

Locality in exceptions and derived environments in vowel harmony

Shakuntala Mahanta

Received: 12 September 2008 / Accepted: 7 May 2012
© Springer Science+Business Media B.V. 2012

Abstract The regular realm of vowel harmony in Assamese consists of right-to-left regressive [ATR] harmony. In contrast with this regular pattern of vowel harmony, the exceptional Assamese processes dealt with in this paper are symptomatic of the behavior of a pair of morphemes that trigger additional processes not seen elsewhere in the language. This pair of morphemes allows raising of the otherwise opaque vowel /a/ and fronting/backing of /a/ depending on the [Back] quality of a mid vowel adjacent to /a/. Raising is strictly local in the presence of preceding high and low vowels, but there is also another pattern which shows backness assimilation to a previous vowel if there are mid vowels preceding the /a/ of the input. This exceptional raising occurs to allow [ATR] harmony to spread regressively by changing the [−ATR] low vowel into a [+ATR] mid vowel. I analyse these cases within Optimality Theory (Prince and Smolensky 1993/2004) and show that these exceptional occurrences are morpheme-specific. It is also shown that these exceptional occurrences lend themselves to an account based on indexation of markedness constraints (Flack 2007; Ota 2004; Pater 2000, 2006, 2009). Consequently, the Assamese examples show that indexed markedness constraints are able to deal with an exceptional alternation where a low vowel undergoes harmony locally. This article also shows that an emergence of the unmarked analysis is required to account for the low back vowel that alternates with a front vowel if there is a preceding front vowel. This article goes beyond the problems encountered in Assamese, and claims that there is no need to invoke locality in exceptional blocking in vowel harmony, as both exceptional and non-exceptional blocking in vowel harmony are always local and bounded. The goal of this paper is to shed light on exceptional and emergent processes, arguing that they are always local and governed by strong universal properties of grammar.

S. Mahanta (✉)
Indian Institute of Technology Guwahati, Guwahati, Assam, India
e-mail: smahanta@iitg.ernet.in

Keywords Morpheme-specific exceptions · Lexical indexation · Locality · Vowel harmony · Emergent unmarkedness · Assamese

1 Introduction

Assamese has eight surface vowels, and it exhibits regressive [ATR] harmony: the high vowels /i/ and /u/ systematically trigger [+ATR] in all the extant [−ATR] high and mid vowels in the language (i.e. /ɛ/, /ɔ/ and /ʊ/) except for in the [−ATR] low vowel /a/. In this language, exceptional patterns emerge when a root morpheme containing the vowel /a/ is harmonized to either [e] or [o] by the presence of the suffixes /-ija/ and /-uwa/. In this paper I present the intricacies of exceptional triggering of [ATR] vowel harmony by the two morphemes /-ija/ and /-uwa/ in Assamese, and I also present an analysis of this exceptional pattern within the theory of lexical indexation in Optimality Theory.

Section 1 presents a general background to Assamese vowel harmony, and delineates the nature of the sequential markedness constraints that will be employed to analyze regressive vowel harmony. Section 2 deals with data and problems relating to exceptional triggering of harmony by the affixes /-ija/ and /-uwa/ in Assamese. Its subsections illustrate the theoretical precept of locality in exceptionality. Section 2 also discusses the typological implications of the patterns of exceptionality thus far encountered in languages. Section 3 discusses the untenability of alternative approaches to exceptions in vowel harmony. Section 4 discusses the /a/-raising data, and offers an emergence of the unmarked solution to the problem encountered in these data. The subsections in 4 discuss alternative theoretical approaches, and the paper ends with a conclusion in Sect. 5.

The main thrust of this paper is to discuss exceptions in vowel harmony in order to broaden our understanding of exceptional processes, with reference to data from a hitherto under-described language. In order to do so, we must first understand the regular vowel harmony pattern of Assamese. To this extent, Sect. 1.1 presents a descriptive backdrop that acquaints the reader with the vowel system and the processes of vowel harmony in the language.

1.1 Introduction to Assamese vowel harmony

Assamese has the eight surface vowels [i, e, ɛ, a, ɔ, o, ʊ, u], as shown in Table 1.

The two high vowels [i] and [u] are pronounced with an advanced tongue root (indicated in phonological representations by the feature [+ATR]) as are the mid vowels

Table 1 Assamese surface vowels

	Front	Back	
High	i	u	+ATR
		ʊ	−ATR
Mid	e	o	+ATR
	ɛ	ɔ	−ATR
Low		a	−ATR