Chinese Directionals

Miriam Butt and Biljana Scott
UMIST, University of Oxford
mutt@ccl.umist.ac.uk, biljana.scott@ling-phil.ox.ac.uk
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1 Light Verbs

We examine Chinese directionals and seek to align them with light verbs in Urdu.

Jespersen (1965,Volume VI:117) is generally credited with first coining the term *light verb* for English V NP constructions such as

have a rest, a read, a cry, a think
take a sneak, a drive, a walk, a plunge
give a sigh, a shout, a shiver, a pull, a ring

- Light Verbs are part of complex predicates. The defining characteristics of complex predicates are:
  - The argument structure is complex (two or more semantic heads contribute arguments—primary vs. secondary predication).
  - The grammatical functional structure is that of a simple predicate: there is only a **single subject** and no embedding.
  - Complex predicates may be formed either morphologically (lexically) or syntactically. The constructions under investigation here are syntactically formed.
- Identifying Light Verbs
  - A light verb is always form-identical with a main verb (Butt and Lahiri 2002).
  - Light Verbs have a funny syntax: they can be distinguished syntactically and phonologically from main verbs and auxiliaries — this indicates the need for a separate syntactic class (Butt and Geuder 2001).
  - The funny syntax goes hand-in-hand with a funny semantics: the systematic semantic contribution of a light verb is hard to characterize.

We argue that both Chinese directionals and Urdu light verbs serve to further *structure* the event described by the main verb.

(1) a. nadya=ne xɑt **lɪk^h li-ya**
Nadya.F=Erg letter.M.Nom write take-Perf.M.Sg
'Nadya wrote a letter (completely).' (Urdu)

b. nadya=ne mɑkan **bɑna di-ya**
Nadya.F=Erg house.M.Nom make give-Perf.M.Sg
'Nadya built a house (completely, for somebody else).' (Urdu)

(2) a. wo **chi guo** le
I eat cross Curr.Rel.Sit.
'I have eaten.' (Chinese)

b. ta ba men **guan shang** le
he OM door close ascend Curr.Rel.Sit.
'He closed the door.' (Chinese)

2 Chinese Directionals — Defining Properties

2.1 The Potential Infix

- Chinese directionals are usually classed with resultatives because both take the potential infix (*de*/*bu* for positive and negative, respectively).

(3) duan de shang (Directional)
serve POT_{pos} ascend
'can be served up (Chinese)

(4) da bu po (Resultative)
hit POT_{neg} break
'cannot be broken/unbreakable' (Chinese)

2.2 A Closed Class

Directionals are drawn from a closed set of verbs of direction.

(5) **Directional Etymons**

shang	ascend/up	*hui*	return/back
xia	descend/down	*qi*	rise
jin	enter/in	*kai*	open/apart
chu	exit/out	*lai*	come/hither
guo	cross/over	*qu*	go/thither
dao	reach/to		

(6) **Examples of Usage**

pao jin	run enter	=‘to enter running’
na chu	take exit	=‘to take/extract’
fang xia	put descend	=‘to put down’
pa shang	climb ascend	=‘to climb up’
tong guo	traverse cross	=‘to go through/cross’
zhuan hui	turn return	=‘to turn back/return’
lai dao	come reach	=‘to arrive, come to’
zhan qi	stand rise	=‘to stand up’
zou kai	walk open	=‘to walk away’

2.3 Optional Deictic Component

Directionals may optionally be followed by the verb *lai* ‘come/hither’ or *qu* ‘go/thither’.

(7) a. *pao jin lai* run enter come =‘come running in’
pao jin qu run enter go =‘go running out’

b. *na chu lai* take exit come =‘to bring out’
na chu qu take exit go =‘to take out/away’

2.4 Dissociability

Directionals are dissociable.

(8) a. ta **duan shang** [yi-bei cha] **lai** le
he serve ascend one-cup tea come Curr.Rel.Sit.
‘He served up a cup of tea.’ (Chinese)
[Li and Thompson 1981:63]

b. ta **duan** le [yi-bei cha] **shang lai** le
he serve Perf one-cup tea ascend come Curr.Rel.Sit.
‘He served up a cup of tea.’ (Chinese)
[Li and Thompson 1981:63]

2.5 Multiple Functions of Directionals

The Class of Directionals listed under (5) can function as:

1. Freestanding main verbs

(9) a. guo malu
cross road
‘to cross the road’ (Chinese)

b. guo nian
cross New Year
‘to pass the New Year’ (Chinese)

2. V2 in a directional construction

(10) a. pao guo qu
run cross go
‘to run across’ (Chinese)

b. shuo guo lai
speak cross come
‘to explain’ (Chinese)

3. Aspectual markers: a small subset (*guo* ‘cross’, *qilai* ‘rise-come’ and *xiaqu* ‘descend-go’) can also be used as aspectual markers denoting the experiential perfective ((11)), the inceptive ((12)) and the durative ((13)).

(11) a. ni chi guo yuchi meiyou?
you eat cross shark fin NEG
‘Have you ever eaten shark’s fin? (Chinese)
[Chao 1968:251]

b. wo shuai duan guo tui
I fall sever cross leg
‘I broke my leg once (but it has healed since).’ (Chinese)
[Iljic 1987:36]

(12) ta shuo qilai le
he speak rise-come Curr.Rel.Sit.
‘He started speaking.’ (Chinese)

(13) ta shuo xiaqu le
he speak descend-go Curr.Rel.Sit.
‘He continued speaking.’ (Chinese)

2.6 Complications

There are a number of exceptions to the defining properties of directionals: the picture is more complex.

- The potential infix may be prohibited
- Collocationally, the verbs *come* and *go* may be prohibited or obligatory, as well as optional.

- Distributionally, the directional compound may be constrained or bound, as well as dissociable.
- The V2 directional construction does not always give rise to a the straightforward directional meaning (or even a metaphorically extended meaning).

3 Evidence for a Distinct Subclass — Light Verbs?

Previous analyses: Several Sinologists have suggested that in addition to Resultatives and Directionals, a third class of verb compounds exists, often referred to as "phase" complements following Chao (1968).

The common properties of this class include: 1) a quasi-aspectual meaning; 2) boundedness; 3) they do not take the potential infix or the deictic *lai* 'come' and *qu* 'go'.

3.1 *guo* 'cross' — A Case Study

Table (14) provides phonological, collocational and syntactic evidence in favor of a distinct class of light verbs (exemplified by *guo*, see Scott (1996) for further discussion).

Light verbs can be clearly distinguished from the lexical V2 directional usage and from the fully functional aspectual usage.

(14)

	guo 'cross'			
	Main Verb	V2 Directional	V2 Light Verb	Aspect Marker
I	[+tone] free form no S.R.	[±tone] (pref.) constrained strong S.R. LOC/THEME	[±tone] (dispref.) bound affix some S.R. THEME	[−tone] bound affix few S.R. none
II	*BA ASP POT *lai/qu* AUX		BA *Durative *POT **lai/qu* *AUX	BA (rare) *Durative*perf
III	NEG NOM V-C		*NEG *NOM *V-C optional	NEG NOM V-C obligatory

S.R. = selectional restrictions BA = Object Marker Construction
ASP = verbal aspects V-C = Verbal Classifiers
POT = Potential Construction NOM = Nominalizing Particle DE_{nom}

Co-occurence

(15) a. ta conglai meiyou **cuo guo**$_{LV}$ hao **jihui** **guo**$_{Exp}$
he ever NEG err cross good opportunity cross
'He has never missed a good opportunity.'

b. nar a? ta bf cuo **guo**$_{LV}$ **guo**$_{Exp}$
where Quest.Part. he err cross cross
'Who says he hasn't? He has! (he has had the experience of having erred-past good opportunities).

Negation

(16) a. hai mei chi *guo ne
yet NEG eat cross Sent.Final.Part
'I haven't eaten yet.'

b. mei chi guo yuchi
NEG eat Exp.Asp. shark fin
'I have never eaten shark's fin.

Verbal Classifiers

(17) a. *ta chi guo liang-ci fan
he eat cross two times rice

a. ta chi guo liang-ci yuchi
he eat cross two times shark fin
'He has eaten shark's fin twice before.'

3.2 Semantic Evidence

The diagnostics listed in table (14) offer evidence for a distinct subclass with distinct phonological and syntactic properties.

(18)

Directional Light Verbs	
guo	'cross'
shang	'ascend'
dao	'arrive'
xia	'descend'
kai	'open'

Question: Is there a common semantic denominator which characterizes the members of this subclass of directionals?

3.2.1 A Quasi-Aspectual Meaning

- The light verb usage seems to add a telic component to the event (in most cases).
- The light verb usage seems to group with a subclass of resultative V2 uses.

(19)

Resultatives	
ting	'finish'
wan	'complete'
liao	'finish/complete'
hao	'good'
diao	'fall/drop'
jian	'see/meet'
zhu	'stop'

- The light verb usage can serve as a substitute for an otherwise obligatory aspectual marker (e.g., the *ba*-construction).

All of this evidence points towards an analysis by which the light verb contributes a [±telos] feature to the event (cf. Scott 1996).

However, this analysis is too reductive:

- the full class of light verbs (combining directionals and resultatives) comprises about a dozen elements: this by far exceeds the number of aspectual markers in most languages.
- the directional light verbs are not obligatory, unlike aspectual markers (section 3.3.1).
- it does not account for lexically motivated selectional restrictions (section 3.3.2).
- it does not do justice to the observation that a class of light verbs occurs crosslinguistically. This class is characterized by similar syntactic, semantic and phonological properties and serves to further modulate or structure an existing event predication.

3.3 Crosslinguistic Evidence

3.3.1 Functional vs. Lexical: Aspect

When the directional is V2, it can either denote a literal directional meaning ((20)) or it can acquire what looks like a more aspectual usage ((21)).

(20) pao guo qu
run cross go
'to run across' (Chinese)

(21) wo chi guo le
I eat cross Curr.Rel.Sit.
'I have eaten.' (Chinese)

However, whereas aspectual markers are obligatory, the "aspectual" V2 directional is not obligatory.

(22) a. ta ba men **guan shang** le
he OM door close ascend Curr.Rel.Sit.
'He closed the door.' (Chinese)

b. ta ba men **guan** le
he OM door close Perf
'He closed the door.' (Chinese)

This finds a close parallel with Urdu V-V complex predicates, where the contribution of the Urdu light verb (V2) is often considered to be vaguely aspectual in nature.

But, again the presence of the light verb is optional, not obligatory.

(23) a. nadya=ne xɑt **lɪk^h li-ya**
Nadya.F=Erg letter.M.Nom write take-Perf.M.Sg
'Nadya wrote a letter (completely).' (Urdu)

b. nadya=ne xɑt **lɪk^h-a**
Nadya.F=Erg letter.M.Nom write-Perf.M.Sg
'Nadya wrote a letter.' (Urdu)

Note: With regard to the standard Chinese aspectual markers, Klein, Li and Hendriks (2000) for example suggest that even these should be interpreted as *assertion markers* in that they serve to assert or highlight a part of the semantic content of the clause that is already given, rather than contributing new information to it. The observed aspectual effects are thus derived rather than primary.

3.3.2 Functional vs. Lexical: Selectional Restrictions

The Chinese light verbs construction shows selectional restrictions that go beyond the merely functional.

(24) a. guan diao/*shang shouyinji
shut fall/ascend radio
'switch off the radio' (Chinese)

b. guan shang/?diao men
shut ascend/fall door
'close the door' (Chinese)

Urdu light verbs show similar selectional restrictions (see Butt 1995 for more discussion).

(25) a. nadya=ne xɑt lɪkʰ li-ya
Nadya.F=Erg letter.M.Nom write take-Perf.M.Sg
'Nadya wrote a letter (completely).' (Urdu)

b. *nadya xɑt lɪkʰ gɑ-yi
Nadya.F.Nom letter.M.Nom write go-Perf.M.Sg
'Nadya wrote a letter (completely).' (Urdu)

(26) a. nadya gɪr gɑ-yi
Nadya.F.Nom fall go-Perf.F.Sg
'Nadya fell (down).' (Urdu)

b. *nadya=ne gɪr li-ya
Nadya.F=Erg fall take-Perf.M.Sg
'Nadya fell (completely).' (Urdu)

Note: The issue is not simply one of transitivity matching.

(27) nadya mɑkan **bɑna pɑṛ-i**
Nadya.F.Nom house.M.Nom make fall-Perf.F.Sg
'Nadya fell to building a house.' (Urdu)

3.4 Summary

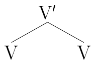
All the formal and semantic evidence points to the existence of distinct class of directional light verbs (previously referred to as phase complements).

Question: How do the semantics of light verbs work?

4 The Structuring of Events via Light Verbs — Urdu

4.1 General Characteristics of Complex Predicates (Butt 1995)

Light verbs must be considered as a type of co-head or co-predicator (cf. Baker and Osamuyinnen 1999).

(28)


This co-predication is expressed in terms of *Argument Fusion* at the level of argument structure (thematic roles).

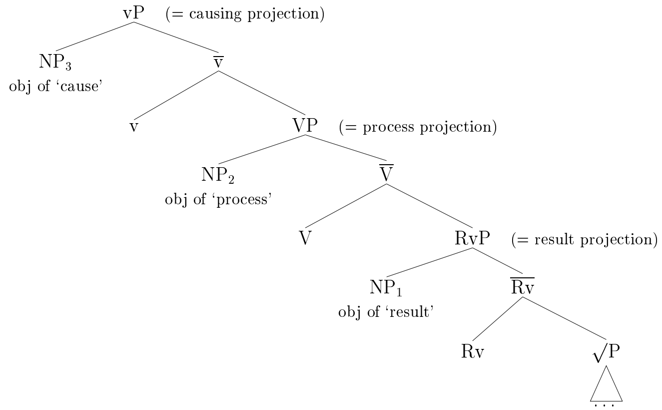
The complex predicate only has a single *subject*: There is no evidence for an embedded or controlled subject.

4.2 Event Decomposition/Modification

Butt and Geuder (2001) analyze these light verbs in Urdu as semi-lexical elements whose apparent aspectual effects are linked to a subtle form of event structuring and modification.

On the basis of complex predicates in Urdu and Bengali, Butt and Ramchand (2001) make the following proposals (building on Ramchand 1997, 2001).

- Light verbs serve to help *structure* events.
- Light verbs are not simply functional heads that encode "viewpoint aspect" (unlike auxiliaries).
- This is what makes light verbs unique and seems to give them properties intermediate between lexical items and auxiliaries (or inflections).

(29)


The syntactic representation works together with a Davidsonian event semantics (Davidson 1967, Higginbotham 1985, Parsons 1990).

The following notions are assumed to be *primitives* of the metalanguage:
$e = e_i \rightarrow e_j$: e consists of two subevents, e_i, e_j such that e_i leads to or causes e_j (see Hale and Keyser 1993)

$e = < e_i, e_j >$: e consists of two subevents, e_i, e_j such that e_i and e_j form an accomplishment event structure where e_i is the process portion and e_j is a state interpreted as the result state of the process (see Parsons 1990 and Higginbotham 1999, cf. also Levin and Rappaport-Hovav's 1998 notion of template augmentation).

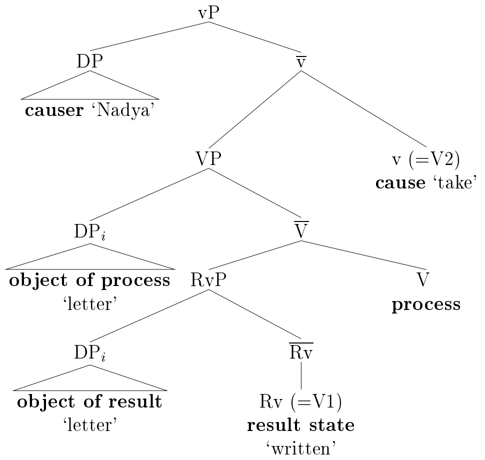
4.3 Sample Analysis

(30) nadya=ne xɑt **lɪkʰ** **li-ya**
Nadya.F=Erg letter.M.Nom write take-Perf.M.Sg
'Nadya wrote a letter (completely).'

Syntax and Semantics for (30) — Revised Workshop Analysis

(31) V1 = Rv = written (e; y) V2 = v = CAUSE ($e'(=e_1 \rightarrow e_2)$; x,y)
$\exists$e: e = $e_1 \rightarrow <e_2\ e_3>$[Cause($e_1 \rightarrow e_2$; 'Nadya', 'letter') & written(e_3; 'letter')]
'Nadya instigates a process affecting a letter which has the result that the letter comes to be written.'

(32)



Features of the Analysis

- The main verb (V1) actually provides the result component of the predication, not the light verb as would be expected if light verbs were indeed akin to aspectual markers (as is often assumed).
- The main verb also is responsible for the process (V) portion (this contrasts with Germanic particles, which are not verbs and are confined to the result portion).

4.4 The Structuring of Events via Directionals

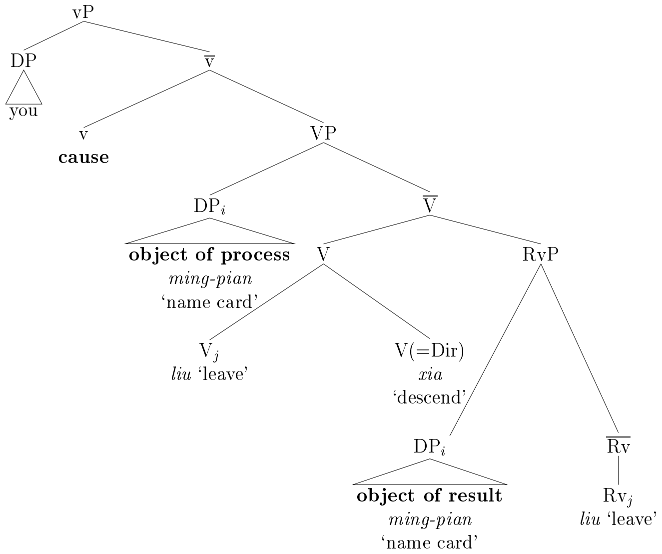
We suggest that the Chinese directional light verbs should be analyzed along similar lines. Chinese Directionals pattern with the Urdu light verbs in that:

- The directionals form a complex predicate as co-heads under V′.
- The directionals structure the main event by contributing subevental information
- The main verb (V1) in conjunction with the light verb (V2) constructs the telic component as part of a RvP (result phrase).

(33) qing ni liu xia nide ming-pian
please you leave descend your name card
'Please leave your name card.'

(34) V1 = Rv = left (e; y) V2 = CAUSE-PROCESS ($e'(=e_1 \rightarrow e_2)$; x,y)
$\exists$e: e = $e_1 \rightarrow <e_2\ e_3>$[Cause-Process($e_1 \rightarrow e_2$; 'you', 'name card') & left(e_3; 'name card')]
'You instigate a process affecting a name card which has the result that the name card comes to be left.'

(35)



Argument Structure:

- When the predication includes a THEME argument, the object of result and object of process are coindexed, just as with the Urdu light verbs.
- When the predication includes a LOCATIVE, no complex predication is possible:
  - The LOCATIVE is only subcategorized for by the directional, not by the main verb.
  - Neither argument sharing nor telic event building is possible — the prototypical directional construction results, which can be analyzed as a PP complement headed by the directional (section 4.6).

4.5 Points for Discussion

Although light verbs are responsible for event building/modulation, they exhibit lexical differences which result in overall interpretational differences at the level of the VP.

(36)

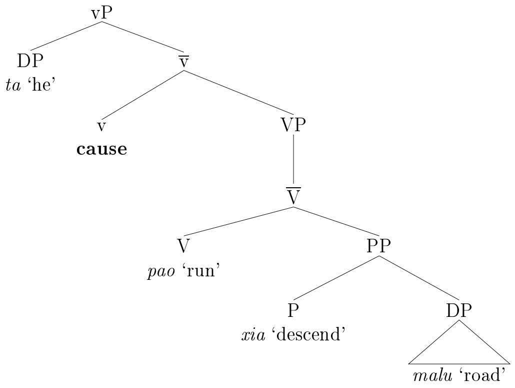
Directional Light Verb	**(Sub)event Structure of the VP**
lai/kai/xia 'come/open/descend'	$e_{process}$
shang/dao/guo 'ascend/arrive/cross'	$e_{process} + e_{telos}$
wan/zhu/hao 'finish/stop/good'	e_{telos}

- Structure seems counterintuitive: the subset of light verbs drawn from the resultative construction seem to have switched into becoming main verbs.
- Further point: just like in Urdu, these structures show a reluctance to be negated.

4.6 Sample Analysis — Prototypical Directional (Non Light Verb)

(37) ta pao xia malu
he run descend road
'He run down the road.'

(38)



5 Conclusion

A subclass of Chinese directionals were found to be light verbs.

- Light verbs crosslinguistically form a distinct category.
- Light verbs serve to modulate (sub)event structure.
- The main verb (V1) turns out to contribute the telic/result component of the predication as part of the complex predicate construction (further research needs to be done for the Chinese case).

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