Complex Predicate Puzzles

Miriam Butt
University of Konstanz

NINJAL International Symposium
Mysteries of Verb-Verb Complexes in Asian Languages
Tokyo, December 14–15, 2013

This talk

Outline

Staking out an Empirical Domain

- Two (or more) items are not complex predications, compounds or collocations just because
  - they occur together fairly frequently
  - and mean something in that combination
- Example:
  A banker at UBS **is being** fired.

- Neither *a banker* nor *is being* (or *being fired*) should be considered a complex predicate, compound or collocation under anybody's theory or description.

Staking out an Empirical Domain

- Complex predicates raise thorny problems about the nature of predication which can only be understood if the empirical domain is well demarcated.

- Goal:
  - establish formal properties of complex predicates
  - use that to focus on a coherent empirical domain
  - consider the diachrony of complex predicates
  - and the challenges posed for our current understanding of predication and event semantics

Outline

Background

- Background Assumptions:
  - Groundwork as in Butt (1995)
  - Further developments as in Butt (1998), Butt&Geuder (2001), Butt&Tantos (2004), Butt (2010), Butt&Lahiri (2013), Butt (2013)

- Main Domain of Inquiry
  - Hindi/Urdu permissives, V-V "aspectual" complex predicates and causatives
  - Recent extension to N-V complex predicates (Ahmed&Butt 2011, Butt et al. 2012)

What's a Complex Predicate?

Definition of a Complex Predicate (based on Butt 1995)

Complex predicates are formed when two or more predicational elements enter into a relationship of co-predication. Each predicational element adds arguments to a monoclausal predication. Unlike what happens with control/raising, there are no embedded arguments and no embedded predicates at the level of syntax.

Tests for complex predicates are language specific

Examples (for more see Butt 2010):

- Romance: include clitic climbing and long passives,
- Choi (2005) developed NPIs (negative polarity items) as a test for Korean
- Hindi/Urdu: agreement, control, anaphora, (NPI)

Establishing Complex Predication

It is very important to:

- pay attention to surface morphosyntactic clues on the one hand
- test for the actual underlying structure on the other hand.

Establishing Complex Predication

- Examples: Permissive (Complex Predicate) vs. Instructive (Control)

  (1) nadya=ne   yassin=ko   paoda   kaṭ-ne
      Nadya.F.Sg=Erg Yassin.M.Sg=Dat plant.M.Sg.Nom cut-Inf.Obl
      di-ya   tʰ-a
      give-Perf.M.Sg be.Past-M.Sg
      'Nadya had let Yassin cut the plant.'

  (2) nadya=ne   yassin=ko   [paoda   kaṭ-ne]=**ko**
      Nadya.F.Sg=Erg Yassin.M.Sg=Dat plant.M.Sg.Nom cut-Inf.Obl=Acc
      kah-a   tʰ-a
      say-Perf.M.Sg be.Past-M.Sg
      'Nadya had told Yassin to cut the plant.'

- Permissive has (slightly) different morphosyntax and behaves syntactically quite differently from the instructive (agreement, control, anaphora, NPI).

Testing for Complex Predication — Example with NPI

- NPI (Negative Polarity Item) cannot be distributed across two different clauses.
- Here the NPI is made up of the focus particle $b^h i$ and the negation.

(3) ek=**b**^{h}**i** laṛke=ne sita=ko kɪtab
one=also boy.M.Obl=Erg S.F=Dat book.F.Sg.Nom

nɑhĩ paṛ^h-ne d-i
not read-Inf.Obl give-Pf.F.Sg
'Not even a single boy let Sita read the book.' (permissive)

Testing for Complex Predication — Example with NPI

- NPI (Negative Polarity Item) cannot be distributed across two different clauses.

- Here the NPI is made up of the focus particle $b^h i$ and the negation.

  (5) ek=**b**ʰ**i**   laṛke=ne   sita=ko   kıtab
      one=also boy.M.Obl=Erg S.F=Dat book.F.Sg.Nom

      nɑhĩ paṛʰ-ne   d-i
      not   read-Inf.Obl give-Pf.F.Sg
      'Not even a single boy let Sita read the book.'   (permissive)

- Only the complex predicate permissive allows for the "split" NPI.

  (6) *ek=**b**ʰ**i**   laṛke=ne   sita=se   [kıtab
      one=also boy.M.Obl=Erg S.F=Inst book.F.Sg.Nom

      nɑhĩ paṛʰ-ne]=ko   kɑh-a
      not   read-Inf.Obl=Acc say-Pf.M.Sg
      'Not even a single boy told Sita to read the book.'   (instructive)

The Structural Explanation

- The differences in behavior in Urdu/Hiondi with respect to NPI as well as anaphora, control and agreement can be explained under the following analysis:
  - ► The permissive is a monoclausal complex predicate.
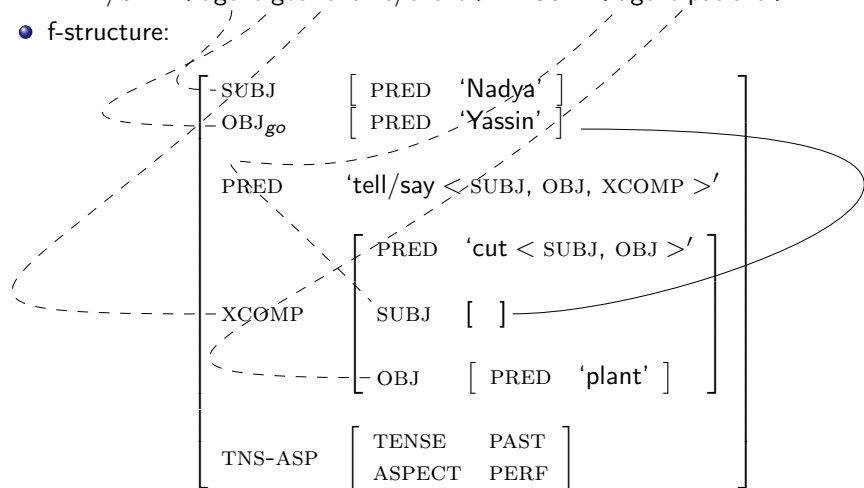 - ► The instructive is a biclausal control construction.

Instructive: A Biclausal Control Structure

Nadya told Yassin [to cut the plant].

- a-structure:
  TELL/SAY $<$ agent goal theme/event $>$ CUT $<$ agent patient $>$
- f-structure:

$$
\begin{bmatrix}
\text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'Nadya'} \end{bmatrix} \\[4pt]
\text{OBJ}_{go} & \begin{bmatrix} \text{PRED} & \text{'Yassin'} \end{bmatrix} \\[6pt]
\text{PRED} & \text{'tell/say} < \text{SUBJ, OBJ, XCOMP} >' \\[8pt]
\text{XCOMP} & \begin{bmatrix}
\text{PRED} & \text{'cut} < \text{SUBJ, OBJ} >' \\[4pt]
\text{SUBJ} & [\ \ ] \\[4pt]
\text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'plant'} \end{bmatrix}
\end{bmatrix} \\[8pt]
\text{TNS-ASP} & \begin{bmatrix} \text{TENSE} & \text{PAST} \\ \text{ASPECT} & \text{PERF} \end{bmatrix}
\end{bmatrix}
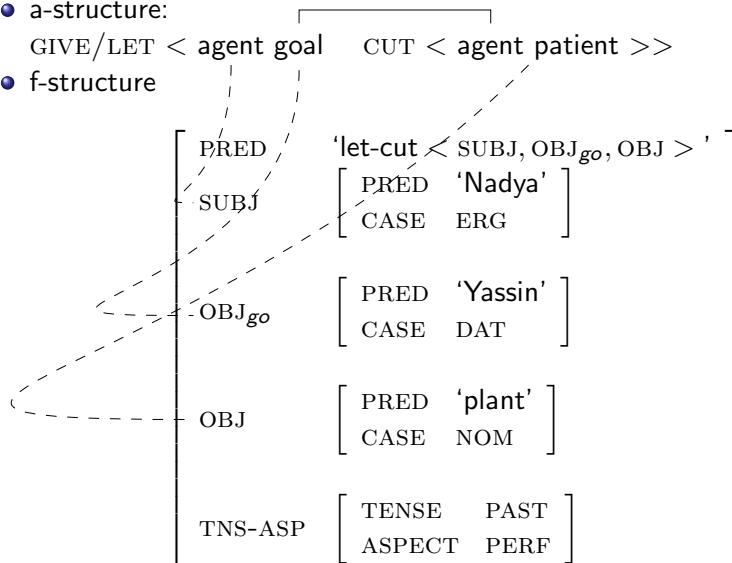$$

Permissive: A Monoclausal Complex Predicate

Nadya let Yassin [cut the plant].

- a-structure:

  $\text{GIVE/LET} < \text{agent goal} \quad \text{CUT} < \text{agent patient} >>$

- f-structure

$$
\begin{bmatrix}
\text{PRED} & \text{'let-cut} < \text{SUBJ}, \text{OBJ}_{go}, \text{OBJ} > \text{'} \\
\text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'Nadya'} \\ \text{CASE} & \text{ERG} \end{bmatrix} \\
\text{OBJ}_{go} & \begin{bmatrix} \text{PRED} & \text{'Yassin'} \\ \text{CASE} & \text{DAT} \end{bmatrix} \\
\text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'plant'} \\ \text{CASE} & \text{NOM} \end{bmatrix} \\
\text{TNS-ASP} & \begin{bmatrix} \text{TENSE} & \text{PAST} \\ \text{ASPECT} & \text{PERF} \end{bmatrix}
\end{bmatrix}
$$

Establishing Complex Predication — Another Example

- Sulger (2013): the examples in (7) look very similar on the surface.
- But: Copula (Locational) in (7a) vs. N-V Complex Predicate (Dative Experiencer Construction) in (7b)

  (7) a.

nina=mẽ	bʰay	hɛ
Nina.Fem.Sg=Loc$_{in}$	fear.Masc.Sg	be.Pres.3.Sg

  'Nina is fearful.' (lit. 'There is fear in Nina.')

  b.

nina=ko	bʰay	hɛ
Nina.Fem.Sg=Dat	fear.Masc.Sg	be.Pres.3.Sg

  'Nina is afraid.'

Tests for Complex Predication

- Some Tests for N-V complex predicates:
  - Contribution of extra argument(s) by noun
  - Determination of case on argument(s) by noun
  - Impossibility of substitution via a pronoun or wh-phrase.
  - (see Kearns 2002 for more for English)

- Tests that are generally **not** reliable for any kind of complex predicate:
  - linear adjacency, scrambling
  - negation or other adverbial modification

The latter appear to test phrase structure constituency and scope, i.e., are more surface oriented (for example, they do not work very well with morphological causatives, which are also complex predicates underlyingly).

Establishing Complex Predication — NV Complex Predicates

- In the N-V complex predicate the noun licenses an extra argument.
- This is not the case in the copula construction.

(8) a.

    *nina=mẽ   yasin=se   pyar   hɛ
    Nina.Fem.Sg=Loc$_{in}$ Yassin.Masc.Sg=Inst love.Masc.Sg be.Pres.3.Sg
    'Nina loves Yassin.' (lit. 'There is love in Nina from Yassin.')

b.

    nina=ko   yasin=se   pyar   hɛ
    Nina.Fem.Sg=Dat Yassin.Masc.Sg=Inst love.Masc.Sg be.Pres.3.Sg
    'Nina is loves Yassin'

Outline

Predicate Composition and LFG

Current State in LFG

- Complex predicate formation involves a complex a(rgument)-structure with embedding(s) which corresponds to a monoclausal simplex f(unctional)-structure.

- Complex predicate formation can be triggered via
  - ▶ periphrastic means (as in the Urdu permissive example above)
  - ▶ via morphological means (i.e., morphological causatives)

- The underlying mechanism is the same (cf. Alsina 1993).

- But different types of argument merger appear to exist (cf. also Rosen 1989).

- Butt (1998, 2013)
  - ▶ proposes there are basically only two types
  - ▶ these mirror syntactic control/raising

Argument Identification at Different Modules of Grammar

Butt (1998, 2013):

- Argument Identification at the level of syntax (f-structure) has been called control/raising

- Similarly, Argument Identification exists at the level of a-structure. This leads to complex predication (or clause union or argument merger, as it has variously been called).

	Control	Raising	Complex Predicate
syntax (f-structure)	PRO controlled	Exceptional Case Marking	No
a-structure	argument controlled (fusion)	arguments unified (raising)	Yes

Argument Identification at Different Modules of Grammar

Stated with other theoretical assumptions:

- Complex Predication happens within the vP, control/raising happens above that (VP) (cf. Ramchand, First Phase Syntax)
- Subevents merge into one complex event with the force-dynamic interpretation of a primary predication (cf. Talmy 1988, DeLancey 1985, Croft 1998, 2001).

Argument Identification at Different Modules of Grammar

- However, note that most approaches either cannot or do not make a difference between control/raising at a-structure vs. control/raising in the syntax.

	Control	Raising	Complex Predicate
syntax (f-structure)	PRO controlled	Exceptional Case Marking	No
a-structure	argument controlled (fusion)	arguments unified (raising)	Yes

- But without this, the exact nature of complex predication will never be understood.

Examples of Different Argument Mergers

- Argument Fusion (analogous to syntactic control)

  (9) mã=ne   **bɑccõ=ko**   kɪtab-ẽ   paɾʰ-ne
  mother.F.Sg=Erg child.M.Pl.Obl=Dat book.F-Pl.Nom read-Inf.Obl
  dĩ
  give.Perf.F.Pl
  'Mother let (the) children read (the) books.'

- Argument Raising (analagous to syntactic raising)

  (10)

      pɪta=ne   peɽ   kaʈ-ne   di-e
      father.M.Sg=Erg tree.M.Nom be.cut-Inf.Obl give-Perf.M.Pl
      'Father allowed the trees to be cut.'

Example: Argument Raising (Complex Predicate)

- The permissive in (11) was analyzed as syntactic raising by Davison (2013) and as raising cum restructuring in the sense of Wurmbrand (2001) by Bhatt (2005).

  (11)

pɪta=ne	peɾ	**kɑʈ-ne**	**di-e**
father.M.Sg=Erg	tree.M.Nom	be.cut-Inf.Obl	give-Perf.M.Pl

  'Father allowed the trees to be cut.'

- Butt (2013) shows that syntactically **both** types of permissives must be analyzed as complex predicates (tests from agreement, anaphora, control, etc.)

Different Argument Mergers

- "Allow-to-do" reading — Permittee fused with highest argument of embedded a-structure (argument fusion)

  GIVE/LET < agent goal ⌐‾‾‾‾‾‾‾‾‾‾‾¬ CUT < agent patient >>

- "Allow-to-happen" reading — Arguments from both predicates are taken together, but no argument fusion happens ⟶ argument "raising"
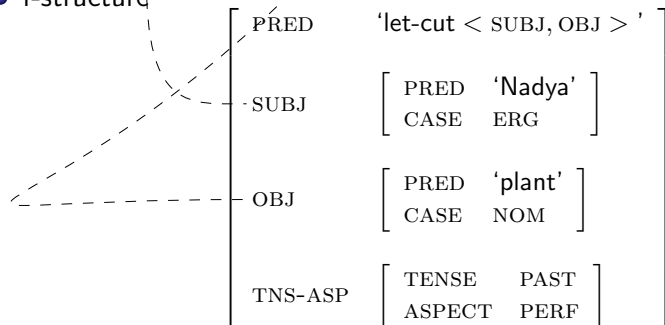
  LET < agent   CUT < patient >>

Example: Argument Raising (Complex Predicate)

Nadya allowed the plant to be cut.

- a-structure:
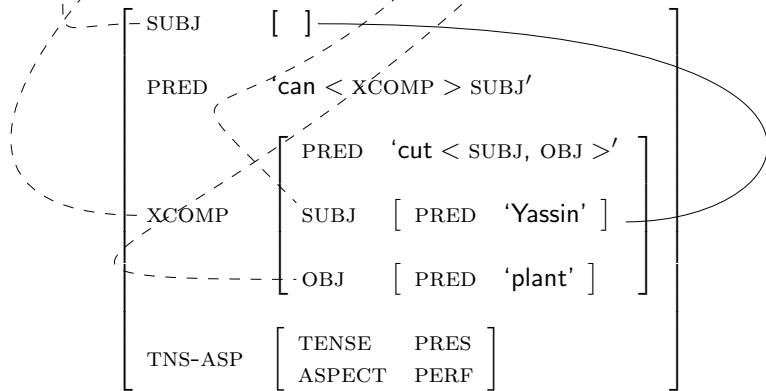
  LET $<$ agent CUT $<$ patient $>>$

- f-structure

$$
\begin{bmatrix}
\text{PRED} & \text{'let-cut} < \text{SUBJ}, \text{OBJ} > \text{'} \\
\\
\text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'Nadya'} \\ \text{CASE} & \text{ERG} \end{bmatrix} \\
\\
\text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'plant'} \\ \text{CASE} & \text{NOM} \end{bmatrix} \\
\\
\text{TNS-ASP} & \begin{bmatrix} \text{TENSE} & \text{PAST} \\ \text{ASPECT} & \text{PERF} \end{bmatrix}
\end{bmatrix}
$$

Example: Syntactic Raising

Yassin can [cut the plant]. (in Urdu, of course, Bhatt et al. 2011)

- a-structure:

  CAN ___ < theme/event >   CUT < agent patient >

- f-structure

$$
\begin{bmatrix}
\text{SUBJ} & [\ ] \\
\\
\text{PRED} & \text{'can} < \text{XCOMP} > \text{SUBJ'} \\
\\
\text{XCOMP} & \begin{bmatrix} \text{PRED} & \text{'cut} < \text{SUBJ, OBJ} >\text{'} \\ \text{SUBJ} & [\ \text{PRED} \quad \text{'Yassin'}\ ] \\ \text{OBJ} & [\ \text{PRED} \quad \text{'plant'}\ ] \end{bmatrix} \\
\\
\text{TNS-ASP} & \begin{bmatrix} \text{TENSE} & \text{PRES} \\ \text{ASPECT} & \text{PERF} \end{bmatrix}
\end{bmatrix}
$$

Outline

Aspectual V-V Complex Predicates

- Another type of V-V complex predicate
  (cf. Hook 1974, 1993, 2001)

  (12) a.

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

      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).'

      c.

      ram   **ga**   **ʊʈ**$^{\text{h}}$**-a**
      Ram.M.Sg.Nom sing rise-Perf.M.Sg
   'Ram sang out spontaneously (burst into song).'

Event Modification

- As with the permissive, a *light verb* is involved.
- But this light verb seems "lighter" than the permissive....
    - The light verb does not independently contribute an argument to the overall predication.
    - The complex predicates are all "completive".
    - Different light verbs contribute different defeasible information (suddenness, responsibility, benefaction, surprise, etc.)
- Butt& Geuder (2001) and Butt&Ramchand (2005) analyze these as instances of *Event Modification* (event fusion).
- Different type of complex predicate — no embedding of a-structures.

Characteristics of Light Verbs

- Light verbs are always form-identical with a main verb
- Butt&Lahiri (2013) show that light verbs as in the Aspectual V-V complex predicates are historically stable in Indo-Aryan (as a syntactic configuration).
- They propose that light verb and main verb versions be derived from the same underlying entry.
- Grammaticalization that may occur is always based on the main verb version.

    (13)

    Underlying Entry
    — Main Verb   (Auxiliary via reanalysis)
    — Light Verb
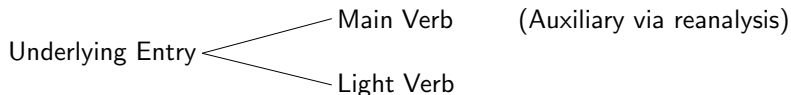
Open Questions

- How are light verb versions related to the underlying lexical-semantic representation?
- For that matter, what should the underlying representation be?
- From my perspective:
  - ▶ Information about valency (how many argument slots)
  - ▶ Lexical semantic information pertaining to case marking (e.g., experiencer vs. agent).
  - ▶ Aktionsart type information (e.g., $\pm$ telic).
- **Most importantly:**
  - ▶ information about event semantics
  - ▶ systematic way of relating light to full verb entries

Events and Subevents

General solution so far: Assume some sort of lexical event decomposition and think of light verbs as contributing information at the level of subevents.

- Butt (1995):
  - ▶ used Lexical-Conceptual Structures (LCS) based on Jackendoff (1990)

Events and Subevents

General solution so far: Assume some sort of lexical event decomposition and think of light verbs as contributing information at the level of subevents.

- Butt (1995):
  - ▶ used Lexical-Conceptual Structures (LCS) based on Jackendoff (1990)
  - ▶ But: system is too unconstrained as is (Caudal, Nordlinger, Seiss 2013)

Events and Subevents

General solution so far: Assume some sort of lexical event decomposition and think of light verbs as contributing information at the level of subevents.

- Butt (1995):
    - used Lexical-Conceptual Structures (LCS) based on Jackendoff (1990)
    - But: system is too unconstrained as is (Caudal, Nordlinger, Seiss 2013)
    - Seiss (2013) argues that one needs to think in terms of predicational "blue prints".

Murrinh-Patha Complex predicates

- The Australian language Murrinh-Patha contains complex predicates that consist of a lexical stem and a classifier (light) verb.
- The combinatory possibilities are different from what we have seen so far.
- The individual contribution of each verbal part is difficult to pin-point.
  - Lexical stems cannot stand alone.
  - Most Classifier stems cannot appear alone.
  - The classifier stems mostly seem to classify the kind of event described, i.e., something done with a long, thin object vs. a flat object or with hands.

Different effects of BASH(14), POKE(19) vs. SLASH(23)

- bash(14), poke(19) and slash(23) can all be used in predications of caused contact
- But poke(19) implies long pointy objects, bash(14) flat objects and slash(23) the long side of a stick.

(4)   a. *nga - nhi - ma - parrang - nu*
          1SGS.POKE(19).FUT - 2SG.DO - IBP - numb - FUT
          'I'll numb your hand (by injection).' (Street 1989)
       b. *bangam - parrang*
          1SGS.BASH(14).NFUT - numb
          'I made him numb (with stone/spear).' (Street 1989)
       c. *ngu - nhi - me - parrang - nu*
          1SGS.SLASH(23).FUT - 2SG.DO - IBP - numb - FUT
          'I'll numb your foot (with stick).' (Street 1989)

Murrinh-Patha Complex predicates — Example

- slash(23) is the classifier (light verb)
- 'flatten' is the lexical stem

  (14) *ngu* - *mel* - *nu*
        1SGS.SLASH(23).FUT - flatten - FUT
        'I will flatten it out (with a stick/pipe).'

- The combination is a change-of-state predicate which allows for the specification of an instrument.
- Seiss (2013) argues that predicational "blue prints" are predefined for a language and that the individual pieces of a joint predication simply slot into the overall blue print.
- This also explains why they cannot appear in isolation.

LCS blueprints: An example for change of state verbs

- SLASH(23) + *mel* 'flatten' : @CHANGE_OF_STATE_CP

LCS blueprints: An example for change of state verbs

- SLASH(23) + *mel* 'flatten' : @CHANGE_OF_STATE_CP
- SLASH(23): INSTRUMENT = LONG_SIDE_STICK

LCS blueprints: An example for change of state verbs

- SLASH(23) + *mel* 'flatten' : @CHANGE_OF_STATE_CP
- SLASH(23): INSTRUMENT $=$ LONG_SIDE_STICK
- *mel*: RESULT $=$ FLAT

LCS blueprints: An example for change of state verbs

- SLASH(23) + *mel* 'flatten' : @CHANGE_OF_STATE_CP
- SLASH(23): INSTRUMENT = LONG_SIDE_STICK
- *mel*: RESULT = FLAT
- @CHANGE_OF_STATE_CP:
$$\begin{bmatrix} \text{CAUSE ([}_{\text{THING}}\ ]_A^\alpha,\ [\text{BECOME ([BE ([}_{\text{THING}}\ ]_A^\beta,\ [\text{RESULT])])])} \\ [\ \text{BY [CAUSE([}_{\text{THING}}\ ]_A^\alpha,\ [\ \text{AFF}^-([\text{INSTRUMENT}],\ [_{\text{THING}}\ ]_A^\beta)])]] \end{bmatrix}$$

LCS blueprints: An example for change of state verbs

- SLASH(23) + *mel* 'flatten' : @CHANGE_OF_STATE_CP
- SLASH(23): INSTRUMENT = LONG_SIDE_STICK
- *mel*: RESULT = FLAT
- @CHANGE_OF_STATE_CP:
$$\begin{bmatrix} \text{CAUSE} ([_{\text{THING}}\ ]_A^\alpha, [\text{BECOME} ([\text{BE} ([_{\text{THING}}\ ]_A^\beta, [\text{RESULT}])])]) \\ [\ \text{BY} [\text{CAUSE}([_{\text{THING}}\ ]_A^\alpha, [\ \text{AFF}^-([\text{INSTRUMENT}], [_{\text{THING}}\ ]_A^\beta)])]] \end{bmatrix}$$

- SLASH(23) + *mel* 'flatten' :
$$\begin{bmatrix} \text{CAUSE} ([_{\text{THING}}\ ]_A^\alpha, [\text{BECOME} ([\text{BE} ([_{\text{THING}}\ ]_A^\beta, [\text{FLAT}])])]) \\ [\ \text{BY} [\text{CAUSE}([_{\text{THING}}\ ]_A^\alpha, [\ \text{AFF}^-([\text{LONG\_SIDE\_STICK}], [_{\text{THING}}\ ]_A^\beta)])]] \end{bmatrix}$$

Events and Subevents — vP

The same basic idea can be found in an interesting manner in quite a different framework: First Phase Syntax (Ramchand 2008a,b)

- Assume that all verbal predication takes place within a vP (determination of number and type of arguments)
- Assume that this is closely tied to an (sub)evental event semantics.
- A vP is decomposed into init(iator), proc(ess) and res(ult).
- The init, proc and res heads represent subevents that can be interpreted in the formal semantic Neo-Davidsonian event semantics.

(cf. also work within force-dynamics, i.e., Talmy, deLancey, Croft)

vP and Complex Predicates

- A verbal (vP) predication can be instantiated by one verb, or by parts that are composed into a complex predicate.
- Each part of the complex predicate instantiates some subevent in this predicational "blue print" or "template".

Events and Subevents — vP

- Analysis of (15) based on Ramchand's system:

  (15)

nadya=ne	xɑt	**lɪk**ʰ	**li-ya**
Nadya.F=Erg	letter.M.Nom	write	take-Perf.M.Sg

  'Nadya wrote a letter (completely).'

- The main verb 'write' is actually a participle form.
- Assume that the main verb instantiates the process and the result part of the predication and contributes a patient argument.
- The light verb 'take' instantiates the initiator part of the predication and contributes an agent argument.

Ramchand's System Recast in LCS Terms

- As per Seiss' "blue print" or template idea, the init, proc and res parts of an event provide a blue print for verbal predication.

  (16)
  $$\left[\begin{array}{l} \text{INIT}([\alpha], \text{PROC}([\beta], RES[[\gamma]])) \\ \text{AFF}([\quad]^{\alpha}, [\quad]^{\beta/\gamma}) \end{array} \right]$$

- The different parts of the complex predicate instantiate parts of the overall schema to give a complete verbal predication.

- Consider again 'Nadya wrote-took the letter.'
  (='Nadya wrote the letter completely.')

  (17)
  $$\left[\begin{array}{l} \text{lık}^{\text{h}} \text{ liya 'wrote (completely)'} \\ \left[\begin{array}{l} \text{INIT}_{liya}([\alpha], \text{PROC}_{likh}([\beta], \text{RES}_{likh}[[\beta]])) \\ \text{AFF}^{+}([\text{Nadya}]^{\alpha}, [letter]^{\beta}) \end{array} \right] \end{array} \right]$$

Positive Consequence: Auxiliaries/Modals vs. Light Verbs

- Taking event semantics into account allows a clear distinction between auxiliaries/modals and light verbs.

Positive Consequence: Auxiliaries/Modals vs. Light Verbs

- Taking event semantics into account allows a clear distinction between auxiliaries/modals and light verbs.
  - Light verbs **contribute** to an independently existing event predication at the subevental level.

Positive Consequence: Auxiliaries/Modals vs. Light Verbs

- Taking event semantics into account allows a clear distinction between auxiliaries/modals and light verbs.
  - Light verbs **contribute** to an independently existing event predication at the subeventual level.
  - Auxiliaries **situate** an event in time. They do not modify the basic event predication.

Positive Consequence: Auxiliaries/Modals vs. Light Verbs

- Taking event semantics into account allows a clear distinction between auxiliaries/modals and light verbs.
    - Light verbs **contribute** to an independently existing event predication at the subevental level.
    - Auxiliaries **situate** an event in time. They do not modify the basic event predication.
    - Modals **situate** an event with respect to possible worlds. They do not modify the basic event predication.

Positive Consequence: Auxiliaries/Modals vs. Light Verbs

- Taking event semantics into account allows a clear distinction between auxiliaries/modals and light verbs.
    - Light verbs **contribute** to an independently existing event predication at the subevental level.
    - Auxiliaries **situate** an event in time. They do not modify the basic event predication.
    - Modals **situate** an event with respect to possible worlds. They do not modify the basic event predication.

- Auxiliaries and modals do not modify the primary event predication
  $\longrightarrow$ they do **not** form complex predicates
  $\longrightarrow$ and are subject to diachronic reanalysis

Problematic: "Super" Events

- Serial verbs consist of several "full" events that are bundled together in some way into a construable coherent "super" event (Durie 1997).

  (18) a.
        mɨyt ritm   muh-hambray-an-m
        tree insects climb-search.for-1S-3Pl
        'I climbed the tree looking for insects.' (Alamblak, Bruce 1988:29)

        b.
        *mɨyt guñm muh-hëti-an-m
         tree stars climb-see-1S-3Pl
         'I climbed the tree and saw the stars.' (Alamblak, Bruce 1988:29)

- Not clear to me how this can be handled within current versions of formal event semantics.

Outline

Historical Stability

- Butt& Lahiri (2013) show that V-V aspectual complex predicates are historically stable as a syntactic configuration in Indo-Aryan.
- The modern Indo-Aryan morphological causative is also not much different from how it was over 2000 years ago (Butt 2003).
- Davison (2013) notes that the permissive with 'give' also already appears to have existed in Old Indo-Aryan.

Diachrony of Indo-Aryan

(19) A. Old Indo-Aryan
        1200 BCE — 600 BCE (Vedic)
        600 BCE — 200 BCE (Epic and Classical Sanskrit)
    B. Middle Indo-Aryan (Aśokan inscriptions, Pāli, Prākrits,
        Apabhraṃśa—Avahaṭṭha)
        200 BCE — 1100 CE
    C. New Indo-Aryan (Bengali, Hindi/Urdu, Marathi and other
        modern North Indian languages)
        1100 CE — Present

Diachrony of Indo-Aryan

Note: Indo-Aryan is not historically conservative in other areas

- Case system crashed and was reinvented.
- Tense/Aspect system crashed and was reinvented
- Verb Particles were gotten rid of.
- . . .

Light Verbs and Historical Stability

- Further crosslinguistic evidence confirms that light verbs are historically stable
  (cf. Bowern 2008, Brinton&Akimoto 1999, Klump 2013):

  - They do not grammaticalize further into auxiliaries or inflections.
  - A light verb use is not independent of the main verb use — when the main verb is lost, so are all light verb uses.
  - Example: English *take* replacing *nimen* (Iglesias-Rábade's 2001).

Historical Change

But:

- Aspectual V-V complex predicates have become more frequent over time in Indo-Aryan (Hook 1993, 2001, Hook and Pardeshi 2008).
- This appears to be connected to the demise of verb particles (Deo 2002).
- Particle-Verb combinations do lexicalize.
- Adj/N-V complex predicates lexicalize (cf. Caudal et al. 2013)
- Serial verbs change over time $\longrightarrow$ Prepositions, Complementizers (e.g., Lord 1993).

Historical Change and Complex Predication

- Bowern (2008) conducts a historical survey of the diachrony of complex predication.
- Overall Butt and Lahiri's central claim holds up — there are no instances of auxiliaries that have developed from light verbs.
- However, historical change does apply:
  - Univerbation or Lexicalizsation. E.g., Urdu/Hindi *la-na* 'bring' probably from *le* 'take' + *a* 'come'.
  - Changes in the productivity/frequency of the complex predicate construction (cf. Hook 1993, 2001, Hook and Pardeshi 2008).

Historical Change and Complex Predication

Suggestion:

- Predicational "blue prints" or templates exist as part of language structure.
- More than one lexical or morphological item can predicate together and slot into the overall predication template.
- The combinatory possibilities are constrained by
  - constraints on number and type of arguments
  - argument fusion/merger vs. argument raising
  - semantic/pragmatic selectional restrictions (completion, suddenness, responsibility, benefaction, etc.)
- Complex predication as a **syntactic mechanism** is stable diachronically.

Historical Change and Complex Predication

But:

- Whether or not a particular type of complex predication is used can be subject to change.
- (Relatedly: whether or not a language uses verbal particles is subject to change.)
- The frequency of use of complex predicates as a predicational strategy can change (expand or contract).
- Individual light verbs (and main verbs) are subject to change (drop out of the language, change meaning, be newly recruited).
- Observation: Small numbers of main verbs (Urdu/Hindi has about 800) make complex predication likely.

Outline

Summary

- It is important to understand/define (different types of) complex predicates.
- This involves developing tests that bring out the underlying structure (look beyond the surface).
- The types of complex predicates that exist are best understood in terms of event semantics.
- The different parts of the complex predicate instantiate different subparts/subevents of the overall predication.
    - Light verbs **contribute** to an independently existing event predication at the subevental level.
    - Auxiliaries **situate** an event in time. They do not modify the basic event predication.
    - Modals **situate** an event with respect to possible worlds. They do not modify the basic event predication.

Summary

- Auxiliaries and modals do not modify the primary event predication
  - ⟶ they do **not** form complex predicates
  - ⟶ and are subject to diachronic reanalysis
- Complex predication as a **syntactic mechanism** is historically stable.
- Frequency of use of certain light verbs or complex predicates may change over time, however.
- What governs this historical change remains to be understood (cf. this symposium).

References I

Ahmed, Tafseer and Miriam Butt. 2011. Discovering Semantic Classes for Urdu N-V Complex Predicates. In *Proceedings of the International Conference on Computational Semantics* (IWCS 2011), Oxford.

Alsina, Alex. 1993. *Predicate Composition: A Theory of Syntactic Function Alternations*. PhD thesis, Stanford University.

Bhatt, Rajesh. 2005. Long distance agreemnet in Hindi-Urdu. *Natural Language and Linguistic Theory* 23:757–807.

Bowern, Claire. 2008. The diachrony of complex predicates. *Diachronica* 25: 161–185.

Brinton, L.J. and Akimoto, M.(eds.). 1999. *Collocational and Idiomatic Aspects of Composite Predicates in the History of English*. John Benjamins.

Bruce, L. 1988. Serialization: From syntax to lexicon. *Studies in Language* 12:19–49.

Butt, Miriam. 1995. *The Structure of Complex Predicates in Urdu*. CSLI Publications.

Butt, Miriam. 1998. Constraining argument merger through aspect. In: Hinrichs E, Kathol A, Nakazawa T (eds) *Complex Predicates in Nonderivational Syntax*, Academic Press, pp 73–113.

Butt, Miriam. 2013. Control vs. Complex Predication. Comment on Alice Davison. To Appear in a Special Issue of *Natural Language and Linguistic Theory*.

Butt, Miriam. 2010. The Light Verb Jungle: Still Hacking Away, In M. Amberber, M. Harvey and B. Baker (eds.) *Complex Predicates in Cross-Linguistic Perspective*, 48–78. Cambridge University Press.

Butt, Miriam. 2003. The Morpheme That Wouldn't Go Away. Ms., University of Konstanz.

Butt, Miriam, Tina Bögel, Annette Hautli, Sebastian Sulger and Tafseer Ahmed. 2012. Identifying Urdu Complex Predication via Bigram Extraction. In *Proceedings of the 24th International Conference on Computational Linguistics (COLING)*, 409–424. Mumbai, India.

Butt, Miriam and Wilhelm Geuder. 2001. On the (Semi)Lexical Status of Light Verbs. In N. Corver and H. van Riemsdijk (eds.) *Semi-lexical Categories: On the content of function words and the function of content words*, Berlin: Mouton de Gruyter, 323–370.

Butt, Miriam, Tracy Holloway King, and John T. Maxwell III. 2003. Complex Predicates via Restriction. *Proceedings of LFG03*. CSLI Publications.

Butt, Miriam and Aditi Lahiri. 2013. Diachronic Pertinacity of Light Verbs. *Lingua*. http://dx.doi.org/10.1016/j.lingua.2012.11.006

Butt, Miriam and Gillian Ramchand. 2005. Complex aspectual structure in Hindi/Urdu. In: Ertischik-Shir N, Rapoport T (eds) *The Syntax of Aspect*. Oxford University Press, pp 117–153

Caudal, Patrick, Rachel Nordlinger and Melanie Seiss. 2013. Complex Predicates in Murrinh-Patha: towards a formal and comparative approach. Talk presented at the *Approaches to Complex Predicates Workshop*, Paris.

Caudal, Patrick, Maria Ponsonnet and Marie-Elaine Egmond. 2013. Complex predicate patterns across Australia: evidence for area grammaticalization cline(s)? Talk presented at the *Approaches to Complex Predicates Workshop*, Paris.

References II

Croft, William. 1998: Event Structure in Argument Linking. In: M. Butt & W. Geuder (eds.), The Projection of Arguments. Lexical and Compositional Factors. Stanford. CSLI Publications, 21–64.

Croft, William. 2001: Radical Construction Grammar. Syntactic Theory in Typological Perspective. Oxford/New York: Oxford University Press.

DeLancey, Scott. 1985: Agentivity and syntax. In: W. H. Eilfort, P. D. Kroeber, K. L. Peterson (eds.), Papers from the Parasession on Causativity and Agentivity at the Twenty-First Regional Meeting. Chichago Linguistic Society (CLS 21), Part 2. Chicago: Chicago Linguistic Society. 1–12

Deo, Ashwini. 2002. A Diachronic Perspective on Complex Predicates in Indo-Aryan. Talk presented at the *Workshop on Complex Predicates*, Konstanz.

Durie, Mark. 1997. Grammatical structures in verb serialization. In: Alsina A, Bresnan J, Sells P (eds) Complex Predicates, CSLI, Stanford, pp 289–354.

Choi, Seongsook. 2005. Multiple verb constructions in Korean. PhD thesis, University of Sussex.

Davison, Alice. 2013. Non-finite complements and modality in dee-naa allow in Hindi-Urdu. To appear in Special issue of *Natural Language and Linguistic Theory*.

Hook, Peter E. 1974. *The Compound Verb in Hindi*. Center for South and Southeast Asian Studies: The University of Michigan.

Hook, Peter E. 1993. Aspectogenesis and the compound verb in Indo-Aryan, in: Verma, M. (Ed.), *Complex Predicates in South Asian Languages*. Manohar Publishers & Distributors, 97–113.

Hook, Peter E. 2001. Where do compound verbs come from? (and where are they going?), in: Bhaskararao, P. and Subbarao, K. (eds.), *The Yearbook of South Asian Languages and Linguistics*. Sage Publications, 101–130.

Hook, Peter E. and Prashant Pardeshi. 2008. Inflation in the Marathi Compound Verb. 9th Conference on Conceptual Structure, Discourse, & Language (CSDL9).

Iglesias-Rábade, L. 2001. Composite predicates in Middle English with the verbs *nimen* and *taken*. *Studia Neophilologica* 73:143–163.

Kaplan, Ron, and Jürgen Wedekind. 1993. Restriction and Correspondence-based Translation. *Proceedings of the 6th European Conference of the Association of Computational Linguistics*, pp. 193–202.

Kearns, Kate. 1988/2002. Light Verbs in English. Ms., University of Canterbury.

Klumpp, Gerson. 2013. On complex predicates in Kamas. Talk presented at the *Approaches to Complex Predicates Workshop*, Paris.

Lord, Carol. 1993. Historical Change in Serial Verb Constructions. John Benjamins.

Seiss, Melanie. 2013. *Murrinh-Patha Complex Verbs: Syntactic Theory and Computational Implementation.*. PhD Dissertation, University of Konstanz.

Rosen, Sara. 1989. *Argument Structure and Complex Predicates*. PhD thesis, Brandeis University.

Sulger, Sebastian. 2013. When Copula Meets Case. Ms., University of Konstanz.

Street, Chester. 1989. Murrinh-Patha vocabulary. Electronic MS Word file.

Talmy, Leonard. 1988: Force dynamics in language and cognition, Cognitive Science 12, 49-100

Wurmbrand, Susanne. 2001. *Infinitives: Restructuring and Clause Structure*. Mouton de Gruyter, Berlin.