



# Word: padam

The word order in Sanskrit is not 'completely' free.

What is a word? – Pada?

- śaktam padam:

- “pratyayaḥ” (Pā.sū-3.1.1)

- “paraśca” (Pā.sū-3.1.2)

Within a word, the order of prakṛti and pratyaya is fixed.

- “upasarjanam pūrvam” (Pā.sū-2.2.30)

Within a compound, the order of components is fixed.



# Word: padam

- **suptiñantam padam:**

Particle placement: Word Order has a role  
(examples from *Sanskrit Syntax* by J.S.Speijer)

- 1 khalu:

asminkṣaṇe **khalu** vismṛtaṃ mayaitat –śā.  
*but now, indeed, I did not remember it*

- 2 api:

- tvam **api** evaṃ nale vada –Nala.1.30  
*Also speak in this way to Nala*  
alternately,  
tvam evaṃ nale **api** vada  
*Speak in this way to Nala also/as well*
- **api** tvam gacchasi



# Possible Word Order

Barring particles, are all possible permutations of the words meaningful?

rāmaḥ grāmam gacchati

Total possible word orders =  $3!$  (= 6).

All of them convey the same gross meaning,  
with possible additional semantic meanings such as topicalisation, etc..



Another example:

rāmaḥ dugdham pītvā śālām gacchati

5 words  $\Rightarrow 5! = 120$  combinations.

Do all the permutations convey the same meaning?

Are all permutations meaningful?



Another example:

rāmaḥ dugdham pītvā śālām gacchati

5 words  $\Rightarrow 5! = 120$  combinations.

Do all the permutations convey the same meaning?

Are all permutations meaningful?

No.





So for example,

rāmaḥ śālām dugdham gacchati pītvā

will not lead to the desired śābdabodha.



# Calder Mobile

Which word orders are allowed and which are not?











# .. Contd

Summarising ....

- $XP \Rightarrow \dots, X, \dots$
- $S \Rightarrow (NP), (AUX), VP$

‘,’ –  $\Rightarrow$  the phrase markers generated by them are not ordered by precedence.



In Prose,

- ① Words from distinct clauses do not intermix.
- ② While the linear order of sisters within a clause is free, the dislocation is confined to-
  - extraposition from subject position
  - extraposition from verb complement position
  - verb complement topicalisation



Gillon's Study was confined to –

- Phrase Structure Grammar Framework
- Prose



Gillon's Study was confined to –

- Phrase Structure Grammar Framework
- Prose

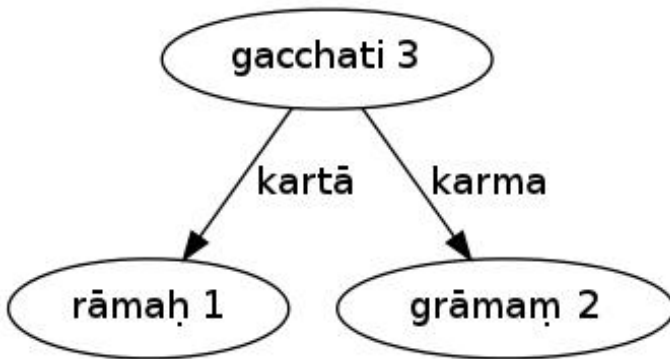
We intend to extend this to –

- Pāṇinian Dependency Framework
- śloka (verse)



The dependency tree for

rāmaḥ grāmaṃ gacchati













We tested our hypothesis on the following data :-

- All the cases of dislocations discussed in Gillon (1996).
- All the ślokas from ŚrīmadBhagvadGītā(BhG), which do not have 'ca'.

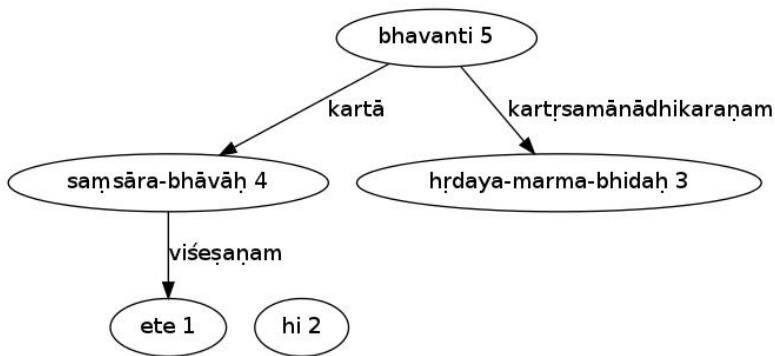


## Sentences from Gillon(1996) with cases of Dislocation in PST



# Dislocation of viśeṣaṇa:

- Extraposition from Subject Phrase
  - ete hi hṛdaya-marma-bhidaḥ saṃsāra-bhāvāḥ bhavanti  
 (For, these worldly things are heart breakers.)



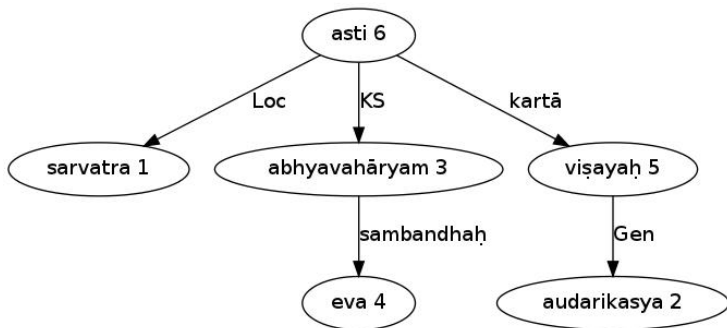






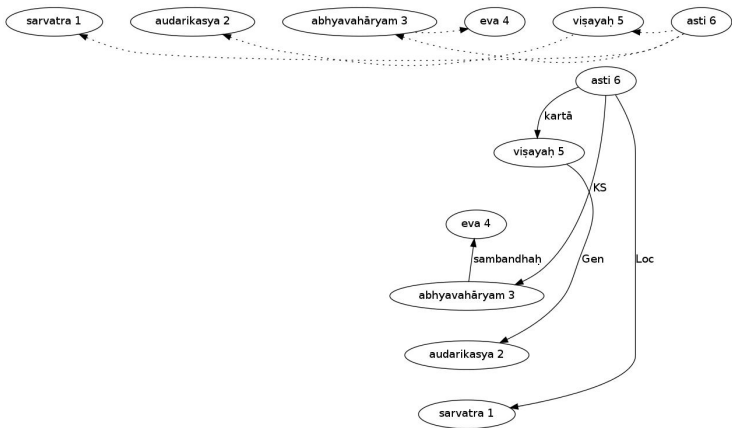
# Dislocation of a Genitive:

- sarvatra audarikasya abhyavahāryam eva viṣayaḥ asti  
*(In every case, a glutton's object is only food.)*



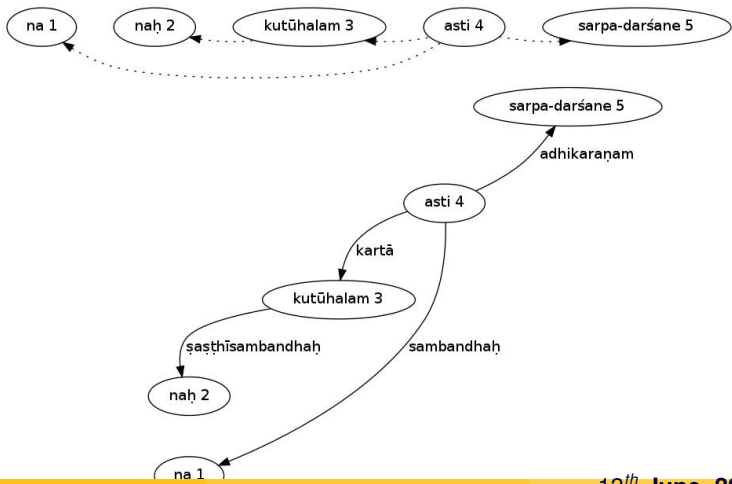
# Dislocation of a Genitive:

- sarvatra audarikasya abhyavahāryam eva viṣayaḥ asti  
(In every case, a glutton's object is only food.)



# No dislocation in Dependency Tree:

- na naḥ kutūhalaṃ asti sarpa-darśane  
*(There is no curiosity on our part to see the snake.)*



- Extra-position from Verb Phrase

Dependency Tree is not binary, and the subject position is not sacrosanct.

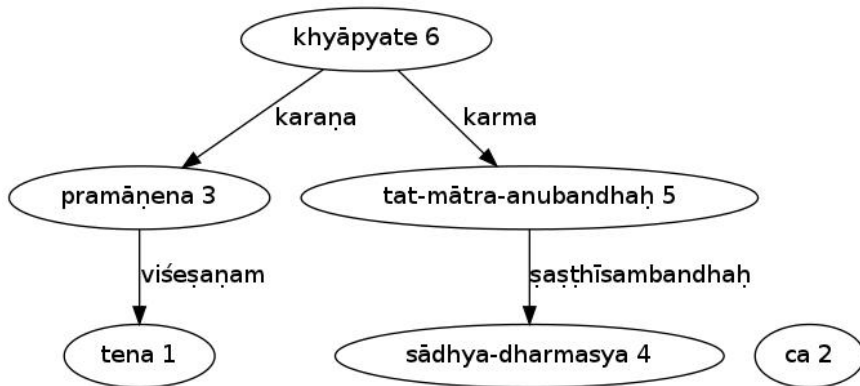
All the arguments to the verb are sister nodes, and hence transpositions of these is possible, without resulting into any tangling.

So none of these sentences result into dislocation in DT.



# Extra-position from Verb Phrase

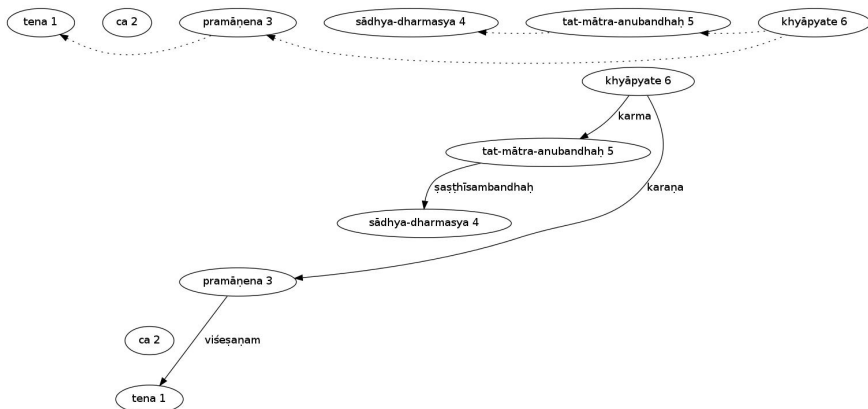
- **tena ca pramāṇena** sādhyā-dharmasya tat-mātra-anubandhaḥ khyāpyate  
*(And the dependence of the provable property merely on it (i.e., the proving property) is made known by that epistemic cognition.)*



# Extra-position from Verb Phrase

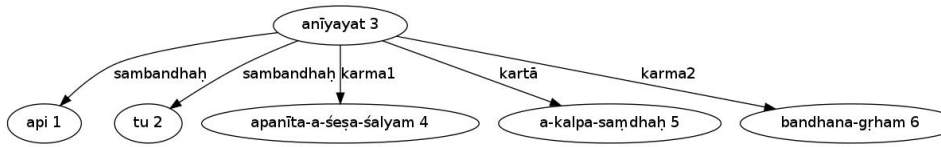
- No Dislocation

*tena ca pramāṇena sādhya-dharmasya tat mātra-anubandhaḥ khyāpyate*  
 (And the dependence of the provable property merely on it (i.e., the proving property) is made known by that epistemic cognition.)



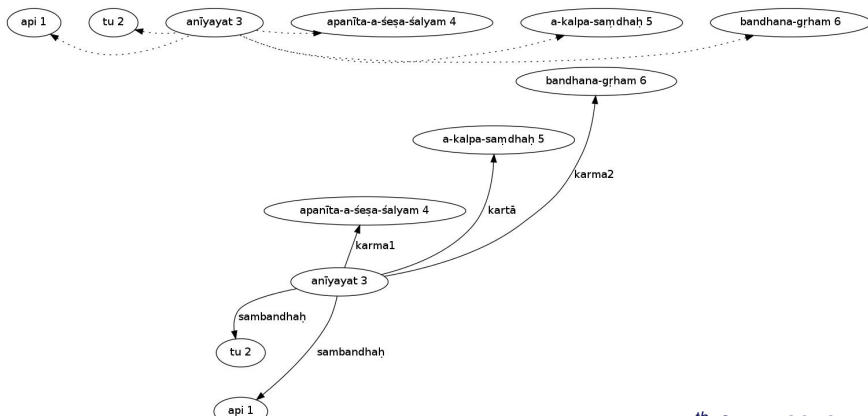
# Extra-position from Verb Phrase

- api tu anīyayat apanīta-a-śeṣa-śalyam a-kalpa-saṃdhaḥ bandhana-gr̥ham  
*(Rather, God (lit. He whose will is not subject to control) had the one from whom all darts had been removed taken to the prison.)*



# Extra-position from Verb Phrase

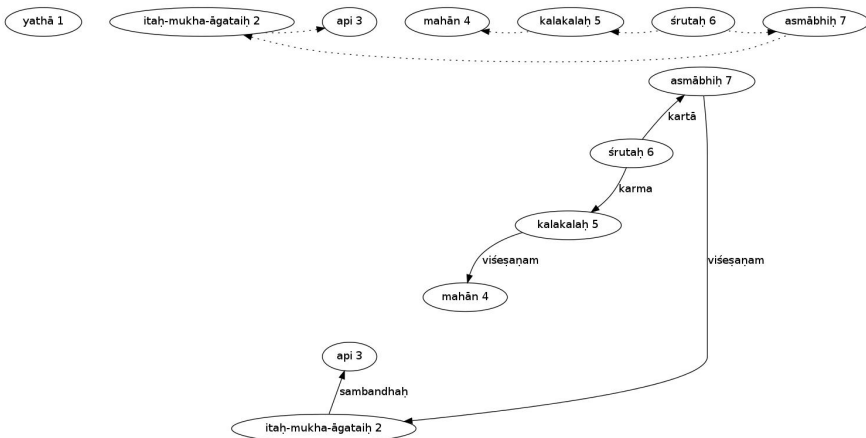
- api tu anīyayat apanīta-a-śeṣa-śalyam a-kalpa-saṃdhaḥ bandhana-gr̥ham  
*(Rather, God (lit. He whose will is not subject to control) had the one from whom all darts had been removed taken to the prison.)*



# Verb Compliments

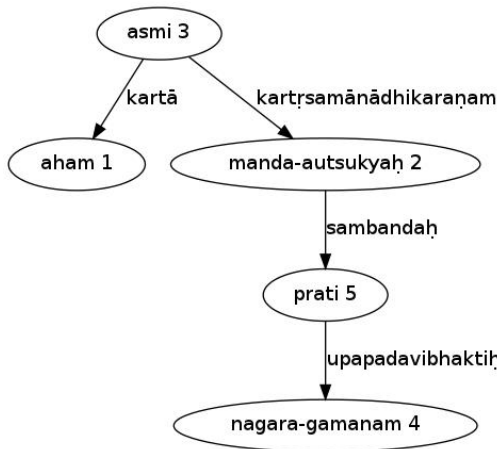
## Dislocation of *viśeṣaṇa*; No Cross linking

- *yathā itaḥ-mukha-āgataiḥ api mahān kalakalaḥ śrutaḥ asmābhiḥ*  
 (As a great uproar was heard by us, even while coming in this direction...)



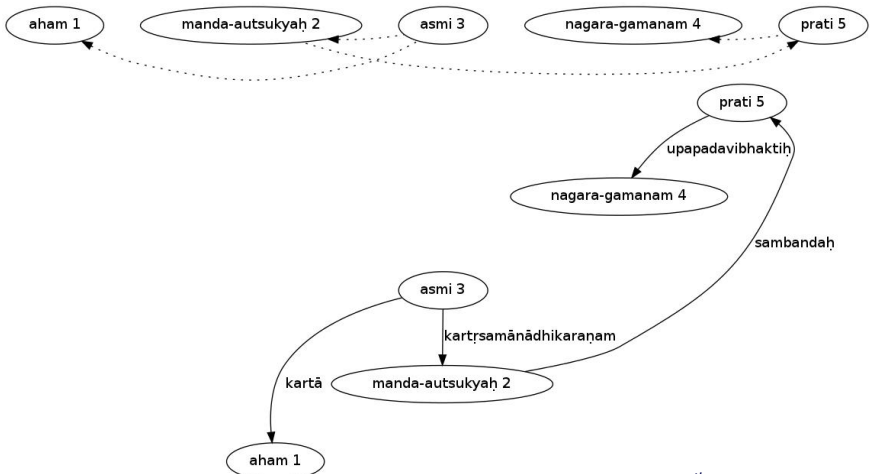
# Verb Compliments

- aham manda-utsukyaḥ asmi nagara-gamanam prati  
(I am (one who is) little eager about going to the city.)



# Verb Compliments

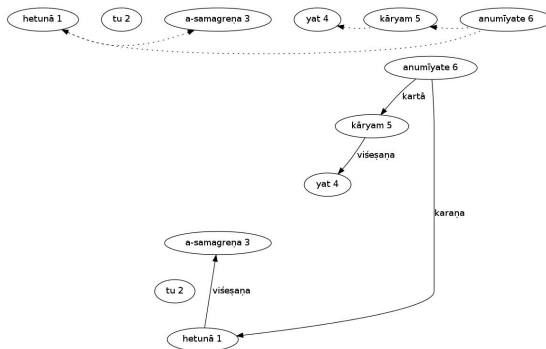
- aham manda-utsukyaḥ asmi nagara-gamanam prati  
*(I am (one who is) little eager about going to the city.)*





# Dislocation of verbal arguments:

- hetunā tu a-samagreṇa yat kāryam anumīyate śeṣavat tat a-sāmarthyāt dehāt rāga-anumāna-vat  
*(But, an effect inferred from a non-totality of causes is inadequate, since it lacks the capacity, as is exemplified by the inference of (the existence of) passion from (the existence of) a body.)*







Conclusion: Only cases of cross linkings are those of

- Adjectives (Viśeṣaṇa)
- Genitives (ṣaṣṭhīsambandhaḥ)

Modified Hypothesis: **Sanskrit allows only those word orders in which the projection of the dependency graph on a plane does not lead to crossing of links, with an exception of Viśeṣaṇas and ṣaṣṭhīsambandhas.**

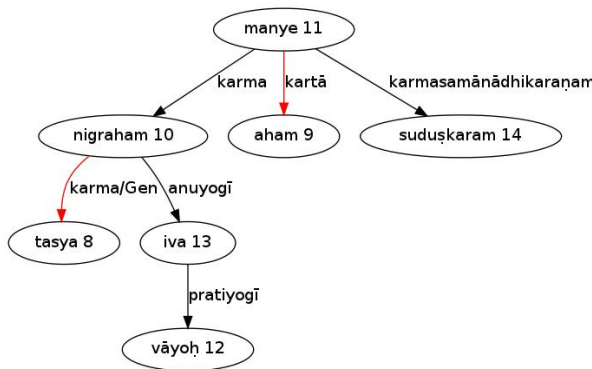




# kartā-kartā

- cañcalam hi manaḥ kṛṣṇa pramāthi balavat dṛḍham tasya aham nigraham manye vāyoḥ iva suduṣkaram 6.34  
*O kṛṣṇa! the mind is fickle, turbulent, obstinate and strong, hence I think it is as difficult as to control the wind.*

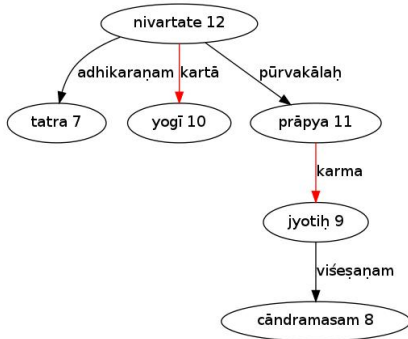
## Projection



# kartā-karma

- dhūmo rātristathā kṛṣṇaḥ ṣaṅmāsā dakṣiṇāyanam  
 tatra cāndramasaṃ jyotiryogī prāpya nivartate –BhG.8.25  
*(The yogī on travelling the path of smoke, night, the dark half of the  
 month and the six months of the southern path (of the sun) after death,  
 obtains the lunar light and returns (to this world).)*

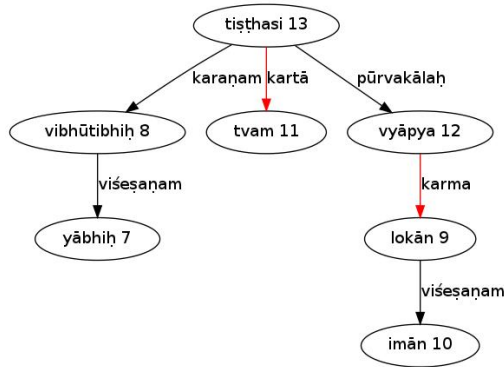
## Projection



# kartā-karma

- vaktumarhasyaśeṣeṇa divyā hyātmavibhūtaḥ  
 yābhirvibhūtibhirlokānimāṃstvaṃ vyāpya tiṣṭhasi –BhG.10.16  
 (You could tell me about your divine manifestations by which you exist  
 pervading these worlds.)

## Projection



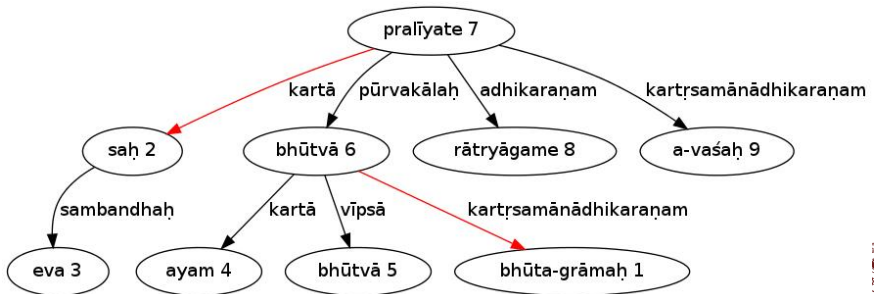




# kartā-kartṛsamānādhikaraṇa

- bhūtagrāmaḥ sa evāyaṃ bhūtvā bhūtvā pralīyate  
 rātryāgame'avaśaḥ pārtha prabhavatyaharāgame –BhG.8.19  
*(O Pārtha, these living beings arise again and again and merge at the onset of night and re-emerge on the coming of the day.)*

## Projection





Dhanyavādaḥ!!!

