

Patterns of Intonation in Central Kurdish A Study in Cognitive Phonology

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Abstract— *The present study attempts to analyze intonation in Central Kurdish, the Sorani variety spoken in Slemani in Iraqi Kurdistan. Intonation refers to pitch fluctuations used by a speaker to express meanings. To carry out the analysis, the study embraces the theory of Cognitive Phonology. The study attempts to claim that there is a relationship between the pitch of a linguistic expression and its meaning. Accordingly, it is hypothesized that the meaning of an utterance is shaped by the particular intonation used by the speaker. The study has two aims. The first is to show that intonation, as a suprasegmental feature, is meaningful in Central Kurdish. The second is to show that using one pattern of intonation instead of another is the result of the construal dimension of perspective. As native Kurdish speakers, the researchers are being used as sources of data. One important finding is that Kurdish intonation is meaningful because using one pattern of intonation instead of another is consequential. A change in tone adds a specific tint of meaning to the utterance in spoken language.*

Index Terms— Cognitive Phonology, Central Kurdish, intonation, patterns of intonation, construal.

I. INTRODUCTION

According to Mackenzie (1961: xviii), the Kurdish language is classified into three main dialects: Northern Kurdish, Central Kurdish, and Southern Kurdish. According to Haig and Öpengin (2014), Kurdish is classified into five dialect groups: Northern Kurdish (Kurmanji), Central Kurdish (Sorani), Southern Kurdish, Gorani, and Zazaki. Of concern to the present study is Central Kurdish (CK). It is a regional language used in Sulaimani, Kirkuk, and Erbil provinces in Iraq and Kurdistan province in Iran. Estimates of the total number of Kurdish speakers vary widely. As Hamid (2015: 7) states, the number of CK speakers is nearly (6.750.000). At the beginning of the 1970s, CK became the language of instruction in public schools in Kurdish areas of Iraq. There is today thriving literature in Iraq, where Kurdish intellectuals have established a Standard Literary Kurdish based on the CK dialect. Three significant writing systems are recognized in the Kurdish language: modified Arabic, Latin Kurmanji, and Cyrillic (Kurdish Academy of Language, 2018). The present study

embraces the Latin Kurmanji writing system because it is very close to the English writing system. Concerning the data used in this study, they come from the researchers since both are native speakers of CK. The transcription of the examples is written in square brackets. Rounded brackets are used when writing their meanings and grammatical categories in English. The study essentially deals with intonation from a cognitive phonological view, making it the first study that covers it within the framework of Cognitive Phonology.

II. INTONATION

Kurdish is not a tone language. According to Salih (2013: 93), intonation is “one of the suprasegmental units that cause changes in the meaning of a sentence.” Intonation plays a vital role in determining the meaning of an utterance. Generally, in Kurdish phonology, intonation may reciprocally be used with several other terms such as suprasegmental, speech melody, and sentence melody. From a phonological standpoint, as Al-Bazzaz and Qadir (2016: 67) explain, intonation simply refers to pitch fluctuations used by a speaker to express meanings. It is regarded as a complex system of meaning communicated through the rise and fall of a speaker's voice. In Fattah's (1997: 59) view, intonation provides utterances with different shapes and shades of meanings. It is an essential and integral part of speech from a phonological perspective. Amin (2004: 53, 289) describes intonation as “the change in the way we are pronouncing sentences to convey different meanings”. He asserts that the change in intonation is due to the change in the vibrations of vocal cords.

Adding to Amin's idea, Garib (2019: 11-12) states that “intonation in spoken language replaces punctuation. It changes vibration in the vocal cords and happens at the beginning, middle, and end of sentences”. He believes that an utterance devoid of intonation is as ambiguous as a written sentence without punctuation. He also says, in the deep structure of a sentence, intonation does not change the meaning of an utterance. Instead, it is used in distinguishing sentences with different grammatical structures such as declarative, interrogative, imperative, and superlative (Hashim, 2012: 26). A sentence such as *Azad dwênê hat. /azad dwene hat/ (Azad*

came yesterday) is declarative when said with a falling tone, and a question when said with a rising tone. Intonation can be applied to words in isolation. The word *Çaka* /tʃakə/, 'asking if something is ok' when articulated with a rising tone. When the same word is articulated with a mid-tone, it means 'charity'. The two ways of saying the same word could be differentiated when the listener knows about the context of the utterance.

Intonation is very important in communication. It gives information beyond just the basic meaning of the words. Kurdish speakers use different intonation patterns to show feelings and attitudes. The speaker can convey, through intonation, several attitudes such as criticism, protest, complaints. For instance, when the word *xwardi* /xwardi/ (he/she ate it) is said with a rising tone; it sounds like the speaker is protesting or disagreeing. When the word is said with a falling tone, the speaker is disappointed or surprised. For listeners, intonation helps them disambiguate utterances. The sentence *nekey detkujim* /nəkei dətkudʒim/ has two possible interpretations. The first means I will kill you if you do that. The second means I will kill you if you do not do that. The speaker would mean the first when *nekey* is said with a rising tone; the listener knows that the speaker is threatening. The speaker would mean the second when saying *detkujim* with a rising tone representing a warning (Amin, 1994:14-15).

In addition to that, patterns of intonation are used as a marker of the speaker's personal and social identity. For example, newspaper sellers use a particular intonation pattern, as do newsreaders and people delivering lectures or sermons. Usually, this is done when a newsreader wants to start reading the news by giving an opening greeting to the listener or audience. To be able to attract the attention of listeners and viewers, the opening greetings are delivered in a lowered tone and with the right speed. The meaning of intonational prominence is grammaticalized as intonational focus or to mark stages along the given-new continuum. A higher pitch is used for items new to the discourse and a lower pitch for items accessible to the hearer through the context (Amin, 1997: 15) as shown in:

- (1) Nazdar namakay ʔnwsɪ/ nazdar naməkei ʔnusi/
(Nazdar wrote a letter).

The example shows that Kurdish is not a tone language, as claimed by Amin (1989, 1994, 2004), Mahwi (2016), and Ali (2005). Kurdish speakers can provide different meanings when rising or falling their tones. Kurdish speakers do not use pitch changes to differentiate the dictionary meaning of the word. Through the speaker's tone, the listener can diagnose the new information, know the attitudes and feelings of the speaker, and differentiate the meaning of two similar utterances.

A. Patterns of intonation

In Kurdish, different intonation patterns are classified. Each pattern signifies a specific meaning. Ali (2015: 115) explains that intonation is a prosodic phenomenon used in syllables, words, and sentences. A change in an intonation pattern causes a change in a syllable, word, and sentence. Intonation helps the listener's cognition process so that speakers can depend on distinct intonation patterns to indicate old and new information. Abdulla and Maccarus (1967) set four patterns of intonation,

naming them falling, rising, middle, and high rising. Hamid (1987) recommends five different patterns of intonation falling, rising, low rising, rising-falling, and falling-rising. She adds another pattern called level. Then Amin (1989) names six different levels of intonation: sudden rise, gradual rise, gradual fall, sudden fall, pause brief, and pause. Qadir (2011) recommends four intonation patterns: extra-high pitch level, high pitch level, mid-pitch level, and low pitch level. Hamid (2014) admits that the number and names of intonation patterns are not yet agreed upon since scholars have distinct viewpoints regarding this issue. However, Mahwi (2016: 525), with whom many Kurdish scholars agree, names four patterns of intonation: falling, low, mid, and rising.

Falling tone

One of the Kurdish patterns, which all scholars agree on, is the falling intonation. According to McCarus (1958, 37) and Karim (2012: 21), falling intonation in Kurdish usually comes at the end of sentences and has the general meaning of completion. The pitch of the voice could start with a rising or mid-tone, but it ends with a fall. The pitch of the voice drops down at the end, and it is symbolized as '↘.' This type of intonation occurs in statements, commands, and requests. As explained by Fattah (1982: 236), it enables speakers to show their emotions of dissatisfaction, anger, certainty, disagreement, and threat.

- (2) Hawre daxwenet. /haure dəxwenet/ ↘
(Hawre is studying) statement
Hawre xwardnaka bxo./haure xwardinəkə bxo/ ↘
(Hawre, eat the food) command
Ba broin. /ba broini/ ↘ (Let us go)
request
Le erawa daroin. /le erəua deroi/ ↘ (We are going
from here) statement

The sentences given in (2) are examples of falling intonation, in which the pitch goes downward at the end of each sentence. The falling pattern of intonation in statements indicates neutrality, calmness, certainty, and finality. In commands, the falling intonation indicates threatening and warning. In requests, the falling intonation signifies an order. In instructions, the falling intonation indicates concern and seriousness. This shows that in the falling pattern of intonation, the pitch of the voice falls on the strong and stressed syllables found in phrases and sentences, and indicates different kinds of meaning.

Low tone

The low pattern of intonation refers to the level of tone where the pitch remains low. By low, it is meant that the tone level is lower than the falling tone. The pitch of the voice may start from mid-dipping to low or from rising going down to low. In the low pattern of intonation, there is slow vibration of the vocal cords. In most Kurdish words, as Qadir (2011: 79) explains, the pitch is low in the pre-head of the syllable found in the last word of a sentence, and it remains so. As Al-Bazaaz and Qadir (2016) clarify, the symbol used in Kurdish phonology to represent this level of intonation is 'l'. The low pattern of intonation is commonly used in wh-questions and statements, both positive

and negative. In *Na^ˈro ma^ˈwa /naromawə/* (I am not going back), for example, the utterance starts on mid tone, rises to high tone, and goes down to low tone. Kurdish speakers use this intonation pattern to express anger, fear, calmness, boredom, routine, or sadness. Qadir (2011: 37) illustrates the idea by an example. When a teacher calls a student's name for taking the absentees, the student answers *Bale /bale/* (yes), showing that he is bored or uninterested.

(3) Xot dazani. /xot dazani/ J (You know)

Statement

bo kwe daroi?/bo kwe deroi/ J (Where are you going?) Wh-question

In the statement in (3), the low pattern of intonation denotes something routine, sadness, and boredom. In the Wh-question in (3), the low pattern of intonation denotes fear and anger. The low head of the syllable found in the final content word of the sentences in (3) creates the effect of annoyance. The low drop tone with no head expresses sadness and upset in interrogative sentences. The key is low as the tonic syllable is low.

(4) Nergz nagarayawa?/nergiz nagerajewa/ J (Hasn't Nergz come back?)

Nergz hat?/nergiz hat/ J (Nergiz came?)

The speaker shows his concerns, sadness, and upset about Nergz's not coming back since it might be too late. Therefore, her parents are angry about their daughter's not coming back home, expressing anger, fear or upset. In the examples given in (3) and (4), the pitch of the voice is low at the end of the sentences.

Mid tone

The mid pattern of intonation refers to the normal pitch of the speaker's voice. In Kurdish, primary stress takes a high pitch, but secondary stress generally takes a mid-pitch. The pitch starts from high, coming down to mid, or starts from low going up to mid. The endpoint of the pitch is mid, and it is represented by '·'. As Rahimpour and Doveise (2011: 79) contend, Kurdish speakers frequently use the mid pattern of intonation to ask a question with a statement word order. Also, it is used with choice questions or sentences with 'ya na'(or not). It is primarily used in statements, especially when the speaker does not make a significant change in his voice tone.

(5) detbinmewe. /detbinmewə/ (I will see you)

Statement delivering information

Xwardnaka xosh bw ˘yan ˘na? (The food was delicious or not?)/xwardnakə xoʃbu jan na/

Choice question

Goran inglizi ˘dazane? /goran inglizi dazane/ (Goran knows English?) Question with statement word order

As cited by Sheeler (1996: 5) and McCarus (1958), when, for example, a mid-level of intonation occurs several times in the same utterance, the mid-level superimposed on the utterance is different from the next. The speaker shows his/her lack of concern, interest, and sometimes displeasure when using the mid pattern of intonation.

(6) La birta ba pe daroshtin bo xwendnga?

Wabw yan ˘na?

/le birtə bə pe dərɔʃtin bo xwendɪŋə?

wabu jan na/

(Do you remember we were walking to school?Do you or not?)

In the example in (6), some degree of displeasure is implied in the speaker's mid-tone of the utterance.

Rising tone

In Kurdish, the rising intonation indicates the increase in speed where the pitch of the voice rises at the end of a sentence. The pitch of the voice begins mid, then it rises. The gliding up or taking off the tone is represented by 'ˆ'. The rising intonation is used for changing a statement into a yes-no question that usually begins with an auxiliary verb.

(7) Atawe broi?ˆ / ˆətəwe broi/ (Do you want to go?)

Question with auxiliary verb

Agar ewan nayan aroi? ˆ/ˆəgər ˆəwan najan to ˆroi/ Yes, No question

(Will you go if they do not come?)

The rising intonation used in examples given in (7) is used when the speaker wants to confirm an idea or information. The speaker raises his/her tone at the end of the sentence asking to confirm the idea of wanting to go. As Fattah (1997: 61, 64) explains, speakers may express distinct feelings and attitudes when using the rising tone, such as expressing fear, request, surprise, uncertainty, and hesitation. Al-Bazzaz and Qadir (2016: 73-75) and Musa (2009:75) also state that a rising pitch conveys interest, excitement, and enthusiasm.

(8) Mn salekitr ahangi darchwnma. /min salekitir

ahangi dərʃʃunmə/ˆ (I will graduate after a year)

Excitement

Dastm le mada./dəstim le mədə/ˆ (do not touch me)

Request

Esta dayanbat. /ˆəsta dajanbat/ ˆ (he will take them now)

Fear

Awa barastta! /ˆəwə bərasttə/ˆ (are you serious!)

Surprise

Sometimes the effect of using the rising intonation by speakers is to repeat the information or what has been said.

(9) A. Wanaka la katjmer 9 dastpedakat. (The class will start at nine.) Repetition

B. Kai? ˆ/Kei/ (When?)

In the example in (9), B asks A to repeat the information since he/she didn't understand what he/she had just heard. To do this, he/she uses a rising tone. A rising tone is the commonest tone to use in yes-no questions expressing surprise. Moreover, when the rising tone is used in Kurdish, the speaker will leave the listener free to answer Yes or No, and only the expression of surprise will be involved, as in, *barastta nayay? ˆ /bərastta najai/* (seriously, you are not coming?). In all the examples, the tone rises at the end of the utterances.

III. COGNITIVE VIEW OF INTONATION

Cognitive Linguistics is an approach that focuses on language as a tool for organizing, processing, and conveying information, as Greenaersts and Cuyckens (2012: 4) state. It aims to explore and understand the interactions between language and cognition. The core principle of Cognitive Linguistics is that language functions in the brain according to general cognitive principles. Human language ability is not discrete from the rest of the other cognitive abilities. Linguistic data storage and recovery are significantly similar to the storage and recovery of other knowledge. Phrased differently by Mompean (2006: 1), the use of language in understanding engages the same cognitive capabilities as those used in other non-linguistic tasks, such as attention and perspective, volition and intention, and expectation and affect. Cognitive Linguistics argues that semantics involves the conceptualization or construal of an experience by a speaker for linguistic communication. Cognitive Linguistics is concerned with analyzing the interaction between language and the mind. Human interaction with the world is mediated through informational structures in the mind. Linguistic knowledge involves not only knowledge of the language, but also knowledge of the human experience of the world as mediated by the language and represented, as Talmy (2006: 542-546) believes, by conceptual structures.

One branch within Cognitive Linguistics is Cognitive Phonology, the study of the sound system. As Taylor (2016: 2) describes, it studies the speaker's situation, feelings, and attitudes, which play a vital role in understanding the form of language used. Phonological representations are abstractions (or schematization) over usage events, stored in the mind. Consequently, interpreting a speaker's speech depends on the context in which it is employed. It signifies that language use is situated and conditioned. Kurdish speakers use distinct patterns of intonation whenever trying to convey a particular meaning or deliver a specific idea. As a suprasegmental feature, intonation plays a significant role in expressing the speaker's attitude, negotiating speaker-hearer relations, articulating syntactic structure, regulating the flow of information, and even signaling semantic-conceptual contrasts. For example, a rising tone is used in *I \thought he was \married. (... and I was right— he is married)*. The speaker is showing feeling upset since they might have been saying he is married, but no one believed them. The precise construal is imposed on the situation where the language is used and which intonation pattern a speaker should choose when trying to construe a particular statement or meaning.

A. Construal

Construal is defined by Hamawand (2005, 2021, and 2022) as “the two possibilities for expressing the same situation are two different ways of describing and thereby ‘construing’ that situation”. The term *construal* is used to account for selecting between alternating expressions. It plays a significant role in, what forms, the core of the cognitive linguistic approach to language. Construal is posited as a relationship between the conceptual content and the conceptualizer. For cognitive linguists, meaning exists in cognition rather than the relationship between language and the world, as Möttönen (2016: 13) suggests. Cognitive linguists, like Divjak et al.

(2019: 37), recognize that meaning is made. In Cognitive Phonology, as Hamawand (2022: 283) argues, speakers can describe and perceive a situation differently depending on the tone and manner of description. Just, see the difference between *He won't speak to any \one*. (He is picky with regard to whom he speaks to) and *He won't speak to \anyone*. (He will speak to no one). The examples suggest that differences in intonation are inherently meaningful and must therefore count as examples of symbolic units to convey specific meaning depending on the speaker's intention. Each pattern of intonation serves to feature a different aspect of the content. Each pattern creates a distinct meaning and construes a particular view of the scene depending on the speaker's intention and communicative needs.

B. Perspective

The construal operation that is likely to play in the construction of different meanings through intonation is called *perspective*. Perspective is defined by Iriskhanova and Cienki (2018) as “the process of describing an object or a situation from the speaker's point of view”. For Bien, (2021: 18), the act of construal is performed by the speaker to influence the listener's cognitive state. Hamawand (2007: 167) refers to describing a situation or an object as relating to the change of attention or focus from one part to another depending on the communication requirements. In Cognitive Phonology, especially suprasegmental phonology, the speaker can draw or focus one's attention on one or more parts of a situation (an utterance) and shift one's attention to other parts. To do so, the speaker uses intonational contours. Intonation is characterized by affecting the meaning of an utterance.

In Kurdish, speakers depend on different patterns of intonation when trying to express their feelings or the meanings they intend to convey. Consequently, the speaker's tone affects the listener's cognition of being able to differentiate one interpretation of an utterance from another. A good illustration of how meaning is carried in different patterns of intonation is shown in the following utterances:

- (10) a. Trifa wena dagret. \ /trifə wənə dəgret/ (Trifa is taking a picture) Falling tone
 b. Trifa wena dagret? \ /trifə wənə dəgret/ (Trifa is taking a picture?) Rising tone
 c. Trifa wena dagret. \ /trifə wənə dəgret/ (Trifa is taking a picture.) Low tone

The examples under (10) show that the speaker is trying to deliver different perspectives by using different patterns of intonation each time he/she is uttering the same sentence. In (10a), the falling pattern of intonation is used to express a statement. The speaker intends to deliver a piece of information by using the falling pattern of intonation. In (10b), the rising pattern of intonation is used when the speaker intends to ask for information. In (10c), the same sentence is said with a low intonation when the speaker is delivering an unexpected piece of information. In all the examples, the word order is the same, but they differ in the way the speaker utters them and he/she intends to use them for different purposes. This means that the speaker (the conceptualizer), depending on the patterns of intonation, can describe, virtualize, and conceptualize of the same scene in distinct ways.

Besides conceptualizing, the speaker uses different patterns of intonation when trying to change attention or focus from a specific part of the information or speech to another part according to the demands of the conversation, as shown by the following examples:

- (11) a. Aroit? ↗ /ʔəroit/ (Are you going?)
Rising tone
b. Aroit. ↘ /ʔəroit/ (You are going.)
Falling tone

In (11a), the rising pattern of intonation shows that the speaker is angry or upset. It can be known through the speaker's use of rising intonation. When a child refuses to go or stay at home, the mother is upset and angry and commands or threatens the child to stay at home. To convey her message, she uses rising intonation. In each utterance, the speaker uses a different pattern of intonation, suiting the communication's purpose. The pattern used in each situation reflects a diverse mental experience, which is modified according to the aim of the conceptualizer. In (11b), the falling pattern of intonation indicates that the speaker is sad or dissatisfied. The falling pattern of intonation is used as a friendly way of expressing sadness or dissatisfaction with someone's decision to leave. To deliver his/her intention, the speaker uses a falling intonation. After spending a lovely evening with a close friend, she then decides to leave, and you are sad because she is leaving or you disagree with her decision. Before moving to the conclusion, we would like to explain the idea of a tone unit. To deal with intonation, a unit greater than a syllable is needed; the unit is called the tone unit. Carr (2008: 78) refers to it as a word or a group of words that contains a tonic syllable. However, many Kurdish linguists attempted to define 'utterance'. For example, Sheeler (1996: xi) states that "A sentence is understood to be an utterance bounded by silence at either end which spoken as, and felt to be, a complete unit by a speaker." So, the condition for a unit to be 'utterance,' according to this definition, is to have silence at the beginning or end of the unit, "a unit of information." So, the term tone group can be inferred from the above definitions as the unit where the pitch changes, a short or filled pause. As Qadir (2011) stresses, an utterance is composed of one tone group or more, and there is a long silent pause at either end.

- (12) Khushkakatan zhny kamyana?(Your sister is the wife of whom?)
A. //xu[kəkətan / zini /kamjanə// (Your sister is the wife of whom?)
B. //xu[kə/ kətan / zini /kamjanə// (Your sister, named Katan, is the wife of whom?)

The sentence in (12a) is not divided into tone units. Thus, the sentence is a question in which the speaker asks about someone's sister, your sister. In (12b) the sentence is divided into two-tone units. Here, the sentence is a question in which the speaker asks about someone named 'Katan', which is a proper name usually used for females, as Hassan and Hassan (2018: 411) explain. The sentence in (12) shows that dividing the sentence into tone units helps in the comprehension process. In addition to that, it indicates that boundaries of tone unit play

a vital role in knowing the exact meaning of an utterance. The boundaries of the tone unit are called Juncture. It is a criterion for the demarcation of tone unit boundaries.

CONCLUSION

This study has analyzed CK intonation from a cognitive phonological perspective. As a non-tonic language, intonation in CK refers to pitch fluctuations used by a speaker to express meanings. Based on Cognitive Phonology, the study has accomplished two aims. The first is to confirm that intonation in CK, as a suprasegmental feature, is meaningful. The second is to show that using one pattern of intonation instead of another is the result of the cognitive process of construal. In CK, four fundamental patterns of tone have been found: falling, low, mid, and rising. Intonation helps Kurdish speakers express their attitudes or feeling. Besides, it provides grammatical information such as distinguishing between a statement and a question. It changes the grammatical category of a sentence from declarative to interrogative or superlative designating semantic, pragmatic, and expressive intent. Intonation is also used to mark the given-new continuum where the meaning of intonational prominence is considered as intonational focus. Thus, based on Cognitive Phonology, intonation in CK is meaningful since shifting between patterns of intonation or a change in tone adds a specific tint of meaning to the utterance. The study has also found that the construal dimension of perspective is responsible for the production of intonation. It plays a fundamental role in constructing different meanings where two utterances composed with the same elements and describing the same situation would provide distinct meanings.

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