

## SibawaYhi and the Concept of Sonority

Atefesadat Mirsaeeidi <sup>+1</sup>, Sahar Najarzagdegan <sup>2</sup> and Hadi Salehi<sup>3</sup>

<sup>1</sup> Department of linguistics, Khorasgan (Isfahan) Branch, Islamic Azad University, Isfahan, Iran

<sup>2</sup> Department of English Language, Khorasgan (Isfahan) Branch, Islamic Azad University, Isfahan, Iran

<sup>3</sup> Faculty of Literature and Humanities, Najafabad Branch, Islamic Azad University, Najafabad, Isfahan, Iran

**Abstract.** As an important concept, “sonority” has always been taken into consideration in phonology . Considering the concept of “the degree of sonority” in the book named Kitâb (SibawaYhi, 1316 A.D), which is the most well-known book in the history of Arabic linguistic tradition on one hand, and reviewing the concept of sonority the same way that it is approached in modern phonology on the other hand, this article attempts to explore the methods of explaining “sonority” in each of these sources .It seems that some of the concepts related to sonority which are presented in modern phonology have been taken into account in SibawaYhi’s famous book very long ago. One of these concepts is “the degree of sonority” in different kinds of sounds on the basis of the way they are articulated and another one is “sonority hierarchy” in the sounds . This article shows that some of the approaches to sonority provided by modern phonologists have their roots in SibawaYhi’s thoughts.

**Keywords:** phonology, sonority, degree of sonority, SibawaYhi, Kitâb.

### 1. Introduction

Abu Bishr Amr ibn Uthmân ibn Qanbar, known as “SibawaYhi”, which in Persian means “smell of apples”, is the author of the most famous book in Arabic linguistic tradition named “Kitâb” .This book has a unique status in this tradition; and has gained great respect since one of the biographers called it “Qurân of grammar” and that’s why SibawaYhi himself was sometimes called “the imam of grammarians”.

It is not exaggerating to say that the whole Arabic linguistic tradition is nothing but the interpretations of “Kitâb” .The book SibawaYhi left to later generations was unique in several respects .In the first place it was the first coherent description of the entire system of the Arabic language .In the second place it was one of the first real publications in Arabic literature in any discipline as it is revealed by the title of the book “the book of SibawaYhi” meaning the publications of SibawaYhi (Versteegh,1997:39-40).

Having 24 chapters, Kitâb contains almost all issues regarding Arabic Linguistics .One of the issues reviewed by SibawaYhi in his book is “Governance principle” which is also related to the topic of this article .Regarding “Governance principle”, SibawaYhi sets forth “hierarchy in speech” and then he expands on it to syntax, morphology, and phonology. He applies “hierarchy in speech” on the degree of sonority of the phonemic elements .The way SibawaYhi approaches “hierarchy in speech” for the sounds is the same as what Western phonologists have surveyed.

This issue will be taken into consideration in detail later in this article.

### 2. Sonority in “Kitâb”

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+ Corresponding author. Tel.: (00989134003304)  
E-mail address: atefehe2000@yahoo.com

## 2.1. Governance Principle

The most essential innovation SibawaYhi introduced has been the systematization of the declensional system in Arabic .He rejected the old method of calling all vowels by the same terms, whether they were declensional or not; in this way he made a distinction between those endings that were produced by the action of another word in the sentence, a governor, and those words in which the ending was invariable .This distinction would be seen in the following table:

Table 1 The endings of the words (Versteegh,1997:45)

	with governor	without governor
/a/	naṣb	fath
/i/	jarr	kasr
/u/	rafʿ	ḍamm
zero	jazm	waqf

The status of the declension is thus directly concerned with the important principle of governance . SibawaYhi, like other Arabic grammarians, believes that the relationship between governor and declension suggest a dependency between two constituents; based on such relationship within each syntactic structure all elements, except one, depend on another element, but never directly on more than one. In this case, one of the strictest rules in Arabic syntactic theory is precisely that there can never be more than one governor for a governed element, although one governor may govern more than one element at the same time.

SibawaYhi formulates the Arabic theory of governance in terms of another important metaprinciple in grammatical system called “hierarchy in speech”. Regarding this, he believes that each element in the linguistic system has its own status and therefor its own rights. So all the elements including syntactic, morphological, and phonological graded from “light” to “heavy” have their own status. For instance, in syntax the hierarchy of elements from light to heavy plays an important role in the way that the lightness of an element means that it is more flexible in its syntactic behavior and more variable in its form. For example, since nouns are used in more syntactic slots than the verbs, and their morphological form varies according to their syntactic roles, they are said to be lighter than verbs .Therefore the lighter an element is, the weaker its force to govern another element .As a result, verbs are heavier and at the same time stronger to govern other elements (Versteegh, 1997:45-46).

In phonology, too, the degree of sonority of phonemes as well as the hierarchy of sounds from light to heavy plays an important role, but in a somewhat different sense comparing with syntax .This is going to be explained in the next part .

## 2.2. Governance Principle and Sonority

As mentioned earlier, SibawaYhi formulates the Arabic theory of governance in terms of “hierarchy in speech” in syntax, morphology, and phonology .Considering the point that each linguistic element can be either light or heavy based on its own properties, he then analyses linguistic behavior of the elements in each domain of language.

In phonology, he applies the principle of ‘hierarchy in speech’ on the degree of sonority of different kinds of sounds depending on their articulatory characteristics and in this way introduces degree of sonority in the sounds.

Considering the degree of sonority and through using the terms “light” and “heavy”, SibawaYhi classifies phonological elements; that is the lighter the sound, the more sonorant it is .The reverse is also true; the heavier the sound the less degree of sonority it has. So in the hierarchy being provided for the speech sounds, he considers vowels lighter than glides, which in their turn are lighter than full consonants. Then within the group of the vowels /a/ is the lightest vowel, then /i/, then /u/. He also believes that the degree of weight a phonological element has determines its behavior in phonology and accordingly explains the phonological changes in Arabic .He explains, for instance, that in verbs containing a glide as one of their radicals, the combination of the glide with vowels frequently leads to a change: /awa:/ becomes /a"/ which is realized as [a:] e.g., /da'awa/→[da'a:]. Therefore, according to phonotactics of Arabic a combination such as

/\*CiCuC/ is impossible in Arabic, because, this would mean that in order to articulate such combination, the speaker has to go from the light vowel /i /to the heavy vowel /u/. A combination such as /CuCiC/ on the other hand is a permitted one, since the speaker goes from a heavy to a light element.

### 3. Sonority in Modern Phonology

Here, the concept of sonority, specially its hierarchy for the speech sound based on their articulatory characteristics, is investigated in the way that modern phonology takes it into consideration.

Chomsky and Halle (1968) in their book “The Sound Pattern of English” specify four classes of nonobstruents or sonorants:

liquids (laterals and ‘r’-types), vowels, nasals, and glides (Lass,1998:83).

Considering two criteria of voicing and degree of stricture, Philip Carr (1993) has shown the hierarchy of sonority for the speech sound as follows; in this way voiced sounds are said to be more sonorant than their voiceless counterparts (“>” means “more sonorant than”):

a>e>o>i>u>r>l>m>n>ð>v>z> ʒ>θ>f>s>ʃ>b>d>g>p>t>k

This hierarchy can also be shown as follows:

Vowels	↓	the most sonorant one
Laterals	↓	
Nasals	↓	
Fricatives	↓	
Stops	↓	the least sonorant one

Lass (1998:264) shows hierarchy of speech concerning the degree of sonority provided by Saussure as follows:

Vowels	↓	the most sonorant one
Glides	↓	
Liquids	↓	
Nasals	↓	
Obstruents	↓	the least sonorant one

So, phonologists agree that the degree of sonority for all speech sounds is classified as follows, in a way that vowels are classified as the most sonorant sounds and obstruents as the least sonorant one (Kenstowicz,1994:254):

Vowels	↓	the most sonorant one
Glides	↓	
Liquids	↓	
Nasals	↓	
Obstruents	↓	the least sonorant one

### 4. A Comparative Analysis between the Concepts of Sonority from the Viewpoint of Modern Phonology and that of SibawaYhi

A review on SibawaYhi’s approach to the degree of sonority and the status of each sound on the basis of their articulatory characteristics in the hierarchy of sonority on one hand, and classification of phonemes concerning the degree of sonority in modern phonology on the other hand indicates that both classifications are somehow the same.

SibawaYhi’s classification can be shown as follows:

Vowels	↓	the most sonorant one
	Glides	↓
Consonants	↓	the least sonorant one

As it is clear, both of the classifications are done in the same way except for the fact that SibawaYhi hasn’t divided consonants to liquids, nasals, and obstruents .So he hasn’t mentioned their exact status in the hierarchy of sonority .

SibawaYhi’s classification of vowels is shown as follows:

This classification is the same as what Philip Carr mentioned in the degree of sonority of speech sound except for the fact that unless Carr's classification, there is no exact status for the vowels /e/ and /o/ in SibawaYhi's classification.

Therefore, it can be said that the basis of classification of speech sounds according to degree of sonority in modern phonology has their roots in SibawaYhi's book "Kitâb". In other words, SibawaYhi is the beginner of this classification and the Western phonologists have developed it.

## 5. Conclusion

Analyzing SibawaYhi's writings in his famous book, "Kitâb", shows sounds degree of sonority on the basis of their articulatory characteristics, as well as the status of each phoneme in the hierarchy of sonority through using the terms "light" and "heavy". On the other hand, a review on grading sounds degree of sonority by Western phonologists leads us to the fact that some of the Western phonologists' approaches regarding sonority have their roots in SibawaYhi's thought. In other words, considering the degree of sonority of the sounds and placing them in a hierarchy on the basis of their degree of sonority was first investigated by SibawaYhi when he used the terms "light" and "heavy". So sonority hierarchy set forth by modern phonology is actually a more detailed and completed form of what SibawaYhi has mentioned earlier.

## 6. References

- [1] Carr, P. (1993), *Phonology*, London :The Macmillan Press LTD .
- [2] Chomsky, N. & Halle, M. (1968), *The Sound Pattern of Speech*, New York :Harper.
- [3] Kenstowicz, M. (1994), *Phonology in Generative Grammar*, Oxford :Blackwell.
- [4] Lass, R. (1998), *Phonology*, Cambridge :Cambridge University Press.
- [5] Saussure, F. de (1916), *Cours de Linguistique générale*, Paris :Payot.
- [6] Semaan, Khalil (1968), *Linguistics in the Middle Ages*, E.J.Brill, Leiden, Netherlands.
- [7] SibawaYhi (1316 A.D), *Kitâb*, Bulaq.
- [8] Versteegh, K. (1997), *The Arabic Linguistic Tradition*, London & New York :Routledge.