

# Lisp from a Philosophical Perspective according to Ya'qub ibn Ishaq al-Kindi (185-256 AH / 805-873 AD)

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## Abstract

Al-Kindi's treatise on lisping (*al-Luthghah*), authored in the third century AH, is considered a pioneering work in modern phonetic studies. The author adopted a scientific methodology, investigating causes before judging phonetic phenomena. He addressed speech disorders faced by some Arabic speakers suffering from muscular or neurological issues affecting the articulation points (*makharij*) of certain letters. These individuals are forced to substitute the articulation of one letter with another that is close in point of articulation or phonetic attribute. Al-Kindi structured his treatise into aspects of lisping represented by: the powers of the speaking soul, the weakness of the speaking soul, and the increase or decrease of the speech apparatus. He then dedicated a section to the letters affected by lisping, such as *seen*, *sheen*, and *raa*. He concluded by discussing various nomenclatures of lisping, such as *tamtamah* (stammering), *fa'fa'ah* (stuttering), *al-madhmum*, *dhu al-'aql*, *dhu al-habs*, *al-akhann* (nasalization), and *al-alkan* (foreign accent). Al-Kindi's description is characterized by conciseness and the unique use of specific terminology. He delved into explanations as a philosopher and emerged as an expert anatomist and physio-acoustic scientist. By revisiting traditional and modern phonetic studies, this paper asks: Can Al-Kindi's treatise be considered an integrated scientific reference in uncovering the causes of lisping and speech disorders, or is it merely a collection of limited descriptive observations?

**Keywords:** Al-Kindi, Lisping (*al-Luthghah*), Speech Apparatus, Causes of Letters, Aspects of Lisping.

## Introduction

The subject of speech and articulation defects is regarded as one of the significant topics that both ancient and modern scholars have been keen to study in their scientific works and treatises. This interest stems from their understanding of the impact these defects have on the eloquence and clarity of words in hearing, and the extent of their influence on the integrity of the linguistic communication process. Among the Muslim philosophers who paid exceptional attention to these symptoms and distortions in the vocal apparatus was Al-Kindi (d. 260 AH). He distinguished himself with unique terminology that enriched the heritage, and his treatise

titled *al-Luthghah* (The Lisp) became a support and reference for subsequent philosophers. His treatise contained precise concepts and terms. In this research paper, we will attempt to extrapolate the most important contents of his treatise, compare them with the accounts of ancient linguists and philosophers, and clarify the extent to which his knowledge aligns with the findings of modern studies.

## I. Definition of Lisping (*al-Luthghah*)

### A. Linguistic Definition

- 1
- Oxford Dictionary Definition:
- 2
- "Lisp: an incorrect way of speaking in which s sounds like th" [1].
- 3
- Lisan al-Arab Definition:** The term *luthghah* derives from *lathagha*, meaning to divert a letter to another. An *althagh* (one who lisps) is someone who cannot pronounce the letter *raa*, or turns it into a *ghayn* or *laam*, or diverts it to another letter. They may turn *saad* into *faa* and *seen* into *thaa*. It refers to someone with heaviness in their tongue such that their speech is unclear, and their tongue falls short of the letter's position, reaching the position of the nearest letter instead [2].

Linguists have differed in identifying the letters affected by lispings, following two main trends:

| Trend        | Description                                              | Key Proponents/Sources                                                                                          |
|--------------|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| First Trend  | Restricting lispings to specific letters.                | Al-Batalyusi (4 letters: <i>qaaf</i> , <i>seen</i> , <i>laam</i> , <i>raa</i> ) [3]; Al-Jahiz (10 letters) [4]. |
| Second Trend | Generalizing lispings to any letter without restriction. | Ibn Manzur [2].                                                                                                 |

Linguistically, lispings is the deviation or shift in the pronunciation of a letter to another letter.

### B. Technical Definition

Ibn Rushd defined the *althagh* as "one for whom the pronunciation of certain letters is not possible" [5]. Al-Jahiz discussed it as a phonetic defect, such as when one pronounces the word *Mudar* as *Muday*, extracting the *raa* from the articulation point of the *yaa* due to a deficiency in the speech apparatus. He noted that the sounds affected by lispings are *qaaf*, *seen*, *laam*, and *raa*, where *qaaf* turns into *taa*, *seen* into *thaa*, *laam* into *yaa* or *kaaf*, and *raa* into *ghayn* or *yaa* [4].

Modern scholars diagnose lispings as a common type of functional speech disorder belonging to the science that studies defects in the pronunciation of linguistic sounds in individuals [6]. It has been described as "replacing the position of a sound with a position close to it in articulation, and the failure of the vocal apparatus to achieve its quality, thus shifting from its

position due to an original or accidental cause, such as tension, extension, or a defect in any part of the vocalization process" [7]. Lispings occur by substituting one letter for another, attributed to imitation, oral/dental deformities, or psychological and social factors. Examples include turning *seen* into *thaa* (e.g., *Bism Allah* becoming *Bithm Allah*) or *qaaf* into *taa* (e.g., *qultu* becoming *tultu*) [8].

Thus, the technical definition mirrors the linguistic one in highlighting the physiological features of lispings as a congenital defect caused by the heaviness of the tongue, which hinders its function in these letters.

## II. Al-Kindi's Treatise on Lispings

Al-Kindi's treatise is a primary source for speech defects and disorders, which modern linguistics studies under phonetics. Authored in the third century AH [9], it was edited by Dr. Muhammad Hassan al-Tayyan from a unique manuscript in the Süleymaniye Library in Istanbul. The treatise includes:

- An introduction to language and writing.
- Description of the articulation points (*makharij*) and the causes of sound production.
- The causes of letters and which ones are subject to lispings.
- Types of lispings and the titles of those afflicted [9].

Al-Kindi adopted a unique approach in describing Arabic letters and their articulation, relying on physical anatomical descriptions. He discussed the causes of lispings, such as tension (*tashannuj*) or relaxation (*istirkha'*) of the tongue, identified ten affected letters, and named their symptoms. While later philosophers like Ibn Sina were influenced by him, Ibn Sina's descriptions were more akin to those of a physician-anatomist, whereas Al-Kindi's work reflected that of a physio-philosopher.

### 1. Al-Kindi's Definition of Lispings

Al-Kindi provided a specific concept for lispings, viewing it as a defect in the speech apparatus (*al-alah al-nutiyyah*). When a defect or disability occurs in the speech organ, it fails to perform its function. He termed these ailments *al-Luthghah* and categorized them under "The causes of letters, and in which letters lispings occurs."

He explained: "Know, my brother, that lispings arises from two clear causes: either a deficiency in the speech apparatus or an increase in it, such that it cannot release the necessary positions for speech" [9]. The term "tongue difficulty" (*ta'assur al-lisan*) refers to the obstruction during speech that prevents natural movement, causing the tongue to stumble within the mouth. This results in an inability to pronounce letters correctly. He further clarified the causes of organ increase or decrease: "The cause of the increase in the speech organ is from coldness and moisture... while the decrease is from coldness and dryness" [9].

The tongue is a vital organ in speech due to its flexibility and movement, transitioning between different positions to produce linguistic sounds [10]. Al-Kindi also identified two necessary conditions for tongue difficulty: tension (*tashannuj*) and relaxation (*istirkha'*) [9].

- **Tension (*Tashannuj*):** An involuntary movement where the tongue muscles contract suddenly, leading to speech difficulty, overlapping letters, and heaviness. It may result from nervous tension, dehydration, or neurological diseases. Al-Kindi defined it as "producing incomplete words... such as saying *laam* in place of *raa*, or *sheen* in place of *seen*" [9].
- **\*Relaxation (*Istirkha*):\*** The opposite of tension, where the relaxation and extension of tongue muscles lead to weak movement and speech difficulty. Al-Kindi defined it as "producing extra words outside the natural flow without order" [9].

## 2. Articulation Points of Letters Affected by Lisp

Al-Kindi identified ten sounds affected by lisp in Arabic, noting they are more common in children and the elderly. He stated: "Lisp appears in the Arabic language in ten letters for the elderly, and in more than that for the young" [9]. He began his treatise by describing the correct articulation of each letter to show how deviation leads to lisp. The letters are: *qaaf*, *faa*, *zay*, *'ayn*, *seen*, *sheen*, *kaaf*, *saad*, *meem*, *haa*, and *raa*.

| Letter | Al-Kindi's Description of Articulation and Lisp Cause                                                                                                                       |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 'Ayn   | Requires a tone with breath extending to the uvula, with a tongue stroke and opening of the epiglottis.                                                                     |
| Seen   | Requires pressing the tip of the tongue against the upper front teeth and a slight hidden breath. If the breath exceeds the required amount, it fails to be a <i>seen</i> . |
| Sheen  | Requires pressing the sides of the tongue against the palate and molars with a strong breath.                                                                               |
| Kaaf   | Requires pressing the sides of the tongue against the first molars, an opening, and the upper teeth pressing the lower lip with a slight breath.                            |
| Saad   | Requires a slight breath between the tongue and palate, with a stroke between the tongue and upper teeth.                                                                   |
| Jeem   | Requires a tone with the sides of the tongue joined to the molars and palate, and the lips closing and opening.                                                             |
| Haa    | Requires breath exiting the palate with a quick, compressed clearing of the throat using the root of the tongue and uvula.                                                  |
| Raa    | Requires moving the tip of the tongue against the opening of the palate.                                                                                                    |
| Qaaf   | Requires the epiglottis to press firmly against the nasal passages, pushing breath with force, and the upper lip dropping over the lower teeth.                             |
| Zay    | Requires a tone with the tip of the tongue pressed against the front teeth, with a slight buzzing breath.                                                                   |

Al-Kindi concluded that lisping occurs due to the speech apparatus's inability to reach the necessary positions (like the front teeth). He noted that lisping due to organ "increase" specifically affects *seen*, *saad*, *jeem*, *zay*, and *sheen* [9].

### 3. Aspects of Lispings according to Al-Kindi

Al-Kindi categorized lisping into three aspects:

- 4 **Powers of the Speaking Soul:** Deviation from the natural flow.
- 5 **Weakness of the Speaking Soul:** Inability to move muscles strongly, corrupting speech.
- 6 **Increase or Decrease of the Speech Apparatus:** "Increase" is caused by cold/moisture or heat/moisture, leading to a thick, enlarged, and relaxed organ. "Decrease" is caused by extreme cold/dryness or heat/dryness, making the organ thick but small, preventing it from resting on the required articulation positions [9].

These can be summarized into two main causes:

- **Neurological Cause:** Referred to as the "Speaking Soul." Any defect in the nerves controlling the speech muscles leads to incorrect sound production. Modern studies identify this as "dysarthria," where neurological disturbances cause speech distortions or substitutions (e.g., *laam* for *raa*) [10].
- **Muscular/Organic Cause:** Related to the size and condition of the speech organs. Changes in size (increase/decrease) or conditions like "tongue-tie" (short frenulum) obstruct the tongue's movement, affecting sounds that require the tongue tip [11].

### III. Names of Lispings Symptoms in Al-Kindi's Work

Al-Kindi briefly mentioned several terms for lisping symptoms:

- 7 **Al-Mamtam (Stammerer):** Refers to *ta'ta'ah* (stuttering), specifically substituting *thaa* or *meem* [9]. Stuttering involves repeating initial letters or sudden pauses.
- 8 **Dhu al-'Aql:** Refers to lisping with the letter *raa* [9]. Al-Jahiz noted that *raa* can be substituted with *yaa*, *dha'*, *dhal*, or *ghayn*, with *yaa* being the heaviest and *ghayn* the lightest [12].
- 9 **Al-Maghanim al-Ya'i:** Refers to lisping with the letter *ghayn* [9]. It involves substituting *'ayn* with *ghayn* or *raa* with *ghayn*. Although *raa* is apical and *ghayn* is velar, they share features of voicing and openness [13].
- 10 **Al-Fa'fa'ah:** Refers to lisping with the letter *faa* [9]. It is a tongue obstruction where the *faa* sound dominates (e.g., *f-f-f-fatihah*). Ibn Sina attributed this to tongue relaxation [14].
- 11 **Dhu al-Habs:** Refers to lisping with the letter *qaaf* [9]. *Habsah* is the inability to speak when intended, without reaching the level of *fa'fa'ah* or *tamtamah* [15]. Al-Jahiz noted that such individuals turn *qaaf* into *taa* (e.g., *qultu* becoming *tultu*) [16].
- 12 **Al-Akhann and Al-Alkan:**
  - **Al-Alkan:** Difficulty in sound production due to tongue muscle inability. It often refers to pronouncing Arabic letters with a foreign accent, where the

speaker uses the phonetic movements of their first language (e.g., *seen* for *sheen*) [12].

- **Al-Akhann (Nasalized):** Breath exits through the nasal passages instead of the mouth, resulting in thick, unintelligible speech. This "nasality" (*khankhanah*) is a vocal defect where nasal resonance is heard because the soft palate fails to close during speech [12].
- 13 **Al-Akhras (The Mute):** Al-Kindi argued that a mute person is still "human" and "speaking" in potential, as philosophers define man as a "rational speaking animal." Muteness is a disease resulting from the weakness of the speaking organ [9].

## Conclusion

Al-Kindi authored his treatise on lisping using a descriptive, physio-anatomical methodology. He was concise in explanation yet precise in terminology. He viewed lisping as a speech disorder resulting from defects in articulation points or the speech apparatus, leading to substitution errors. These distortions are phonetic failures in the positioning or coordination of speech organs like the tongue. Lispings are particularly prominent in fricatives (e.g., *f*, *s*, *gh*) and dental sounds (e.g., *d*, *dh*, *th*), weakening the articulation level. By tracing his study from definitions to neurological and muscular causes, one observes a level of precision that transcends mere observation, aligning closely with the findings of modern phonetic studies.

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