

Superframes for Consistent and Comprehensive Semantic Role Annotation

Motivation

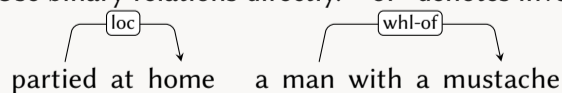
- ▶ Goal: an inventory of semantic roles that annotators can agree on
- ▶ ARG0, ARG1, ARG2...: requires tedious lookup in perennially incomplete lexicons
- ▶ Agent, Theme, Source...: no clear definitions
- ▶ Idea: define roles via a handful of coarse “superframes” that cover all predicates

Binary Relations (“Superframes”)

relation	description	domain	range
<i>entity-entity</i>			
ass	assignment	assigned to	assigned
cmp	comparison	compared	reference
loc	location	located	location
orl	org role	appointee	task/role/org
pss	possession/control	possessee	possessor
qnt	quantity	of what	how much
soc	social	somebody	friend/relative/...
suc	succession	succeeded	successor
whl	part-whole	part	whole
<i>entity-scene</i>			
msg	message	topic	message
scn	scene	participant	scene
<i>scene-entity</i>			
ast	asset	scene	asset
ben	beneficiary	scene	beneficiary
cau	causer	scene	causer
ext	extent	scene	extent
ins	instrument	scene	instrument
mnr	manner	scene	manner
rcp	recipient	scene	recipient
snd	sender	scene	sender
tmp	temporal	scene	time/frequency/...
<i>scene-scene</i>			
cnc	concession	happens anyway	happens admittedly
ela	elaboration	less specific	more specific
prp	purpose	scene	purpose
<i>constructional</i>			
anc	ancillary	predicate	ancillary
dif	discourse	token	discourse function
exp	expletive	predicate	expletive
nuc	nucleus	predicate	same predicate
ptn	pertinence	predicate	pertinent entity
rsd	resultative	predicate	affected entity
rsr	resultative	predicate	result

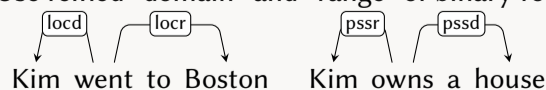
Role Type I: Modifiers

Use binary relations directly. “-of” denotes inverse (AMR convention).



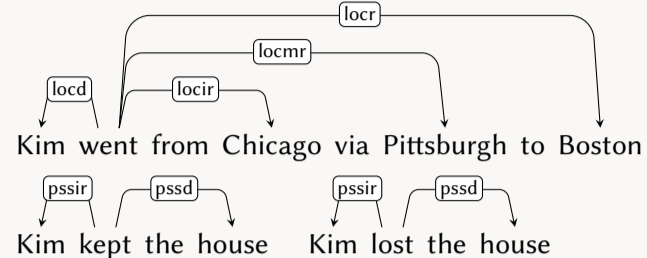
Role Type II: Core Arguments

Use reified “domain” and “range” of binary roles (AMR terminology).



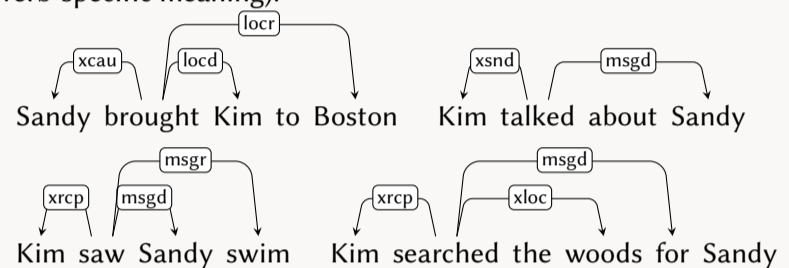
Role Type IIa: Initial/Interm. Range

To mark initial/intermediate states.



Role Type III: Non-core Arguments

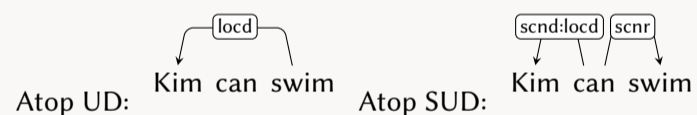
Prefix a binary relation with “x” to mark it as an argument (i.e., having a verb-specific meaning).



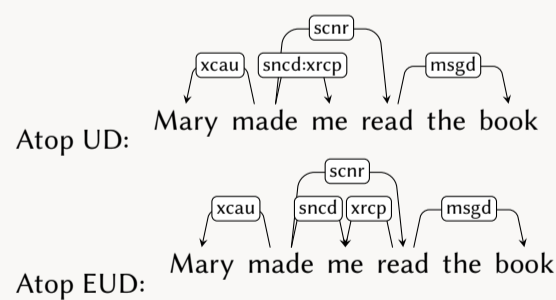
Design Principles

- ▶ exactly 2 core roles per superframe
- ▶ abstract away from tense, aktionsart (except ir/mr/r distinction), evidentiality, polarity
- ▶ annotable atop syntax (UD, EUD, SUD)
- ▶ unified binary relation inventory for all modifiers and arguments

Auxiliary Verbs



Control



MWEs



Next Steps

- ▶ finalization of v0.1.0 guidelines
- ▶ pilot annotation of treebanks and a lexicon (PropBank)