Urdu/Hindi Complex Predicates of Motion and the Manner/Result Complementarity

Annette Hautli-Janisz, *University of Konstanz*

Abstract

This paper surveys complex predicates of motion in Urdu/Hindi (Hook 1974, Hautli-Janisz 2013), a spatial resultative construction that denotes manner of motion along a path. In particular, I show that the combinatorial possibilities between main and light verb are driven by the principles of manner/result complementarity set forth by Levin and Rappaport Hovav (2008, 2013). In order to identify these meaning components in Urdu/Hindi verbs, I propose a set of truth-conditional and syntactic tests that identify manner versus result components in the class of Urdu/Hindi motion verbs. Moreover, I provide an analytical framework that shows how the dichotomy drives the patterns found in this type of complex predicate.

1 Introduction

Urdu/Hindi has been shown to exhibit various types of complex verbal constructions, including N+V, ADJ+V and V+V complex predicates (CPs) (e.g., Mohanan (1994), Butt (1995), inter alia). A lesser known construction, but one that occurs fairly frequently is that of complex predicates of motion (Hook 1974, Hautli-Janisz 2013): Here, two motion verbs combine to express manner of motion and direction in one complex event, as shown in (1).[1]

(1) cor   mɑkan=se   bahɑr **kud   nɪkl-a**
    thief.M.Sg.Nom house.M.Sg=Source outside **jump emerge-Perf.M.Sg**
    'The thief jumped out of the house.'   (Hook 1974, p. 69)

From a surface point of view, CPs of motion are similar to aspectual complex predicates (Butt 1995) in that a verb in the root form is followed by a finite verb. However, it is not aspectual information that is contributed by the finite verb, but rather motional information. Taking together the events denoted by both verbs renders a complex motion event, i.e. the manner of motion along a path. In (1), the thief undergoes the path of emerging by way of jumping out of the house.

In this paper I show that Urdu/Hindi motion verbs adhere to the dichotomy of manner and result proposed by Levin and Rappaport Hovav (2008, 2013), with CPs being a way of expressing a combination of both components in a monoclausal structure. After an introduction of the data in Section 2 and a comparison of the construction with other spatial resultatives (Section 3), I establish a set

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[1]The Hindi judgements on the data come from Hook (1974), the Urdu judgements come from two informants, Asad Mustafa (from Karachi) and Ghulam Raza (from Punjab).

of truth-conditional and syntactic criteria that manifest manner and result meaning components for Urdu/Hindi, taking into account language-specific properties (Section 4). The analytical framework in Section 5 shows that the complementarity of manner and result drives the combinatorial possibilities between main verbs and light verbs in CPs of motion as in (1): Here, manner is contributed by the main verb *kud-na* 'to jump' and the result component is contributed by the light verb *nɪkal-na* 'to emerge'. In Section 6, I show that these verb complexes complement the ways of telic path formation in Urdu/Hindi described in Narasimhan (2003). Section 7 concludes the paper.

2   Data

The expression of manner of motion together with the direction of motion is a phenomenon which, from a syntactic point of view, is realized very differently across languages (Talmy 1991). One possibility is the usage of a sequence of motion verbs, where each verb contributes its share in the overall interpretation. Li (1993) shows that this strategy is employed in a wide range of languages, in particular in many West African and South-East Asian languages, but also in languages of Papua New Guinea and East Asia. A cross-linguistic overview of the patterns is shown in examples (2)–(4), with (2) for Korean (Zubizarreta and Oh 2007), (3) for Edo (Baker and Stewart 1999, Ogie 2003) and (4) for Thai (Wechsler 2003).

(2) John-i   kongwen-ey **kel-e**   **ka-ss-ta**
     John-Nom park-Loc   **walk-L go-Past-Decl**
     'John walked to the park.'   Korean (Zubizarreta and Oh 2007, (7))

(3) Òzó **rhùlé-rè làá**   òwá
     zo   **run-Past enter** house
     'Ozo ran into the house.'   Edo (Ogie 2003, (19))

(4) Piti **den   khâw** roo nrian
     Piti **walk enter** school
     'Piti entered the school walking.'   Thai (Wechsler 2003, (2))

Urdu/Hindi also employs this strategy of expressing complex motion events, with the construction first noted by Hook (1974). The verb sequence consists of two motion verbs, where the first motion verb is in the root form and the second verb is finite and inflects according to the common agreement and tense/aspect patterns in the language. These syntactic properties are shared with aspectual CPs in Urdu/Hindi, an example of which is shown in (5): Here, the main verb *gɪr-na* 'to fall' combines with the light verb *paṛ-na* 'to fall', which contributes a sense of suddenness to the event of falling denoted by the main verb.

(5) am   **gɪr paṛ-a**
     mango.M.Sg.Nom **fall fall-Perf.M.Sg**
     'The mango fell (suddenly).'

For CPs of motion, Hautli-Janisz (2013) shows that according to the principles of Butt (1995), the construction is an instance of a complex predicate (CP) in Urdu/Hindi, where the root verb is the main verb of the CP and the finite verb serves as the light verb. This analysis is based on several facts: Firstly, the light verbs in these motion verb sequences do not have a systematic contribution, secondly they contribute a bleached version of their lexical semantics and thirdly, only a restricted set of verbs can serve as light verbs. Moreover, the verbs in these CPs share their arguments in a similar way as aspectual CPs in the language.

As with the cross-linguistic examples from (2)–(4), the Urdu/Hindi constructions are used to convey the manner of the motion which is executed along a path. The following examples illustrate

the phenomenon: In (6), the verb $b^h ag$ 'run' in the root form combines with the finite verb *nɪkla* 'emerged' which inflects for tense and number and agrees with the masculine subject *sanp* 'snake'. Combining the two motion verbs results in an interpretation similar to 'shoot out of'. Example (7) shows a construction with the two motion verbs $baɽ^h na$ 'to advance' (root verb) and *doɽna* 'to run' (finite verb), which together denote the event of 'charge into'.

(6) sanp　　　　　　bɪl=se　　　　　　　　　**bʰag nɪkl-a**
　　snake.M.Sg.Nom snake-pit.M.Sg.Obl=Source **run　emerge-Perf.M.Sg**
　　'A snake shot out of the pipe.'

(7) sanɖ　　　　　　gayõ=ke　　　　　　ɽevaɽ=ke　　　　　　taɾaf
　　buffalo.M.Sg.Nom cow.F.Pl.Obl=Gen herd.M.Sg=Gen.Obl direction

　　baɽʰ　　doɽ-a
　　advance run-Perf.M.Sg
　　'The buffalo charged into a herd of cows.'

In similar constructions in Yoruba (Ekundayo and Akinnaso 1983) and Sranan (Sebba 1987), the manner of motion verb always comes before the directional motion verb, a pattern that is not found in Urdu/Hindi. Instead, the order is more flexible: Whereas in (6), the manner of motion verb $b^h agna$ 'to run' precedes the directional verb *nɪkalna* 'to emerge', the order in (7) is reversed with the directional verb $baɽ^h na$ 'to advance' preceding the manner of motion verb *doɽna* 'to run'.

However, the combinations are not restricted to cases where manner of motion combines with directional motion. Example (9) shows a construction where two directional motion verbs, $g^h ʊsa$ 'enter" and *ja* 'go', combine to form an increased directional reading towards a location.[2]

(10) cʰʊri　　　　ʊs=ke　　　　　　peʈ=mẽ　　　　　　**ja gʰʊs-i**
　　knife.F.Sg Pron.3.Sg=Gen stomach.M.Sg=in **go enter-Perf.F.Sg**
　　'The knife sank into his stomach.'

An interesting property of cps of motion is that some combinations facilitate the swapping of their motion verbs, while retaining the overall interpretation of the sentence. The nature of the reversal is not one where root and finite verb change their order in the cp, but instead, the verb that is light becomes the main verb, whereas the main verb turns into the light verb. This is illustrated in (11), with the verbs *calna* 'to walk' and *uɽna* 'to fly': Whereas in (11a), the main verb *uɽ* 'fly' in the root

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[2]The combinatorial possibilities go further, as exemplified in (8): Here, the sequence comprises two nearly synonymous verbs, *doɽna* 'to run' and $b^h agna$ 'to run', with the interpretation of 'running away'. In the sequence in (8), both verbs have a deverbal noun that shares its root with the verb root, namely *doɽ* and $b^h ag$, both meaning 'run'. As a nominal compound, *doɽ $b^h ag$* (and its reversed version $b^h ag doɽ$) means 'much running around' and is commonly used in the language. Therefore, the verbal sequence in (7) could be interpreted as a deverbal noun of the compound as a whole. As this pattern is exceptional in cps of motion in Urdu/Hindi, I refrain from drawing any generalizations and merely note that the construction in (8) is uncommon in that sense.

(8) gʰoɽa　　　　　　**doɽ bʰag-a**
　　horse.M.Sg.Nom **run run-Perf.M.Sg**
　　'The horse ran away.'

Another exceptionality of the construction is that $b^h ag doɽana$ (and its inverse *doɽ $b^h agana$*) 'to run away' are the sole instances of Urdu/Hindi mvss where causativization only applies to the finite verb, as shown in (9) with *doɽana* 'to cause to run'.

V₁.base + V₂-Caus

(9) malɪk=ne　　　　gʰore=ko　　　　　**bʰag doɽ-a-ya**
　　owner.M.Sg=Erg horse.M.Sg.Obl=Acc **run　run-Caus-Perf.M.Sg**
　　'The owner made the horse run away.'

form precedes the finite light verb *cala* 'walked'; in the alternative realization in (11b), *cal* 'walk' serves as the main verb and *uṛa* 'flew' is the light verb. According to native speaker judgement, the construction in (11a) is preferred.[3]

(11) a. hava=ke   jʰonke=ke   satʰ patang   **uṛ cal-i**
        wind.M.Sg=Gen gust.M.Obl=Gen with kite.F.Sg **fly move-Perf.F.Sg**
        'The kite flew up with a gust of wind.'   (Hook 1974, p. 57)

     b. hava=ke   jʰonke=ke   satʰ patang   **cal   uṛ-i**
        wind.M.Sg=Gen gust.M.Obl=Gen with kite.F.Sg **move fly-Perf.F.Sg**
        'The kite flew up with a gust of wind.'   (Hook 1974, p. 57)

The ability to swap verbs in CPs of motion is not dependent on the particular lexical semantics of the combined verbs, i.e. it is not only CPs with two manner of motion verbs that allow for the alternation. The trigger of this alternation, which is not allowed for all CPs of motion and is uncommon for aspectual and permissive complex predicates in the language, still needs to be investigated in further detail.

An interesting property of CPs of motion, which distinguishes them from other CPs in the language, is the possibility of causative formation of (at least one of) the verbs in the CP. The examples in (12) and (13) show the causativized versions of the constructions in (6) and (10), respectively. While in (12), both verbs, *bʰagana* 'to cause to run' and *nɪkalna* 'to cause to emerge' are in the causative, (14) shows that only the verb in the root form, *uṛana* 'to cause to fly', causativizes.

V₁-Caus + V₂-Caus

(12) malɪk=ne   sanp=ko   bɪl=se
     owner.M.Sg=Erg snake.M.Sg=Acc snake-pit.M.Sg.Obl=Source

     bʰag-a   nɪkal-a
     run-Caus emerge.Caus-Perf.M.Sg
     'The owner made the snake shoot out of the snake pit.'

V₁-Caus + V₂.base

(13) hava   patang=ko   **uṛ-a   cal-i**
     air.F.Sg.Nom kite.M.Sg=Acc **fly-Caus move-Perf.F.Sg**
     'The gust made the kite fly up.'

In both cases, an external argument, the causer, is added to the overall event. If, as in (11), both verbs are in the causative, the external argument is shared between the two verbs. Verbs that do not causativize as simple verbs also do not allow for causativization in CPs of motion (e.g. *cʰorna* 'to leave', *ḍagmagana* 'to toddle', *rɪpaṭna* 'to slip'). In turn, verbs that can causativize as simple verbs do not necessarily allow for causativization in these CPs, where certain constraints seem to hold between the two motion verbs.

Despite the combinatorial freedom between motion verbs, native speakers have a clear intuition with respect to the grammaticality or ungrammaticality of certain CPs. For instance, the verb *nɪkalna* 'to emerge' can form a CP with the manner of motion verb *bʰagna* 'to run' as in (11), but the CP with *ḍagmaga* 'to stagger' in (14) is ungrammatical, despite 'to run' and 'to stagger' both being manner of motion verbs. Similarly, *rengna* 'to crawl' can appear in a CP with *nɪkalna* 'to emerge', but is ungrammatical in combination with *gʰʊsna* 'to enter', as shown in (15).

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[3]The acceptability of (11b) varies between native speakers, but the majority of the consulted Urdu/Hindi informants judged the swapped version as being grammatical.

(14) * ʃarabi   kamre=se   bahar   ḍagmaga nɪkl-a
       drunkard.M.Sg room.M.Sg=Source outside stagger   emerge-Perf.M.Sg
       'The drunkard staggered out of the room.'

(15) * bacca   kamre=mẽ   reng gʰʊs-a
       child.M.Sg.Nom room.M.Sg=in crawl enter-Perf.M.Sg
       'The child crawled into the room.'

Based on a quantitative investigation of the construction in three corpora, Hautli-Janisz (2013) shows that a number of cps are in fact preferred and used across different genres, for instance *bʰag nɪkalna* 'to run out of (lit. to run emerge)', *baṛʰ caṛʰna* 'to climb up (lit. to advance climb)' and *utar caṛʰna* 'to climb down (lit. to descend climb)'. Moreover, the verbs *bʰagna* 'to run', *doṛna* 'to run' and *calna* 'to move/walk' are often used as light verbs in cps of motion and combine with a range of different main verbs. The most flexible motion verb is *nɪkalna* 'to emerge', which can be used both as a main and a light verb in various combinations. A comparatively large number of motion verbs does not appear in cps of motion at all, particularly very special motion concepts such as *langaṛana* 'to limp' or *matakna* 'to dance (style often found in Bollywood movies)'. The data also shows that causative cps of motion are less frequent than their base counterparts, whereas cps with indirect causatives do not occur at all.

In the following section I show that Urdu/Hindi cps of motion are instances of *spatial resultatives* with telic paths, paving the way for analyzing the construction along the lines of manner and result complementarity.

3   cps of motion as spatial resultatives

Resultative constructions, in particular the group of spatial resultatives, can appear in various guises across languages: For instance, English allows for the usage of an adjectival phrase as in (16a) or a prepositional phrase as in (16b) to denote the resultativity of a path (Goldberg and Jackendoff 2004, inter alia). In both cases, the paths denoted by the constructions are telic, i.e. the motion event is completed once the path denoted by the AP or the PP has been traversed.

(16) a. He jumped *clear* of the traffic.
      b. John ran *out of the room*.

Goldberg and Jackendoff (2004) also show that path resultatives can be atelic as in (17), or can have a stative interpretation as shown in (18) (examples (68) and (69) in Goldberg and Jackendoff (2004), respectively): In (17), the path of floating is unbounded, but still expresses resultativity in that the moving entity ends up in a different location. In (18), the road occupies the entire length of the path and is homomorphic to the structure of the path, which, according to Jackendoff (1996), renders a resultative construction.

(17) The boat floated *down the river*.

(18) The road zigzagged *down the hill*.

Other languages employ complex verbal constructions to denote spatial resultativity, as shown in (19) for Sranan (Sebba 1987) and (20) for Ịjọ (Williamson 1965): In (19a), the construction with *waka* 'walk' has a locative reading, whereas with the addition of the verb *go* 'go' in (19b), the interpretation is one of walking along a bounded path. A similar pattern emerges in (20), where the telic path reading with *bómi* 'come' in (20b) is only available when the verb *pá* 'come/go-out' is added.[4]

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[4]SPa in the glosses stands for simple past.

(19) a. A   **waka** na   wowoyo
          Pron.3.Sg.M **walk** Loc market
          'He walks (about) on the market.'

      b. A   **waka go** na   wowoyo
          Pron.3.Sg.M **walk go** Loc market
          'He walks to the market.'   Sranan (Sebba 1987, (15))

(20) a. toboụ-bì **bó**-mi
          child-T   **come**-SPa
          'The child came.'

      b. toboụ-bì **pá**   **bó**-mi
          child-T   **come/go-out come**-SPa
          'The child came out.'   Ịjọ (Williamson 1965, p. 48)

In Urdu/Hindi, simple motion verbs and CPs of motion also differ in their event structure, similar
to the difference in (19) and (20) for Sranan and Ịjọ. This is illustrated by way of the verbs *uṛna* 'to fly'
and *bʰagna* 'to run' in (21) and (22), respectively: In (21a), the simple verb usage denotes the process
of flying, whereas in combination with the light verb *calna* 'to walk' in (21b), the construction turns
into a spatial resultative. Here, as a consequence of flying, the kite ends up in a different location,
namely away. The same holds for (22), where the activity reading of *bʰagna* 'to run' in (22a) is
turned into a resultative event when the verb is used in a CP with the light verb *nıkalna* 'to emerge',
as shown in (22b).

(21) a. patɑng   **uṛ-i**
          kite.F.Sg.Nom **fly-Perf.F.Sg**
          'The kite flew.'

      b. %patɑng   **uṛ cal-i**
          kite.F.Sg.Nom **fly** walk-Perf.F.Sg
          'The kite flew up.'

(22) a. laṛki   bʰag-i
          girl.F.Sg.Nom run-Perf.F.Sg
          'The girl ran.'

      b. laṛki   bʰag nıkl-i
          girl.F.Sg.Nom run   emerge-Perf.F.Sg
          'The girl ran out.'

Urdu/Hindi CPs of motion only denote resultative events that are telic, in contrast to the examples
shown in (17) and (18) for English. This is illustrated in (23) for the CP *uṛ cal-na* 'to fly away (lit.
to fly walk)' from (21b), where the telic modifier *palak jʰapakne=mẽ* 'in the blink of an eye (lit. in
the blinking of an eyelash)' in (23a) is grammatical. The unbounded modifier *kayi gʰanṭõ=se* 'for
many hours' in (23b) is ungrammatical in the atelic reading with the CP, however it is valid as a
temporal modifier ('a few hours ago').[5]

(23) a. patɑng palak   jʰapakne=mẽ   **uṛ cal-i**
          kite.F.Sg eyelash.M.Sg.Nom blink.Inf.Obl=in **fly walk-Perf.F.Sg**
          'The kite flew away in the blink of an eye.'

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[5]The *for* test, paralleled here for Urdu/Hindi, is complicated insofar as resultative events are accomplishments with
a durative event structure, using an atelic modifier sometimes yields acceptable results by highlighting the process
that leads to the result state (cf. Beavers 2006).

b. pɑtɑng kɑyi gʰɑntõ=se   **ʋɽ cɑl-i**
   kite.F.Sg many hour.M.Pl.Obl=Source **fly walk-Perf.F.Sg**
   *'The kite flew away for many hours.'
   'The kite flew away a few hours ago.'

In sum, Urdu/Hindi cps of motion parallel the pattern of resultative formation in languages like Sranan or Ịjọ, where a sequence of motion verbs renders manner of motion along a bounded path.

In the remainder of the paper, I show that the claim of manner-result complementarity by Levin and Rappaport Hovav (2008, 2013) is the crucial factor in the formation of motion cps. In order to manifest the complementarity in Urdu/Hindi, I propose a set of syntactic diagnostics that consistently identifies these meaning components for Urdu/Hindi motion verbs in Section 4. With this distinction at our hands, we can then go on to resolve the combinatorial complexities of cps of motion in Section 5.

4 The complementarity of manner and result

4.1 In general

With the goal of filtering out the *lexicalized meaning* of verbs, i.e. the meaning that each verb contributes irrespective of its context, Levin and Rappaport Hovav (2008, 2013) introduce the notion of the *manner/result complementarity*. According to this concept, a verb either instantiates the manner with which an action is carried out or it denotes the result of an action. This means that manner and result meaning components are in complementary distribution, i.e. in a particular construction, a verb can express only one.

The crucial factor that distinguishes result from manner is the concept of the *scalar event structure* (Rappaport Hovav 2008): The traversal of a path can be considered a scalar change when the moving entity changes its location on the path in a monotonic relation to the event that progresses (Krifka 1998). Scalar changes are the basis for results, in that at the endpoint of the path, the entity is in a state (location) as a result of moving along the path. This reading is entailed in a sentence such as 'The water rose to the top of the dike', where the water level rises on a path that is mappable onto the progress of the event (scalar change). In contrast, manner verbs entail nonscalar change, i.e. dancing involves infinitely many small movements that cannot be mapped on a temporal or spatial path.

For English, Beavers and Koontz-Garboden (2012) establish a set of truth-conditional diagnostics that extract scalar result and nonscalar manner meaning components (for a summary see Table 1). For instance, the *denial of the result* is acceptable for nonscalar manner verbs like 'sweep' in (24) because they do not entail a result state: The floor does not necessarily become cleaner as a consequence of sweeping it. In contrast, the modifier phrase like 'nothing is different about it' is ungrammatical for scalar result verbs like 'break' in (25): The property of the vase changes from being whole to being broken and the result state cannot be reversed.

(24) Shawn swept the floor, but nothing is different about it. (✓manner)

(25) # Shawn broke the vase, but nothing is different about it. (✓result)

In turn, the *denial of action* is only grammatical with scalar result verbs, where actual motion of "various parts of the human body" (Beavers and Koontz-Garboden 2012, p. 345) is not necessarily implied. The test confirms the nonscalar manner nature of 'sweep' (26) and the scalar result structure of 'break' (27).

(26) # Shawn swept the floor, but didn't move a muscle. (✓manner)

(27) Shawn broke the vase, but didn't move a muscle. (✓result)

This classification is further underpinned by the *object deletion* diagnostic: For nonscalar manner verbs in English, the object can be dropped (see (28) for 'sweep'), a pattern that is impossible for

scalar result verbs (see (29) for 'break').

(28) Shawn swept the floor. All last night, Shawn swept. (✓manner)

(29) Shawn broke the vase. # All last night, Shawn broke. (✓result)

A somewhat more vague diagnostic is the *selectional restrictions* test: manner verbs generally impose more selectional restrictions on the subject, because they reject inanimates and natural forces, whereas result verbs accept these. The examples in (30) and (31) illustrate the pattern for 'sweep' and 'break', respectively.

(30) Shawn/#The stiff brush swept the floor. (✓manner)

(31) Shawn/The earthquake/The hammer broke the vase. (✓result)

Another test examines the set of accepted *resultative phrases*: Manner verbs are assumed to have fewer restrictions on the kinds of result they appear with than is the case with result verbs.

(32) Shawn swept the floor clean/shiny/bare. (✓manner)

(33) Shawn broke the vase in half/#purple/#into the ground. (✓result)

Regarding the *complexity of the action*, manner verbs consist of a series of non-trivial intervals of change and are durative (e.g. dancing involves complex bodily motion), whereas result verbs denote scalar change and can either be durative if they denote a multipoint scale (e.g. 'the temperature rises') or are punctual if they denote a two-point scale (e.g. the change from non-broken to broken).

MANNER	DIAGNOSTICS	RESULT
✓	Denial of result	#
#	Denial of action	✓
✓	Object deletion	*
✓	Selectional restrictions	—
✓	Complexity of action (Durative event)	multipoint scale: ✓ two-point scale: —
—	Restricted resultatives	✓

TABLE 1 Diagnostics for manner versus result in English (Beavers and Koontz-Garboden 2012)

Now the question is to what extent the tests employed for English can also be used to detect manner and result meaning components in Urdu/Hindi and the data at hand. Due to language-specific properties of Urdu/Hindi, a number of tests put forth by Beavers and Koontz-Garboden (2012) cannot be applied: For instance the criterion of object deletion does not yield consistent results for a pro-drop language like Urdu/Hindi and for the mostly intransitive verbs of motion. Moreover, I refrain from using diagnostics like the selectional restrictions test, because the patterns are generally difficult to quantify and motion verbs form a class that tends to be more acceptable with animates than inanimates and natural forces.

Taking this into account, §4.2 illustrates how manner versus result meaning components can be identified in Urdu/Hindi motion verbs by applying a set of truth-conditional and syntactic tests. In addition I show that in the class of Urdu/Hindi motion verbs, some verbs express both manner and result – a pattern that is confirmed in Section 5 when analyzing the behavior of these verbs in complex predicates of motion.

4.2   Diagnosing manner and result in Urdu/Hindi motion verbs

For Urdu/Hindi, three tests, namely the denial of the result (§4.2.1), the test with directional versus locational *mẽ* 'in' (§4.2.2) and the telic path alternation (§4.2.3), allow for a reliable distinction

between manner and result meaning components. §4.3 summarizes the results and provides a list of motion verbs and their classification.

4.2.1 Denial of the result

If a verb denotes scalar change (result verbs), at least one property of the entity that undergoes the event is necessarily different than before the event. As a consequence, constructions with scalar verbs are ungrammatical when this change is being contradicted, for instance with the phrase 'but nothing is different about it'. For the class of motion verbs, the denial of the result can be attested with the phrase 'but X is not somewhere else', showing that as a result of the motion, the entity ends up in a different location. Similar to 'to break', a small number of scalar motion verbs inherently license the result state of the event. In the class of Urdu/Hindi motion verbs, these are g^hʊsna 'to enter', nɪkalna 'to emerge' and pahʊncna 'to arrive'. As exemplified in (34a) with nɪkalna 'to emerge', the girl gradually emerges from the room and as a result of emerging, she ends up in a final location which lies outside of the room. The resultativity is attested with the phrase *lekɪn vuh kahĩ aur jagah nahĩ gayi* 'but she did not go to some (other) place' in (34b). This test shows that the verb itself entails a result state which cannot be reversed by the modifier phrase.[6]

(34) a. laṛki   kɑmre=se   nɪkl-i
      girl.F.Sg.Nom room.M.Sg=Source emerge-Perf.F.Sg
      'The girl emerged from the room.'

    b. # laṛki   kɑmre=se   nɪkl-i
      girl.F.Sg.Nom room.M.Sg=Source emerge-Perf.F.Sg

      lekɪn vuh   kahĩ   aur jagah   nahĩ ja-ti   hɛ
      but   Pron.3.Sg somewhere and place.M.Sg not   go-Impf.F.Sg be.Pres.3.Sg
      #'The girl emerged from the room, but she isn't somewhere else.'

Other scalar motion verbs do not entail a result, as shown in (35) with the verb ʊtar-na 'to descend', where the boat moves from a higher position to a lower position. Despite the lack of an explicit endpoint with nɪkal-na 'to emerge', the denial of the result test still fails due to the scalar structure of the event: The path of motion is monotonic to the event structure, i.e. as the event progresses, the boat moves lower and the location at the end of the event is different than at the beginning.

(35) # kaʃti   ʊtr-i
      boat.F.Sg.Nom descend-Perf.F.Sg

      lekɪn vuh   kahĩ   aur jagah   nahĩ ja-ti   hɛ
      but   Pron.3.Sg somewhere and place.M.Sg not   go-Impf.F.Sg be.Pres.3.Sg
      #'The boat descended, but it isn't somewhere else.'

In contrast, a large number of motion verbs in Urdu/Hindi express the manner of motion and are nonscalar, i.e. the motion they denote is not mappable on a temporal or spatial path. For instance, motion concepts like *langaṛa-na* 'to limp', *maṭak-na* 'to dance (style often found in Bollywood movies)' and *ḍagmaga-na* 'to wobble' involve infinitely many small parts of motion that combine to form the overall motion but do not necessarily entail a change in location. Therefore, these verbs allow for the denial of the result, as shown in (36) for *ter-na* 'to float': Here, the boat moves in(side) the water, but does not necessarily change its position in the course of the event.

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    [6](34b) is felicitous in a context where the girl emerges from the room, but then stays right outside the room and does not go somewhere else, however this still entails that she left her initial starting position inside the room.

(36) kaʃti   ter-i
     boat.F.Sg.Nom float-Perf.F.Sg

     lekɪn vuh   kɑhĩ   aur jɑgɑh   nɑhĩ ja-ti   hɛ
     but   Pron.3.Sg somewhere and place.M.Sg not   go-Impf.F.Sg be.Pres.3.Sg
     'The boat floated, but it isn't somewhere else.'

In the following, the established distinction is confirmed by the results of a test that is based on language-specific properties of Urdu/Hindi, namely the test for locative versus directional *mẽ*.

4.2.2   Locative versus directional mẽ

Similar to languages like German (Gehrke (2007), inter alia), some postpositions in Urdu/Hindi either have a locative or directional interpretation when they appear with motion verbs. In particular the postposition *mẽ* 'in' can have a telic reading of directed motion ('into') or an atelic reading of locational movement ('in(side)'), depending on the motion verb it appears with. The contrast is shown in (37) and (38): With *ʋtarna* 'to descend' in (37b), *mẽ* 'in' explicitly records the end point of the path with the postpositional phrase *pani=mẽ* and describes the state of the boat as a result of its descent ('into the water'). This means that, together with the denial of result test for *ʋtarna* 'to descend' in (35), the verb can be unambiguously classified as a result verb — together with all other result verbs in Table 2 (§4.3) share.

(37) a. kaʃti   ʋtr-i
        boat.F.Sg.Nom descend-Perf.F.Sg
        'The boat descended.'

     b. kaʃti   pani=mẽ   ʋtr-i
        boat.F.Sg.Nom water.M=in descend-Perf.F.Sg
        'The boat descended into the water.'

In contrast, *mẽ* can also have a locative usage, exemplified in (39b) for the verb *bʰagna* 'to run': Here, *kamre=mẽ* 'room.Loc' denotes the location in which the motion happened.

(38) a. laɽki   bʰag-i
        girl.F.Sg=Nom run-Perf.M.Sg
        'The girl ran.'

     b. laɽki   kamre=mẽ   bʰag-i
        girl.F.Sg.Nom room.M.Sg.Obl=in run-Perf.M.Sg
        'The girl ran in(side) the room.'

The directional interpretation of *mẽ* 'in' as in (37b) correlates with the ungrammaticality of the denial of the result, i.e. verbs like *pahʋncna* 'to arrive', *ʈapakna* 'to drop' and *nɪkalna* 'to emerge' license a telic, directional interpretation with *mẽ* 'in' and do not allow for the denial of the result. These verbs are therefore result verbs, because the motion event can be mapped onto a spatial path which implies motion from one location to another. On the other hand, the atelic, locational interpretation of *mẽ* with verbs like *bʰagna* 'to run' as in (38b) concurs with the grammaticality of the denial of the result, i.e. the motion is restricted to a specific location and is not mapped onto a spatial path. These verbs, among them *ɪʈʰlana* 'to strut', *pʰʋdakna* 'to hop' and *cakarana* 'to stagger', therefore have a nonscalar event structure and are manner verbs.

4.2.3   Exceptional cases

Two verbs in the class of motion verbs in Urdu/Hindi, namely *bʰagna* 'to run' and *calna* 'to walk', exhibit an exceptional pattern in that they can express either manner or result meaning, depending

on the context they appear in. This can be tested with an alternation that is grammatical only with those two manner verbs, namely the *telic path alternation* (Hautli-Janisz 2014): Similar to languages like English, the intransitive verb frame alternates with a frame that takes an oblique denoting the bounded path of motion. Example (39) shows the grammaticality of the alternation with the verb $b^h agna$ 'to run', (40) employs *nacna* 'to dance' to illustrate the ungrammaticality with other manner verbs.

(39) a. laṛki b^hag-i
         girl.F.Sg=Nom run-Perf.M.Sg
         'The girl ran.'

      b. laṛki=ne   lambi b^hag=ko b^hag-a
         girl.F.Sg=Erg long.F.Sg run.F.Sg=Acc run-Perf.M.Sg
         'The girl ran the marathon.'

(40) a. laṛki   nac-i
         girl.F.Sg=Nom dance-Perf.M.Sg
         'The girl danced.'

      b. * laṛki=ne   lambi   nac=ko   nac-a
         girl.F.Sg=Erg long.F.Sg dance.F.Sg=Acc dance-Perf.M.Sg
         'The girl danced the long dance.'

Although both $b^h agna$ 'to run' and *calna* 'to walk' have been identified as manner verbs according to the denial of the result test in §4.2.1 and the locative interpretation of *mẽ* 'in' in §4.2.2, they behave like result verbs in the telic path alternant — a property that other manner verbs do not have (for instance see the manner verb *nac-na* 'to dance' in (40)). The confirmation that they are solely resultative when they lexicalize their result meaning component and do not also lexicalize manner at the same time is shown in (41): Here, the telic path alternant of $b^h agna$ 'to run' is modified with 'but she isn't somewhere else', a phrase that is grammatical only with manner verbs. In (41), this modification renders the construction ungrammatical, showing that in this context, the verb expresses solely a resultative meaning. This means that $b^h agna$ 'to run' and *calna* 'to walk' are two verbs in Urdu that can lexicalize either a manner or a result meaning component depending on the context they appear in.

(41) * laṛki=ne   lambi b^hag=ko b^hag-a
         girl.F.Sg=Erg long.F.Sg run.F.Sg=Acc run-Perf.M.Sg

         lekɪn vuh   kahĩ   aur jagah   nahĩ ga-yi
         but   Pron.3.Sg somewhere and place.M.Sg not   go-Perf.F.Sg
         'The girl ran the marathon, but she isn't somewhere else.'

This alternation shows that, similar to 'to climb' in English (Levin and Rappaport Hovav (2013) along with Kiparsky (1997)), $b^h agna$ 'to run' and *calna* 'to walk' can denote nonscalar motion at a specific location as well as motion that is mappable onto a spatial path, for instance *lambi $b^h ag$* 'marathon (lit. long run)' as in (40b). The exceptional behavior of $b^h agna$ 'to run' and *calna* 'to walk' coincides with a cross-linguistic pattern: Levin et al. (2009) show that the Spanish *corer* 'to run' and *caminar* 'to walk' as well as the Italian *correre* 'to run' can express manner and result, depending on the context they occur in. This, together with the telic path alternation in (41), provides an explanation as to why these two verbs stand out in Urdu/Hindi cps of motion, in a way I present later on.

4.3   Summary

The syntactic diagnostics above suggest that three groups of motion verbs in Urdu/Hindi exist: Those that have a nonscalar event structure (manner verbs), those that denote scalar motion (result verbs) and those that can express either one depending on the context they appear in. The members of each class are listed in Table 2.

Manner		Result		Either one	
$t^h arak$-na	'to stomp'	$j^h ul$-na	'to swing'	cal-na	'to walk'
ʈɛhɪl-na	'to lollop'	$g^h ʋs$-na	'to enter'	$b^h ag$-na	'to run'
ʈ$^h ʋmak$-na	'to strut'	mʋɽ-na	'to turn'		
lapak-na	'to dash'	$p^h alang$-na	'to leap over'		
kud-na	'to jump'	ʋ$b^h ar$-na	'to rise'		
sɛrak-na	'to slither'	pahʋnc-na	'to arrive'		
reng-na	'to crawl'	$p^h and$-na	'to leap over'		
rapaʈ-na	'to slip'	ʋtar-na	'to descend'		
$p^h ɪsal$-na	'to slip'	nɪkal-na	'to emerge'		
laɽk$^h ara$-na	'to stumble'	$c^h or$-na	'to leave'		
$k^h ɪsak$-na	'to slide'	gɪr-na	'to fall'		
ɪʈ$^h la$-na	'to strut'	palaʈ-na	'to turn'		
matak-na	'to sashay'	ʈapak-na	'to drop'		
$p^h ʋdak$-na	'to hop'	gʋzar-na	'to cross'		
ter-na	'to float'	a-na	'to come'		
langara-na	'to hobble'	ja-na	'to go'		
caɽ^h-na	'to climb'	bɛhɛ-na	'to run (water)'		
cakara-na	'to stagger'	baɽ^h-na	'to advance'		
mandɛla-na	'to wander'				
$j^h apaʈ$-na	'to scram'				
lapeʈ-na	'to roll'				
doɽ-na	'to run'				
$g^h um$-na	'to roll/rotate'				
lʋʈ$^h ak$-na	'to tumble'				
nac-na	'to dance'				

TABLE 2 Manner and result in Urdu/Hindi motion verbs

Now that the manner-result complementarity for Urdu/Hindi motion verbs is established, the next question concerns the kinds of mechanisms that govern the compositionality between the verbs in CPs of motion. To that end, I propose a general schema in the following section, based on the patterns elicited above.

5   Manner and result in CPs of motion

This section shows how the complementarity of manner and result plays a crucial role in unraveling the mechanisms that govern the combinatorial possibilities of motion verbs in the CP. The data in Table 3 summarizes the different patterns of combining manner and result in CPs of motion in Urdu/Hindi and is drawn from Hook (1974), my own field research and a corpus investigation (Hautli-Janisz 2013). They are the basis for the following discussion.

5.1   Scalar + nonscalar motion

The basic pattern in CPs of motion is that an unambiguous result verb combines with an unambiguous manner verb. As shown in Section 2, the syntactic function of the verb in the CP does not correlate with a particular lexical semantic function, i.e. neither is the light verb restricted to express only

		CPs of motion		
Basic	(a)	MANNER + RESULT	*kud nɪkal-na*	'to jump out of (lit. to jump emerge)
	(b)	RESULT + MANNER	*baɽʰ doṛ-na*	'to charge into' (lit. to advance run)
	(c)	RESULT + MANNER	*gʰʊs cal-na*	'to move into (lit. to enter walk)'
Disjunctive	(d)	MANNER + RESULT	*ʊṛ cal-na*	'to fly away' (lit. to fly walk)
	(e)	MANNER + RESULT	*bʰag ja-na*	'to run away (lit. to run go)
	(f)	MANNER + RESULT	*doṛ bʰag-na*	'to run away' (lit. to run run)
Deixis	(g)	DEIC + RESULT	*a nɪkal-na*	'to come out' (lit. to come emerge)
	(h)	DEIC + RESULT	*ja gʰʊs-na*	'to go into' (lit. to go enter)

TABLE 3 Urdu/Hindi CPs of motion

result, nor does the main verb obligatorily express manner, or vice versa. As shown with the CP in (a) in Table 3, the manner verb *kudna* 'to jump' is the main verb and combines with the result light verb *nɪkalna* 'to emerge'. Conversely, in (b) in Table 3, the result main verb *baɽʰna* 'to advance' combines with the manner light verb *doṛna* 'to run'. Consequently, the light verb contributes the information that the main verb in the CP does not express, in Table 3 (a) it is the resultative information, in (b) it is the manner information.

This leads to our first conclusion, which is captured in Figure 1: If an unambiguous result verb serves as the light verb (V_{light}) in a CP with an unambiguous manner verb, it contributes resultative information to the main verb meaning (V_{main}) — represented by the `+Result` arrow. If an unambiguous manner verb serves as the light verb and has an unambiguous result main verb, it contributes manner information to the overall CP, represented by the `+Manner` arrow from right to left.
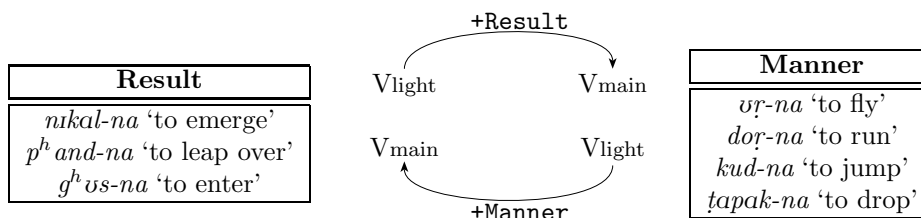

FIGURE 1 Combining result with manner of motion

5.2   Verbs with disjunctive behavior

As established in §4.2, two Urdu/Hindi motion verbs, namely *calna* 'to walk' and *bʰagna* 'to run', exhibit a disjunctive behavior with respect to the manner/result complementarity. In particular, these verbs can express either a scalar or a nonscalar event structure, but realize only one depending on the companion verb in the motion CP. The CPs in (c) and (d) in Table 3 and the examples in (42) illustrate the pattern for the verb *calna* 'to walk': If it combines with a scalar verb like *gʰʊsna* 'to enter' in (42a), it denotes the manner of continuous movement, expressing its manner interpretation. In contrast, when combined with a nonscalar verb like *ʊṛna* 'to fly' as in (42b), it adds a scalar path interpretation to the nonscalar event of flying.

(42) a. sanḍ   makan=mẽ   **gʰʊs cal-a**
          ox.M.Sg.Nom house.M.Sg=in **enter move-Perf.M.Sg**
          'An ox got into the house.'

      b. pataŋg   **ʊṛ cal-i**
          kite.F.Sg **fly walk-Perf.F.Sg**
          'The kite flew away.'

This multifunctionality also pertains to $b^h agna$ 'to run', illustrated by the constructions in (43): In combination with the light verb *jana* 'to go' in (43a), $b^h agna$ 'to run' expresses its manner meaning and *jana* 'to go' contributes a scalar meaning in laying out the path of motion to the final location. In the CP in (43b) with the nonscalar verb *doṛna* 'to run', however, $b^h agna$ 'to run' expresses a scalar meaning and lays out the path that the child traverses by the manner of motion *doṛna* 'to run'.

(43) a. bɑcca   **bʰag gɑ-ya**
         child.M.Sg.Nom **run   go-Perf.M.Sg**
         'The child ran away.'

     b. bɑcca   **doṛ bʰag-a**
        child.M.Sg.Nom **run run-Perf.M.Sg**
        'The child ran away.'

These patterns are shown in Figure 2: If $b^h agna$ 'to run' and *calna* 'to walk' serve as light verbs (Vlight) in a CP, their contribution depends on the main verb in the CP. Combined with an unambiguously scalar motion verb like *nɪkalna* 'to emerge' as the main verb (Vmain), $b^h agna$ 'to run' and *calna* 'to walk' realize their `Manner` meaning component ('to run out of' and 'to walk out of', respectively). If combined with the nonscalar main verb *doṛna* 'to run', the light verb realizes its `Result` component and contributes the path of motion ('to run away').
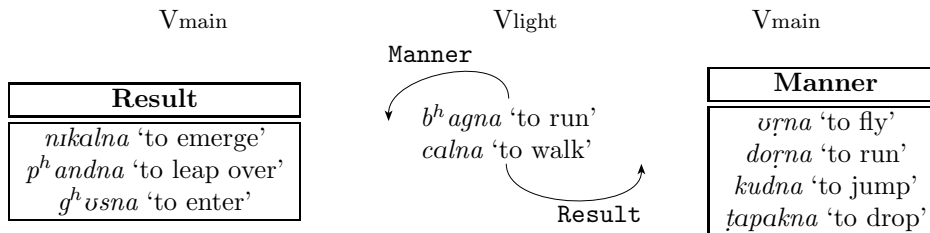

FIGURE 2 Disjunctive verbs $b^h agna$ 'to run' and *calna* 'to walk'

The patterns indicate that the main verb in the CP is the discriminant factor that decides what meaning component the light verb realizes. The main verb unifies its meaning with the meaning of the light verb — an assumption that is also made for aspectual and permissive complex predicates in Urdu (c.f. Butt (1995)). For $b^h ag$-*na* 'to run' and *cal-na* 'to walk', I conclude that if they are used as light verbs, they are underspecified – they can either lexicalize manner or result, depending on the main verb they combine with. The view of the "semantic primacy" of the main verb for selecting light verbs and their meaning contribution is further corroborated by the patterns found for the verbs *ana* 'to come' and *jana* 'to go', illustrated in the following.

5.3 The verbs *ana* 'to come' and *jana* 'to go'

The verbs *jana* 'to go' and *ana* 'to come' are two more motion verbs in Urdu/Hindi that exhibit multifunctional properties in CPs of motion (also see (g) and (h) in Table 3). Especially *jana* 'to go' is flexible in its event modulation, depending on the main verb it appears with in the CP. Whereas the contribution in a CP with *rapaṭna* 'to slip' is one of sudden inception ('to slip suddenly'), in combination with *nacna* 'to dance', *jana* 'to go' triggers a serial interpretation of the event ('to dance and then go'). Another usage of *jana* 'to go' entails telicity: In a CP with a verb that has a scalar interpretation like *ʋbʰarna* 'to rise' in (44), *jana* delimits the path of rising by contributing the end point of the motion ('to rise completely'), i.e. the atelic event structure of *ʋbʰarna* 'to rise' turns telic by way of adding the light verb *jana* 'to go'. This is the aspectual light verb usage of *jana* 'to go' as discussed in Butt (1995).

(44) suraj   **ʊbʰar ɡɑ-ya**
     sun.M.Sg.Nom **rise   go-Perf.M.Sg**
     'The sun rose (completely).'

This function of *jana* 'to go', I claim, is independent of the principles of the manner/result dichotomy that drive the combinatorial possibilities between main and light in motion cps. In these constructions no manner of motion is entailed: In a cp with an atelic scalar motion verb like *ʊbʰarna* 'to rise', the telic scalar nature of *jana* 'to go' merges its path with the main verb and adds the end point of the path that is not entailed by the main verb. This means that the verb is so light that it does not contribute an event in itself, it merely functions as a telic aspectual modifier of the main verb, in accordance with the assumptions in Butt (1995).

However, in combination with nonscalar verbs like *doṛna* 'to run', *jana* 'to go' fulfills the function that is predicted by the manner/result complementarity: While the nonscalar motion denoted by *doṛna* 'to run' is not mappable on a path that the entity traverses, the scalar path interpretation is contributed by *jana* 'to go', rendering a meaning of 'running away' as exemplified in (45). This differentiates the contribution of *jana* 'to go' from the construction in (44): Whereas in (44), it merely marks the end of the path because the main verb already denotes the path, the nonscalar motion of *doṛna* 'to run' in (45) does not conflict with the scalarity of *jana* 'to go' and the light verb can contribute its full path meaning. Therefore, the manner/result complementarity makes the right predictions as to the interpretation of *jana* 'to go': Together with a scalar motion verb, *jana* 'to go' unifies its scalar nature and serves as a telic aspectual modifier, in combination with a nonscalar motion verb, *jana* 'to go' expresses its full result meaning.

(45) bacca   **doṛ ɡɑ-ya**
     child.M.Sg.Nom **run go-Perf.M.Sg**
     'The child ran away.'

However, *jana* 'to go' can also have a different spatial contribution in motion cps that is independent from the manner/result complementarity, namely the notion of deixis. Following Fillmore (1966) for English, 'to go' entails that "the place to which one goes is the place where [the speaker] is not" (p. 223). The deictic nature of *jana* 'to go' explains the function of the verb when it combines with verbs that are scalar and have an end point already inherent in their event structure, for instance *nɪkalna* 'to emerge' in (46), where *jana* 'to go' cannot contribute any scalar path information. I claim that in these constructions, *jana* 'to go' adds a purely deictic meaning in the sense that the moves out of the room and to a place, which does not concur with the location of the speaker. The cp in (46) with *nɪkalna* 'to emerge' therefore only denotes result, the principles of the manner/result complementarity do not apply.

(46) laṛki   kamre=se   nɪkal ɡɑ-yi
     girl.F.Sg.Nom room.Sg.Obl=Source emerge go-Perf.F.Sg
     'The girl emerged from the room (and went away).'

The behavior of *jana* 'to go' is mirrored by the verb *ana* 'to come' in Urdu/Hindi: In (47), the main verb of the cp, *gɪrna* 'to drop', is a scalar verb with an event structure that is mappable on a path. In combination with *ana* 'to come', the event structure becomes bounded, yielding a telic construction with the final location *asman=mẽ* 'into the sky'. This construction, I claim, is in fact an aspectual complex predicate similar to the construction with *jana* 'to go' in (44), in that *ana* 'to come' solely contributes an endpoint to the event, but no event on its own.

(47) asman=mẽ   badɑl   **gɪr   a-e**
     sky.M.Sg=in cloud.M.Pl **drop come-Perf.M.Pl**
     'Clouds flooded into the sky.'   (Hook 1974, p. 79)

Following Fillmore (1966) in his deictic interpretation of the English 'to come', the contribution of *ana* 'to come' in CPs of motion is that the path of motion is directed towards the location of the speaker. This pattern is found in example (48), the equivalent of the construction in (46) with *jana* 'to go'. Instead of the interpretation of 'run away' with a path directed away from the speaker, *ana* 'to come' denotes the motion of running towards the speaker.

(48) bɑcca   **doṛ a-ya**
     child.M.Sg.Nom **run come-Perf.M.Sg**
     'The child came running.'

As with *jana* 'to go', *ana* 'to come' can also form CPs of motion with verbs that are scalar and have an inherent endpoint, illustrated in (49) with the verb $p^h andna$ 'to leap over'. Parallel to *jana* 'to go', *ana* 'to come' is solely used to mark the deictic structure of the event. Here, Ali leaps over the wall, coming towards the speaker. As above, I argue that these combinations do not violate the manner/result complementarity, because *ana* 'to come' situates the motion event in relation to a reference point and does not influence the nature of the motion event itself, i.e. the light verb does not act upon the manner with which the event is carried out nor does it affect the resultative nature of the event. Again, I claim that deixis is a factor outside of the manner/result dichotomy, with the CP in (49) only realizing result, but no manner component.

(49) ɑli   devar=ko   **pʰand   a-ya**
     Ali.M.Sg.Nom wall.F.Sg=Acc **leap-over come-Perf.M.Sg**
     'Ali came leaping over the wall.'

In sum, the light verbs *ana* 'to come' and *jana* 'to go' fulfill a set of functions depending on the main verb they combine with, illustrated in Figure 3. If they combine with a scalar motion verb that licenses an inherent endpoint to the event, for instance *nɪkalna* 'to emerge', the light verbs contribute a sense of Deixis to the event structure in that the event is located with relation to a reference point. Here, the light verbs function outside of manner/result dichotomy and are not complex events in that they only have a resultative path interpretation without any manner of motion entailed. If they combine with a scalar verb that is atelic, e.g. $ʊb^h arna$ 'to rise', then they function as aspectual light verbs and only contribute the endpoint of the motion (Telicity). In combination with nonscalar motion verbs like *doṛna* 'to run' and *kudna* 'to jump', they consistently realize their scalar component, which triggers the Result interpretation of the construction, rendering "true" CPs of motion that denote manner of motion along a path.

5.4   Interim summary

This section has shown that manner and result are combined in CPs of motion and are the principles that govern the combinatorial possibilities between main verbs and light verbs. In general, the meaning between the verbs in the CP is unified — the main verb is the driving force that selects the meaning component of the light verb, which results in a varied contribution of a subset of light verbs, in particular $b^h ag$-*na* 'to run', *cal-na* 'to walk', *ja-na* 'to go' and *a-na* 'to come'. The principle of unification is mirrored on the level of syntax, where Hautli-Janisz (2013) shows that the arguments of main verb and light verb are merged and form a joint predication. An interesting theoretical question is how to combine and formalize the semantic and syntactic processes of unification: Instead of considering them as subsequent modules where first the semantics decides on the combinatorial possibilities and then the syntax combines the arguments, it would be preferable to have a joint analysis — an issue that I leave for further research. Before I conclude, I briefly discuss how Urdu/Hindi CPs of motion fit in the typology of constructions denoting manner of motion along a path.
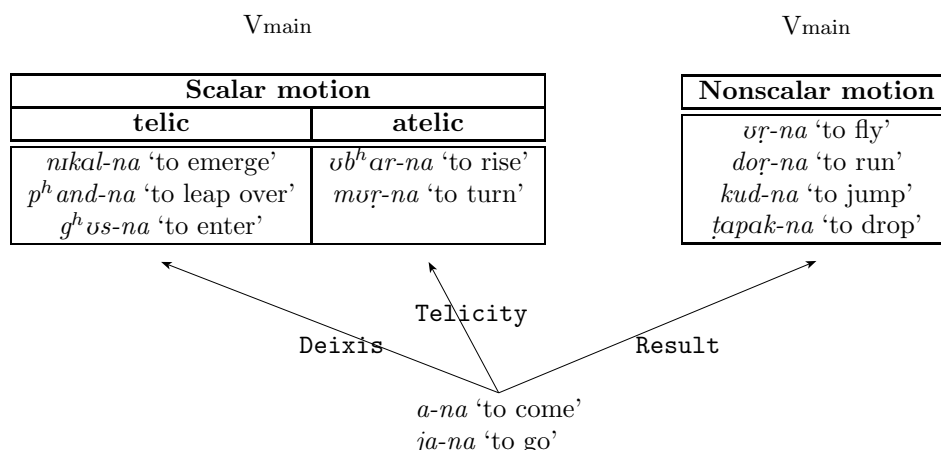
Vmain   Vmain

Scalar motion	
telic	**atelic**
nɪkal-na 'to emerge' *pʰand-na* 'to leap over' *gʰʊs-na* 'to enter'	*ʊbʰar-na* 'to rise' *mʊɽ-na* 'to turn'

Nonscalar motion
ʊɽ-na 'to fly' *doɽ-na* 'to run' *kud-na* 'to jump' *ʈapak-na* 'to drop'

Telicity

Deixis   Result

a-na 'to come'
ja-na 'to go'

FIGURE 3 Disjunctive verbs *a-na* 'to come' and *ja-na* 'to go'

6   Urdu/Hindi cps of motion and the typology

Manner of motion along a path is expressed very differently across languages. In verb-framed languages like Spanish, French, Korean, Japanese (Talmy 1985, 1991), a construction parallel to the Spanish example in (50) is employed: Here, the direction of motion is expressed with the main verb *subir* 'to rise', whereas the manner of motion is an adjunct to the matrix clause, here *flotando* 'floating'.

(50) El globo   subió   por   la chimenea (flotando).
     the balloon moved-up through the chimney (floating)
     'The balloon rose up the chimney, floating.'   (Talmy 1985, (15e))

   In satellite-framed languages, in contrast, illustrated in (51) for English and (51) for Dutch, the manner of motion verb is the main predicate of the sentence, with the path of motion contributed by the prepositions 'up' and *binnen* 'in', respectively. This way of combining manner of motion with the path of motion is not available in verb-framed languages.

(51) The ballon floated up the chimney.

(52) Jan   rende de kamer binnen.
      John ran   Art room in
      'John ran into the room.'   (Slobin 2005, (2))

   For Urdu/Hindi, Narasimhan (2003) claims that the language falls into the class of verb-framed languages, based on examples like (53): The path of motion to the target location *kamre=mẽ* 'into the room' with the manner of *langaɽana* 'to limp' requires the manner verb to appear in the subordinate clause *langaɽate hue* 'limping', with the path contributed by the matrix verb *ana* 'to come'.

(53) laṛka   langaṛa-te   hu-e
     boy.M.Sg.Nom limp.Impf.M.Sg.Obl become-Perf.M.Sg.Obl

     kɑmre=mẽ   a-ya
     room.M.Sg.Obl=in come-Perf.M.Sg
     'The boy limped into the room (came into the room, limping).'

With the CPs of motion investigated in this paper, it becomes clear that a simple classification along the lines of verb-framed versus satellite-framed languages is problematic for Urdu/Hindi, because the language features other ways of expressing complex motion in a monoclausal construction. In fact, the CPs of motion show that Urdu/Hindi shares crucial properties with *equipollently-framed languages*, a typological category put forth by Slobin (2004), complementing the typology established by Talmy (1985). Languages of this type mark the manner and the path of motion with elements "that are equal in formal linguistic terms and appear to be equal in force and significance" (p. 9). Across languages, sequences of verbs, for instance [manner verb + path verb] in Niger-Congo languages, [manner + path]$_{\text{Verb}}$ constructions in Algonquian languages and [manner preverb + path preverb + verb] constructions in Jaminjungan languages express the manner of motion along a designated path.

In equipollently-framed languages, the participating verbs are equal, with none being subordinate to the other. This, I claim, is what is found in Urdu/Hindi: Although the status of the finite verb as a light verb entails that main verb and light verb are not completely equal concerning their syntactic and semantic "weight", they are equal in the sense that from a syntactic point of view, neither the main verb nor the light verb is subordinated (Hautli-Janisz 2013). From a semantic point of view, they are equal from a manner/result point of view in that one verb contributes the manner of the motion, while the other verb contributes the path (or 'result' in terms of Levin and Rappaport Hovav). I therefore argue that Urdu/Hindi cannot be clearly allocated to the group of verb-framed languages, because the language features constructions that are typical for equipollently-framed languages. Due to the fact that manner of motion verbs in Urdu/Hindi cannot realize telic paths by way of using postpositions, I claim that complex predicates of motion are a method for compensating for this gap in that they avoid a complicated subordinated structure similar to the one shown in (53). Complex predicates of motion are therefore the only way of syntactically realizing manner of motion verbs and telic paths in a monoclausal construction in Urdu/Hindi.

7   Discussion and conclusion

This paper shows that Urdu/Hindi CPs of motion are telic spatial resultatives, where the dichotomy between manner and result explains the various combinatorial possibilities between main verbs and light verbs. In order to support this claim, a set of syntactic tests was presented that establish result and manner components in Urdu/Hindi motion verbs. The resulting classification shows that the dichotomy of manner and result introduced by Levin and Rappaport Hovav (2008, 2013) holds, namely that a verb can express only one meaning component per construction, in contrast to the patterns that Beavers and Koontz-Garboden (2012) find for English manner-of-killing verbs, which lexicalize both manner and result in a single construction.

An important conclusion is that light verbs of motion, which can license both components, adjust their contribution to the structure of the main motion verb in the CP. Consequently, each CP has only one motion verb which contributes the manner and the result meaning component. This explains why exactly two motion verbs combine in CPs of motion and do not allow for further augmentation, as for example possible in languages like Dagaare, with four different motion verbs. Urdu/Hindi seems to strictly adhere to the principle that each meaning component can only be expressed by one verb, i.e. nonscalar motion cannot be contributed by more than one verb.

This principle also explains the unavailability of aspectual modification by using CPs of motion in aspectual complex predicates, in particular with *jana* 'to go': The lexical semantic "slots" of

result are already filled by the combining motion verbs in the cp and it is therefore impossible to merge another event modifier into the construction. The parameters of result and manner and the stipulation of their complementary distribution therefore do not only make the right predictions for the combinatorial possibilities of motion verbs in these cps, they also explain other properties of the construction.

Across languages, the same verbs seem to be used in complex motion events to denote either path or manner of motion, independent of the exact syntactic status of the verb complex. For instance, the Sranan verbs *komoto* 'to come out', *komopo* 'to come from', *fadon* 'to fall', *opo* 'to arise', *gwe* 'to go away', *go* 'to go', *kon* 'to come', *waka* 'to walk' are commonly used to modify motion events (Sebba 1987). Chinese encodes spatial resultativity using a set of directionals such as *jin* 'enter', *chu* 'exit', *duo* 'cross', *lai* 'come' or *qu* 'go' (Scott 1996). These combine with other motion verbs in complex predicates, for example *pao jin* 'to enter running (lit. run enter)', *tong guo* 'to cross (lit. to traverse cross)' (taken from Butt (2010)). Therefore, Chinese seems to feature the same underlying principles of encoding complex motion than Urdu/Hindi, both from a syntactic as well as a lexical semantic point of view.

An interesting area for further research concerns an Urdu/Hindi-wide investigation of manner/result complementarity. This includes an extension of the truth-conditional and syntactic tests that diagnose manner and result in order to identify the two meaning components independent of the verb class. Resolving these issues will show whether manner and result meaning components are truly complementary or whether there are cases like 'to guillotine' in English, where the dichotomy is violated, as shown by Beavers and Koontz-Garboden (2012). This will also pave the way for a more general analysis of the effects of manner and result in the language.

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