

Instrument as Path: Reconciling the semantic usages of Urdu *se* and Pashto *pa*

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1. Introduction

- Instrument markers in South Asian languages (SA) have different syncretisms with different markers. There is not a single syncretism pattern.
- Some South Asian languages have examples of comitative-instrument and ergative-instrument syncretism.
- The other two interesting and “un-usual” examples are Ablative-Instrument and Locative-Instrument syncretisms found in Urdu/Hindi and Pashto respectively.
- We focus on the above two pairs of syncretic markers and explain the syncretism by using spatial semantic features.

2. Instrument in South Asian languages

2.1. Companion Metaphor

- Lakoff and Johnson (1980) proposed that instruments are conceptualized as companions.
- They claimed that almost all languages use this metaphor.
- Among the South Asian languages, Sindhi, Siraiki, Punjabi and Balochi have the same form for both comitative (accompaniment) and instrument usage.

(1) maiN o=de **naal** baazaar gayaa
1P.Sg 3P.Sg=Gen **com** market.M.Sg go.Perf.M.Sg
'I went to the market with him.'
<Punjabi>

(2) o=ne caabi **naal** buuhaa k^hol-iaa
3P.Sg=Erg key.F.Sg **inst** door.M.Sg open.Perf.M.Sg
'He opened the door with the key.'
<Punjabi>

- In Punjabi and Sindhi, the comitative-instrument marker also has a locative usage 'beside'.

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(3) maiN kampiutar=de **naal** kitaab rak^h-ii
 1P.Sg computer.M.Sg=Gen **beside** book.F.Sg put.Perf.F.Sg
 ‘I put the book alongwith/near the computer.’ <Punjabi>

- We propose that locative ‘beside’ is a metaphor for accompaniment, and the same form is used for the instrument too.

Question: Do all the South Asian languages use the companion metaphor and have comitative-instrument syncretism?

- Stolz, Stroh and Urdze (2006) pointed out that Companion metaphor is not found cross-linguistically.
- According to them, 65 % of languages (out of 323 languages surveyed) are A-type languages. They define a language as A-type if it uses different markers for accompaniment and instrument. (Stolz, Stroh and Urdze 2006:105)
- The South Asian languages provide us the examples for syncretism patterns other than comitative-instrument.

Table 1: Instrument marker and its syncretism patterns in South Asian languages

Language	Instrument marker	Syncretism
Sindhi	saaN	Comitative-Instrument
Punjabi	naal	Comitative-Instrument
Siraiki	naal	Comitative-Instrument
Balochi	goN	Comitative-Instrument
Nepali	le	Ergative-Instrument
Manipuri	na	Ergative-Instrument
Pashto	pa	Locative-Instrument
Urdu/Hindi	se	Ablative-Instrument ³
Torwali	de/te	-

- In the next section, we will focus on the instrument marker of Urdu/Hindi and Pashto.

³ Urdu/Hindi uses the postposition *saath* as the comitative marker (that marks companions). But, *se* appears with some peripheral usages of comitative markers. For example, the “object” of reciprocal verbs ‘fight’ and ‘marry’ etc. are marked by the comitative marker in the sister languages (e.g. Sindhi, Punjabi and Balochi) and by *se* in Urdu/Hindi.

2.2. Instrument as Path and Location

- Urdu/Hindi *se* is used for ‘from’ (source) and instrument as in (4) and (5).

(4) ahmad karaachii **se** aa-yaa
 Ahmad Karachi **from** come.Perf
 ‘Ahmad came from Karachi.’ <Urdu/Hindi>

(5) asad ne chure **se** rassi kaaT-ii
 Asad Erg knife **inst** rope cut.Perf
 ‘Asad cut the rope with a knife.’ <Urdu/Hindi>

- The Pashto preposition *pa* is used for ‘at/on’ and instrument as in (6) and (7).

(6) ahmad **pa** cawkey kenasto
 Ahmad **on** chair sat down
 ‘Ahmad was sitting down on a chair.’ <Pashto>

(7) asad paray **pa** chaara prekaR
 Asad rope **inst** knife cut
 ‘Asad cut the rope with a knife.’ <Pashto>

Questions: How can the locative-instrument syncretism found in Pashto be explained? Why is the instrument marked by ablative in one language and locative in the other?

Proposal: The semantic usage ‘through’ is the solution to this puzzle.

- Both Urdu/Hindi *se* and Pashto *pa* are also used for the sense ‘through’ as in (8) and (9).

(8) hamid bagh **se** guzra
 Hamid garden **through** passed
 ‘Hamid passed through the garden.’ <Urdu/Hindi>

(9) hamid **pa** bagh tiir sho
 Hamid **through** garden passed
 ‘Hamid passed through the garden.’ <Pashto>

- Instruments are conceptualized as abstract paths. (Ostler 1979)
- The syncretism of the instrument in (5) and (7) with ‘through’ usages (8) and (9) suggests that the markers *se* and *pa* denote a spatial path that has been metaphorically reanalyzed as an abstract path for the instrumental reading.
- Torwali, an Indo-Aryan language, gives another example of this Path-as-Instrument metaphor.
- In Torwali, the form *de/te* marks both ‘through’ and (instrumental) ‘with’.

(10) ahmad baagh **te** lhangu
 Ahmad garden **through** passed
 ‘Ahmed passed through the garden.’

(11) ahmad-e kera **de** bhowai chi ki
 Ahmad-Erg knife **with** apple cut did
 ‘Ahmed cut the apple with the knife.’

Question: Ostler (1979) proposed the following spatial features system: *source* is [+source,-goal], *location* is [-source,+goal], *path/instrument* is [+source, +goal]. Do these features allow for the syncretism pattern found in Urdu/Hindi and Pashto?

- Urdu/Hindi *se* has both source [+source,-goal] and path/instrument [+source, +goal] usages, leading to a conflict with the feature [goal].
- Pashto *pa* has both location [-source, +goal] and path/instrument [+source, +goal] usages, leading to a conflict with the feature [source].
- To explain this apparent conflict, we review different models of locative representation including Ostler (1979) and propose an underspecified feature system based model in the following section.

3. Models for Spatial Markers

- In the literature, spatial markers are generally modeled by using different features and structures (Ostler 1979, Jackendoff 1990, Kracht 2002).
- Butt (2006) proposed that case markers have both space and control dimensions simultaneously.
- Here, we concentrate only on the space dimension and devise a semantic model based on the relevant features found in different spatial models.
- We focus on the representation of the usages ‘from’ and ‘through’ in these models and the potential problems introduced by the markers of South Asian languages.

3.1. Ostler’s Model

- Ostler (1979) proposed features for source, location, theme, and path.
- As shown in 2.2, the features of path/instrument and source (ablative) usages of Urdu/Hindi *se* conflicts. The case of Pashto *pa* is similar.
- We can introduce two different lexical entries for Urdu/Hindi *se* and two different entries for Pashto *pa*, but it will be an ad-hoc solution and will not explain the relationship between the usages ‘from’ and ‘through’ as in Urdu/Hindi *se* and between ‘through’ and ‘at’ as in Pashto *pa*.
- The other models for spatial markers have similar problems regarding to this issue.

3.2. Jackendoff's Model

- Jackendoff (1990) has the following structures for 'from', 'through' and 'to' usages.

'From' : [Path FROM (Place)]

'Through' : : [Path VIA (Place)]

'To' : [Path FROM (Place)]

- Urdu/Hindi *se* marks source/'from' and path/'through'. Unlike Ostler's system, there is no conflict of features here, but still we need two lexical entries for the two usages of Urdu/Hindi *se*.
- We cannot explain what the common thing is which results in the syncretism of 'from' and 'through' usages.

3.3. Kracht's Model

- Another model for the locative markers is proposed by Kracht (2002).
- He proposed that locative expressions have two layers: configuration and mode.
- The configuration is the way in which several objects are positioned with respect to each other. Examples are: at, in, on, between, in front etc.
- The mode describes the way in which an object moves with respect to the named configuration.
- Examples of mode are:
 - co-initial (object moves away from location) e.g. English 'from'
 - transitional (object enters and leaves the location) e.g. English 'through'
 - co-final (object reaches the location) e.g. English 'to'
 - static (object is at the location) e.g. English 'at'.
- Urdu/Hindi *se* marks both the co-initial and transitional usages.
- Similarly, Pashto *pa* marks both the transitional and static usages.
- Again just like Jackendoff and Ostler's system, we cannot explain the use of common markers for the usages 'from'/'through' in Urdu/Hindi and 'through'/'at' in Pashto.

Question: We need an explanation of why a particular marker marks two different usages. Can we propose a single lexical entry covering the different usages?

4. Features for the Spatial Markers

- To find commonalities between ‘from’ and ‘through’ and between ‘through’ and ‘at’ we introduce a different set of spatial semantic features based on a combination of previous proposals.

- We introduce the following features into which a spatial marker can be decomposed.

Source	= Starting point of a path
End	= End point of a path
Via	= A path which does not include Source or End point
Loc	= A location/place (which does not have path in it)

- The spatial markers can be decomposed into these features. Following are a few examples from English spatial markers.

From	= + Source + Via
Through	= - Source + Via
To	= + Via + End
At	= + Loc-at

- The feature set can model different types of locatives e.g. [+ Loc-in] for English *in* and [+ Loc-on] for English *on*.
- The above analysis differentiates between English *from* and *through*.
- English *from* has a starting point [+Source] while English *through* does not have starting point [-Source].
- Otherwise both have the [+Via] feature that is related to path.

4.1.Explaining the South Asian patterns

- Unlike English, the Punjabi ablative marker *toN* marks both ‘from’ and ‘through’ usages.

(12)	ahmad	karaachii	toN	aa-yaa	
	Ahmad	Karachi	from	come.Perf	
	‘Ahmad came from Karachi.’				<Punjabi>

(13)	hamid	bagh	toN	nangi-aa	
	Hamid	garden	through	pass.Perf	
	‘Hamid passed through the garden.’				<Punjabi>

- The common point between ‘from’ and ‘through’ in Punjabi is the feature [+Via] that is present in both the usages.
- We suggest following feature(s) for Punjabi toN.

toN = + **Via**

- Compare it with English ‘from’ and ‘through’ repeated from above.

From = + Source + Via

Through = + Via

- The feature set of Punjabi *toN* is underspecified for the feature [Source] that allows it to encode both ‘from’ and ‘through’.

Question: Do the ablative markers of Urdu/Hindi and Pashto have the same feature(s) as of Punjabi?

- As Urdu/Hindi *se* marks ‘from’ and ‘through’/instrument usages, its feature(s) are:

se = + **Via**

- The feature(s) of Urdu/Hindi *se* is same as Punjabi *toN*. The only difference is that Punjabi uses the companion metaphor (comitative-instrument marker *naal*) and Urdu/Hindi uses the path metaphor (ablative-instrument *se*) for instrument.
- The feature(s) of Pashto *pa*, having ‘through’/instrument and location usages are:

pa = - **Source**

- Pashto *pa* is underspecified for the feature [Via]. It can have any usage that does not require [Source] feature.
- Compare it with the feature set of Pashto *na* that marks the usage ‘from’.

na = + **Source** + **Via**

(14) ahmad karaachii **na** raaGle
 Ahmad Karachi **from** came
 ‘Ahmad came from Karachi.’ <Pashto>

(15) *hamid bagh **na** teer sho
 Hamid garden **from** passed
 ‘Hamid passed through the garden.’ <Pashto>

- Pashto *na* does not mark ‘through’ because it has [+Source] feature which conflicts with the ‘through’ usage.

- The feature(s) of Torwali *de/te* is similar to English ‘through’.

de/te = - Source + Via

- The following table summarizes the model proposed here

Table 2: Semantic model of instrument of different languages

	‘From’	‘Through’	Instrument	Location
Punjabi	toN + <i>Via</i>		naal + <i>Loc</i>	
Urdu/Hindi		se + <i>Via</i>		saat ^h + <i>Loc</i>
Pashto	na + <i>Source</i> + <i>Via</i>		pa - <i>Source</i>	

5. Instrument as Path: Summary

- We find that Urdu/Hindi, Pashto and Torwali use the same marker for ‘through’ and instrument usages.
- The marking of usages ‘from’ and ‘through’ by the same marker in Urdu/Hindi cannot be explained by using models proposed by Jackendoff (1990), Kracht (2002) and Ostler (1979).
- Similarly, Pashto *pa* marking the usages ‘location’ and ‘through’ cannot be explained by these models.
- In these models, we need two lexical entries for the same marker. In Ostler’s model, the lexical entries for the Urdu/Hindi *se* and Pashto *pa* have conflicting features.
- We solved these problems by
 - Proposing the feature set Source, Via, End and Loc.
 - Underspecified feature(s). For example, Pashto *pa* has [-Source]. Hence it can be used to mark for both ‘at’ and ‘through’ but not for ‘from’.
 - Introducing [Via] as the common feature present both in the usages ‘from’ as [+Source +Via] and ‘through’ as [+Via]. It explains use of Urdu/Hindi *se* for both of these usages.
 - Different markers ??? up taking up different amounts of the ‘semantic space’ (cf. Table 2).

6. Conclusion

- In addition to the companion metaphor, instruments can be expressed by the Instrument-as-Path metaphor as Urdu/Hindi, Pashto and Torwali use the same markers for instrument and ‘through’.
- Urdu/Hindi *se* marks the usages ‘from’, ‘through’ and instrument. Pashto *pa* marks ‘at’, ‘through’ and instrument.
- We introduced a feature-based system for spatial markers. The features introduced are Source, End, Loc and Via.
- We represent the instrument (and other) markers as a single set of the above features. The features can be underspecified.

7. References

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