ŋ̖̿̿̿̿̿̿̿, ŋ̗̿̿̿̿̿̿̿, ŋ̘̿̿̿̿̿̿̿, ŋ̙̿̿̿̿̿̿̿, ŋ̿̿̿̿̿̿̿̚, ŋ̛̿̿̿̿̿̿̿, ŋ̜̿̿̿̿̿̿̿, ŋ̝̿̿̿̿̿̿̿, ŋ̞̿̿̿̿̿̿̿, ŋ̟̿̿̿̿̿̿̿, ŋ̠̿̿̿̿̿̿̿, ŋ̡̿̿̿̿̿̿̿, ŋ̢̿̿̿̿̿̿̿, ŋ̣̿̿̿̿̿̿̿, ŋ̤̿̿̿̿̿̿̿, ŋ̥̿̿̿̿̿̿̿, ŋ̦̿̿̿̿̿̿̿, ŋ̧̿̿̿̿̿̿̿, ŋ̨̿̿̿̿̿̿̿, ŋ̩̿̿̿̿̿̿̿, ŋ̪̿̿̿̿̿̿̿, ŋ̫̿̿̿̿̿̿̿, ŋ̬̿̿̿̿̿̿̿, ŋ̭̿̿̿̿̿̿̿, ŋ̮̿̿̿̿̿̿̿, ŋ̯̿̿̿̿̿̿̿, ŋ̰̿̿̿̿̿̿̿, ŋ̱̿̿̿̿̿̿̿, ŋ̲̿̿̿̿̿̿̿, ŋ̳̿̿̿̿̿̿̿, ŋ̴̿̿̿̿̿̿̿, ŋ̵̿̿̿̿̿̿̿, ŋ̶̿̿̿̿̿̿̿, ŋ̷̿̿̿̿̿̿̿, ŋ̸̿̿̿̿̿̿̿, ŋ̹̿̿̿̿̿̿̿, ŋ̺̿̿̿̿̿̿̿, ŋ̻̿̿̿̿̿̿̿, ŋ̼̿̿̿̿̿̿̿, ŋ̿̿̿̿̿̿̿̽, ŋ̿̿̿̿̿̿̿̾, ŋ̿̿̿̿̿̿̿̿, ŋ̿̿̿̿̿̿̿̿̄, ŋ̿̿̿̿̿̿̿̿̇, ŋ̿̿̿̿̿̿̿̿̈, ŋ̿̿̿̿̿̿̿̿̉, ŋ̿̿̿̿̿̿̿̿̊, ŋ̿̿̿̿̿̿̿̿̋, ŋ̿̿̿̿̿̿̿̿̌, ŋ̿̿̿̿̿̿̿̿̍, ŋ̿̿̿̿̿̿̿̿̎, ŋ̿̿̿̿̿̿̿̿̏, ŋ̿̿̿̿̿̿̿̿̐, ŋ̿̿̿̿̿̿̿̿̑, ŋ̿̿̿̿̿̿̿̿̒, ŋ̿̿̿̿̿̿̿̿̓, ŋ̿̿̿̿̿̿̿̿̔, ŋ̿̿̿̿̿̿̿̿̕, ŋ̖̿̿̿̿̿̿̿̿, ŋ̗̿̿̿̿̿̿̿̿, ŋ̘̿̿̿̿̿̿̿̿, ŋ̙̿̿̿̿̿̿̿̿, ŋ̿̿̿̿̿̿̿̿̚, ŋ̛̿̿̿̿̿̿̿̿, ŋ̜̿̿̿̿̿̿̿̿, ŋ̝̿̿̿̿̿̿̿̿, ŋ̞̿̿̿̿̿̿̿̿, ŋ̟̿̿̿̿̿̿̿̿, ŋ̠̿̿̿̿̿̿̿̿, ŋ̡̿̿̿̿̿̿̿̿, ŋ̢̿̿̿̿̿̿̿̿, ŋ̣̿̿̿̿̿̿̿̿, ŋ̤̿̿̿̿̿̿̿̿, ŋ̥̿̿̿̿̿̿̿̿, ŋ̦̿̿̿̿̿̿̿̿, ŋ̧̿̿̿̿̿̿̿̿, ŋ̨̿̿̿̿̿̿̿̿, ŋ̩̿̿̿̿̿̿̿̿, ŋ̪̿̿̿̿̿̿̿̿, ŋ̫̿̿̿̿̿̿̿̿, ŋ̬̿̿̿̿̿̿̿̿, ŋ̭̿̿̿̿̿̿̿̿, ŋ̮̿̿̿̿̿̿̿̿, ŋ̯̿̿̿̿̿̿̿̿, ŋ̰̿̿̿̿̿̿̿̿, ŋ̱̿̿̿̿̿̿̿̿, ŋ̲̿̿̿̿̿̿̿̿, ŋ̳̿̿̿̿̿̿̿̿, ŋ̴̿̿̿̿̿̿̿̿, ŋ̵̿̿̿̿̿̿̿̿, ŋ̶̿̿̿̿̿̿̿̿, ŋ̷̿̿̿̿̿̿̿̿, ŋ̸̿̿̿̿̿̿̿̿, ŋ̹̿̿̿̿̿̿̿̿, ŋ̺̿̿̿̿̿̿̿̿, ŋ̻̿̿̿̿̿̿̿̿, ŋ̼̿̿̿̿̿̿̿̿, ŋ̿̿̿̿̿̿̿̿̽, ŋ̿̿̿̿̿̿̿̿̾, ŋ̿̿̿̿̿̿̿̿̿, ŋ̿̿̿̿̿̿̿̿̿̄, ŋ̿̿̿̿̿̿̿̿̿̇, ŋ̿̿̿̿̿̿̿̿̿̈, ŋ̿̿̿̿̿̿̿̿̿̉, ŋ̿̿̿̿̿̿̿̿̿̊, ŋ̿̿̿̿̿̿̿̿̿̋, ŋ̿̿̿̿̿̿̿̿̿̌, ŋ̿̿̿̿̿̿̿̿̿̍, ŋ̿̿̿̿̿̿̿̿̿̎, ŋ̿̿̿̿̿̿̿̿̿̏, ŋ̿̿̿̿̿̿̿̿̿̐, ŋ̿̿̿̿̿̿̿̿̿̑, ŋ̿̿̿̿̿̿̿̿̿̒, ŋ̿̿̿̿̿̿̿̿̿̓, ŋ̿̿̿̿̿̿̿̿̿̔, ŋ̿̿̿̿̿̿̿̿̿̕, ŋ̖̿̿̿̿̿̿̿̿̿, ŋ̗̿̿̿̿̿̿̿̿̿, ŋ̘̿̿̿̿̿̿̿̿̿, ŋ̙̿̿̿̿̿̿̿̿̿, ŋ̿̿̿̿̿̿̿̿̿̚, ŋ̛̿̿̿̿̿̿̿̿̿, ŋ̜̿̿̿̿̿̿̿̿̿, ŋ̝̿̿̿̿̿̿̿̿̿, ŋ̞̿̿̿̿̿̿̿̿̿, ŋ̟̿̿̿̿̿̿̿̿̿, ŋ̠̿̿̿̿̿̿̿̿̿, ŋ̡̿̿̿̿̿̿̿̿̿, ŋ̢̿̿̿̿̿̿̿̿̿, ŋ̣̿̿̿̿̿̿̿̿̿, ŋ̤̿̿̿̿̿̿̿̿̿, ŋ̥̿̿̿̿̿̿̿̿̿, ŋ̦̿̿̿̿̿̿̿̿̿, ŋ̧̿̿̿̿̿̿̿̿̿, ŋ̨̿̿̿̿̿̿̿̿̿, ŋ̩̿̿̿̿̿̿̿̿̿, ŋ̪̿̿̿̿̿̿̿̿̿, ŋ̫̿̿̿̿̿̿̿̿̿, ŋ̬̿̿̿̿̿̿̿̿̿, ŋ̭̿̿̿̿̿̿̿̿̿, ŋ̮̿̿̿̿̿̿̿̿̿, ŋ̯̿̿̿̿̿̿̿̿̿, ŋ̰̿̿̿̿̿̿̿̿̿, ŋ̱̿̿̿̿̿̿̿̿̿, ŋ̲̿̿̿̿̿̿̿̿̿, ŋ̳̿̿̿̿̿̿̿̿̿, ŋ̴̿̿̿̿̿̿̿̿̿, ŋ̵̿̿̿̿̿̿̿̿̿, ŋ̶̿̿̿̿̿̿̿̿̿, ŋ̷̿̿̿̿̿̿̿̿̿, ŋ̸̿̿̿̿̿̿̿̿̿, ŋ̹̿̿̿̿̿̿̿̿̿, ŋ̺̿̿̿̿̿̿̿̿̿, ŋ̻̿̿̿̿̿̿̿̿̿, ŋ̼̿̿̿̿̿̿̿̿̿, ŋ̿̿̿̿̿̿̿̿̿̽, ŋ̿̿̿̿̿̿̿̿̿̾, ŋ̿̿̿̿̿̿̿̿̿̿, ŋ̿̿̿̿̿̿̿̿̿̿̄, ŋ̿̿̿̿̿̿̿̿̿̿̇, ŋ̿̿̿̿̿̿̿̿̿̿̈, ŋ̿̿̿̿̿̿̿̿̿̿̉, ŋ̿̿̿̿̿̿̿̿̿̿̊, ŋ̿̿̿̿̿̿̿̿̿̿̋, ŋ̿̿̿̿̿̿̿̿̿̿̌, ŋ̿̿̿̿̿̿̿̿̿̿̍, ŋ̿̿̿̿̿̿̿̿̿̿̎, ŋ̿̿̿̿̿̿̿̿̿̿̏, ŋ̿̿̿̿̿̿̿̿̿̿̐, ŋ̿̿̿̿̿̿̿̿̿̿̑, ŋ̿̿̿̿̿̿̿̿̿̿̒, ŋ̿̿̿̿̿̿̿̿̿̿̓, ŋ̿̿̿̿̿̿̿̿̿̿̔, ŋ̿̿̿̿̿̿̿̿̿̿̕, ŋ̖̿̿̿̿̿̿̿̿̿̿, ŋ̗̿̿̿̿̿̿̿̿̿̿, ŋ̘̿̿̿̿̿̿̿̿̿̿, ŋ̙̿̿̿̿̿̿̿̿̿̿, ŋ̿̿̿̿̿̿̿̿̿̿̚, ŋ̛̿̿̿̿̿̿̿̿̿̿, ŋ̜̿̿̿̿̿̿̿̿̿̿, ŋ̝̿̿̿̿̿̿̿̿̿̿, ŋ̞̿̿̿̿̿̿̿̿̿̿, ŋ̟̿̿̿̿̿̿̿̿̿̿, ŋ̠̿̿̿̿̿̿̿̿̿̿, ŋ̡̿̿̿̿̿̿̿̿̿̿, ŋ̢̿̿̿̿̿̿̿̿̿̿, ŋ̣̿̿̿̿̿̿̿̿̿̿, ŋ̤̿̿̿̿̿̿̿̿̿̿, ŋ̥̿̿̿̿̿̿̿̿̿̿, ŋ̦̿̿̿̿̿̿̿̿̿̿, ŋ̧̿̿̿̿̿̿̿̿̿̿, ŋ̨̿̿̿̿̿̿̿̿̿̿, ŋ̩̿̿̿̿̿̿̿̿̿̿, ŋ̪̿̿̿̿̿̿̿̿̿̿, ŋ̫̿̿̿̿̿̿̿̿̿̿, ŋ̬̿̿̿̿̿̿̿̿̿̿, ŋ̭̿̿̿̿̿̿̿̿̿̿, ŋ̮̿̿̿̿̿̿̿̿̿̿, ŋ̯̿̿̿̿̿̿̿̿̿̿, ŋ̰̿̿̿̿̿̿̿̿̿̿, ŋ̱̿̿̿̿̿̿̿̿̿̿, ŋ̲̿̿̿̿̿̿̿̿̿̿, ŋ̳̿̿̿̿̿̿̿̿̿̿, ŋ̴̿̿̿̿̿̿̿̿̿̿, ŋ̵̿̿̿̿̿̿̿̿̿̿, ŋ̶̿̿̿̿̿̿̿̿̿̿, ŋ̷̿̿̿̿̿̿̿̿̿̿, ŋ̸̿̿̿̿̿̿̿̿̿̿, ŋ̹̿̿̿̿̿̿̿̿̿̿, ŋ̺̿̿̿̿̿̿̿̿̿̿, ŋ̻̿̿̿̿̿̿̿̿̿̿, ŋ̼̿̿̿̿̿̿̿̿̿̿, ŋ̿̿̿̿̿̿̿̿̿̿̽, ŋ̿̿̿̿̿̿̿̿̿̿̾, ŋ̿̿̿̿̿̿̿̿̿̿̿, ŋ̿̿̿̿̿̿̿̿̿̿̿̄, ŋ̿̿̿̿̿̿̿̿̿̿̿̇, ŋ̿̿̿̿̿̿̿̿̿̿̿̈, ŋ̿̿̿̿̿̿̿̿̿̿̿̉, ŋ̿̿̿̿̿̿̿̿̿̿̿̊, ŋ̿̿̿̿̿̿̿̿̿̿̿̋, ŋ̿̿̿̿̿̿̿̿̿̿̿̌, ŋ̿̿̿̿̿̿̿̿̿̿̿̍, ŋ̿̿̿̿̿̿̿̿̿̿̿̎, ŋ̿̿̿̿̿̿̿̿̿̿̿̏, ŋ̿̿̿̿̿̿̿̿̿̿̿̐, 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'action' of the phoneme /n/ when it is followed by certain consonants (*Ikhfa'* letters), namely [f, θ, ð, ð^w, t̪, d̪, t̪, d̪, ʃ, ʒ, s, z, k, and q]. Another thing to note is that the assimilation seems to occur generally, without any restriction from word boundary. Referring to the homorganic nasal assimilation rule found in *Ikhfa' Haqiqi*, we may also include the principle of *Iqlab* as it has the same rule. In other words, we may actually write the same rule notation for both *Iqlab* and *Ikhfa' Haqiqi* as to account for their similar phonological phenomena, like the following:

- *Homorganic nasal assimilation*

$$/n/ \rightarrow \left[\begin{array}{c} + \text{nasal} \\ \alpha \text{ [place]} \end{array} \right] / _ \left[\begin{array}{c} + \text{consonantal} \\ \alpha \text{ [place]} \end{array} \right]$$

- *Lengthening*

$$\left[\begin{array}{c} + \text{nasal} \\ \alpha \text{ [place]} \end{array} \right] \rightarrow [+long] / _ \left[\begin{array}{c} + \text{consonantal} \\ \alpha \text{ [place]} \end{array} \right]$$

The third principle identified is *Idgham bi Ghunnah*. In *Idgham bi Ghunnah*, besides lengthening, we find two diachronic processes of **progressive nasal assimilation** and **regressive total assimilation**. This is the reason why the case is called *Idgham Bi Ghunnah*, which means assimilating with nasalizing. In fact, both processes occur synchronically. The /n/ nasalizes the following segments (/j, n, m, w/), and the segments assimilate the /n/. Interestingly, the segments /j, n, m, w/ at the beginning of a word still retain their nasality when they assimilate the phoneme /n/ at the end of the preceding word. The phoneme /n/ itself also retain its nasal feature when it is in turn assimilated by /j, n, m, w/. It

seems that nasality is a strong feature in the two cases. Another thing to note is that this assimilation seems to be restricted by word boundary. The rules for processes found in *Idgham Bi Ghunnah* are stipulated as follows:

- *Progressive Nasal Assimilation*

/j, n, m, w/ → [j̄, ñ, m̄, w̄] / [n]_, or

$$\begin{pmatrix} +\text{voice} \\ +\text{sonorant} \end{pmatrix} \rightarrow [+nasal] / \begin{pmatrix} +\text{cons} \\ +\text{nasal} \end{pmatrix} _$$

- *Regressive Total Assimilation*

/n/ → [j, n, m, w] / _# # [j, n, m, w], or

$$\begin{pmatrix} +\text{nasal} \\ +\text{coronal} \end{pmatrix} \rightarrow \begin{pmatrix} +\text{voice} \\ +\text{sonorant} \\ +\text{nasal} \end{pmatrix} / _# \# \begin{pmatrix} +\text{voice} \\ +\text{sonorant} \end{pmatrix}$$

- *Lengthening*

$$\begin{pmatrix} +\text{voice} \\ +\text{sonorant} \\ +\text{nasal} \end{pmatrix} \rightarrow [+long] / _ \begin{pmatrix} +\text{voice} \\ +\text{sonorant} \end{pmatrix}$$

The fourth process found is *Idgham Mutajaanisain*. Here, besides lengthening, we also find **regressive complete nasal assimilation**, where a consonant (in this case is /b/) becomes totally like a nasal consonant which follows it (i.e /m/). Since we have a very limited data (only one occurrence), we formulate the rules as general as possible, as the following:

- *Regressive Total Nasal Assimilation*

/b/ → [m] / __[m], or

$$\begin{pmatrix} - \text{nasal} \\ + \text{bilabial} \\ - \text{sonorant} \end{pmatrix} \rightarrow \begin{pmatrix} + \text{nasal} \\ + \text{bilabial} \\ + \text{sonorant} \end{pmatrix} / _ \begin{pmatrix} + \text{nasal} \\ + \text{bilabial} \\ + \text{sonorant} \end{pmatrix}$$

- *Lengthening*

[m] → [long] / __[m], or

$$\begin{pmatrix} + \text{nasal} \\ + \text{bilabial} \end{pmatrix} \rightarrow [+long] / _ \begin{pmatrix} + \text{nasal} \\ + \text{bilabial} \end{pmatrix}$$

In sum, from all principles of *Tajwid* identified, there are two kinds of directional assimilation: progressive nasal assimilation and regressive nasal assimilation. By the extent, we also find two types of assimilation: partial assimilation and total/complete assimilation. The nasal assimilation found in the *Tajwid* principles occurs synchronically with the lengthening processes, not separately. Here we learn that the lengthening is applicable not only when the affected segment shares the same place feature with the following segment, but also when the segments involved include nasality. If one of the conditions is not present, then the lengthening rule is not applicable.

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