A Comparative Study of Negative Markers in Urdu and Turkish Syntax

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Abstract

Negative Markers are morpho-syntactic devices that carry negation and mark a syntactic (or lexical) unit as negative. This research analyzes and compares Urdu and Turkish Negative Markers (NMs) under LFG (Belyaev, Forthcoming a; b; Bond, Forthcoming) in terms of their structure, using constituent-structure (c-structure), and function, using functional-structure (f-structure). This research finds that all three of Urdu NMs (*nahiin, na, mat*) are negative particles. One Turkish NM (*-me/-ma)* is a suffix and part of the verbal morphology, whereas the other two (*değil* and *yok*) are independent negative verbs and fall into the category of negative 'word'. Urdu NMs and Turkish negative affix are non-projecting *Neg* nodes within the VC (for Urdu) and VP (for Turkish). They are represented as binary atomic value (POL ±) in the f-structure. Turkish *değil* and *yok* are the head (V) of the VP in the c-structure and main predicate (PRED) in the f-structure. Thus Urdu and Turkish NMs are partially similar in terms of structure. Urdu NMs are similar to the verbal suffix *–ma/-ma* in terms of their c-structure as well as f-structure despite their apparent morphological difference. Whereas *değil* and *yok* are different in terms of their structure and function.

Keywords: *LFG, NSIs, Urdu, Turkish*

Negation is one of the few universal features of language that is found cross-linguistically without exception. Negative Markers are morpho-syntactic devices that carry negation and mark a syntactic (or lexical) unit as negative. This research aims to analyze and compare Urdu and Turkish Negative Markers (NMs) in terms of their structure and function under the theory of Lexical-Functional Grammar (LFG). The structural analysis is done using constituent-structure (c-structure) and functional analysis is done using functional-structure (f-structure). Since Urdu and Turkish are typologically different in many ways; this research provides an insight into how typologically diverse languages compare under LFG in terms of polarity.

Research Questions

- What is the structure and function of NMs in Urdu?
- What is the structure and function of NMs in Turkish?
- What are the similarities and differences in Urdu and Turkish NMs?

Definitions of Terminologies

Negative Markers

Negative Marker (NM) is anything that carries the meaning of negation and can semantically be notated as ¬. It is a bracket term which includes all types of morphological and syntactic items cross-linguistically. NMs can have different classifications. However, Bond (Forthcoming) states three types of NMs based on the five types identified by Dryer (2013). These are:

- ***Negative Particles***: the stand alone NMs (they are independent words)
- ***Negative Verbal Morphology***: The NMs that occur with verbs in the form of an affix
- ***Negative Auxiliaries***: The NMs that behave and inflect like auxiliaries.

Literature Review

Negation and by extension polarity is one of the fundamental and universal elements of natural language including sign languages (Kuhn & Pasalskaya, 2022; Pfau et al., 2022; Quer, 2020). Due to its universality and links to multiple levels of linguistic analysis (morphology, syntax, semantics, pragmatics), negation has been a major area of interest for linguistic research. Various aspects of negation have been researched including typology of negation (Dryer, 2013; Horn, 2020; Klima, 1964; Miestamo, 2005; Payne, 1985), syntactic and sematic behaviors of Negative Polarity Items in various languages (Giannakidou & Zeijlstra, 2017; Homer, 2021), their licensing (Benmamoun, 1997) and semantic scope (Wilkinson, 1996). The universality yet cross-linguistic morpho-syntactic variation of expression of negation presents a major opportunity for comparative syntactic research and the search for UG.

Negation is marked via morphological or syntactic devices. (Moeschler, 2020). The type and nature of these markers vary cross-linguistically, ranging from stand-alone negative particles to morphological verbal negation and negative auxiliaries to negative affixes (Bond, Forthcoming; Dryer, 2013; Joshi, 2020). Language can also have multiple types of negative markers with varying functional or structural distribution for example, in Urdu-Hindi the negative marker '*mat'* is used in imperative contexts only (Kumar, 2006). In Turkish, the negative particle '*değil'* is used only with nominal and *'yok'* is used to mark existential negation and the negative suffix *'me/ma'* is used with verbal negation (Göksel & Kerslake, 2005).

The nature of negative markers has been investigated in various languages which furthers the typological and comparative syntactic research (Cable, 2018; Pasquereau, 2020; Etxeberria et al., 2021). De Clercq & Wyngaerd (2019) concludes that negative morphemes with similar scope cannot be stacked together, not only within the same word but also across lexical boundaries. Georgieva, Salzmann & Weisser (2021) study the 'negative verb clusters' of Mari and Udmurt and argue that they should be classified separately from the negative auxiliaries of the other languages of their Finno-Ugric family due to their differing morpho-syntactic nature. Goodhue (2022) focuses on the pragmatic aspect of polar questions and investigates the nature

of speaker bias and concludes that their interpretation is dependent upon their context. Any-DPs show a different syntactic behavior in existential modal sentences than other syntactic contexts in which they appear. (Crnič, 2022).

Negation has also been investigated under LFG. Sells (2000) conducted one of the first LFG based analysis of negation (Bond, Forthcoming), which identified that an independent Negative Phrase (NegP) is the best descriptor of negation in Swedish. Moreover, two attribute-value pairs ENEG and CNEG (Eventuality and Constituent Negation) were introduced in the f-structure for recognizing wide-scope and narrow-scope negation and its impact on NPI licensing. Similarly, Laczkó (2015) delineates the LFG analysis for negation in Hungarian and Camilleri & Sadler (2017) investigates Maltese NSIs under LFG.

The body of literature in Urdu[1] syntactic research has grown in the past few decades. (Bhatt, 2005; Bhatt & Dayal, 2020; Butt, 1995; 2014; Butt & Ahmed, 2011; Davison, 2014; Homer & Bhatt, 2020; Manetta, 2019). Urdu negation has also been an important part of Urdu syntactic research with varied aspects of negation being covered. Homer & Bhatt (2020) concluded that negation within a restructuring infinitival clause in Hindi-Urdu shows similar effects to that in the matrix clause. However, this behavior is limited to restructuring infinitival only. There has also been a detailed analysis of Hindi NPIs in Lahiri (1998). Certain aspects of Urdu negation have been investigated under LFG as well e.g. the polar question marker *kya* and its prosodic, syntactic and pragmatic behavior under LFG has been studied extensively in the past few years (Bhatt & Dayal, 2020; M. Butt et al., 2017; M. Butt & Biezma, 2022; Hussain & Sharif, 2023). Syntactic behavior of Urdu NMs in Serial Verb Constructions is investigated in Butt et al. (2022) under Minimalist Program.

A significant body of syntactic research in Turkish has been under the umbrella of LFG as well. Çetinoğlu (2009) provides a detailed account of the Turkish language under LFG. There have also been investigations into how to analyze a language like Turkish which is highly agglutinative under LFG which considers morphology and syntax to be separate levels of analysis. Çetinoğlu & Oflazer (2006) delineate morphological analysis of Turkish which is very important for its syntactic analysis due to its agglutinative nature. Broadwell (2008) uses lexical sharing to analyze Turkish suspended affixation and Sensekerci (2022) uses another branch of LFG, LrFG for the its analysis. Renans et al. (2020) investigates the uniqueness of Turkish plurality and how it differs from other languages like English. Turkish NSIs have been investigated regarding their classification as NPIs or NCIs as well. Much of the body of literature classifies them as latter (Görgülü, 2019; Jeretič, 2018; 2022). In terms of its NMs, Emeksiz, (2010) conducts a pragmatic analysis of Turkish NMs (*-ma/-me* and *değil*).

Both Turkish and Urdu negation have been investigated in a wide variety of areas. Moreover, they are both part of the LFG-based ParGram project and there has been much research in both these languages under LFG. However, neither Urdu nor Turkish NMs have been investigated under LFG. Moreover, Turkish syntactic analysis is quite different from Urdu especially under LFG. Urdu does not have a large number of morphemes per word, whereas Turkish is an agglutinative language; the compounding of affixes leads to multiple syntactic functions being

represented within the same lexical item. Thus, a comparative analysis of Urdu and Turkish under LFG is insightful for understanding the syntactic behavior of two typologically different languages.

Methodology

The following is a descriptive qualitative research with a comparative design. The NMs of Urdu and Turkish are analyzed in terms of their structure and function. Firstly, the NMs of the two languages are analyzed in terms of their structure using constituent-structure (c-structure) and function using functional structure (f-structure), and then compared in order to identify their similarities and differences.

Theoretical Framework

In this research, Lexical-Functional Grammar (LFG) is used as theoretical framework for analyzing Urdu and Turkish NMs. Belyaev's (Forthcoming a &b) and Bond's (Forthcoming) description of LFG is used in this research. The former two delineate the methods of formal analysis employed by LFG and the latter deals with the specifics of analysis related to negation.

The LFG based analysis used in this research has two levels:

C-Structure

The c-structure is a phrase-structure tree which is quite similar to the phrase-structure trees used in various generative models. LFG usually uses X-bar theory's formalisms for its c-structure. The c-structure is used to analyze the **structure** of NMs in Urdu and Turkish.

In this research certain phrase-structure rules are presumed and pre-determined for both Urdu (Butt, 1995, 2012; Butt et al., 2016; Butt & King, 2004; Butt & Rizvi, 2010) and Turkish (Belyaev, Forthcmoing b; Çetinoğlu, 2009; Güngördü, 1993; Güngördü, 1994).

Urdu Phrase-Structure Rules

$KP \rightarrow NP + K$

$NP \rightarrow (Det) + (AdjP) + N/Pro$

$AdjP \rightarrow$ (Adv) + Adj

$VC \rightarrow V + (Aux) + (Aux)$

$ADvP \rightarrow$ Adv

Urdu does not have Verb Phrase (VP). Instead either V′ or Verbal Complex (VC) is used in place of a VP (Butt, 1995). This research uses the VC category for Urdu.

Turkish Phrase-Structure Rules

$KP \rightarrow NP + K$

$NP \rightarrow (Det) + (AdjP) + N/Pro$

$AdjP \rightarrow$ (Adv) + Adj

$VP \rightarrow$ V + (Aux) + (Agr)

$ADvP \rightarrow$ Adv

F-Structure

F-structure is an Attribute-Value Matrix (AVM) which gives information regarding the functional attributes of a syntactic unit and express predicate-argument relations. The main matrix has the main verb as its predicate (PRED) which has argument functions like subject (SUBJ), object (OBJ), indirect object (OBJ_θ) or $oblique_\theta$ (OBL_θ) expressed in angle brackets< > in front of the PRED as well as non-argument functions like adjunct (ADJ) or $adjunct_\theta$ (ADJ_θ). The f-structure is a series of AVMs as matrices can have further embedded matrices of argument and non-argument functions. Each matrix has a predicate (PRED) which expresses its main lexical content and relevant functional information in the form of atomic values like case (CASE), number (NUM), gender (GEN), person (PERS), tense (TNS), aspect (ASP), polarity (POL) etc. These atomic values are expressed via binary-value feature (±) or multiple-value feature. Various nodes of the c-structure are mapped onto an f-structure using metavariables.

The f-structure is used to analyze the **function** of NMs in Urdu and Turkish**.**

Metavariables and Mapping from C-structure to F-structure

In LFG, the c-structure is mapped onto the f-structure via the function ϕ. Each node in c-structures correspond to at an AVM. Multiple c-structure nodes can correspond to the same AVM. Once the c-structures are drawn they are annotated with metavariables ↓ and ↑ to indicate their grammatical function. The two metavariables stand for the following.

↓ : The f-structure of this c-structure nodes

↑ : The f-structure of the c-structure node which immediately dominates (or is the mother of) this node

Data Collection

In this research the data is collected from secondary sources such as grammar books which have listed Urdu and Turkish NMS. Urdu NMs from Kumar (2006) and Turkish NMs from Göksel & Kerslake (2005) have been analyzed in this research.

Data

The data consists of the three NMs from Urdu and three NMs from Turkish.

Urdu NMs that have been analyzed in this research are:

- *na*
- *nahiin*
- *mat*

(Kumar, 2006)

Turkish NSIs that have been analyzed in this research are:

- *-ma/-me*
- *değil*
- *yok*

(Göksel & Kerslake, 2005)

Discussion Analysis

Both Urdu and Turkish are SOV languages with free word orders which renders them non-configurational. However, both languages are highly different in terms of their morphological typology and the nature of their NMs.

Urdu

All three Urdu NMs *nahiin*, *na* and *mat* are negative particles.

Nahiin is the most common and universal negative marker of Urdu as it has no restrictions or limitations on the type of syntactic contexts in which it can appear. Any syntactic environment which allows negation without exception allows the usage of nahiin.

The canonical position of negation (for sentential negation) is right before the main verb:

(1)	*mein=ne*	*yeh*	*mez*	***nahiin***	*kharii-da*	*tha*
	I.1P.SG=ERG	this	table	NEG	buy-M.SG.PERF	PAST.M.SG
	I did not buy this table					

Some other possible word orders are

(2)	*mein=ne*	*yeh*	*mez*	*kharii-da*	***nahiin***	*tha*
	I.1P.SG=ERG	this	table	buy.M.SG.PERF	NEG	be.PAST.M.SG

I did not buy this table (instead I rented it)

(3) ***nahiin*** *kharii-da* *tha* *mein=ne* *yeh* *mez*
NEG buy.M.SG.PERF be.PAST.M.SG I.1P.SG=ERG this table
I did not buy this table (such an event never occurred)

(4) *kharii-da* ***nahiin*** *tha* *mein=ne* *yeh* *mez*
buy.M.SG.PERF NEG be.PAST.M.SG I.1P.SG=ERG this table
I did not buy this table (I rented it)

(5) *mein=ne* ***nahiin*** *kharii-da* *tha* *yeh* *mez*
I.1P.SG=ERG NEG buy.M.SG.PERF be.PAST.M.SG this table
I did not buy this table/It was not me who bought his table (both sentential and constituent negation readings are possible)

(6) *mein=ne* *kharii-da* ***nahiin*** *tha* *yeh* *mez*
I.1P.SG=ERG buy.M.SG.PERF NEG be.PAST.M. SG this table
I did not buy this table

(7) *yeh* *mez* ***nahiin*** *kharii-da* *tha* *mein=ne*
this table NEG buy.M.SG.PERF be.PAST.M.SG I.1P.SG=ERG
I did not buy this table

(8) *yeh* *mez* *kharii-da* ***nahiin*** *tha* *mein=ne*
this table buy.M.SG.PERF NEG PAST.M.SG I.1P.SG=ERG
I did not buy this table

Note: Example (1 & 2) are derived from Homer & Bhatt (2020).

Despite the variation in the surface position of *nahiin* the negative particle cannot occur without the VC. i.e. no other constituent can come in between the negative particle and the rest of the VC. Since the negative particle in this case does not project a phrase, it is categorized as a non-projecting category as defined by Toivonen (2003) (see Figure 1)

Na is used only in subjunctive and imperative context. ***Mat*** has a very limited usage as it can only appear in imperative contexts. It usually generates prohibitive negation. Both *na* and *mat* can be analyzed in a similar way (See Figure 2).

(9) *tum* *wahan* *na/mat* *ja-o*
you. 2P.FAM there NEG go-SBJ.2P.FAM
Don't go there

Figure 1

Nahiin (C-structure)

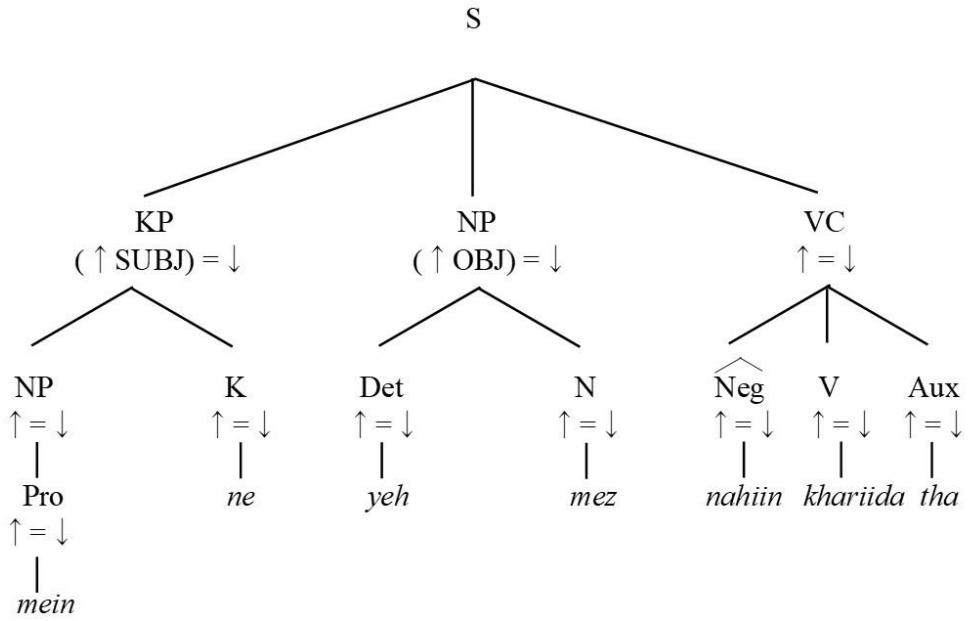
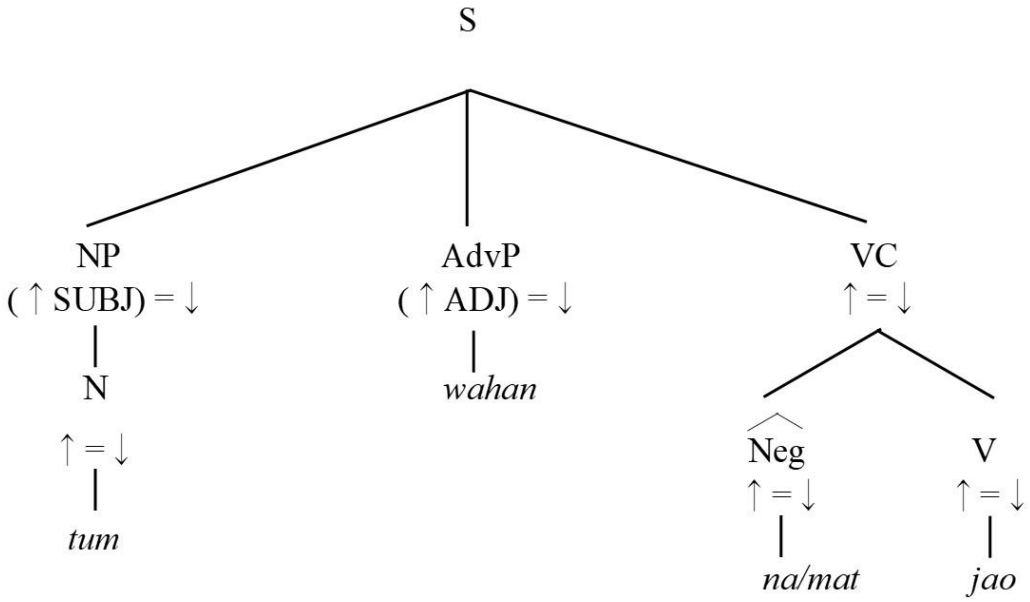


Figure 2

Na/Mat (C-Structure)



Thus, structurally, they are non-projecting categories labelled as *Neg* within the VC. Functionally (i.e. in the f-structure), negation is expressed as a binary atomic value (POL±) for all Urdu NMs (see Figure 3 & 4).

Figure 3

Negation as Binary Atomic Value (F-Structure for Nahiin)

$$\begin{bmatrix} PRED & 'buy' < SUBJ, OBJ > \\ SUBJ & \begin{bmatrix} PRED & 'I' \\ CASE & ERG \end{bmatrix} \\ OBJ & \begin{bmatrix} PRED & 'table' \\ NUM & SG \\ GEN & M \end{bmatrix} \\ POL & - \\ TNS & PAST \\ ASP & PERF \end{bmatrix}$$

Figure 4

Negation as Binary Atomic Value (F-Structure for Na/Mat)

$$\begin{bmatrix} PRED & 'go' < SUBJ > \\ SUBJ & \begin{bmatrix} PRED & you \\ PERS & 2 \\ HON & FAM \end{bmatrix} \\ ADJ & \begin{bmatrix} PRED & 'there' \\ ADJ-TYPE & Adv \end{bmatrix} \\ POL & - \\ ASP & SBJ \end{bmatrix}$$

Turkish

The three Turkish NMs vary in their morphological nature. The NM *-ma/-me* is a verbal suffix and thus falls into the verbal morphology category of NMs as described by Bond

(Forthcoming). They attach themselves to the verb and can only move around in the sentence with the verb i.e. the suffix cannot move independently of the word.

(10)	*Ben*	*bu*	*masa-yı*	*al-ma-dı-m*
	I.NOM	this	table-ACC	buy-NEG-PAST-1P.SG
	I did not buy this table			

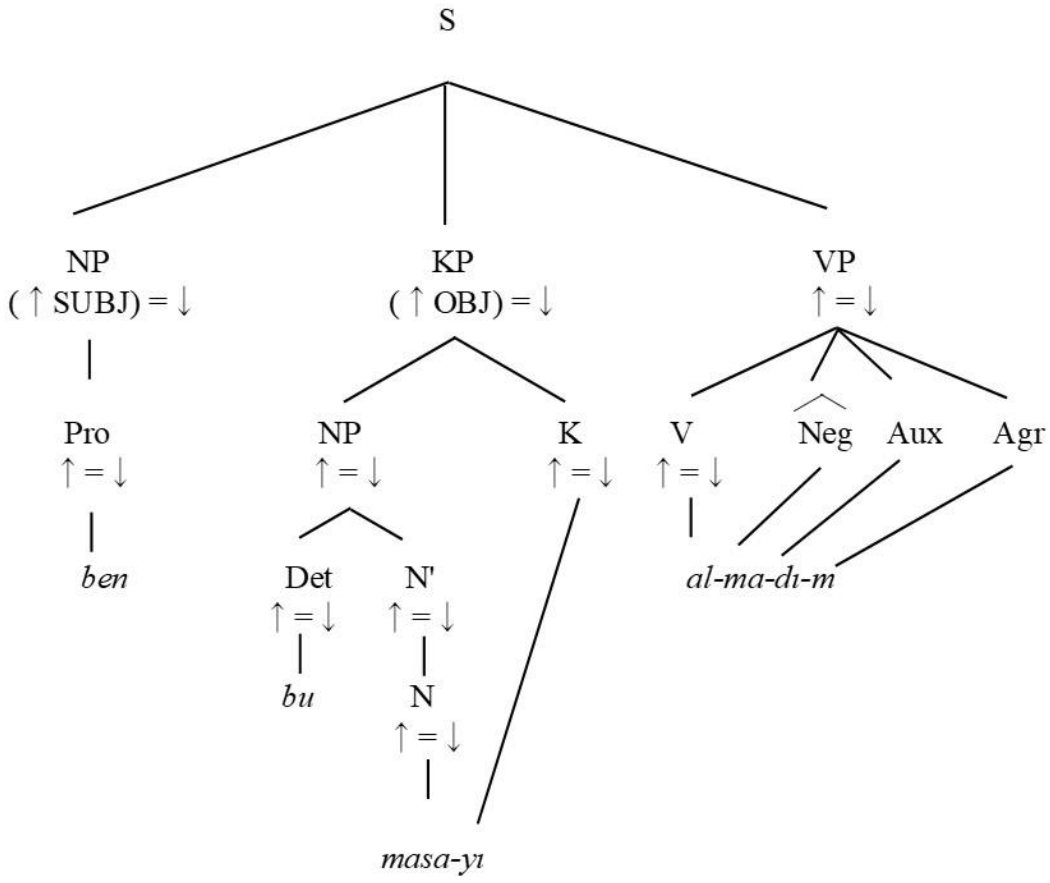
(11)	*Ben*	*al-ma-dı-m*	*bu*	*masa-yı*
	I.NOM	buy-NEG-PAST-1P.SG	this	table-ACC
	I did not buy this table			

(12)	**Ben*	*bu*	*masa-yı*	*al- dı- ma-m*
	I.NOM	this	table-ACC	buy- PAST- NEG-1P.SG
	Intended: I did not buy this table			

It is thus described structurally as a non-projecting *Neg* category just like the Urdu NMs. The *Neg* category lexically shares the V within the VP (see Figure 5).

Figure 5

-ma/-me (C-structure)



The other two NMs *değil* and *yok* are morphologically complete negative verbs. *Değil* is the negative counterpart (be.NEG) of the present forms of be verb be, *ım/im/um/üm* (1P.SG), *ız/iz/uz/üz* (1P.PL), *sın/sin/sun/sün* (2P.SG), *sınız/siniz/sunuz/sünüz* (2P.PL), *dır/dir/dur/dür* (3P.PL), *lardır/lerdir/lardur/lerdür* (3P.PL) (see Figure 6).

(13)	*Salim*	*çalışkan*	*bir*	*oğrenci*	*değil*
	Salim.NOM	hardworking	a	student	be-NEG.3P.SG.PRES.
	Salim is not a hardworking student				

Yok expresses existential negation and the negative counterpart of verb *var* (see 7).

(14)	*Benim*	*bir*	*arab-am*	*yok*
	1P.SG.POSS	a	car-1P.SG.POSS	have NEG-PRES
	I don't have a car			

Figure 6

Değil (C-Structure)

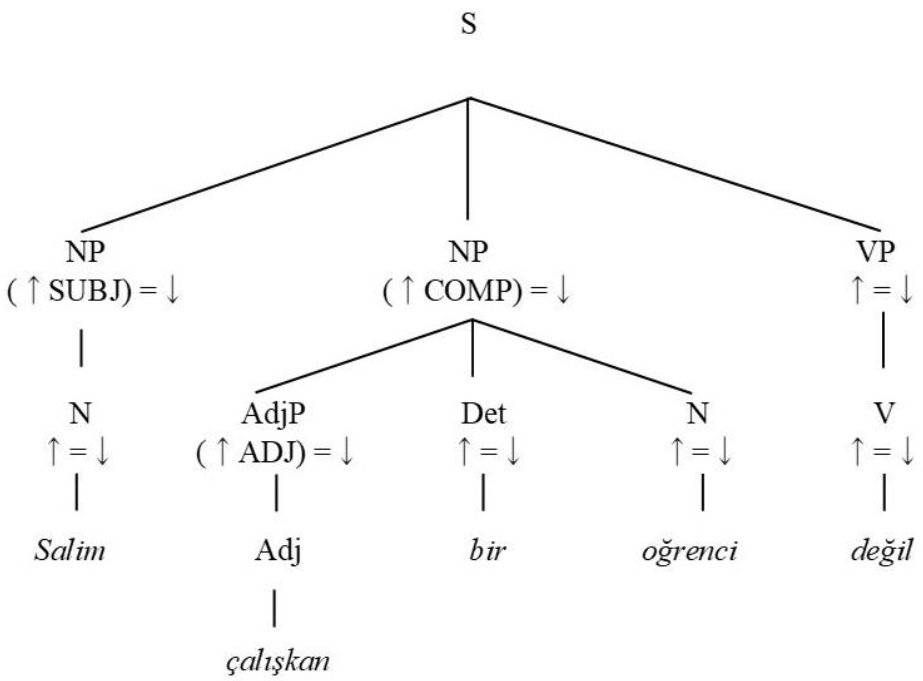
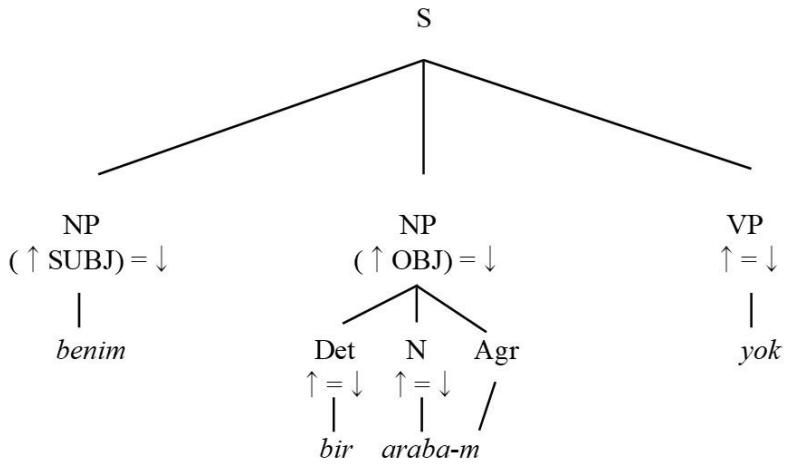


Figure 7

Yok (C-Structure)



Functionally Turkish NM *-ma/-me* is expressed as a binary atomic value (POL±) (see Figure 8). *Değil* and *yok* are represented as main predicate (PRED) and both of them are verbs in terms of their structure and are best described as the main verb or PRED attribute of the clause. (see Figure 9)

Figure 8

-me/-ma as Binary Atomic Value (F-Structure)

$$\begin{bmatrix} PRED & 'buy' < SUBJ, OBJ > \\ SUBJ & \begin{bmatrix} PRED & 'I' \\ CASE & NOM \\ PERS & 1 \\ NUM & SG \end{bmatrix} \\ OBJ & \begin{bmatrix} PRED & 'table' \\ CASE & ACC \end{bmatrix} \\ POL & - \\ TNS & PAST \end{bmatrix}$$

Figure 9

Değil as Main Predicate (PRED) (F-structure)

$$\begin{bmatrix} PRED & 'be\ not' < SUBJ, COMP > \\ SUBJ & \begin{bmatrix} PRED & 'Salim' \\ CASE & NOM \\ PERS & 3 \\ NUM & SG \end{bmatrix} \\ COMP & \begin{bmatrix} PRED & 'student' \\ CASE & ACC \\ ADJ & \begin{bmatrix} PRED & 'hardworking' \\ ADJ-TYPE & Adj \end{bmatrix} \end{bmatrix} \\ POL & - \\ TNS & PRES \end{bmatrix}$$

Independent negative verbs as a type of NMs was not included Bond (Forthcoming). Both *değil* and *yok* do not fall in any category described by Bond (Forthcoming). However, there are certain negative 'words' which cannot be categorized clearly as either verbs or particles (Dryer, 2013). *Değil* and *yok* can be categorized as negative 'words' for the lack of better description, though a more extensive research into these two NMs of Turkish is required for their classification.

Comparative Analysis of Urdu and Turkish Negative Markers

Although both Urdu and Turkish have three NMs, Urdu has one universal NM, the negative particle *nahiin* and two negative particles which can only appear in certain syntactic environments, whereas all of Turkish negative markers have restrictions on the syntactic environments in which they can appear, and one cannot take replace another in a given syntactic construction.

Urdu and Turkish NMs are partially similar in terms of structure. All of Urdu NMs are negative particles, which are represented by the non-projecting *Neg* category within the VC. The Turkish NM *-ma/-me* is a suffix which like the Urdu NMs is represented by the non-projecting *Neg* category within the VP. However, it is part of the verbal morphology and not a negative particle (as in Urdu). The other two Turkish NMs *değil* and *yok* are negative verb forms and are thus heads (V) of the VP. Urdu NMs are similar to the verbal suffix *–ma/-ma* in terms of their c-structure despite their apparent morphological difference, whereas *değil* and *yok* are an entirely separate syntactic category. Functionally, Urdu NMs and Turkish *-ma/-me* are represented as a binary atomic value (POL±), whereas *değil* and *yok* are represented as main predicate (PRED). Thus Urdu and Turkish NMs are partially similar in terms of structure.

Limitations

This research only focuses on wide-scope or sentential negation as the NMs analysis presented in this paper is only for sentential negation. Syntactic analysis of NMs in terms of constituent negation is a broad area on its own and is outside the scope of this research.

Recommendations

This research has provided a preliminary analysis and comparison of Urdu and Turkish NMs. NMs of both languages can be investigated further, such as the role of prosodic features in polarity and negation, structural and functional analysis of constituent negation and interaction of NMs with various other syntactic areas like tense, aspect, modality, case etc. can be possible areas of further investigation.

Conclusion

All three of Urdu NMs (*nahiin*, *na*, *mat*) are negative particles. One Turkish NM (*-me/-ma)* is a suffix and part of the verbal morphology, whereas the other two (*değil* and *yok*) are independent negative verbs and fall into the category of negative 'word'. Urdu NMs and Turkish negative affix are non-projecting *Neg* nodes within the VC (for Urdu) and VP (for Turkish). They are represented as binary atomic value (POL $\pm$) in the f-structure. Turkish *değil* and *yok* are the head (V) of the VP in the c-structure and main predicate (PRED) in the f-structure. Thus Urdu and Turkish NMs are partially similar in terms of structure. Urdu NMs are similar to the verbal suffix *–ma/-ma* in terms of their structure as well as function despite their apparent morphological difference. Whereas *değil* and *yok* are different from all Urdu NMs in terms of their structure and function.

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