Different Paths in Directed Manner of Motion Constructions

Alison Biggs

1. Introduction

This paper examines the syntactic structure of three complements to manner-of-motion vPs in Mandarin. Each of the complement has the reading of a Path or Result, and gives rise to the interpretation of *Directed* Manner of Motion. Despite their similar interpretations, this paper shows in a series of short case studies that the internal structure of these complements varies.

Manner-of-motion verbs (e.g. *fei* 'fly') alone express activities. They have a single argument that is interpreted as an Agent, and not as an undergoer of change-of-state/location: in (1) a bird may be flying in a single spot. The v in (1) cannot take an unmarked NP_{Ground} to indicate the direction of motion.[1]

(1) Yi-ge   niao fei-le   (*shu) / (*Yanhucheng).
     One-CLF bird fly-ASP (tree) / (Salt.Lake.City)

    ✓ 'A bird flew.'   *Activity / Undirected Manner of Motion*

    *'A bird flew to the tree / to Salt Lake City.'   *Directed Manner of Motion*

Instead, in Mandarin the interpretation of Directed Manner of Motion requires spatial markers (like English). This paper proposes that two directional complement structures can be identified, one with preposition-like markers[2] (2a) and a second for verbs of inherently directed motion (2b). Adjective-like complements that similarly result in a bounded/endpoint interpretation of the manner-of-motion event are also possible, such as Object Resultatives (2c); these are shown to instantiate a third structure.[3]

(2) a. Yi-zhi   niao fei **dao** wu-limian   le.
        One-CLF bird fly **to** room-inside ASP

        'A bird flew to inside the room.'   *Directed Manner of Motion*: P_{path}

    b. Yi-zhi   niao fei-**chu**-le.
        One-CLF bird fly-**exit**-ASP

        'A bird flew out.'   *Directed Manner of Motion*: V_{path}

    c. Yi-zhi   niao fei-**lei**-le.
        One-CLF bird fly-**tired**-ASP

        'A bird flew (and became) tired.'   *Directed Manner of Motion*: (Object) Resultative

[1] *Ground* is a reference-frame with respect to which a *Figure's* Path is characterized; a *Figure* (e.g. a 'bird' in (1)) is the moving or conceptually movable object whose *Path* is at issue (Talmy, 1985:61). A *Path* is the trajectory along which a Figure traverses; the set of Paths making up the direction of motion of the Figure is made up of Places (Jackendoff, 1983; Kracht, 2008).

[2] Space prevents proper overview, but categories (especially 'preposition') are controversial in Mandarin (Chao, 1968; Huang et al., 2009; Li & Thompson, 1981:409-412). Nothing rests on calling the category in (2a) a preposition - the label is shorthand for the structure described in Section 2.2.

[3] (2b-2c) have transitive variants, but only the intransitive variants are discussed for minimal comparison with (2a).

Manner-of-motion vPs with Path complements are interpreted as 'Accomplishments' or 'Transitions' ('a change to a new state or location'), such that in Directed Manner of Motion Constructions (DMMCs) the surface subject is interpreted as having undergone a change-of-state/location. We assume this interpretation of the surface subjects in (2) reflects the additional structure in the complement of vP.

This paper investigates how this claim is implemented.[4] Previous work has equated all Path/Result ('Accomplishment') complements (2a-c) structurally, for example as secondary resultative predicates (e.g. Hoekstra (1988); Hale & Keyser (1993) et seq.; see also Huang (1982) on Mandarin PPs). Hoekstra (1988), for example, suggests all position and change-of-state structures include a Small Clause complement, as in (3). The SC denotes an abstractly conceived Path toward the end-state held by DP. The denotation of PRED/XP is predicated over the SC's DP subject, where XP might be AP or PP.

(3) V $[_{SmallClause}$ DP [... PRED]] (Hoekstra, 1999:80,(15))

An apparent cross-linguistic correlation in the productivity of path expression complementation to manner-of-motion verbs with the (un)availability of secondary resultative predication Talmy (1985, 2000) is often taken - implicitly or explicitly - as evidence for the phenomena manifesting a unified syntactic configuration (Beck & Snyder, 2001; Mateu, 2002; Folli, 2002; Folli & Ramchand, 2005; Zubizarreta & Oh, 2007; Gehrke, 2008; Acedo-Matellán, 2010, 2016) (technical details differ).[5] Cross-linguistic differences have been argued to follow from differences in lexical items or inventories, or variation in PF or LF (i.e. post-syntactic) processes.

The Mandarin data suggests that the syntactic structure of the Small Clause complement of VP in (3) also varies in DMMCs. Section 2 presents evidence that a complement interpreted as PATH in a Mandarin DMMC can correspond to (at least) two syntactic structures: an 'unergative' adposition (cf. Svenonius 2010) or an 'unaccusative' PredP (cf. Irwin 2012) complement. Section 3 shows Mandarin Object AP resultative complements have an unselected object in a third syntactic configuration. We conclude that syntactic structure is a locus of variation in the expression of Directed Manner of Motion.

2. Two Paths in Mandarin Directed Manner of Motion Constructions
2.1. Motivating a distinction: distributional PATH asymmetries in DMMC environments

There are a number of traditional distributional diagnostics suggesting that there are two types of complement, corresponding to (2a)-(2b) (repeated as (4a)-(4b)).[6] In addition to category (Chao, 1968:749-66), (4a)-(4b) can be distinguished by clausal distribution: P_{path} can precede or follow a manner-of-motion verb; V_{path} must follow it (not shown; see Fong (1997) for related discussion).

(4a)-(4b) differ further with respect to the deictic directional items *lai* 'come' and *qu* 'go' (which would form yet another class of directional complement, but which are not discussed here for reasons of space). In a P_{path} DMMC, the deictic directional follows the full PP (4a). In a V_{path} DMMC, the deictic directional can directly follow V_{path} (4b).

(4) a. Yi-zhi   niao fei dao (***lai**) (*/?**le**) wu-limian (**lai**) (le).
        One-CLF bird fly to (**come**) (**ASP**) room-inside (**come**) (ASP)

        'A bird flew to (*toward the speaker) inside the room (toward the speaker).' P_{path}

    b. Yi-zhi   niao fei-chu (**lai**) (**le**).
        One-CLF bird fly-exit (**come**) (**ASP**)

        'A bird flew out (toward the speaker).' V_{path}

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[4] (2) is not an exhaustive list of Mandarin DMMCs. Mandarin has other means of expressing Paths, including using deictic directionals such as *come* and *go*), and other structures interpreted as 'results'. In addition, the complements in (2) can be complements of non-manner-of-motion verbs. Space prevents discussion of these other structures.

[5] Lamarre (2007) and Fan (2013) discuss motion and caused motion events in modern Mandarin in this tradition.

[6] A complication is that the morpheme *dao* (see (4a)) is homophonous with the verb 'arrive', also used as an 'achievement complement' (Li & Thompson, 1981); the *dao* ('to') that grammaticalized from the verb. This paper predicts that the two items have distinct syntactic behaviours, as well as interpretations: for example, verb *dao* 'arrive' should be compatible with aspect particles and have unaccusative syntax; preposition *dao* 'to' should not. A further complication is that some speakers only have the verb; these speakers are still expected to have PPs such as *cong* 'from', and the unbounded PPs *yanzhe* 'along' and *xiang* 'toward'.
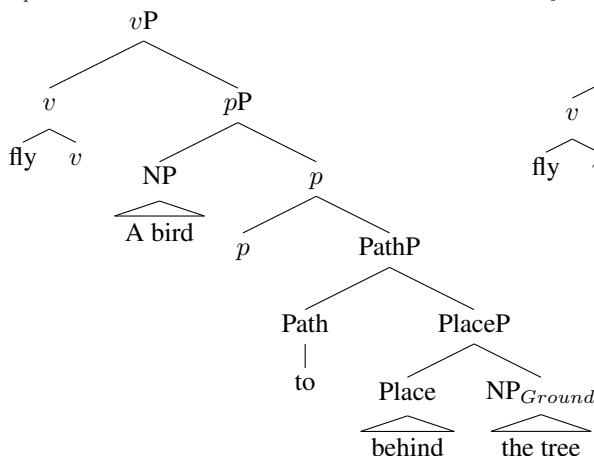
Similarly, (4a)-(4b) differ with respect to the aspect marker *le*: *le* can immediately follow the V_{path} complement (4b), but not P_{path} (4a) (Chao, 1968).

Finally, (4a)-(4b) differ phonologically. In many varieties of Mandarin, P_{path} can undergo 'preposition-drop' (can be null) in DMMCs (e.g. Beijing; Lamarre (2007:6)). I am not aware of parallel reports of 'verb-drop' of V_{path} in DMMCs. However, V_{path} undergoes a different type of reduction: V_{path} markers are always atonal in DMMCs (Chao 1968: 459) (they bear tone as independent verbs). This reduction has led to the characterization of V_{path} complements as affixes, and their informal comparison to Germanic particles (Chao 1968; Lamarre 2007: 7). P_{path} in DMMCs is tonal.
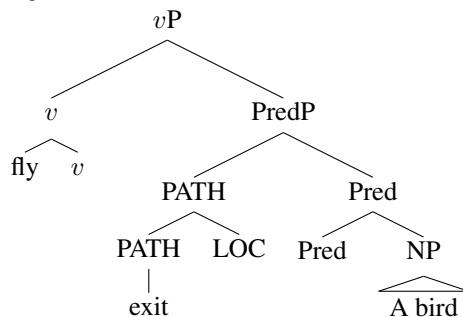
2.2. Two Structures

This paper argues the differences in (4a)-(4b) reflect the syntactic structures (5a)-(5b), respectively. Both pP (5a) and PredP (4b) are interpreted as 'Paths' as complements of a manner-of-motion verb.

(5)   a. P_{path}: *A bird flew to (behind) the tree.*   b. V_{path}: *A bird flew-exited.*

(5a) is based on Koopman (2000) and Svenonius (2008): the directional preposition has a rich internal structure, including projections directly denoting spatial concepts: Path (a transition) and Place (location/termination) are taken to be obligatory structural components. P_{path} realizes PathP.

(5b) is based closely on Irwin's (2012, 2016) analysis of English unaccusative and directional particle verbs; aspects of this structure are shown to capture properties of Mandarin V_{path}.

(5a)-(5b) are discussed in full detail in the following sections. First, a point of comparison to highlight is that the surface subject NPs merge in vP-comp in both (5a)-(5b), and so are interpreted as 'undergoing change'. Then, two key points of contrast: (i) P_{path} merges as the complement of the manner-of-motion verb in (5a), but V_{path} is in the specifier of the manner-of-motion verb complement in (5b); (ii) P_{path} NP merges in a specifier (5a), but the V_{path} NP merges as a complement (5b).

2.3. Two classes of Paths in Mandarin DMMCs: Evidence from argument configuration

This section shows that (5a)-(5b) differ in the locus of the introduction of the surface subject NP, focussing on P_{path} / (5a). V_{path} / (5b) is discussed more fully in the next Section.

Verb structure classes can be diagnosed in Mandarin by possible orderings of verbs and surface subjects. Post-verbal subjects are productively available in unaccusatives (6b) (especially as locative-inversion), and unavailable (broadly) with transitive and unergative verbs, including manner-of-motion verbs (6a). P_{path} DMMCs do not allow a post-verbal subject (7a) (even as locative inversion), patterning with (6a). V_{path} DMMCs pattern with unaccusatives in allowing a post-verbal subject (7b).

(6)   a.   *Fei-le yi-zhi niao.   b.   Lai-le yi-zhi niao.
        Fly-ASP one-CLF bird.   Come-ASP one-CLF bird

        'A bird flew.'   *Non-directed Manner*   'A bird came.'   *Unaccusative*

(7) a. *Wang fangjian-li fei-le   yi-zhi-niao.   b. Fei-chu-le   yi-zhi   niao.
        To   room-in   fly-ASP one-CLF-bird   Fly-exit-ASP one-CLF bird
        'Into the room flew a bird.' P_{path} 'A bird flew out.' V_{path}

The contrast in (7a) and (7b) would not obviously arise if the vP-complements were equivalent; I take the difference to reflect structural differences.

Specifically, the failure of the Figure to occur in post-verbal position in (7a) is consistent with it having an external-argument-like syntax/semantics. This would follow from the proposal that adpositions include a functional layer pP (as in (5a)) (Svenonius, 2003, 2007): NP_{Figure} is argued to be introduced in spec-pP, mirroring the introduction of external arguments in a functional layer in the verbal domain. I assume that a Figure in spec-pP, having external-argument-like properties, can saturate spec-VoiceP (cf. Wood (2015:Ch.4)), and that this means that a spec-pP Figure may be interpreted as the Agent of the manner-of-motion event, a point we return to in Section 3.2.

As we proceed we will argue that the post-verbal NP in (7b) does not have external-argument-like properties, including that it is not an Agent of flying, and we will take this to mean it does not merge in spec-pP. We can reject that it merges in the complement position of lexical P in (5a), given that this position results in the interpretation of an NP as *Ground*. A solution is to adopt a second structure, which I propose is (5b). Following Irwin (2012, 2016), in (5b) the surface subject merges as the complement of PRED, and PRED licenses the post-verbal subject in (7b), rather than spec-pP. Full details of (5b) are given immediately below.

2.4. Two classes of Paths in Mandarin DMMCs: Evidence from interpretation

The two Paths in Mandarin can be distinguished by the interpretation,[7] (i) of the PATH item, and (ii) of NP_{Ground}. Again, we suggest this corresponds to configurational differences.

The structure in (5b) is based closely on Irwin's (2012; 2016) analysis of unaccusative verbs of motion/appearance in English. We suggest components of Irwin's PredP, as in (5b), also correctly captures the interpretation of V_{path} (but not P_{path}) complements in Mandarin.

First, (6)-(7) showed that V_{path} directional complements pattern with unaccusatives in Mandarin, and we suggest this follows from (5b). In (5b), the manner-of-motion v takes a PredicateP complement. The silent head PRED introduces a relation between the specifier and complement, but also, crucially, PRED introduces presentational semantics (Irwin 2016); it is this property of PRED that would license the post-verbal subject in (7b).[8] Crucially, there is no counterpart to PRED in the P_{path} structure in (5a).

Second we adopt the suggestion that PredP complements giving rise to the interpretation of change-of-position/ appearance include a contextually-determined LOCATIVE in their specifier, like (English) existential *be*-sentences (Irwin 2012; cf. Francez (2007)).[9] Following Irwin's (2016) analysis of English directional particles, we propose that in V_{path} DMMCs (5b), V_{path} merges in spec-PredP. The closed class of directional items (V_{paths}) in Mandarin includes *shang* 'descend', *xia* 'ascend', *chu* 'exit', *chu* 'exit', and *hui* 'return'. Their merger in spec-PredP (rather than as Pred or v), parallel to English directional particles like *A boy ran in*, recalls their informal description as affixes/particles (Chao, 1968).

Contextual interpretation is determined by what Irwin (2016) calls the 'center of discourse'. 'Center of discourse' can be illustrated through contrasting the availability of V_{path} with P_{path} in (8)-(9). Take as context that I am in the kitchen, and a bird flies from the yard, and into the kitchen:[10]

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[7] Variable behavior in Path complements of DMMCs has, cross-linguistically, often been characterized as an aspectual alternation related to the lexical semantics of P, or to telicity/ boundedness. Space prevents full discussion, or presentation of the data showing that classes of Paths in Mandarin cannot be clearly carved up in this way.

[8] For Irwin (2012, 2016), English change-of-position unaccusatives pattern syntactically and semantically with existentials, rather than with those 'unaccusatives' interpreted as change-of-state. Exploiting this she suggests a denotation for PRED based on McNally (1997), but this denotation depends on language-specific primitives from which existentials derive; I leave establishment of a denotation for Mandarin to future research. Similarly, I leave the precise denotation of the locative variable in spec-PredP to future research, but for English, see Francez (2007).

[9] Previously proposed contextually-determined elements include pronouns (Francez, 2007) and implicit LOCATIVEs (Partee et al., 2011) in existentials; and deictic LOCATIVEs *here/there* and directional particles in expressions like *A boy ran in* in English (Irwin, 2012, 2016).

[10] In Mandarin, locatives (including source PPs) immediately precede verbs, a pattern also found in e.g. Dutch; I

(8)   a.   Ta   cong yuanzi-li fei-le.
           3SG from yard-in   fly-ASP

           'It flew **from** the yard.' P_{path}

     b.   Ta   fei dao chufang-li le.
           3SG fly to   kitchen-in ASP

           'It flew **to** the kitchen.' P_{path}

(9)   a. $^{??}$Ta fei-chu yuanzi(-li) le.
           3SG fly-exit yard(-in)   ASP

           'It flew-**exited** the yard.' V_{path}

     b.   Ta   fei-jin   chufang-li le.
           3SG fly-enter kitchen-in ASP

           'It flew-**entered** the kitchen.' V_{path}

Watching the bird, a speaker can felicitously describe its flight with either P_{path} in (8) (though (8b) is more natural). This follows from (5a), if the interpretation of the trajectory of the Figure is determined simply by whatever Path is present (Kracht, 2008; Svenonius, 2008). The V_{path} items in (9) also describe the trajectory of the Figure, however speakers find (9a) odd (if not ungrammatical) in this context. I take this to follow from the dependency of the interpretation of the Path item on the locative variable in spec-PredP in (5a) and the sensitivity of LOC to the center of discourse.[11]

Finally, P_{path} and V_{path} have distinct conditions on NP_{Ground}. P_{path} in (10) requires a locative complement NP_{Ground}, and that that NP_{Ground} be modified by an 'AxialPart' (see a.o. Biggs (2014)). This suggests Mandarin adpositions are obligatorily 'transitive': NP_{Ground} merges as the complement of a lexical head Place; PlaceP encodes locative semantics, and is obligatorily overt in the P_{path} structure. All this is consistent with the structure in (5a).[12]

(10)   Wo zou-le   dao *(fangjian) *(limian).
        1SG walk-ASP to   door   inside

        'I walked to inside the room.' P_{path}

(11)   Wo zou-chu-le   (fangjian) (waitou).
        1SG walk-exit-ASP room   outside

        'I walk-exited to outside the room.' V_{path}

In contrast, V_{path} does not require a locative complement, and nor does its NP_{Ground} require overt modification by AxialPart (11); both observations are consistent with the 'intransitive' syntax of (5b). I assume that locative/Place semantics are provided by the null, locative variable that merges with PATH, such that (contextually determined) location is inherent to (5b), and V_{path} does not require NP_{Ground}.

3. Contrasts between Path and Result complements
3.1. The syntax of Object Resultatives in Mandarin

Mandarin also allows 'AP' 'result' complements of manner-of-motion verbs (12): in the spirit of Williams (2014), in this structure a manner-of-motion verb (M) is followed by a v/adjective (R); the surface subject is interpreted as undergoing a change-of-state, holding the result state M-R.

(12)   Yi-zhi   niao fei(-*le)-lei-le.
       One-CLF bird fly-ASP-tired-ASP

       'A bird flew-tired.'   *Manner-Result (M-R) Object Resultative*

As in V_{path} (and unlike P_{path}) DMMCs, an aspect particle cannot intervene between M and R in an object resultative (12) (Chao, 1968). In addition, Path and Result complements of manner-of-motion verbs are in complementary distribution, and cannot co-occur (13a)-(13b).

(13)   a.   Yi-zhi   niao fei-lei(*-chu)-le.
           One-CLF bird fly-tired-exit-ASP

           'A bird flew-tired(*-exiting).'   *M-R-*Path*

     b.   Yi-zhi   niao fei-chu(*-lei)-le.
           One-CLF bird fly-exit-tired-ASP

           'A bird flew-exited(*-tired).'   *M-P-*Res*

These two observations might be taken to indicate that V_{path} and M-R Object Resultatives have the same underlying structure.

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assume locatives merge as vP adjuncts (Gehrke, 2008; Rothstein, 2004); see also Fong (1997).

[11] The phenomena can be likened to the difference Stowell (1978) describes in English between *There ran toward me a group of noisy children* vs. $^{?}$*There ran away from me a group of noisy children* (thanks to Tricia Irwin (p.c.) for this suggestion).

[12] Mandarin bans P-stranding (Huang, 1982:510-13).

However, the syntactic and semantic properties of Directionals and Resultatives are very different (Lu, 1977).[13] For example, a post-verbal subject is not possible in an Object Resultative (14), unlike V_{path} DMMCs (7b). This follows if a post-verbal subject requires the PredP complement's presentational semantics (as in the last section), and if the AP/vP complement does not include PredP.

Based on this contrast, and much previous work, Object Resultatives must correspond to a third configuration. We adopt that in (15) (from Williams (2014)), with NP merging in the complement of vP; NP raises to canonical subject position (spec-TP) in the course of the derivation (not shown).

(14) *Fei-lei-le   yi-zhi   niao.
      Fly-tired-ASP one-CLF bird

      'Flew-tired a bird.'

(15) Object Resultative: *A bird flew-tired.*
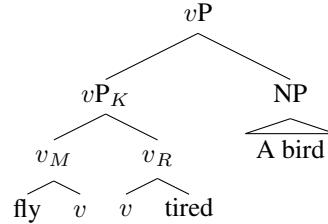
The key difference between (15) and the DMMCs in (5a-5b) is that in (15) NP merges with a 'complex' v_{PK}, comprising a manner-of-motion v (v_M) and a result state v (v_R) (Williams, 2014). In merging with the maximal projection (K), NP does not hold a thematic relation either to Manner vP or Result vP: it is an 'unselected' object (Huang, 1988, 2006; Li, 1990; Williams, 2014; Hu, 2015).

Evidence for the 'unselected argument' configuration, and that Object Resultatives must be distinguished from PATH DMMCs, includes possible responses to the question *X did what?* (*X zuo-le shenme?*), which presupposes an (Agent) argument. It is not possible to reply that someone *ran tired* (although v_R/*tired* is OK) (Williams, Accepted:25). The diagnostic is extended to DMMCs in (5a-5b): P_{path} is a possible response, given here NP holds a thematic relationship with the complex predicate. V_{path} is judged ungrammatical, which follows from (5b) where the NP is not in a thematic relation with either V_{path} or the manner-of-motion v.

(16) a. $^{??}$Ta pao-lei   le.
          3SG run-tired ASP

          'He ran tired.'   Object Resultative

      b. Ta   lei   le.
          3SG tired ASP

          'He is tired.'   AdjP

(17) a. Ta   pao dao wu-li   le.
          3SG run to   room-in ASP

          'He ran to in the room.' P_{path}

      b. $*/^?$Ta pao-chu le.
          3SG   run-exit ASP

          'He ran exited.' V_{path}

3.2. Variation in event composition

As above, in the object resultative, an NP argument is predicated of an event-of-change. In contrast, P_{path} is predicated of a manner-of-motion event in (5a); and in (5b) the manner-of-motion event modifies V_{path}. Adapting Williams (2014), this gives rise to the following compositions:

(18) a. $\llbracket MP \rrbracket = \lambda e_m \exists e_p \llbracket M \rrbracket(...)(e_m) \& \llbracket P \rrbracket(..)(e_p) \& 'K'(e_m, e_p)$ $\qquad$ P_{path} DMMC

      b. $\llbracket MP \rrbracket = \lambda e_p \exists e_m \llbracket P \rrbracket(...)(e_p) \& \llbracket M \rrbracket(..)(e_m) \& 'K'(e_p, e_m)$ $\qquad$ V_{path} DMMC

      c. $\llbracket MR \rrbracket = \lambda e_c \exists e_m \exists e_r \llbracket M \rrbracket(...)(e_m) \& \llbracket P \rrbracket(..)(e_r) \& 'K'(e_c, e_m, e_r)$ $\qquad$ Object Resultative

      $\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad\qquad$ (Williams, 2014:316)

(18) has interpretative consequences. For example, V_{result} can be interpreted as a sequence of events, but V_{path} is a unique event. Second, by their distinct interactions with modifiers: modifiers can always scope over a whole V-V, but the three complements differ in possible narrow readings.[14]

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[13] In contrast to e.g. English, none of the many means of forming a resultative in Mandarin involve adpositions, spatial or otherwise. The 'AP' complement strategy is highly productive (Li, 1990). The 'AP' is likely a deadjectival verb (Hu, 2015).

[14] Adverb choice is crucial: manner-of-motion adverbs have a different pattern.

This is illustrated for negation. Negation preferably scopes over the manner-of-motion verb, to the exclusion of the preposition, in the P_{path} DMMC in (19a); some informants found it difficult to even coerce an interpretation that there was a *flying* event, but not to Beijing. This follows if P_{path} is a predicate of the manner-of-motion event, and the NP can be identified as the external argument of the manner-of-motion verb, as suggested earlier.

(19) a. Zhangsan mei   fei dao Beijing.
          Zhangsan NEG fly to   Beijing
          'Zhangsan didn't *fly* to Beijing.' P_{path} DMMC

      b. Zhangsan mei   fei-chu Beijing.
          Zhangsan NEG fly-exit Beijing
          'Zhangsan didn't fly-*exit Beijing*.' V_{path} DMMC

      c. Zhangsan mei   fei-lei.
          Zhangsan NEG fly-tired
          'Zhangsan did not *fly-tired*.'   Object Resultative

In contrast, many speakers find it difficult to coerce the narrow scope reading over the manner-of-motion verb with V_{path} in (19b), despite linear order (cf. Hsiao (2009:172)). Instead a *flying* event is understood to have occurred whose endpoint (V_{path}) was not reached. This follows from (5b) where the predication relation is between the NP and PATH, and where the manner-of-motion verb has a bleached interpretation as a modifier of the directed motion event.

Finally, with the Object Resultatives in (19c), speakers can coerce narrow scope either over the manner event or exclusively over the result event. This follows from the presence of two vs in (15).

4. Conclusion

The complements of manner-of-motion verbs that give rise to the interpretation of Directed Manner of Motion are superficially similar in Mandarin, as in many other languages. As such cross-linguistic work on DMMCs has typically adopted, implicitly or explicitly, a unified configuration of Path and Result complements.

This paper introduced syntactic and semantic diagnostics that indicate that complements that give rise to a directed interpretation vary systematically in their configuration, at least in Mandarin. Three classes of complements were identified and defined with respect to (i) the locus of a vP-internal NP, and (ii) the locus of the item interpreted as a Path/Result, and (iii) type of composition with the manner-of-motion verb. Variation in the interpretation of the three complements was shown to follow from these differences in syntactic structure.

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Proceedings of the 34th West Coast Conference on Formal Linguistics

edited by Aaron Kaplan, Abby Kaplan, Miranda K. McCarvel, and Edward J. Rubin

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Biggs, Alison. 2017. Different Paths in Directed Manner of Motion Constructions. In *Proceedings of the 34th West Coast Conference on Formal Linguistics*, ed. Aaron Kaplan et al., 81-88. Somerville, MA: Cascadilla Proceedings Project. www.lingref.com, document #3299.