UNIVERSAL SEMANTIC REPRESENTATION GUIDELINE VERSION 4.2 CONSTRUCTION

Semantic frames, which are linguistically expressed as *larger-than-lexical-but-smaller-than-sentential expressions*, are considered as Constructions (CxN) in Universal Semantic Representation.

The conceptual schema of the constructions are mentioned below:

(i) The CxN Frame as the Complex Concept

(ii) The semantic category of the components of the CxN.

The characteristic features of the Constructions are the following:

- There is a form or complex concept that maps to a meaning

- Each complex concept is given a name that reflects the meaning.

- Complex concepts are specified within bracket []
- The semantic tag of each slot of the pattern is specified in the Semantic Category feature row.

- The relations among the components of the construction are specified in the construction row.

How are complex concepts represented?

The format : [name of construction]_number-of-occurence

rāma aura sītā basa sṭapa para dūdha aura cāya pāna kiyā
'Ram and Sita drank milk and tea at the bus stop.'

Original Sentence	rāma aura sītā basa sṭapa para dūdha aura cāya pāna kiyā											
Concept	rāma	sītā	[conj_1]	basa_1	sṭapa_1	[6-waw_1]	dūdha_1	cāya_1	[conj_2]	pāna_1	kara_1-yā_1	[cp_1]
Index	1	2	3	4	5	6	7	8	9	10	11	12
Semantic	per/male	per/female										

Category												
Dependency relation			12:k1			12:k7p			12:k2			0:main
Construction relation	3:op1	3:op2		6:mod	6:head		9:op1	9:op2		12:kriyAmUla	12:verbalizer	

- *rāma* and *sītā* are intra-sententially conjoined, thus, they are the components of a conjunction construction. Conjunction construction is represented as **[conj_1]** and *rāma* and *sītā* are two operators **(op1 and op2)** of [conj_1].

- There exists another intra-sentential conjunction in this sentence, *dūdha aura cāya* 'milk and tea'. Thus, the complex concept of this construction gets **[conj_2]**. *dūdha* and *cāya* are two operators of [conj_2].

- *basa ṣṭapa* 'bus stop' is a noun compound, hence, gets the construction name with appropriate <u>noun compound (samasa) analysis</u>, i.e.- **[6-waw_1]** here. Components of a noun compound have internal modifier-modified relation here, thus, they get mod and head relation in respect to the construction frame, i.e.- The complex concept.

- pāna kiyā is a complex predicate. The construction name is identified as **[cp_1]** for the <u>complex predicate</u> with the **kriyAmUla** and **verbalizer** relations.

- The dependency relation of the construction is given to the complex concept. Thus, [cp_1] gets 0:main and [conj_1] gets k1, [conj_2] gets k2 respectively.

rāma aura sītā ne 29 agasta, 2024 dillī meṃ rohiṇī meṃ basa ṣṭapa para choṭā yā baḍā bhāī se 5 ghaṃṭe bāta kiyā

Complex Concept Type	Example
Compound	**ūrjā vikiraṇa**

Complex Predicate	**snāna kiyā**
Measuring expression	**10 ghaṃṭe, 6 phīṭa**
Calendric expression	**5 julāī 2020**
Spatial expression	**bhārata meṃ meghālaya rājya**
Rate	**80 kimī prati ghaṃṭā , prati do ghaṃṭe meṃ eka bāra**
Span	**1990 se lekara 2000 taka, aba taka**
Conjunction (intra-sentential)	**rāma aura mohana**
Disjunction (intra-sentential)	**roṭī yā kelā**

Noun Compound

- Noun Compounds consist of two or more nouns with the final noun head and other noun modifiers or two nouns in coordinating relation as two operators.
- Noun Compounds can be spaced or hyphenated.
  - [[kṛṣi prasāraṇa] udyoga]
  - gṛha-śikṣaka

When NOT to consider as Noun Compound

- We do not consider a noun compound as a construction when it is written together as *vidyālaya* 'school'**.**
- Compound Verb, i.e.- Verb + Light Verb
  - **kara ḍāl-ā   'do keep-past'**
    - rām ne sārā kāma ekadina maiṃ *kara ḍālā*

      'Ram could do the whole work in one day'

- Multi Word Expression, i.e.- Reduplication or Phrasal expression, frozen expression etc. They are represented as one concept by joining with a '+'.
  - **cAroM+Ora_4** 'everywhere'
  - **mote+wora+para_1** 'generally'
  - **Asa+pAsa_1 '**around'

- **List of Noun compound**

Noun Compound Type	Example
karmaXAraya	
wawpurusha	2-tat **dhana prāpta**
	3-tat **cintā grasta**
	4-tat **guru dakṣiṇā**
	5-tat **śoka mukta**
	6-tat **dhūla-kaṇoṃ**
	7-tat **viśva vitaraṇa**
xvanxa	**peḍa-paudhoṃ**
vahuvrIhi	**[tāpa-abhāva**] kṣetra

Complex Predicate

A complex predicate consists of a kriyāmūla and a kriyā or verbalizer. They are represented as two different concepts with specific concept ID and the complex concept [cp_1] denotes their complex construction.

Appendix

Calendar Construction

- A calendar construction is consists of following elements in an order
  Year>Month>Date>Hour>Minute>Second
- Semantic Category row gives the semantic tag of each slot of the pattern.
- Relation among the components are given in the construction row as following
  Index of [calendar_1]:component_of

Calendar Construction

Original Sentence	15 julāī 2020 somavāra rāma paidā huā thā 'Ram was born on 15th July, 2020.'							
Concept	15	julāī_1	2020	[calendar_1]	rAma	paidā_1	ho_1-yā_thā_1	[cp-1]
Index	1	2	3	4	5	6	7	8
Sem. Cat.	dom	moy	yoc	dow	per/male			
Dependency row				8:k7t	8:k1			0:main
Construction	4:component_of	4:component_of	4:component_of			8:kriyAmUla	8:verbalizer	

Spatial Construction

- A spatial construction shows the relation as a part-whole between the places as
  Whole place> place within
- The relation is shown as
  Index of [spatial_1]: whole and Index of [spatial_1]:part

Original Sentence	bhārata meṃ meghālaya rājya ke cūne kī śailoṃ ke pradeśa meṃ raṃdhra dekhane ko milate haiṃ|									
Concept	bhārata	meghālaya	rājya_1	[spatial_1]	cūnā_1	śaila_1	pradeśa_1	raṃdhra_1	dekha_1	mila_1-tā_hāi_1
Index	1	2	3	4	5	6	7	8	9	10
Sem. Cat.	place	place								
Dependency row			2:rs	5:r6	6:r6	7:r6	10:k7p	10:k1	10:rt	0:main
Construction	4:whole	4:part								

Link to main guideline

📄 USR_GUIDELINES - V 4.2