The Prosodization of Weak Function Words in Kurdish Language (Leilakhi Dialect[1])

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Abstract

This paper investigates the prosodic structure of simple prepositions and dependent personal pronouns as weak function words in Leilakhi Dialect with the theoretical framework of Prosodic Phonology or Phonology of Domains. Weak function words (fnc) of this dialect are proclitics or enclitics that form Clitic Group (CG) with their host. One such feature of these elements is their combinatorial restriction with their host, *i.e.* simple prepositions as prosodic proclitics must precede a noun phrase or independent personal pronoun and absolute prepositions as phonological words join the dependent personal pronouns in the role of enclitics which give form to the clitic group. The phonetic process and phonological process used in this research are aspiration and stress assignment pattern respectively.

Keywords: Weak function words, Proposition, Personal pronoun, Clitic group

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[1] The Kurdish dialect analyzed in this paper is Leilakhi. This dialect is spoken specifically in Qorveh, Dehgolan, Divandareh and some parts of Kamyaran in Kurdistan Province.

1. Introduction

Following the common prosodic distinction between functional words and lexical words put forward in the seminal work of Selkirk (1995) and the subsequent works, we likewise divide morpho-syntactic words in Kurdish language into two major groups. The first group consists of those words which can have lexical stress. Since most of such words belong to the categories of lexeme or content words, we as Selkirk name these categories lexeme (lex). The second group comprises weak function words (fnc) which, in unmarked form, are stressless in natural speech unless they are to be stressed. In Kurdish language, referring words and independent personal pronouns like *æm…æ* (This) and *min* (I), despite being functional words in terms of meaning, fit into the first group because of having lexical stress.

Selkirk (1995) terms weak function words prosodic clitics, *i.e.* these elements combine with the other words and form a prosodic structure with them. They cannot form a prosodic structure by themselves. Selkirk names the method of combination of these elements with their host in the prosodic hierarchy 'prosodization'. He proposes four structures for them which will be given in what follows. Clitic refers to a morpheme which is considered to be an independent word in terms of syntax; but, it is a stem or syntactic dependency in terms of phonology that is either attached to or inserted in them. The word to which the clitic is added is named 'host'. The clitic is attached either to the right side or to the left side of the host; hence, being termed enclitic and proclitic respectively. It may be inserted between a stem and an affix which will be called mesoclitic. In cases in which the clitic splits the stem sections and fixes between them, it is known as endoclitic. Finally, the clitic may have a stem in its structure and be located on the both sides of the host, the term for which is circumclitic. From this perspective, there are enclitic, proclitic and circumclitic in Kurdish language. This study aims to investigate these elements based on the prosodic phonology which is dealt with in the works of Nespor and Vogel (1986), Selkirk (1995) and Vogel (2009). *Contra* Selkirk who considers the clitic to be asymmetrical and the enclitic as free clitics and proclitic as affixal clitics to be attached to their host, the present paper takes both of them to be symmetrical which are added with the clitic group.

As stated, there are enclitic, proclitic and circumclitic in Kurdish language. Elements such as pronominal clitics, copula, indefinite marker, coordinating conjunctions or coordinative and genitive are categorized as enclitic. These words are stressless and always attached to the right side of their host. Elements considered to be proclitic consist of primary prepositions and the correlative conjunction 'or'. Ultimately, circumclitics comprise a number of prepositions which are located on both sides of their complementizer.

The phonological model to be tackled within this paper is the prosodic subsystem which is called the Prosodic Phonology or the Phonology of Domains. Apart from this short introduction, the present paper has the following sections. Firstly, we introduce the prosodic phonological model. Then, different types of prepositions and personal pronouns in Kurdish language are explored. Lastly, we embark on analyzing the data which is followed by concluding remarks.

2. Prosodic Phonology

According to prosodic subsystem, the subjective grammatical aspect of speech is organized in hierarchical structures. Each prosodic structure provides the domain for the function of phonological rules and specific phonetic processes. Within the framework of prosodic model, each structure is not only defined based on phonological and phonetic rules but also these structures rest on a set of principles according to which they are determined. Put differently, each structure draws from distinct pieces of phonological and non-phonological information in prosodic hierarchy. However, it must be kept in mind that the availability of non-phonological information, *inter alia*, morphological, syntactical and semantic, to prosodic phonology is not direct. It occurs indirectly *via* mapping rules. Therefore, prosodic structures are not equal with morphological and syntactical structures in most cases. Nespor and Vogel (1995, p. 11) enumerate seven prosodic structures, the smallest of which is syllable and the biggest one is phonological utterance. These structures are given in order from the smallest to the biggest with their signs as follows:

Syllable (σ), Foot (F), Prosodic or Phonological Word (ω), Clitic Group(C), Phonological Phrase (ɸ), Intonational Phrase (I), and Phonological Utterance (U)

In this model, the phonological rules are classified into three categories based on their function: 1) phonological rules which function within prosodic categories are called domain span rules; 2) phonological rules which function in the border between two similar prosodic categories are termed domain juncture rules; and 3) phonological rules which function in the limit of a specific prosodic category are named domain limit rules.

Nespor and Vogel (1995, p.11) make use of prosodic licensing principle of Ito (1986) in forming and ordering of the prosodic structures. However, they utilize the more restricted version of this principle known as strict layer hypothesis, the fourfold principles of which are:

First Principle: each prosodic (domain) structure such as X^p consists of one or more prosodic structure like X^{p-1} onto which it is immediately dominant.

Second Principle: each prosodic structure is a member of the immediate higher level in one of the levels of the hierarchy.

Third Principle: each prosodic structure branches into one or more immediate structures lower than itself.

Fourth Principle: in each level, one of the prosodic structures is strong (s) and the other structures are weak (w).

One of the hierarchical prosodic structures which is made based on the aforementioned fourfold principles in prosodic phonology is clitic group (CG). Many linguists explored different languages within the framework of this model like Nespor and Vogel (1995) whose findings triggered the present paper. As far as the writer's knowledge is concerned, no research has been conducted in Kurdish language within the framework of this model. The current research will be the first in its kind that investigates the clitic group in Kurdish language in the light of this model. Having these characteristics in mind, Nespor and Vogel

define clitic group as follows:

8. Clitic Group Construction

i. C Domain: the domain of C consists of a phonological word containing an independent (nonclitic) word plus any adjacent phonological words:

a. a directional clitic (DCL), or

b. a clitic such that it has sharing membership with its host and there is no other possibility for the host.

ii. C Construction: all the phonological words in a string join each other in the form of n-ary. They are delimited with the definition of C Domain.

Directional clitics refer to those clitics whose phonological attachment to the existing elements on the left side or the right side depends on the intrinsic features of the clitic itself. Contrarily, normal clitics are those which can freely adjoin to the elements on their left or right side. The point to be highlighted in the given definition relates to Nespor and Vogel who consider clitics as an independent phonological word. Therefore, the clitics like lexical words are taken to be phonological word (PW) in this definition.

Giving diverse reasons, Selkirk (1995) perceives the clitic group to be additional in the prosodic hierarchy and, consequently, omits this structure from prosodic structures set. Instead, Selkirk proposes four prosodic structures, regardless of order, for each combination of host+clitic. He demonstrates these four structures for enclitic as follows (ϕ=phonological phrase, σ=syllable):

| 1. | a. internal clitic | b. prosodic word | c. free clitic | d. affixal clitic |
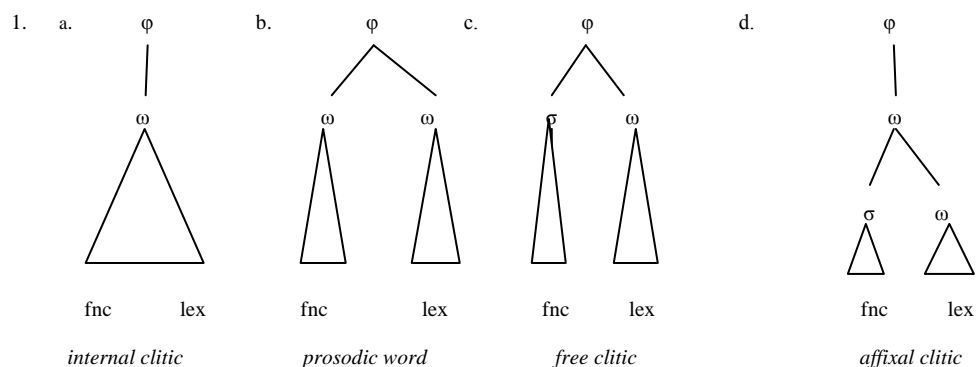
The significant point in diagram 1 is that the proclitic (fnc) is located in the initial position of the phonological words (ω) as in the representative examples (a), (b) and (d) while it is not so in (c). In example (c), the clitic is immediately dominated by the edge of the phonological phrase. Selkirk believes that the initial position in a phonological word always impacts the phonetic realization of the phonological elements. He regards aspiration in English language as the offshoot of the effect of the initial position on voiceless stops. Accordingly, the voiceless stops in the onset of a word, albeit stressed, have the highest level of aspiration. Thus, he considers the aspiration of these consonants to be the phonetic reason influential on determining the initial position of the phonological word (ω). Since the aspiration level of voiceless stops in the initial position of the functional words (fnc) is low, Selkirk contends

that the onset of these elements does not coincide with the initial position of the phonological words; hence, his dismissal of examples (a), (b) and (d). He singularly perceives example (c) to be an enclitic as weak function words. Playing the role of the sister to phonological word, enclitics attach to phonological phrase. Selkirk takes example (d) to be an enclitic and he opines that these elements are affixed to the phonological word and duplicate its structure. According to Selkirk, the proclitics follow skipping on account of direct attachment and the enclitics adhere to recursivity due to the repetition of phonological word. Selkirk considers this state to be the major reason behind the asymmetry of these elements since two different levels adjoin to their hosts.

Vogel (2009) embraces Selkirk's approach about clitics which cannot be regarded as phonological words. He contends that the clitics must not be considered as phonological word. Following Selkirk's arguments about rejecting the clitics as an independent phonological word, Vogel modifies the given definition of Nespor and Vogel (1986) and redefines it as what follows.

11. Clitic Group Formation

iii. C domain: the domain of C consists of a phonological word plus

    a.   a directional clitic, or

    b.   a clitic such that it has sharing membership with its host and there is no other possibility for the host.

iv. C Construction: all the phonological words in a string join each other in the form of n-ary. They are delimited with the definition of C Domain.

The first section of this definition has been modified and the clitics are not considered to be phonological word any longer. Vogel contends that the reason behind omitting clitic group from prosodic structures by Selkirk is not the clitic group itself. Rather, this issue relates to the geometry of prosodic structure which has been defined based on Ito. Therefore, Ito suffices and obviates the need for omitting C. Obversely, C in one of the major and fundamental levels in prosodic phonology, resulting from the interaction of syntax and semantic. Following fourfold structures of Selkirk, Vogel presents these diagrams:
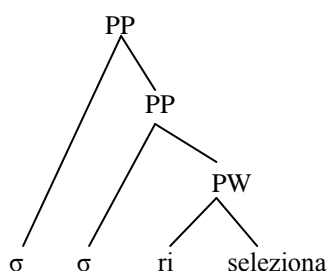
2.   a. skipping   b. recursive
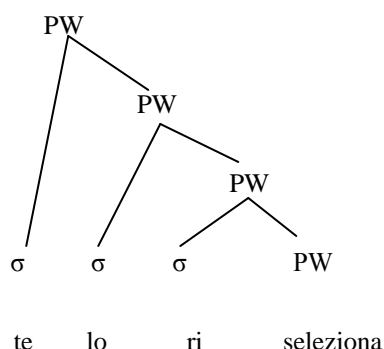
Vogel rejects structure 14.a thoroughly because he takes the omission of C as a means of facilitating the prosodic hierarchy and reducing the number of the structures. However, the acceptance of recursive structure paves the ground for the escalation of the number of the structures, than their reduction. Based on diagram (a), one can duplicate phonological words in accordance with the number of clitics; hence, Shiering et al. (2007) enumerate eleven phonological words in Lhasa language. Thus, recursivity of phonological word does not help to facilitate the prosodic hierarchy; contrarily, it leads to the escalation of the number of the structures and makes the issue more complicated and problematic. On the other hand, if we accept the symmetrical structure of the elements in (a), there must be a kind of similar reaction to phonological processes. Drawing from different processes such as stress rule, voicing in inter-vowel context and vowel alternation process of the clitic, Vogel shows that the reaction of these levels to diverse rules is different. Accordingly, the function of these processes signify the diversity of these levels. As a result, different reaction to processes in prosodic phonology highlights the diversity of structures; hence, structures must be termed variously. The other point to be noted in diagram (14-a) revolves around the fact that there are a number of word-internal phonological words which are positioned between the highest and the lowest phonological words; but, there is not an analogous process in this language to demonstrate the diversity of these structures; hence their being tagged as additional structures. Vogel perceives the effect of this approach on prosodic phonology as the last reason for rejecting recursive words. Validating the concept of recursion in a structure means the tacit acceptance of this process in the other structures. Thus, prosodic phonology as a theory cannot both control and anticipate the number of the structures and recursive processes in each structure. In that case, each linguist may alter optionally the number and type of recursive processes in the existing structures optionally, which altogether detract from the simplicity, explicitness and scientific values of the theory. Therefore, Vogel contends that one cannot omit clitic group and use recursive phonological word in its stead. In addition, regarding Selkirk's approach in (14-b), Vogel remarks that the concept of skipping is different from that of recursion. Skipping does not influence the overall structure of prosodic phonology. It merely alters the attachment and domination which exist between the structures; hence, being more acceptable. Vogel, nevertheless, contends that accepting the concept of skipping is not a reason against C construction since there are many phonological processes which act at the level of clitic group than phonological phrase and vice versa. As a consequence, Vogel accepts the concept of skipping alongside adhering to C construction. To prove his arguments, Vogel mentions two rules namely, stress and syntactical accent or Raddoppiamento Sintattico in Italian language. These two rules act totally different from each other at the levels of clitic group and phonological phrase. Therefore and according to what has been mentioned, Vogel rejects recursive process and accepts skipping under the condition of maintaining the clitic group and modifying the process of skipping. His modification about the definition of clitic group illustrates this fact. Having this introduction as a background, we explore preposition and personal pronouns in Kurdish language.

3. Preposition and Personal Pronouns

Following a general classification, different types of preposition in the Leilakhi dialect of

Ardalani in Kurdish language can be categorized into two major groups. One group consists of primary prepositions which form the real prepositions of language while the other group comprises secondary prepositions. Secondary preposition involves a primary preposition with a lexical category such as noun, adjective and adverb. Primary prepositions which are considered to be real prepositions are divided into simple preposition and absolute preposition in themselves. Simple prepositions are those which have the following features: 1) these words are stressless in the structure of language unless they are to be stressed (2-a). 2) Simple prepositions are always with a complementizer (2.b). 3) The complementizer of these words must be a noun phrase or independent personal pronoun (2. C-e). Lastly, 4) these words must be with complementizer, *i.e.* their complementizer must follow them immediately (2.g).

3. a. bo xwanin   " for reading"

 b. bo kar   "for work"

 c. læ gol.   "from flower"

 d. læ sifækæm xward.   " I ate from the flower"

 e. *læ -it   " from it"

 f. * wæ-m   " to me"

 g. kitiwækæm læ   aw   sanaw. " I took the book from her"

 h. * kitiwækæm læ   sanaw.

The most important simple prepositions in Leilakhi dialect are as follows:

4.   bo "for" ta "until" læ "from"   be "without"   wæ "with" wæk "like"

It must be kept in mind that all simple prepositions precede their complementizer as an enclitic, with which they form a prosodic structure. According to definition given by Nespor and Vogel (1986), simple prepositions are considered to be directional clitics (DCL) that always attach to the right side of their host. Being the second subdivision of primary preposition, absolute prepositions have the following characteristics: 1) unlike simple prepositions, these words have stress. 2) pronominal clitics are the fixed complementizer of absolute prepositions. Such prepositions do not join a noun phrase or independent personal pronouns. 3) the complementizer of these words precedes the preposition in some particular cases.

5. a. wæ minalækanim   wit.   " I told to the children"

 pe- yan-im   wit.   " I told them"

 *pe minalækanim   wit.

 b. wæ aw- im   wit   " I told him/ her"

 pe-im   wit.   " I told him/ her"

 ʃæwsu kar-tan   bo   ækam. " I work for you tomorrow"

The most significant absolute prepositions in this dialect are:

6. bo ” for”   le ”from”   pe ”with”

In Leilakhi dialect, absolute prepositions are phonological words and have stress. Apart from these two groups, there is another group termed secondary preposition which consists of two subdivisions: 1) free prepositions which appear on both sides of their complementizer in the form of two free morphemes. They are used with noun phrase, independent pronouns and dependent pronouns.

7. læ tawsan-a   ” in the summer”

    tæk to-y-a   ”with you”
    tak-t-a   ”with you”

In the given example, morphemes (læ) and (tæk) as the first part of the preposition and (-a) as the second part is located at the end of the complementizer. These kinds of prepositions are called free preposition. The fourth group of preposition is termed compound preposition which are formed *via* combining simple prepositions with lexical categories. The following examples are illustrative:

8. hær ta ”until”   læ ban ” on the top of”   læ ʒir ”under”

As discussed earlier, prepositions in Leilakhi dialect are sensitive to the kind of their complementizer, *inter alia*, dependent and independent personal pronouns and they opt for one of them. Now different kinds of personal pronouns will be explained in brief. Traditional grammarians (Ali Amin, 1960; Xoshnaw, 2012; Kalbasi, (1362- 1983) considered pronoun to be an element which took the place of noun. Personal pronouns in Leilakhi dialect are divided into three groups: independent personal pronouns, dependent personal pronouns and fusional verb inflection. Based on the categories of person and number, these pronouns are given in the following table separately.

Table 1. Personal pronouns in Leilakhi

	Verbal affixes			pronominal clitics			personal pronouns		
	plural	Singular		plural	singular		plural	singular	
1P	-(i)m	-in		-man	-im		emæ	min	
2P	-(i)t	-in		-tan	-it		ewæ	tø	
3P	ø/ -it	-in		-yan	-i		awan	aw	

Free pronouns which are also known as independent pronouns are stressed and, like absolute prepositions, they are considered to be phonological words. Accordingly based on Selkirk's classification, these two categories are regarded as lexical words. Being perceived as dependent forms, bound pronouns and fusional verb inflections are stressless and, like simple

prepositions, always attach to their host. Therefore, they are categorized as weak function words (fnc). Unlike fusional verb inflections which must attach to the verb in all cases and play the role of the verb's argument or agreement markers, dependent pronouns can be added to different categories such as verb among others. Based on the first criterion proposed by Zwicky and Pullum (1983) in distinguishing between affix and clitic in which the affixes are sensitive to choose their host and the clitics are free, one can regard the fusional verb inflections as affix and the dependent pronouns as clitic. As a result, fusional verb inflections form a phonological word with their host and the word stress of the phonological word falls on them. Following Selkirk's classification, one can consider independent personal pronouns, fusional verb inflections and dependent pronouns as lexical word, affix and weak function word respectively. Thus the interaction between absolute prepositions and independent personal pronouns as lexical words on the one hand, and dependent pronouns and simple prepositions as weak function words on the other hand can be one of the hot topics of this language which will be explored in the following section.

4. The Interaction of Lexical Words and Weak Function Words in Leilakhi Dialect

As stated in the previous section, Selkirk divides words into two groups, namely lexical words (lex) and weak function words (fnc). He takes the fourfold structure to be the result of the syntagmatic relationship between lex and fnc. Now based on these fourfold structures, we will analyze the interaction of lex and fnc in Leilakhi dialect. As mentioned, there are two groups of primary prepositions named simple and absolute. Drawing from the characteristics of simple prepositions, these categories are weak function words (fnc) which appear in the speech chain as clitic. However, the question posed is that the combination of (fnc) – simple preposition – and (lex) agrees with which structure of Selkirk's fourfold structures. Bijankhan (2013, p. 78) has opted for structure (a) for prepositions in Persian language. He holds the opinion that the preposition and the following word are a phonological word together. Based on Selkirk's structure (a) and Bijankhan's analysis, the combination of enclitic+host form a (ω) together. Therefore, the first syllable of the preposition is the initial syllable of (ω). In what follows and according to phonetic aspiration, we will see that Selkirk's choice and Bijankhan's approach cannot be valid. In choice (b), Selkirk identified (fnc) as an independent (ω) which in the role of the sister to another phonological word gave rise to a (ɸ). Based on the approach adopted by Kahnemuyinpour (2003) in which "the strong syllable farthest left side of the phonological word in the phonological phrase carries stress," the preposition in the role of (ω) must be stressed. This proposition is contrary to the reality of the prepositions since they cannot carry stress. Therefore, Selkirk's choice (1-b) and Nespor and Vogel's approach (1986) based on which the clitic is considered to be (ω) cannot be valid. The major flaw found in Nespor and Vogel's approach by Selkirk (1995) and Booij (1996) relates to this issue. Now there remain only two choices, namely (c) and (d). In choice (d), the category of the host itself is a phonological word which gives it a superior status in comparison to choice (a); but, in this choice functional words (fnc) combine with their (ω) and form a larger (ω). Although this choice is superior to choice (a), the structure resulting from the clitic and their host is a phonological word which appeared in choice (a) in addition and has the same problems of choice one. Furthermore, the phonological word is repeated

twice in this diagram and the higher phonological word dominates the lower phonological word; in other words, a structure is dominant over itself. However, this kind of structural domination refutes the first principle of the fourfold principles of the strict layer hypothesis, based on which each prosodic structure (X^p) must dominate one or more prosodic structures (X^{p-1}); that is, a structure must not dominate itself. Thus, this choice cannot be appropriate. The only choice which has remained is (c). In this diagram, (fnc) and (lex) combine with each other and form a phonological phrase. This choice has some superiorities over the other choices. For example, unlike choice one in which (lex) is dependent upon (fnc), in this choice (lex) is regarded as a phonological word independently. Secondly, dissimilar to choice (d) which has a recursive structure and rejects the first principle, this choice does not refute the first principle. The point to be highlighted is that the lexical word is in the initial position of the phonological word, either directly or indirectly, in all the three choices. Moreover, the left edge of the phonological word coincides with the left edge of the clitic while it is not so in choice (c) in which the clitic with the phonological word as its host has formed a phonological phrase. The problem with choice (c) is that this choice rejects the second principle of the strict layer hypothesis, based on which each prosodic structure is a member of the immediate higher level in one of the levels of the hierarchy. Contrarily, in this diagram (fnc) the prosodic structure in the role of a syllable has neglected two middle levels, namely (ω) and the clitic group. This refers to the aforementioned skipping process which rejects the second principle. As shown in choices (a), (b) and (c), functional words (fnc) are in the initial position of the phonological word. In case of proving the hypothesis that the initial position of (fnc) cannot be the initial position of (ω), these three choices are declined *ipso facto*. Accordingly and apart from the given reasons for declining these three choices, we bring one example from Leilakhi dialect to prove whether these choices are right or wrong. The phonetic process used is aspiration. Samareh (2002- 1381, pp. 26-7) contends that voiceless plosives have a feature, known as aspiration, of which their voiced pairs do not have any trace. One hears the exhaled airstream in the form of slight friction at the time of producing voiceless stops. Such a phenomenon is named aspiration. Samareh believes that the rate of aspiration varies in relation to the place of the aspirated phoneme. Generally, when aspiration is located in the initial position of a word or at the beginning of a stressed syllable, it is much more than those cases in which the phoneme is placed at the end of the word or between two voiced phonemes. Therefore, Samareh takes the initial position of a phonological word to be more aspirated than the other positions. If one can prove that voiceless plosives in the initial position of the proclitic or (fnc) have less aspiration than the initial position of (lex), hence the claim that functional words (fnc) are not placed in the initial position of the phonological word seems to be sound.

5. An Experiment

In an experiment, prepositions "ta" (to) and "tæk" (with) were used before nouns starting with /t/ in two different sentences in Leilakhi dialect. Six people – three males and three females – in the 30-40 age range as speakers of this dialect read each of these two sentences two times. Their speeches were recorded with 44100 Hertz sampling and analyzed with Praat. In this experiment, voice onset time (VOT) -- a phonetic index both for voicing and spread

glottis which shows the synchrony or diachrony of the voicing of larynx and the oral closure of the plosives and, finally, whose unit of measurement is (ms) – was recorded in the proclitics (prepositions) and the initial position of the lexical words. Consequently, their average and standard deviation were calculated. T. Test was utilized in order to determine the significance of difference which existed between the two words. The sentences in which these words were used are as follows:

1. a. liræw <u>ta tunæjl</u>   esfaltæ.   ” from here to the tunnel is   asphalt”

    b. ʃæwsu <u>tæk   toya</u> tim.   ”I will come by bus tomorrow”

Firstly, close attention must be given to Levine's test which is done to calculate the equality of the variances between the two sample groups. In this case, if the F-test shows this point that there is not a significant difference between the variable variance in the two groups – the variances are equal – we must pay attention to the 'equal variances assumed' and its level of significance. On the contrary, if the 'equal variances assumed' is not proven, the attention must be directed toward 'equal variances not assumed' and its significance. As it is given in Table (1), F-test (F=4.811) and its significance (Sig=0.039) give credit to this point that the sample variances are equal in this research. Drawing from the substantiation of the equal variances assumption, the data collected from the row labelled the Equality of the Variances and its significance show that the level of significance (Sig=0000) is lower than the alpha of the research (α=0.05). Therefore, there is a significant difference between the average voice onset time (VOT) of the two groups in the present research (Sig=0000, t=62.375). To be more precise and based on the findings, one can remark that the average voice onset time (VOT) of "ta" (27.91) was lower than that of "tæk" (64.17). This point shows the significance of the difference. According to the average voice onset time of both of them, one can conclude that "ta" is not located in the initial position of the phonological word.

Table 2. VOT mean

Dependent variable	VOT	NO of variables	mean	Standard deviation
VOT	ta	12	27.91	1.78
VOT	tunæjl	12	64.17	0.93

Table 3. Difference between VOTs in time"

Dependent variable	meaningful T	T statistics	Levine's test		–	mean difference
			Sig	F		
VOT	0.000	62.37	0.039	4.811	Equal variances assumed	36.25

Based on Table (3), the F-test (F=0.014) and its significance (Sig=0.907) demonstrate that the

sample variances in the present research are not equal. Following the inequality of variances assumption which was proved, the data gathered in the row of inequality of variances and its significance signify that the level of significance (Sig=0000) is lower than the alpha of the research (α=0.05). Therefore, there is a significant difference between the average voice onset time (VOT) of the two groups in the present research (Sig=0000, t=55.178). More accurately and based on the findings, one can point out that the average voice onset time (VOT) of "tæk" (22.33) was lower than that of "toya" (47.25). This discrepancy reveals the significance of the difference. Based on the average voice onset time of both of them, one can draw the conclusion that tæk" is not placed in the initial position of the phonological word, a position which is filled by the syllable following it.

Table 4. VOT

VOT	Mean	NO of variances	standard deviation
tæk	22.33	12	1.07
toja	47.25	12	1.14

Table 5. Difference between VOTs in time

Mean difference	meaningful T	Statistical T	Levine's test		Mean difference
			Sig	F	
EVA	0.000	-55.178	o.907	0.014	-24.92
EVNA					

Now that the place of stress in the phonological phrase has been set based on phonological rule, simple prepositions cannot be phonological words since they cannot carry the stress of phonological phrase. Accordingly, the combination of proclitic+host cannot form a phonological phrase. On the other hand, the initial position of the phonological word was determined based on the phonetic rule of aspiration, based on which simple prepositions cannot be located in the initial position of the phonological word since the voice onset time in them is significantly lower than that of the initial position of the phonological word. By extension, fnc+lex structure cannot be considered as phonological word (ω) or phonological phrase (ϕ). On account of this reason, we suggest internal structure between (ω) and (ϕ) which is known as clitic group (CG) for making these constructions. In what follows, we will deal more with the essence and the internal structure of the clitic group. As explored, simple preposition in the role of proclitic attaches to the phonological word after itself. Now the question posed is what would be the place of absolute preposition? We follow Selkirk's approach for the discussion. According to the mentioned characteristics for absolute prepositions, one can claim that these prepositions are phonological words and generally carry lexical stress. However, the interaction of these categories with dependent pronoun seems to be problematic. The given examples (4a-b) demonstrated that these pronouns attach to absolute prepositions and do not have any effect on the stress of these word, *i.e.* the stress remains in its own place. Therefore, if dependent pronouns form a phonological word with their host based on Selkirk's structure (a), the lexical stress must fall on the last syllable. The data of Kurdish language, nonetheless, are contrary to this claim.

2. pe-yan-im ⟶ *(ṕe. ya. nim) $_{pw}$

$$X_w$$
$$(X_\sigma \qquad X_\sigma \qquad X_\sigma)_\omega$$
$$(pe)\sigma \qquad (ya)\sigma \qquad (nim)\sigma$$
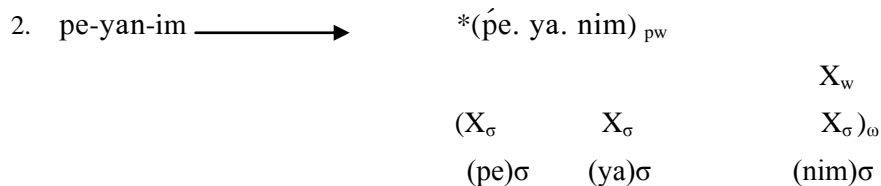
Now one can claim that absolute prepositions in Kurdish language are phonological words and the dependent personal pronouns (example 9) in the role of enclitic form the combination fnc+lex with the phonological word which is symmetrical with the former structure. Based on what has been mentioned, the prosodic structures resulting from the combination of simple and absolute prepositions with their host would be as follows.

3. A. absolute prepositions   b. simple prepositions

CG   CG

lex   fnc   fnc   lex

pe   -m   bo   xwanin
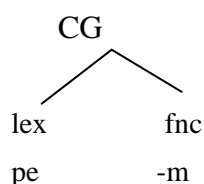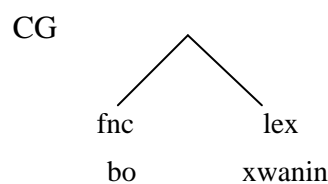
According to these two diagrams, the essence of simple and absolute prepositions are different but their prosodic structure are identical and both of these structures form clitic group. Free prepositions give credit to the above structure with a slight difference.

4.   CG

fnc   lex   fnc

læ   tawsa   -na
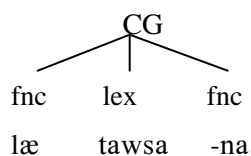
 In the diagram, the lexical stress falls on "tawsan" (summer). Now we deal with the essence of the prosodic structure of these elements. As it was shown, Selkirk's suggested structures are unable to determine the formation of this prosodic structure. The bases of the third principle in the fourfold principles of the strict layer hypothesis define the internal structure of this prosodic structure. According to this principle, all the existing elements in a string join each other in the form of an n-ary and they are delimited with the definition of C Domain. Consequently, Selkirk's suggested binary structures are not acceptable. Following diagrams (9) and (10) and contra Selkirk's approach based on which the enclitics and the proclitics have diverse structures and merge at different levels, the current approach sets forth that these elements have symmetrical structures and they merge with clitic group structure similarly. The only difference which exists between them relates to the direction of their attachment. Having this interpretation at the background, the following diagram fully demonstrates the clitic group construction in Leilakhi dialect. As it is shown in the diagram, Vogel's approach (2009) is simpler, more comprehensive and more compatible with the principles of prosodic phonology (́is used to show the lexical word which carries stress in the clitic group).

5.

$$\overset{CG}{\underset{\text{.....(fnc)} \quad \acute{\text{l}}\text{ex} \quad \text{(fnc).....}}{\diagup | \diagdown}}$$
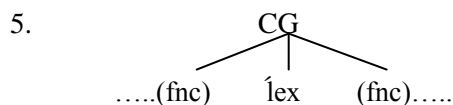
6. Conclusion

The clitic group level in the prosodic hierarchy in the prosodic phonology of Kurdish language was investigated in the present paper. Studying simple and absolute prepositions illustrated that the first group is prosodic proclitic and the second group is phonological word (ω), elements which form clitic group *via* combining with their host. Simple prepositions are used with noun phrase or independent personal pronouns while absolute prepositions are utilized solely with dependent personal pronouns. *Contra* Selkirk's approach (1995) and in line with Nespor and Vogel (1986) and Vogel (2009), the clitic group must be considered as a genuine prosodic level in the prosodic hierarchy of Leilakhi dialect based on the results of stress assignment pattern and aspiration.

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