Vowel Sound Change in Progress: A Cross-Generational Study of Navaron Dialect

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Vowel Sound Change in Progress: A Cross-Generational Study of Navaron Dialect

Sajib Kumar Ghosh

1. Introduction

The paper, by observing how vowel variants have been transmitted over three age groups of speakers, intends to settle on where the vowel sounds of Navaron dialect and the Standard Bangla differ. It studies three successive generations of fifteen adult speakers ranging in age from 16 to 65 years in a narrowly defined dialect region of Bangladesh i.e., Navaron (1). Dialect, as we know, is a variety of a recognized or official language. In essence, changes in phonetic, phonemic, morphological, and syntactic structures of the standard language often give birth to different dialects. Navaron Dialect is an extension of what we know from *Linguistics Survey of India* as Jessore Dialect. *Banglapedia* puts forward four dialect clusters in which Jessore Dialect is placed in the 'b' category of East Bengal Dialect Cluster (2). Some other discussions on Jessore Dialect were published in different papers and journals but no analysis is found. Therefore, they are not resourceful enough to be cited in the present research. Therefore, this paper targets to execute a thorough analysis of the vowel sounds of three generations of Navaron Dialect Community, recognize the perceptible differences between this dialect and standard Bangla language and finally develop an inventory by vowel plotting that is, by locating the found vowel sounds in quadrilateral diagram.

Before diving deep into the analysis of the sounds of Navaron Dialect, a preface of it is a prerequisite. Based on the information retrieved from ethnologue.com a preface is developed and presented below:

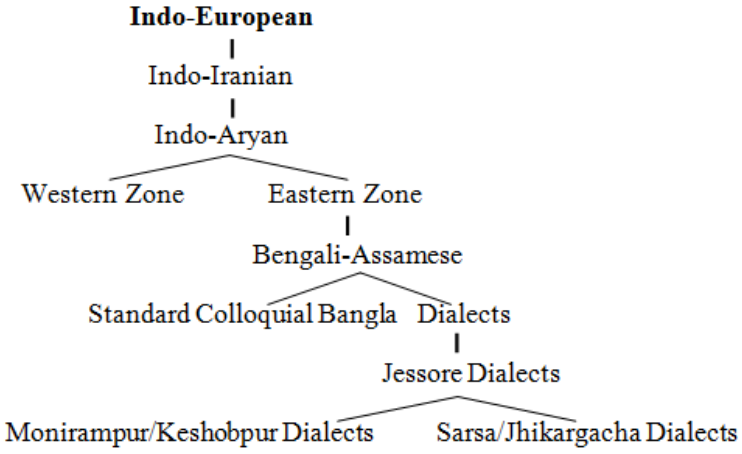

***Figure 1*: Origin of Jessore dialects.**

1.1 Origin of Navaron Dialect

Navaron is one of the biggest unions and the heart of Sarsa Upozilla under Jessore District. There is no noteworthy reference about the selection of this name. It is very adjacent to the Bangladesh-India border. As a consequence, Navaron becomes the dwelling place of many refugees from the West Bengal of India. Most of these refugees settled here around sixty to seventy years back. These new people, with a new variety of Bangla dialect, have been interfering a lot into the existing dialect. For this reason, Naaron Dialect can be a potential material to be studied to identify

different linguistic changes. The following diagram shows the preface of Navaron Dialect particularly.

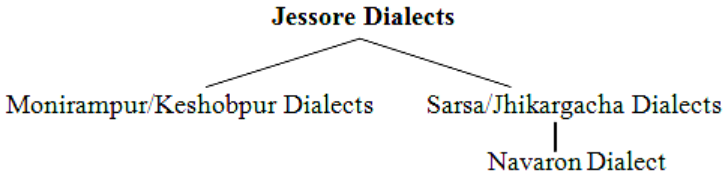

***Figure 2*: Origin of Navaron dialect.**

2. Brief Discussion on Standard Bangla Vowel Inventory

A number of studies based on articulatory phonetics (3) have been accomplished regarding the articulatory and acoustic properties of standard Bangla vowels. H. Abdul (1967) proposes the following monophthongs(4): ই /i/, এ /e/, এ্যা /æ/, আ /a/, অ /ɔ/, ও /o/, ঔ /ou/, উ/u/ (p. 12-35). He also suggests that these phonemes can be nasal in Bangla but they are less frequent. A.K.M. Morshed (2002) shows the following monophthongs: ই /i/, এ /e/, এ্যা /æ/, আ /a/, অ /ɔ/, ও /o/, উ /u/, ইঁ /ĩ/, এঁ /ẽ/, এ্যাঁ /æ̃/, আঁ /ã/, অঁ /ɔ̃/, ওঁ /õ/, উঁ /ũ/ (p. 219-237). Similarly, H. Daniul (2002) presents us with the same number of monophthongs (p. 81-93) like H. Abdul (1967). On the other hand, according to A. Z. Imtiaz (2001) standard Bangla has the following fourteen monophthongs: ই /i/, এ /e/, এ্যা /æ/, আ /a/, অ /ɔ/, ও /o/, উ /u/, ইঁ /ĩ/, এঁ /ẽ/, এ্যাঁ /æ̃/, আঁ /ã/, অঁ /ɔ̃/, ওঁ /õ/, উঁ /ũ/ (p. 67-91). Several other studies explicate Bangla diphthongs based on articulatory phonetic technique. Two studies by Hossain et al. (2004, 2005) explain acoustic properties of Bangla vowel sounds. Several other studies also point out acoustic space of Bangla vowels but these studies do not have any discussion on nasal vowels and diphthongs. However, any use of either acoustic or articulatory phonetic technique in the study of the monophthongs of Navaron Dialect is not found. This paper chiefly intends to do a comparative study of the monophthongs used in Navaron Dialect and standard Bangla. As it is following the acoustic phonetic technique, the nasal monophthongs of standard Bangla have not been taken into consideration instead, the first seven monophthongs proposed by A. Z. Imtiaz (2001) have been. The following vowel diagram for standard Bangla has been developed on the basis of the indication made by A. Z. Imtiaz (2001).

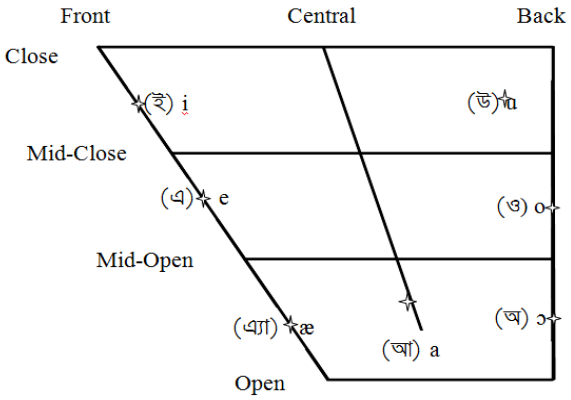

***Figure 3*: Quadrilateral diagram for standard Bangla vowels.**

In this diagram, symbols like ✧ mark the position of the vowel sounds of standard Bangla.

3. Methods of Analyzing Vowel Sounds of Navaron Dialect

The present study seeks to determine the monophthongs of Navaron Dialect and develop its vowel phoneme inventory. The cross-generational changes inside the dialect community were analyzed to reach the conclusion. A list of dictionary words containing all the seven monophthongs of standard Bangla embedded in carrier utterances was chosen for analysis. A possible pattern was selected for identifying the list of words. All data were recorded by number of speakers of three age groups. Finally, they were studied impressionistically. Three different researchers executed this impressionistic study separately and finally, results of these three studies were averaged in accumulation.

3.1 Stimuli

Since the target is to analyze how the seven vowel sounds of standard Bangla are being uttered in Navaron Dialect, a convenient sentence containing all the seven vowel sounds was selected. The recording includes two sentences though only the first sentence was taken under study as it contains seven targeted words which were selected from *Byabaharik Bangla Abhidhan* (2005). Only monosyllabic and disyllabic words were selected. The word patterns were determined very carefully like: Vc, cVc, cV, and VcV where V was any one of the target vowels: ই /i/, এ /e/, অ্যা /æ/, আ /a/, অ /ɔ/, ও /o/, উ /u/ and C is any one of the following consonants: ত /t/, দ /d/, প /p/, র /r/, ক /k/, থ /tʰ/, ট /t/, ল /l/. The syllable patterns were chosen in a way that no voiced or voiceless plosive comes after the vowel as the vowel before voiced is longer than the voiceless plosive (Pickett, 1998, p. 87). The selected sentence along with containing words does not violate Bangla syntactic and phonotactic constraints.

3.2 Deciding the Speakers

Firstly, both the selected male and female speakers were divided into three age groups or generations: Young-Adults (16-25 years), Adults (25-45 years) and Post-Adults (45 years plus). The age of young adults starts at 16 years because the government of Bangladesh declared 16 years the minimum age for getting married and 18 years for being a voter. On the other hand, the common scenario of Bangladesh, at or by the age of 25 years, people start entering into their professional life. People of this group generally do not go through any linguistic change intentionally. For the age group "Adults" the minimum age limit was decided 25 years as profession atmosphere is potential for various linguistic changes as people have to interact and accommodate with different types of people in different socio-cultural ambiances. They intentionally bring out linguistic changes. The maximum limit was decided 45 years as after this age people do not bear strong possibility of having linguistic changes. People older than 45 years were put into the age group named "Post-Adults". These people bear fossilized linguistic structures which are not potential for further changes or developments. This is how the whole population of Navaron Dialect was divided into three generations mentioned above.

Each group contained five speakers; three males and two females. None of the speakers was reported to have speech disorder. Before recording, the each and every participant completed a questionnaire on their biographical and language backgrounds and read the test words once. The questionnaire was designed to check none of the participants was born and brought up outside the selected dialect community.

3.3 Recording Procedure

Utterances of individual participants were recorded in a noise free place using Shure KSM10 microphone and a Tascam (HD-P2) solid-state recorder. Before this audio recording, every participant had completed the questionnaire. The speakers were asked to maintain a convenient distance from the microphone so that unnecessary hissing sounds could not get into the microphone. In this way, the recorded tokens were digitized at a sampling rate of 44.1 kHz and saved as 24-bit resolution and stored as wave format so that these could be further used in acoustic measurements using various technical tools. After the completion of each recording, the moderator checked for any wrong pronunciation and if so, the speaker was re-recorded. After collecting all the recordings, the uttered sentence of each speaker was split into small sounds/words using the software WAV Cutter 1.0. This was done to ensure a careful focus on each of the target vowel sounds.

3.4 Analysis

Total 7×15= 105 (one sentence containing 7 vowel sounds × 15 speakers) segments were analyzed in this study. The study considered a set of segmentation criteria of beginning and ending position of each class of phoneme which is proposed by R. Scarborough (2005) in a lecture. The starting position of the vowel was the preceding stop release, if there was one; else onset of complex voicing. The end position of the vowel was the offset of higher-frequency components.

3.4.1 Young adults (age group 16-25 years). The recorded sounds of this age group were analyzed carefully to determine the position of the each of the vowel sounds in the quadrilateral vowel diagram. As we know, this group consisted of five speakers, two females and three males; majority was counted in case of utterance deviations among speakers. The following diagram posits the utterance place of the target vowel sounds of this age group with the symbols like ☆ where symbols like ✧ mark standard Bangla sounds.

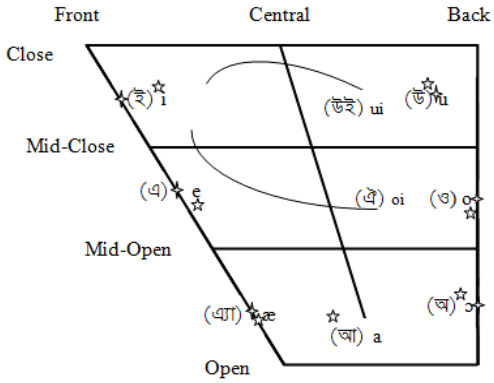

***Figure 4*: Quadrilateral diagram locating the vowel sounds uttered by young-adults.**

3.4.2 Adults (age group 25-45 years). Speakers of this age group did not vary in a large scale in their utterances of vowel sounds. After analyzing the utterances of five members of this group the following vowel diagram was developed by averaging the findings. Here symbols like ✡ stand for this age group where symbols like ✧ stand for the standard Bangla sounds.

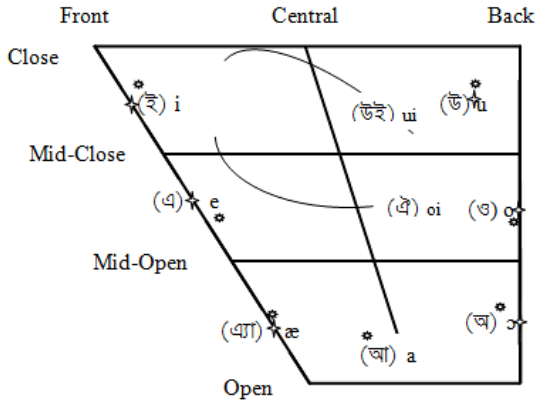

***Figure 5*: Quadrilateral diagram locating the vowel sounds uttered by adults.**

3.4.3 Post-adults (age group 45 years plus). The common features of the representatives of this generation regarding the acoustic characteristics of vowel pronunciation are shown in the vowel diagram below. More or less all the five speakers, three males and two females posited similar qualities. In case of varieties, majority was given priority.

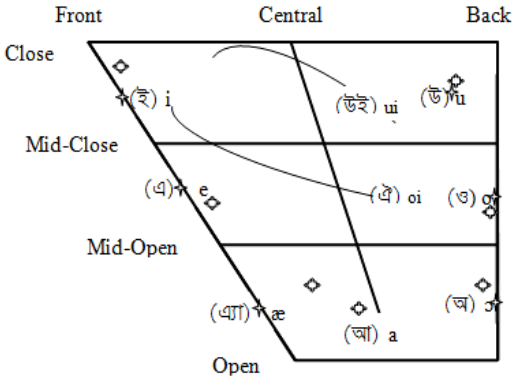

***Figure 6*: Quadrilateral diagram locating the vowel sounds uttered by post-adults.**

In the above diagram symbols like ✧ indicate the utterances of representatives of this age group whereas symbols like ✧ stand for standard Bangla sounds as usual.

4. Results and Discussions

Before presenting the final results, this paper intends to present the cross-generational variations found among the selected three generations.

4.1Cross-generational variations: It presents cross-generational displays of mean relative positions of all seven vowels as well as their variations in a diagram below.

For the back vowels অ/ɔ/, ও /o/, উ/u/ and the central vowel আ/a/, the three generations did not demonstrate any dissimilarity. All of the sounds were produced from the same acoustic space. In the above diagram the position of these vowel sounds are marked by the symbols like ☆. A potential glide from উ/u/ to ই /i/ that is উই/ui/ was also found without any variation among these three groups. This glide is marked with the symbol ⁀ in the diagram.

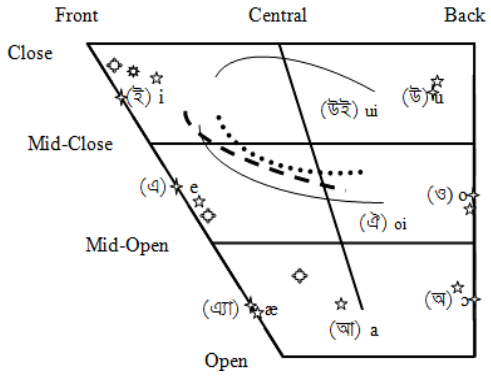

***Figure 7*: Diagram locating the vowel sounds uttered by young-adults, adults and post-adults.**

For the case of two front vowels এ /e/, এ্যা /æ/, no difference was identified between the first and second generations, though the third generation slightly varied. These two vowel sounds were found a bit retracted and tensed in the sounds of the third generation. Position of these vowel sounds are indicated by the symbols like ☆(first generation) and ✧ (third generation). For the sound ই /i/, all the three generations slightly varied among themselves. The third generation presented us with the most front and shortest sound in comparison to the others where the second generation presented it which was comparatively more back and longer than the third one. Here, the first generation sound was the most back in comparison to the others. Similar to the other diagrams, symbols like ☆and ✧ indicate first and third generation sounds respectively and symbols like ✡ locate the second generation sounds.

Another glide from ও /o/ to ই /i/ that is ঐ/oi/ was also found which presented perceptible variations among the three groups. The glide was found very strong in the utterances of the third generation speakers where the first and second generation exhibited general glides. The symbols‿, ····, and ‾ ‾ point out the glides of first, second and third generations respectively in the diagram.

4.2 Dialectical deviation The cross-generational study examined the vowel sounds separately and presented us with a comparative analysis. The results found in that investigation help us out to develop a common quadrilateral vowel diagram for Navaron Dialect by averaging and middling the position of the vowel sounds presented in *figure 8.*

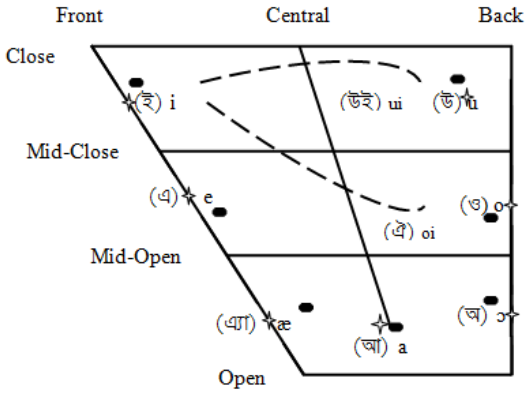

***Figure 8*: Quadrilateral diagram plotting the vowel sounds of Navaron Dialect.**

The above quadrilateral diagram was developed demonstrating the position of the seven vowel sounds of Navaron Dialect. This diagram presents us with the front, back, low and highness of the vowel sounds. The symbols like ● mark the position of the vowel sounds of Navaron Dialect and

the symbols like ✧ mark the standard Bangla vowel sounds where the symbol like ⁓ ⁓ ⁓ marks the vowel glide found in Navaron Dialect.

It is evident in the above diagram that the vowel sounds of Navaron Dialect deviate from the standard Bangla. The sound ই /i/ is comparatively fronted and tensed in this dialect. It confirms its position in between the standard Bangla sound ই /i/ and the cardinal vowel /i/. The sound এ /e/ of this dialect is found to be slightly retracted and laxed in comparison to the standard Bangla sound এ /e/. But the sound এ্যা /æ/ of this dialect is highly retracted. It seems to slide towards the center. The central vowel আ/a/ does not vary from the standard. Unlike the standard sounds, অ/ɔ/, ও /o/ and উ /u/ seem to be a bit fronted.

4.2.1 Diphthongization. The above diagram also presents us with a very exciting deviation of Navaron Dialect; the diphthongization tendency of two vowels ও /o/ and উ/u/. The research found in the recorded material that when each of the two sounds preceded a consonant which was followed by the vowel sound এ /e/, they glided towards ই /i/. This glide remained very strong for the sound ও /o/ but normal for উ/u/.

5. Conclusion

This study thus far analyzed and described the vowel sounds used in Navaron Dialect. Through a cross-generational study, this venture developed a quadrilateral diagram specifying the position of all the seven studied vowel sounds of this dialect. The study did not remain confined into only the cross-generational variations found inside the dialect community; it also explored how these sounds had been deviated from the standard Bangla. Finally, the study established the position of seven pure vowel sounds in the diagram and also identified the diphthongization tendency of two monophthongs in particular contexts.

End Notes

1. Navaron, the biggest union and the heart of Sarsa Upozilla under Jessore District of Bangladesh.
2. According to Banglpedia, East Bengal dialects include those of (a) Dhaka, Mymensingh, Tripura, Barisal, and Sylhet, as well as (b) Faridpur, Jessore, Khulna.
3. Articulatory phonetics is a branch of phonetics which studies how humans produce sounds through the interaction of different speech organs.
4. The term 'monophthong' refers to pure single vowel sound.

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