

# **Grammar Engineering: Complex Predicates**

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# Light Verbs

- Light verbs are part of **complex predicates**.
- They contribute to the overall predication of the event.
  - often they contribute extra arguments (e.g., causatives)
  - sometimes they add information about one argument
  - sometimes they add information about what type of event it is
- Light verbs tend to have their own subcategorization frame.
- This is combined with that of the main verb – a tricky business.

# Complex Predicates

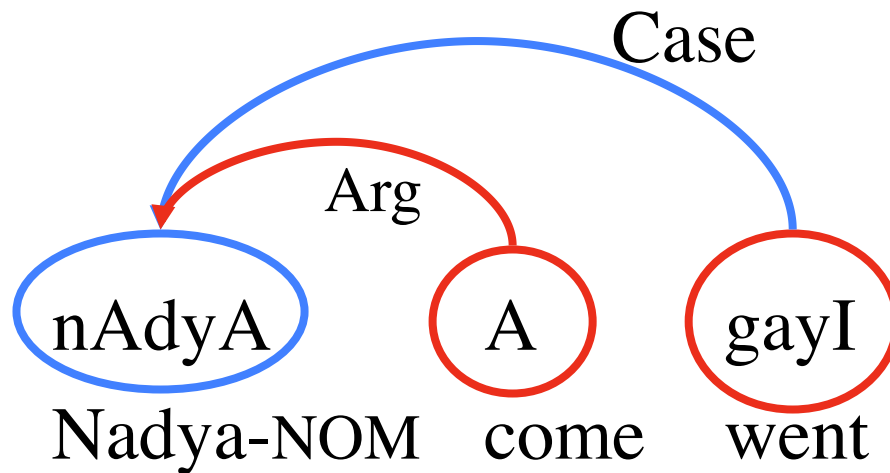
- **Complex predicates** of various different types exist in SALs.
  - V-V (various types)
  - N-V (phone-do, memory-do, memory-come)
  - Adj-V
  - morphological causatives
- Any NLP effort dealing with SALs finds itself confronted with complex predicate sooner rather than later.

# Complex Predicates

- Problem: Complex Predicates are productive, recursive, frequent
  - one cannot simply list them in the lexicon
  - syntactic composition (separable in the syntax)
- Within ParGram/XLE: Implementation via: **The Restriction Operator** (Kaplan and Wedekind 1993)

# Example CPs

Aspectual Main V+ Light V



`Nadya arrived.'

# Light Verb determines Subj Case

nAdyA            bOII  
Nadya.NOM    speak  
'Nadya spoke.'

nAdyA            bOI    paRI  
Nadya.NOM    speak    fell  
'Nadya spoke up.'

nAdyA **nE**            bOI            **IIyA**  
Nadya Erg            speak    took  
Nadya spoke (completely)!

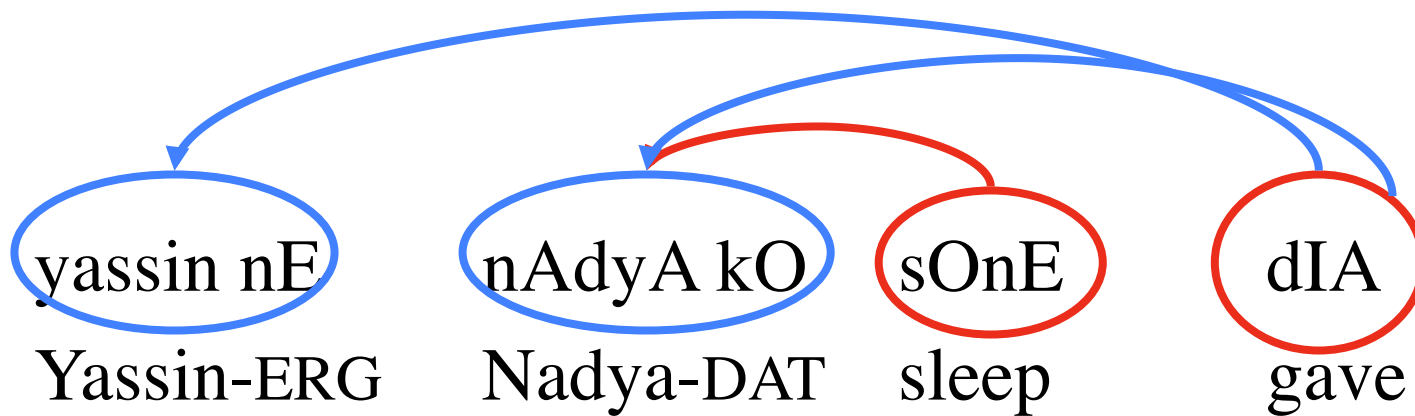
# Analysis

- The f-structure is monoclausal.
- The Light Verb simply contributes a Feature.
- The Light Verb determines the case marking on the Subject.

PRED	' come<SUBJ>'				
SUBJ	<table><tr><td>PRED</td><td>' Nadya'</td></tr><tr><td>CASE</td><td>nom</td></tr></table>	PRED	' Nadya'	CASE	nom
PRED	' Nadya'				
CASE	nom				
TENSE	past				
COMPLETIVE	+				

# Example CPs

Permissive Main V + Light V

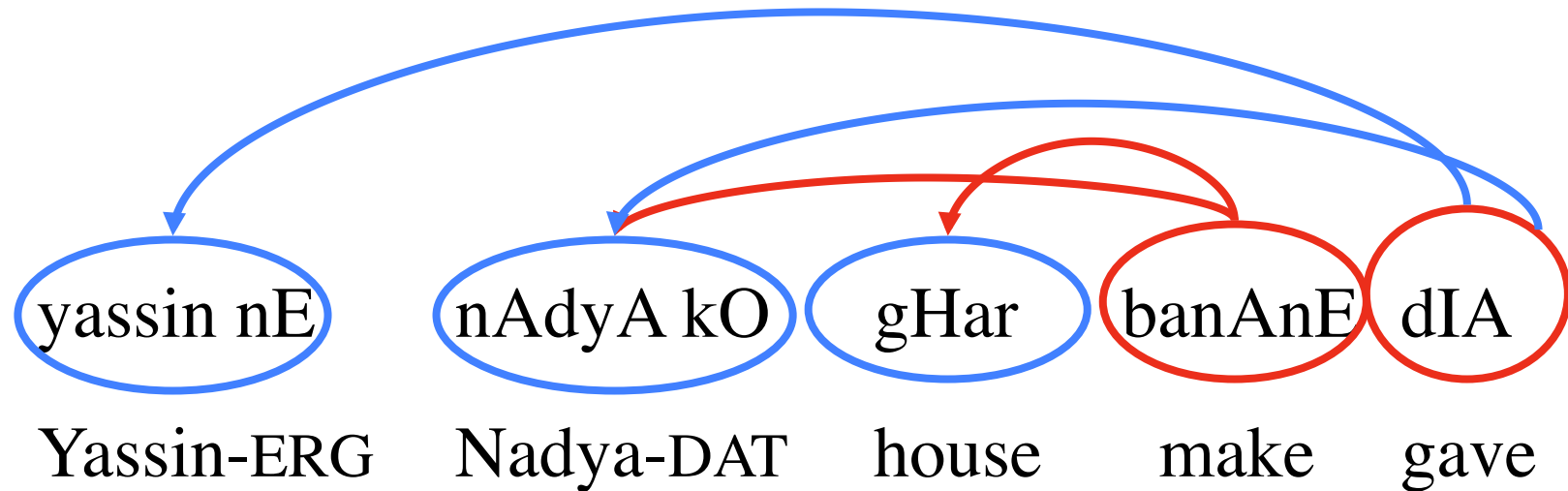


`Yassin let Nadya sleep.'



# Example CPs

Permissive Main V + Light V



`Yassin let Nadya build a house.'

# Analysis

- The f-structure is monoclausal.
- The Light Verb contributes new arguments.
- The Light Verb determines the case marking on the Subject.

PRED	'let<SUBJ, sleep<OBJ>'				
SUBJ	<table><tr><td>PRED</td><td>'Yassin'</td></tr><tr><td>CASE</td><td>erg</td></tr></table>	PRED	'Yassin'	CASE	erg
PRED	'Yassin'				
CASE	erg				
OBJ	<table><tr><td>PRED</td><td>'Nadya'</td></tr><tr><td>CASE</td><td>dat</td></tr></table>	PRED	'Nadya'	CASE	dat
PRED	'Nadya'				
CASE	dat				
TENSE	past				

# More on Complex Predicates

See "Urdu Syntax" slides.

# References

Ahmed, Tafseer, Miriam Butt, Annette Hautli and Sebastian Sulger. 2012. A Reference Dependency Bank for Analyzing Complex Predicates. In Proceedings of LREC12, Istanbul, Turkey.

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Butt, Miriam and Tracy King. 2006. Restriction for Morphological Valency Alternations: The Urdu Causative. In M. Butt, M. Dalrymple and T.H. King (eds.) *Intelligent Linguistic Architectures: Variations on Themes by Ronald M. Kaplan*. Stanford, CA: CSLI Publications, 235-258.

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