

The Function of the Plural Marker *-lar* in Turkish from the Construction Morphology Perspective

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ABSTRACT

This study aims to investigate the properties of the *-lar* construction in Turkish within the framework of Construction Morphology (CxM). According to CxM, constructions are signs which are conventionalized pairings of form and meaning. As an output-oriented theory, it is argued that CxM enables us to account for the various but still relatable semantics of one construction. The plural construction *-lar* in Turkish is quite productive and it can be motivated by various semantic relations in addition to its plurality denotations. It will be argued that our grammar is composed of a lexical network consisting of constructional schemas. The existing literature consists of research on its scopal features, its associative meaning, and whether its reading is inclusive or not; however, the additional functions such as its usages in greetings, making wishes are disregarded. There are also descriptive analyses which list several connotations of the morpheme but which fail to account for the systematicity of the relationships among these meanings. This paper thus accounts for both core grammar and the so-called peripheral usages of the *-lar* morpheme and displays how production of different connotations is structured and enabled.

1. Introduction

The plural formation in many languages like English, Turkish, French, German etc. leads to a change in the form of a word adding a semantic feature that “shifts its denotation from one entity to more than one entity (Shafaei-Bajestan, et al., 2022:2).”

- (1) a. I am reading the **book** that you gave me.
b. Of all the **books** that I’ve read, *Crime and Punishment* has impressed me the most.

The difference between the English singular and plural forms is the morphological item *-s* that appears on the plural form and regarding its semantics, with plurality the number of the entity is no longer one as it is with singularity. This is one very general attribution of plurality. In addition to this, plural forms can lead to different interpretations other than “*more than one entity*”.

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(2) We bought a cabin in the **mountains**.

(from Nauta, et al., 2022)

In the example above, the plural word *the mountains* has a different denotation. It refers to “a mountainous area or a mountain range rather than to a plurality of mountain-individuals (Nauta, et al., 2022:1).” Such plurals are called plurals of extension and include examples such as *cliffs*, *skies* or *Pyrennes* (Nauta, et al., 2022; Waltke & O’Connor, 1990).

Plurality can indicate another supplementary meaning as seen in the examples below:

(3) a. France has 365 different **cheeses**.

b. My colleague is researching on world **Englishes**.

The plural word in (3a) does not refer to multiple pieces of cheese but to several types of cheese. Similarly, the item in (3b) refers to different types of English that are spoken around the world. Although the lexical items keep the plurality feature, they introduce an additional feature, the meaning of ‘type’.

In Turkish, the nominals in the plural form occur with a more complicated scenario as its denotations are more than in English. In this paper, the plural suffix *-lar* in Turkish will be used to illustrate some of the problems related to the study of an inflectional process with a number of senses. It will be shown that various denotations of plurality require a close attention so that it enlightens the system behind the linguistic organization. A usage-based analysis of language, Construction Morphology (CxM) (Riehemann, 1993, 1998; Booij, 2010 et seq.) will be adopted. Seeing that the majority of the literature on CxM is based on word-formation processes, thus derivational, this study will contribute to how the CxM framework accounts for inflectional data.

As will be seen in section 2.1, the existing literature which follows the Minimalist Program (Chomsky, 1992, et seq.) has mainly focused on three functions, namely its inclusive or exclusive reading, associative meaning and its plurality effect on the event and type of the predicate. Expressions like *Teşekkürler* ‘Thanks’ or *İyi günler* ‘Have a nice day’ are not considered to be central to language by most generative grammarians, thus they are not analyzed at all (Fried and Östman, 2004, 2005). For CxM however, all units are of the same importance and can be subject to analysis.

There are also descriptive analyses which list several connotations of the morpheme but which fail to account for the systematicity of the relationships among these meanings. This paper thus accounts for both core grammar and the so-called peripheral usages of the *-lar* morpheme and displays how production of different connotations is structured and enabled.

The paper is organized as follows: In section 2, the Turkish *-lar* constructions and their various meanings are presented as well as the related research within the cross-linguistic literature. In section 3, the principles and development of the usage-based model Construction Morphology is introduced. Also, in this section, the Turkish plural marker *-lar* is discussed within the principles of the CxM framework in order to provide a unified analysis. Section 4 is the conclusion.

2. Plurality of Turkish Nominals

In Turkish, *-lar* is used to express plurality and can occur with any noun respecting the principles of Turkish Vowel Harmony.

- (4) a. Ayşe **kedi-ler-e** mama ver-di.
 Proper N cat-PL-DAT food give-PST
 ‘Ayşe fed the cats.’
- b. Anne-m önümüzdeki yaz **ağaç-lar-ı** kes-tir-ecek.
 Mom-GEN next summer tree-PL-ACC cut-CAUS-FUT
 ‘My mom is going to get the trees cut next summer.’

The examples in (4a) and (4b) represent that the meanings more than one cat and more than one tree are conveyed via the occurrence of *-lar* on each noun. We can see it in two forms, *-lar* or *-ler* as a result of the Turkish Vowel Harmony principles. As an agglutinative language, Turkish makes use of lots of suffixes. And vowels of most of these suffixes agree with the preceding vowel of the base in terms of frontness and backness and rounding. In the examples in (4), the suffix occurs as *-lar* when following a back vowel, and as *-ler* following a front vowel.

It is important to mention that *-lar* can also occur within verbal inflection to agree with the plurality of the subject; however, its inflection of nouns will be the only focus within this paper. Below is introduced how the plurality is studied in Turkish linguistics.

2.1. Literature Review

The literature on the semantics of *-lar* can be grouped into two. The first group are the studies of the linguists with a generative linguistics background and the second are of the linguists with a Turkic studies background. The researchers of the generative framework have studied the plurality in Turkish with respect to the number of the entity. The discussion is built around the question as to whether the plurality includes the singular atomic entity or only refers to two or more entities.

With respect to the number denoted with plurality, the semantics of *-lar* has been studied by Bale, et al. (2010), Kan (2010), Görgülü (2012), Bale & Khanjian (2014), Sağ (2018, 2019), Renans, et al. (2020), and Görgülü (2022) (*among others*). The main question of these studies is related to inclusion of the plural noun in Turkish. There are two opposing arguments one of which is that it has inclusive and exclusive readings and the other is it has only exclusive reading. A group of researchers (Bale, et al., 2010; Görgülü, 2012; Bale & Khanjian, 2014; and Görgülü, 2022, *among others*) argue that plurality cross-linguistically has an exclusive reading with affirmative forms and inclusive reading with negative forms, whereas plurality in Turkish bears an exclusive reading in both affirmatives and negatives.

- (5) Ayşe lale-ler dik-ti.
 Ayşe tulip-PL plant-PST
 ‘i. Ayşe planted more than one tulip.’ → exclusive
- (6) Ayşe lale-ler dik-me-di.
 Ayşe tulip-PL plant-NEG-PST
 ‘i. Ayşe did not plant more than one tulip.’ → exclusive
 ‘ii. Ayşe did not plant any tulips.’ → inclusive

On the contrary, Kan (2010), Sağ (2018, 2019), and Renans, et al. (2020) argue that inclusive reading can also be available in Turkish plurals.

- (7) Erkek-ler tarafından aldat-ıl-an herkes biz-e katıl-abil-ir.
 man-PL by cheat-PASS-REL everybody we-DAT join-ABIL-AOR
 ‘Everyone who has been cheated by men can join us.’

(from Renans, et al., 2020)

The example (7) shows that the plural *erkekler* ‘men’ can denote either one or more than one man, which shows that the plural form can be inclusive.

The theoretical and experimental research focuses on the semantics of the interpretation of plural nouns in both affirmative and negative sentences; however, it is observed that the debate has not yet been settled.

Ketrez (2003) investigates Turkish plurality in terms of syntax. According to her research, *-lar* can have three different readings. The first one is the multiple singulars reading:

- (8) Ayşe kitap-**lar**-ı oku-du.
Ayşe book-PL-ACC read-PST
‘Ayşe read more than one book.’

The second and third readings are multiple events and multiple types readings:

- (9) Ayşe kitap-**lar** oku-du
i. Multiple events of book-reading (Multiple Events)
ii. Ayşe read different types of books (Multiple Types)
iii. *Ayşe read (the) books (*Multiple Singulars)

In the research done within the generative framework, Ketrez (2003) concludes that plurality in Turkish is merged in the Classifier Inflectional Phrase instead of the Number Phrase. Therefore, the number of the noun cannot be interpreted when used without case. Thus, the scope of *-lar* is only available within the DP boundary.

Now, it is turn for the research of the second group with the Turkic studies background. This group focus on the description of the various meanings of the nominal constructions with *-lar* (Banguoğlu, 1986; Ediskun, 1999; Korkmaz, 2009; Bayraktar, 2012).

Banguoğlu (1986) notes that in addition to its meaning of *more than one entity*, it has other contributions and thus argues that *-lar* conveys the meaning of indefiniteness, of family names, of nations, groups, people of a certain religion, cult, of emphasis, of *and the like*, and of places and geographic forms (Banguoğlu, 1986:188).

Ediskun (1999) also lists a number of denotations of the plural noun in Turkish. According to him, plural nouns may denote a common name, a group of people with a common feature, exaggeration, durativity, indefinite plurality, relationality, a specific and popular group.

Korkmaz (2009) introduces similar meanings as Banguoğlu and Ediskun, besides adds that plurality in some cases may also denote respect.

It is worth noting that there are different views on the classification of *-lar*. Neither Banguoğlu (1986) nor Korkmaz (2009) define *-lar* directly as an inflectional suffix. According to Banguoğlu (1986), it is derivational, while Korkmaz (2009) proposes that it is an operational affix, which are defined to be affixes that serve as an umbrella term for inflectional affixes but are less productive. Underhill (1986), on the other hand, identifies it as an inflectional suffix, and this view is the one that dominates most of the literature.

Bayraktar (2012) lists the meanings of *-lar* within a table that includes a neat summary and that is given below:

Table 1.

-IAr and Its Communicational Functions

Example	Function
Annemler, yarın uzun bir tatile çıkıyor. (anne bir tane.) My parents are going on a long vacation tomorrow. (one mom)	group society family
Köktürkler, tarihte iki büyük imparatorluk kurmuşlardır. Köktürks founded two big empires in history	group society
Günaydınlar, merhabalar, iyi geceler Good morning, hello, good night	greeting generalization
Mutluluklar dilerim. Acil şifalar diliyoruz. I wish you happiness. We wish you good health very soon.	greeting generalization dissemination
Hayırlı teskereler (teskere bir tane) I wish you a good discharge (for a soldier) (one discharge)	good wishes
Sayın seyirciler, beyler bayanlar Dear Audience, Ladies and Gentlemen!	addressing
Kimler gelmiş! Look who's here!	respect contentment astonishment
Sofralar (tek sofra) kurulmuş, ikramlar harika, yemekler muhteşem. Tables (one table) are set, the treats are great, the food is amazing.	exaggeration
Sana olan sevgim dünyalar kadar. My love for you is as big as the earths.	exaggeration
Bu yıl sıcaklar birden bastırdı. The heat suddenly hit this year.	generalization
Sular akıyor. (hepsi sayılamayan ad, mecazlar var) The water isn't running. (uncountable nouns, idiomatic expressions)	
Aylardır sizden haber alamıyoruz. "Asırlardır yalnızım." (Kayahan) We can't hear from you for months. "I've been alone for ages."	reinforcement, exaggeration
Fatih Terimler, Rıdvan Dilmenler kolay yetişmiyor. It is not easy to become Fatih Terims, Rıdvan Dilmens.	others like X
Mehmet Beyler geldiler efendim. Mr. Mehmet has arrived, sir.	respect kindness

Source: (adapted from Bayraktar, 2012:1717)

On the right column are the examples of plurals in different contexts with different types of words. On the left column are given the functions including various semantic interpretations of the plural form. As is observable from the table, in Turkish it is possible to construct a plural form regardless of the countability of the nouns, thus any noun, even if uncountable, can be pluralized. We will get back to this table later in section 3 since it requires some additions and simplifications.

2.2. Semantics of -IAr

The basic meaning of *-IAr* is its meaning of 'more than one'. We have seen that any noun in Turkish can be seen in its plural form.

- (10) Pencere-ler kapalı.
Window-PL closed.
'The windows are closed.'

The *pencereler* construction in (10) conveys the meaning of more than one window.

An interesting fact about the Turkish nominals is that a singular noun may also refer to plurality. When they are not used with a numeral, the Turkish singular nouns are trans-numeral.

In such cases, it is ambiguous if the lexical item refers to one or more than one entity, on the contrary to English where a singular noun does not refer to plurality (Görgülü, 2012).

- (11) Bahçe-de köpek var.
Garden-LOC dog exist
'There is a dog/are dogs in the garden.'

In the example in (11), it is possible to interpret either that there is one dog in the garden or that there are more than one. Their trans-numeral feature enables the nouns to occur in their singular form when used with a numeral in Turkish, again in contrast with English.

- (12) a. üç çocuk(lar*) b. on beş öğrenci(ler*)
three child(PL*) fifteen student(PL*)
'three children' 'fifteen students'

Both *çocuk* and *öğrenci* denote plurality in the examples above; however, the plural forms of the nouns lead to ungrammaticality in Turkish. Yet, there is an exception to this rule: some very famous proper nouns or even the numerals themselves when used with famous or well-known entities can be used with *-lAr*.

- (13) a. Pamuk Prenses ve Yedi Cüce-ler
Cotton Princess and Seven Dwarf-PL
'Snow White and the Seven Dwarfs'
b. Ali Baba ve Kırk Harami-ler
Ali Father and Forty Thief-PL
'Ali Baba and the Forty Thieves'

In (13a) and (13b) are given the titles of two famous fairytales. These two world-renowned literary works can bear a numeral occurring with a plural noun thanks to their popularity. Korkmaz (2009) groups the plural forms of numerals themselves with the examples in (13) since they also are proper names:

- (13) c. Üç-ler, Yedi-ler, Kırk-lar
Three-PL Seven-PL Forty-PL
'Lit. Threes, Sevens, Forties'

The proper name in (13c) refers to undercover souls in Islamic tradition that are commissioned to prevent evil, fulfill good deeds on earth by God.

-lAr in Turkish is used in constructions where it does not directly mean 'more than one entity' but has a plurality relatable interpretation. Korkmaz (2009) defines these meanings as functions whereas Banguoğlu (1986) identifies the words which have different meaning relations besides their plurality notions as 'Denominative Nouns' and proposes that the process is derivational rather than inflectional.

- (14) Bu yıldız-lı gök-ler ne zaman başladı dönmeye?
These star-with sky-lAr when start-PST spin
'When did these **skies** with stars start spinning?'

The word 'skies' in (14) above is not interpreted as more than one sky. Rather, its plural form is used in order to strengthen the meaning (Korkmaz, 2009).

- (15) a. Yarın anne-m-ler gel-iyor.
Tomorrow mom-POSS-lAr come-PROG
'My parents (*lit.* my moms) are coming (to my place) tomorrow.'

In (15a), *-lAr* does not introduce a direct plurality to the word *annem* ‘my mom’ instead it indicates an associative meaning. In this case, it generally refers to my parents and/or to my other family members who live with my mom.

- (15) b. Ozan-lar ev-de değil.
Ozan-lAr home-LOC not
'Ozan and his family aren't home.'

In (15b), the interpretation is similar. *Ozanlar* does not refer to a group of people whose names are Ozan, but to a group of people that have a close relationship with Ozan, such as his wife, family or friends, where Ozan is the **focal** referent (Daniel and Moravcsik, 2005 – in Haspelmath, et al. 2005). This type of plurality is called the Associative Plural (Moravcsik, 2003; Göksel & Kerslake, 2005; Dikmen, 2021). Moravcsik (2003) identifies the Associative Plural as “constructions whose meaning is ‘X and X’s associate(s)’, where all members are individuals, X is the focal referent, and the associate(s) form a group centering around X; and whose formal expression consists of a noun referring to X and one or more affix, clitic, and/or word so that these elements taken together do not spell out the entire meaning (Moravcsik, 2003:470-471).”

Daniel and Moravcsik (2005) propose that “given X as the focal referent, the group may be: (i) X’s family, (ii) X’s friends, or familiar associates, or (iii) an occasional group that X is a member of.” Below are given examples from Afrikaans categorized within the West Germanic Languages (G. B. van Huyssteen, 2018):

- (16) a. *pa-hulle*
dad-they
'dad and mom; dad, mom and my other siblings; dad and his friends, etc.'
- b. *pa-goed* (or *pa•goed*)
dad-they
'dad and mom; dad, mom and my other siblings; dad and his friends, etc.'
- (from G. B. van Huyssteen, 2018:400)

In the Afrikaan examples above, we see that it is possible to use the third person plural pronoun *hulle* and *goed* which can be used to indicate i) indefinite plural pronoun, ii) a mass noun, iii) the adjective good in order to make constructions of associative plurals just as is possible with the Turkish *-lar*. Van Huyssteen (2018) observes that the *goed* constructions are not as frequent as the *hulle* constructions with the associative plural interpretation, still both can provide the intended meaning.

- (17) a. Yeni **Srebrenica-lar** yaşa-n-ma-sın!
New Srebrenica-lAr experience-PASS-NEG-IMP
'Don't let there be any more Srebrenicas!'
- b. Neden yeni **Tanpınar-lar** yetiş-m-iyor siz-ce?
Why new Tanpınar-lAr raise-NEG-PRES you-view
'Why do you think we can't raise new Tanpınars?'

As is well-known, Srebrenica is the city where a genocide was committed against the Bosnians in 1993. In the example (17a), the plural Srebrenicas is used as an implicature of genocides. Similarly, Tanpınar is an invaluable novelist of the early modern Turkish literature and is therefore very popular. The expression *Tanpınars* in the example in (17b) refers to the word novelist whose literary work can be as impressive and outstanding as Tanpınar's. Thus, in these examples, *-lar* introduces the meaning of 'others that are like them'.

- (18) Bir ses-ler duy-du-m galiba.
One sound-lAr hear-PST-1SG probably
'I think I heard something (*lit.* 'some sounds')'.

(from Göksel & Kerslake, 2005:149)

The construction 'bir N-lAr' in (18) attributes the meaning of unknown or unknowable (Göksel & Kerslake, 2005).

In addition to the functions above, it is also possible to construct words in the plural form but referring to a single entity:

- (19) Cumhurbaşkanı-nı ara-dı-m ama kendi-leri-yle görüş-e-me-di-m
President-ACC call-PST-1SG but self-lAr-with talk-abil-NEG-PST-1SG
'I called the President but I couldn't speak to them.'

-lAr in the examples in (19) is used in order to refer to the importance of the person (Kornfilt, 1997) and expresses respect and kindness (Korkmaz, 2009).

- (20) a. - Çocuk-lar nerede?
Kid-lAr where
'Where are the kids?'
- Baba-lar-ı-yla okul-da-lar.
Dad-lAr-POSS-with school-LOC-lAr
'They are at school with their father (*lit.* fathers).'
- b. Kim-ler-i gör-üyor-um?
Who-lAr-ACC see-PRES-1SG
'Look who's here!'

The expression *babaları* in (20a) is ambiguous between the father of all kids in the context or the fathers of multiple kids. However, even if it refers to one father, it is obliged to be formed with the plural marker -lAr in order to indicate that there is more than one kid. A similar result is observed with other inanimate possessions such as a house or a car. In this construction, the possessive is a requirement. In addition, in (20b), the expression *kimler* may refer to one or more than one person. In both cases, it implies that the person that is seen has paid an unexpected visit, and the speaker is surprised and happy with their visit.

This pattern can support the claim that a word with a plural construction may refer to a singular entity depending on its context. It bears a similarity with the claim of inclusive reading of plurality in affirmative sentences, which is introduced in the literature review section.

- (21) Davetli-ler gel-me-ye başla-dı.
Invited-PL arrive-NOM-DAT start-PST
'The invited people started to arrive.'

The example in (21) supports that the Turkish affirmatives can also bear an inclusive reading of plurality, as is true cross-linguistically. (21) can be uttered even when only one guest arrives. This usage is in line with the inclusive reading analysis of Kan (2010), Sağ (2018, 2019), and Renans, et al. (2020).

When we consider all the functions of -lAr mentioned above, we see that a finer-grained analysis is required so that all its functions, including greeting, making a wish, etc. can be accounted for. Its functions or interpretations are connected to each other both hierarchically and linearly. At this point, we will resort to Construction Morphology inasmuch as it allows a suffix to acquire different meanings depending on the base to which it is added, and to contain different notions than the meanings we obtain when all the components of the resulting word

are examined one by one. In other words, the meaning resulting from an inflectional or a derivational process is more than the sum of its components.

3. Turkish Plurality from the Construction Morphology Perspective

In Section 2 are given several studies about Turkish plurality and various meanings and functions of *-lar*. It is observed that the *-lar* construction is used in the language with a view to expressing multiple interpretations. However, the studies mentioned above, which list the several meanings of the morpheme, lacks to display the relationships of the meanings conveyed through *-lar* and the various constructions it occurs in. This study aims to propose an analysis that sheds light on how the *-lar* construction is structured. In order to fulfill this aim, CxM framework has been chosen since it enables us to see the relationships among the various semantics of the morpheme. Its meanings are, as will be observed in the analysis part, linked to each other both hierarchically and linearly. This means that the morpheme *-lar* inherits its values to the constructions it dominates. These constructions further dominate the constructions below their level inheriting their own values to them. Hence, through inheritance and value specifications are made new meanings, which never stop inherently sharing the plurality value.

The examples given in the previous section show us that bases and affixes form meaning units as a whole. CxM enables us to analyze the construction of new meanings with various components. It is a theory which aims to account for the main grammatical rules as well as connotations, speech acts, relatively idiomatic or metaphoric meanings which are identified to be peripheral (Hoffman & Trousdale, 2013). Hence, it does not only account for the construction of a word like *kalemler* ‘pencils’, but also for expressions like *Günaydınlar!* ‘Good morning!’.

Construction Morphology is a usage-based model based on the research of Riehemann (1993, 1998) and developed by Booij (2010, et seq.) following the principles of Construction Grammar (CxG). According to CxG, the grammar is based on constructions. The framework rejects the modularity of grammar, in which the labor is divided into modules of syntax, morphology, phonology, etc. Instead, it argues that the grammatical processes are held parallelly within the cognitive system. Thus, the researchers of CxG do not assume that lexicon and syntax are separate from each other. Instead of making a division, they assume that constructions can be presented on a continuum which they call constructicon (a term made up of the words *construction* and *lexicon*) (Fillmore, 1988; Sag, 1988; Goldberg, 2013). Another analogy that describes the constructicon is a network. The constructions that we assume exist in our cognitive system form a grammatical network making use of connections to each other (Jurafsky, 1991:18). Hence, CxG regards grammar as an element existing in the lexicon rather than a separate and autonomous mechanism.

Accordingly, CxM puts the word in its focus as constructions. Booij (2013) claims that lexicon needs to be reanalyzed as a constructicon that is formed of “phrasal and morphological constructions, together with their conventionalized instantiations (Booij, 2017:439)”.

CxM regards words as a whole and makes use of paradigms rather than rules (Booij, 2010). It is the relation between sets of words that provides us with schemas. For example, we can compare the sets below:

- | | |
|----------------------|---------------------|
| (22) a. kitap (book) | b. kitaplar (books) |
| masa (table) | masalar (tables) |
| çanta (bag) | çantalar (bags) |

When we compare the two sets, we see that there is a relation between them. Language learners first learn the language by hearing various tokens of a schema, then after adequate exposure they generalize the schema to other possible items of language.

The language system design of Construction Morphology is made in a way that it can provide a neat and thorough account of a structure. Accordingly, its meanings and functions can be shown via relational links. CxM uses schemas instead of rules. Thus, the plural construction of Turkish is represented as below from the CxM perspective:

$$(23) \langle [(x_i - lAr)_{\omega-j} \leftrightarrow [N_i, + pl]_j \leftrightarrow [PL [SEM_i]]_j \rangle$$

The schema in (23) starts with the phonological form. After the first arrow is the morphological form (the category of the word and the morphological feature of number [+plural]), after the second arrow is the semantics of plural nouns. A new plural word is formed by using a different noun instead of the given variable x in (23).

Nouns in singular forms in Turkish, as in English, are morphologically bare. See below for its representation:

$$(24) \langle [(x_i)_{\omega-j} \leftrightarrow [N_i, + sg]_j \leftrightarrow [SG [SEM_i]]_j \rangle$$

(Booij, 2017)

When we look at the indexation in the schema in (24), we see that we obtain a singular noun as a result of the unification of the noun stem with singularity which does not have an overt morphological realization.

According to CxM, the relationship between singular and plural nouns is not a derivational but an inflectional process. In inflectional processes, there is a sister relationship between the structures instead of a hierarchical relationship as one is not derived from the other. It is possible to represent the singular and plural forms as in the schema below:

$$(25) \langle (x_i)_{\omega-j} \leftrightarrow [A_i, + sg]_j \leftrightarrow [SG [SEM_i]]_j \rangle \approx \langle (x_i - lAr)_{\omega-j} \leftrightarrow [A_i, + pl]_j \leftrightarrow [PL [SEM_i]]_j \rangle$$

Audring (2019) states that inflectional processes in languages are shown via sister schemas. The power of these structures is that the same stem can be used for both constructions through coindexation. She argues that “for productive schemas, coindexing the stem variables encodes the fact that whatever fills the variable in one schema can also fill the variable in the other. In regular inflection, full productivity is generally the norm (Audring, 2019:290)”. In (25), the constructions coindexed with j on either side illustrate that the meaning of the variable does not change since this is an inflectional process. It is important to note here that Jackendoff and Audring (2019) use numbers for this coindexation and define it as sister schema while Booij (2017) coindexes with letters and call them second-order schema.

As we have mentioned above, there is not yet a consensus as to whether *-lAr* is inflectional or derivational. Considering all its functions, it can be argued that the processes is inflectional; however, the denotations other than solely plurality display some restrictions. It is obvious that with other functions of *-lAr*, semantically additional features are involved. Let's revise communicational functions of *-lAr* through the table introduced in Bayraktar (2012), which is given in Section 2 above:

Table 2.

-IAr and Its Communicational Functions - Revised

Example	Function
Ablamlar yarın bizi ziyarete geliyor. My sister and her family are coming to visit us tomorrow. Dün akşam Ozan'larla yemeğe çıktık. We went to dinner with Ozan and his friends yesterday.	Associative Plurality
Şu Çılgın Türkler These Crazy Turks	Group
a. Çocukları kime bıraktın? b. Babalarıyla evdeler. a. Who did you leave the kids with? b. They are at home with their father.	Kinship
İyi günler, merhabalar, selamlar Good day, hello, hi	Greeting
Hayırlı teskereleler, mutlu yıllar I wish you a good discharge (for a soldier), happy new year	Good (or bad) wishes
Hanımlar beyler, sayın seyirciler Ladies and Gentlemen, Dear Audience	Addressing
Kimler gelmiş! Look who's here! Ayşe Hanımlar geldiler mi? Has Ms Ayşe arrived?	Respect contentment astonishment
Sofralar (tek sofra) kurulmuş, ikramlar harika, yemekler muhteşem. Tables (one table) are set, the treats are great, the food is amazing. Sana olan sevgim dünyalar kadar. My love for you is as big as the earths.	Exaggeration
Sular kesildi. The water isn't running.	Generalization
Neden yeni Tanpınarlar yetişmiyor sizce? Why do you think we can't raise new Tanpınars?	Making a similarity
Bir sesler duydum sanki. I think I heard something.	Unknownable

The functions in the Table 2 are adapted from Bayraktar (2012). In this revised version the changes are given as follows: i) The associative plurality which is a widespread function cross-linguistically is proposed in lieu of the function 'group, society, family'. ii) The indication of wishes which were duplicated in the first table are presented as one function here regardless of the countability feature of the noun. iii) The duplicated function of respect has been reduced to one. iv) Unknownable function has been added.

Nevertheless, listing all the functions on a table is far from accounting for the relationships between each function with the other. The functions and interpretations share the common notion of plurality but differ in small other notions with various attributions and they display hierarchical relations among some functions and parallel relations among others. Hence, a network of constructions which can represent these relationships between tokens that keep the common plurality feature, and which can display the production of various other functions will provide us with analytical data.

Besides, and most importantly, it is required that the restrictions of the constructions be presented. The productivity can be deduced from the lists, or the table above; however, the restrictions and the requirements of each denotation should be introduced so that overgeneralization is avoided. CxM provides us with such an explanatory power.

In this respect, firstly, the schemas of the main functions which are dominated by plurality and which themselves dominate a number of other functions are introduced in (26); then, an account is proposed via a relational network that contains all these schemas as well as the functions that are located lower in the hierarchy:

- (26) a. Group with salient members
[[X]_{Ni} -lAr]_{N.PLj} ↔ [GROUP WITH SALIENT MEMBERS SEM_i]_k
b. Making good (or bad) wishes
[[X]_{Ni} -lAr]_{N.PLj} ↔ [WISH RELATED TO SEM_i]_j
c. Generalization
[[X]_{Ni} -lAr]_{N.PLj} ↔ [GENERALIZATION RELATED TO SEM_i]_j
d. Unknowable
[[X]_{Ni} -lAr]_{N.PLj} ↔ [UNKNOWNABLE SEM_i]_j
e. Plural form with singular interpretation
[[X]_{Ni} -lAr]_{N.PLj} ↔ [SINGULAR IN PLURAL FORM SEM_i]_j

As we have mentioned before, the CxM assumes the language system to be a network of constructions, and the reason that we have made a revision on the functions is in order to specify the main functions that are different from each other and that have common notions with some others. These differences and similarities help us see the directions of the relationship between the functions as they are either parallel or hierarchical. The parallel ones referring to the differences are dominated by the plurality function only. The hierarchical ones, on the other hand, are dominated by plurality along with another notion. Hence, the network is designed.

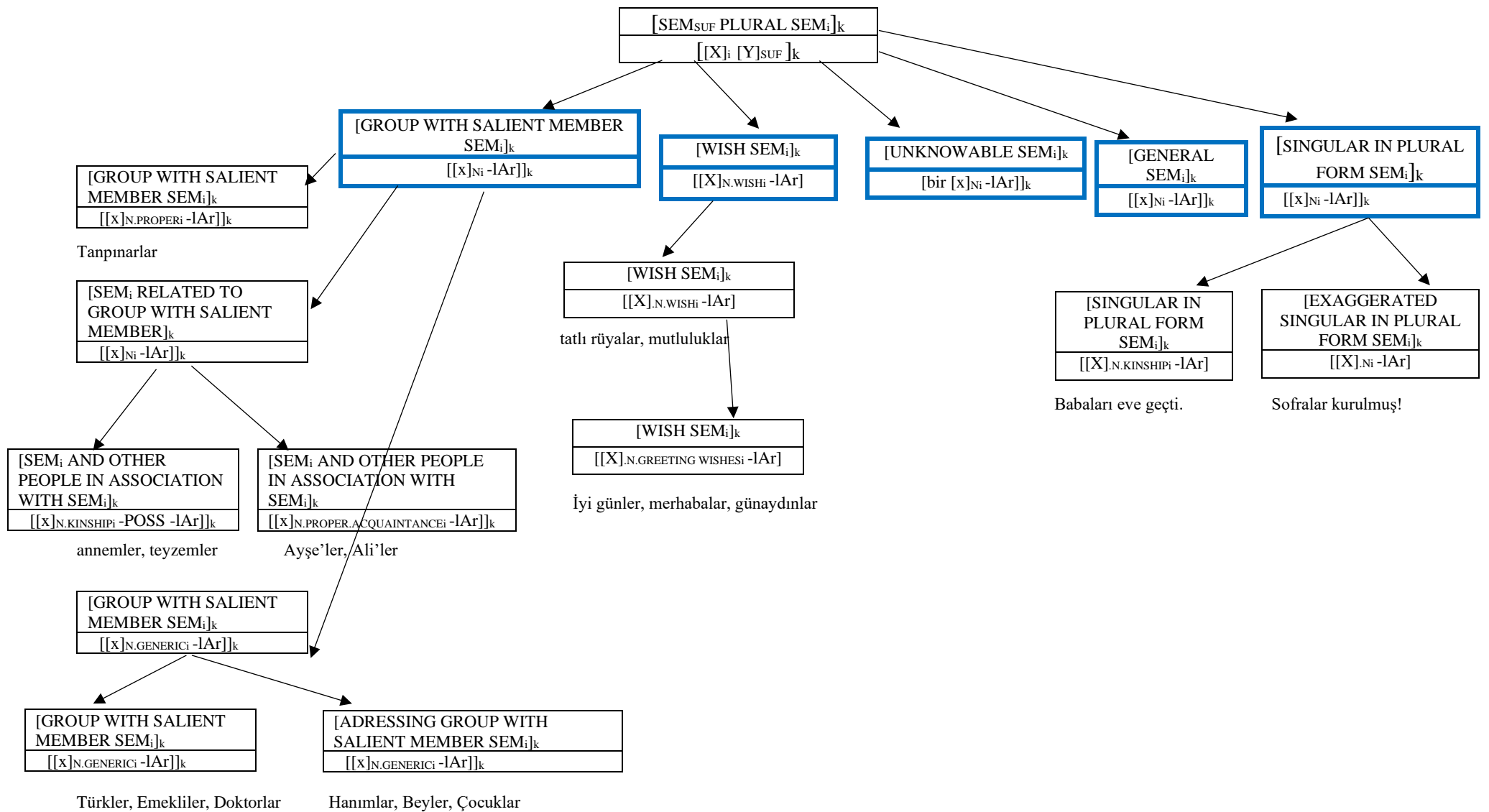


Figure 1. The *-lAr* Network

The Figure (1) above represents the *-lAr* network that is structured in our construction. It consists of several schemas in the shape of boxes divided into two sections and linked to each other hierarchically and linearly. Each box consists of two levels: first level represents the meaning of the construction, second level its form. When we look at Figure (1), we see that at the top is a box whose first level shows the meaning of plurality and second level showing that it is made via suffixation in Turkish. The topmost box then dominates the five main functions of plurality, which are given in (26), and which can be seen below the top line. These boxes are linked to the top via relational links. These five functions, represented by boxes of their own and colored in blue, are linearly linked to each other because they are not derived from one another- they are derived from the plurality directly. Then, below each function are given different functions (if any) that they lead to. As we go from top to bottom, the meanings become more restricted.

It is clear from the figure that the plural semantics is preserved in the functions which are located one level below the top. The group with salient member semantics (26a) then paves the way to three sublevels, the groups made with proper nouns, the ones that convey associative plurality and the ones made with generic nouns. The associative plurality can be made by kinship words as well as proper nouns. As for the generic nouns, we can refer to a specific group of the same kind, same nation, religion, job, etc. With generic nouns, their plural forms can also be used to address people during shows, meetings, etc.

Another main denotation, the wish semantics (26b) is given in the same level as the group semantics. The plural forms of words such as *rüya* ‘dream’ or *mutluluk* ‘happiness’ can be used in constructions to make good wishes. This denotation then is observed in the constructions to greet others.

The following main functions, unknowable and general semantics (26c and 26d) do not bear other relations to denote further meanings, thus stand alone.

The last main function plural form with singular meaning (26e) dominates two sublevels. The first one is related to kinship. As can be seen in the figure, Turkish allows the plural form of kinship words which refer to one person only. Also, the plural form can give an exaggeration semantics when referring to one entity.

Figure (1) gives us a sample of the organization in our cognitive system when learning and using the language. CxM assumes that we have different sets of networks for every single word, phrase or any construction and their relatable meanings are located around them with relational links. Here the plurality semantics is the common notion of all the constructions in this hierarchical network. The other denotations inherit the meaning of plurality from top in addition to creating new yet relatable meanings.

4. Conclusion

This study investigates the nouns constructed with *-lAr*. Its additional connotations have been given in earlier research. However, as a result of those studies, a thorough analysis of the functions and interpretations was still missing. With this research, we aim to have fulfilled this requirement. The Construction Morphology account has enabled us to display the relationship of a semantic function and in what ways it can help produce new constructions with links that inherit the common meaning. In addition, it is observed that both the productivity and the unproductivity of a construction is clearly presented via the proposed network. Besides, CxM has given us the opportunity to investigate expressions such as *good morning*, a conversational unit that seems to be uninteresting for especially generative models. As a word-based model, CxM provides us with a unification of grammar and lexicon by including both schemas and

lists of words in one storage: constructicon (Booij, 2017 – in Hippisley & Stump, 2017). The analysis given via the network has shown that language can be neatly accounted for by studying in terms of a word-based morphological model. This study has been limited to *-lar* constructions of nouns only but future work on verbal constructions and event types can contribute to the related literature.

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