

Inferring aspectuality: a minimalist approach

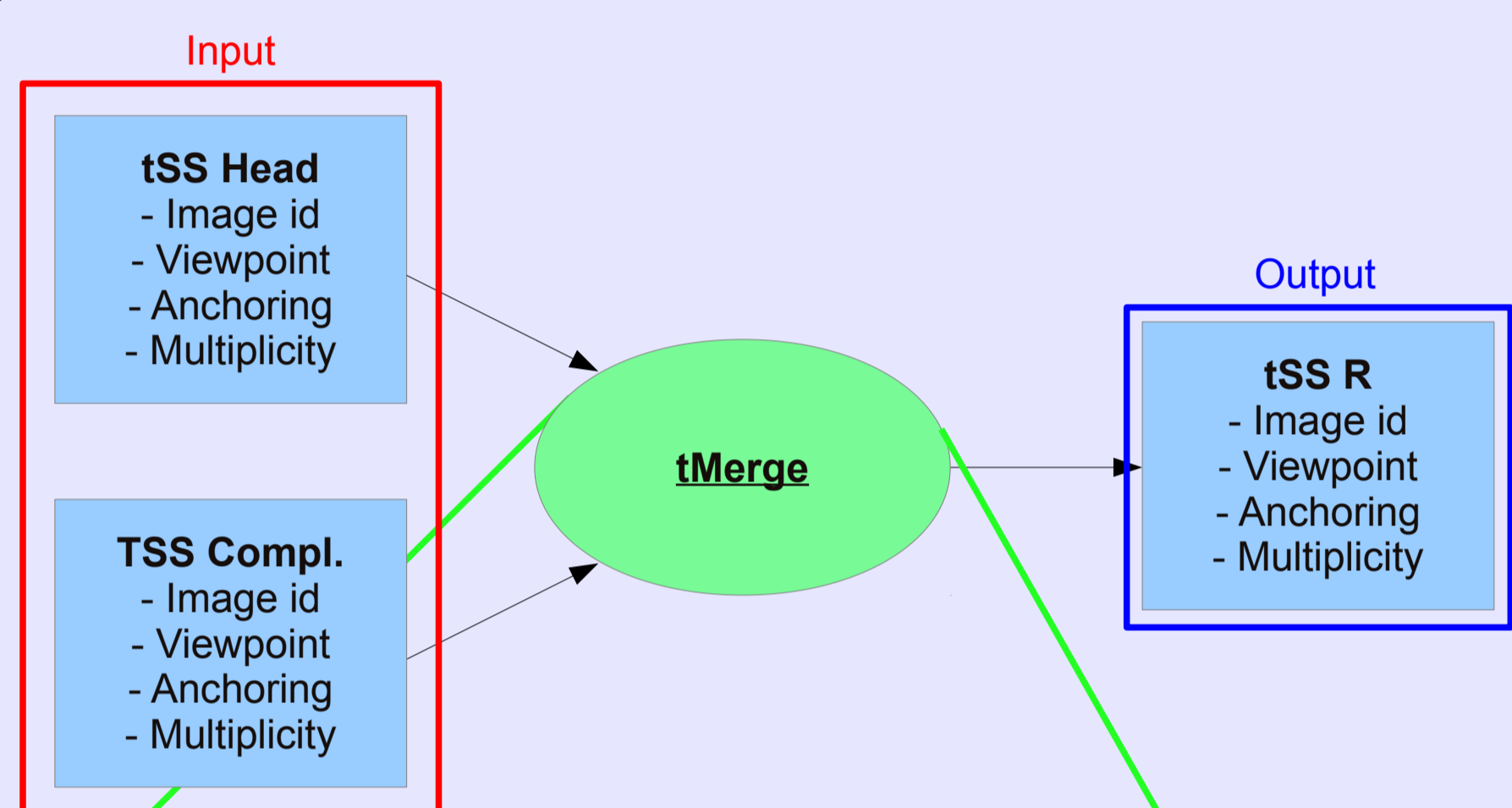
What's the problem ?

- (1) Elle mangera du gâteau pendant 30 minutes.
She will eat/be eating cake for 30 minutes.
- (2) * Elle mangera du gâteau en 30 minutes.
* It will take her 30 minutes to eat cake.
- (3) Elle mangera du gâteau en février.
She will eat/be eating cake in February.
- (4) Elle mangera le gâteau en 30 minutes.
It will take her 30 minutes to eat (and finish) the cake.



How are temporal meanings computed ?

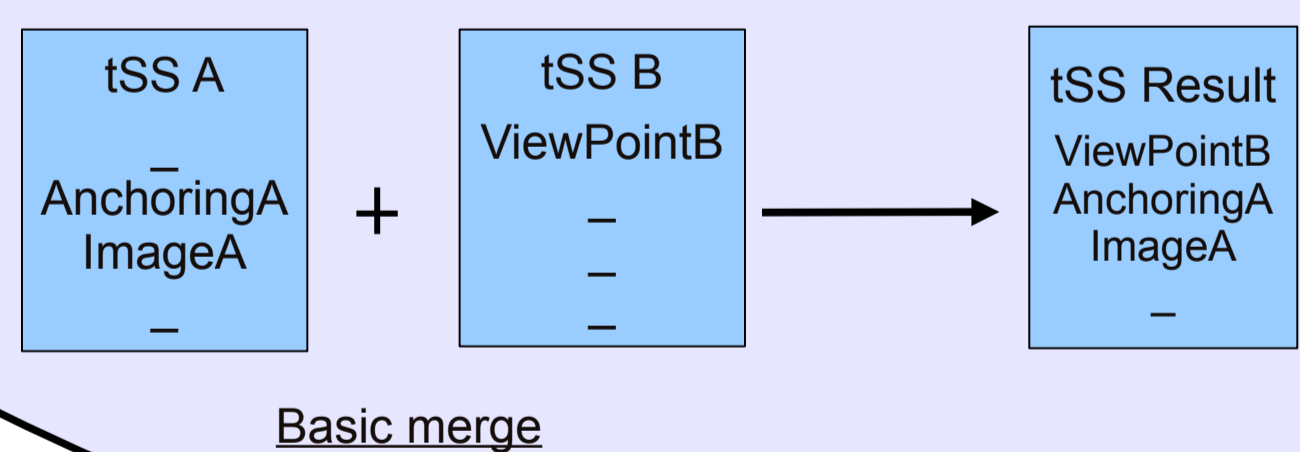
Time Processing Module



(5) Predication	[vp=g, an=?] → [vp=f, an=a]	
(4) Zoom-in	[vp=f, an=a] → [vp=g, an=?]	
(3) Granularity Conflict	C[vp=g, an=a] → C[vp=f, an=a] <i>slice of C</i>	
	or	
	H[vp=f, an=u] → H[vp=g, an=?] <i>repetition of H</i>	
(2) Image merge	H[im1] + C[im2] → R[im1+im2]	
(1) Basic merge	H[vp, an] + C[vp, an] → R[vp, an]	

tMerge

H : Head
C : Complement
vp : viewpoint
an : anchoring
im : image id



tSS attributes

- tSS**
 - Image id
 - Viewpoint
 - Anchoring
 - Multiplicity

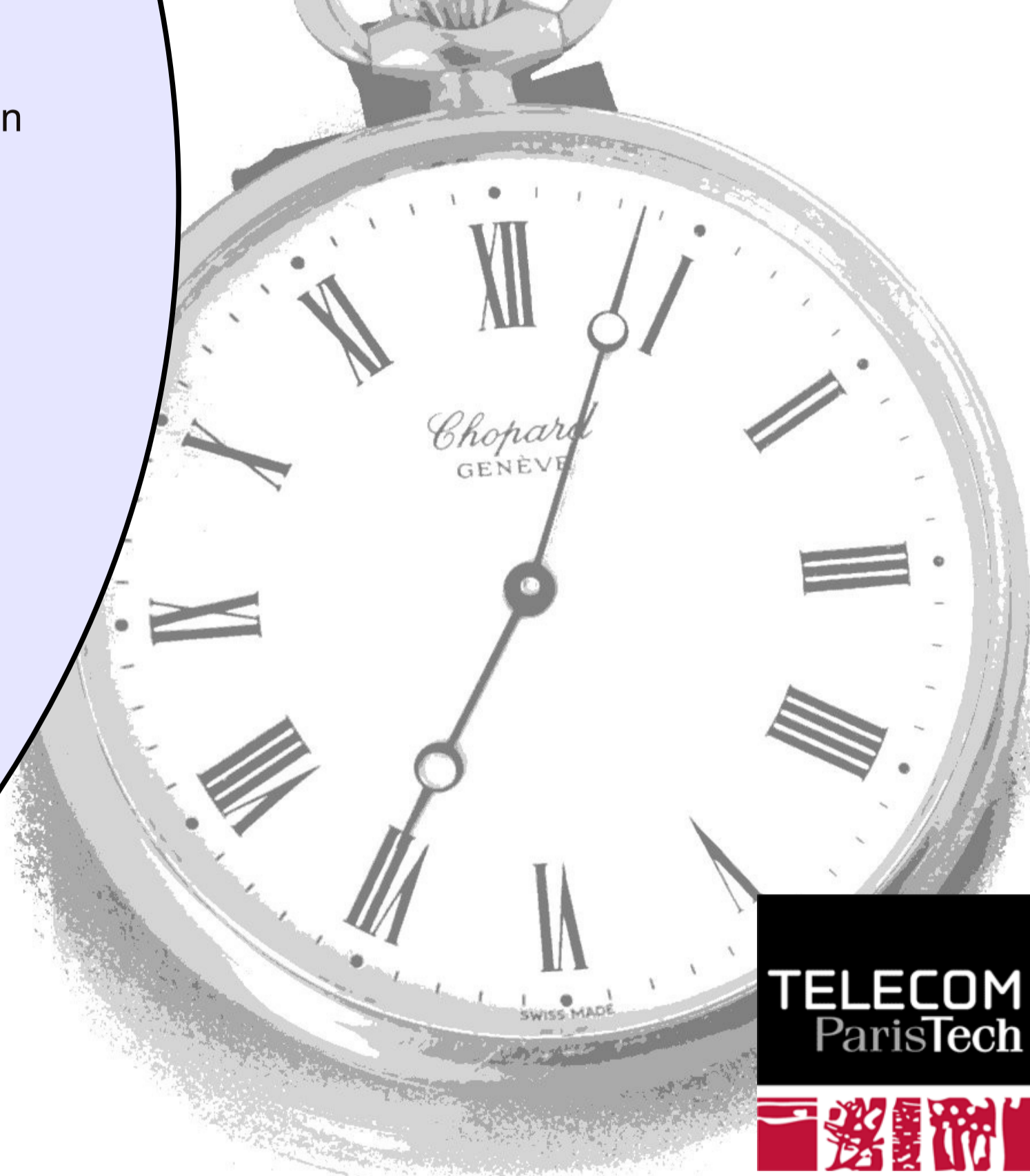
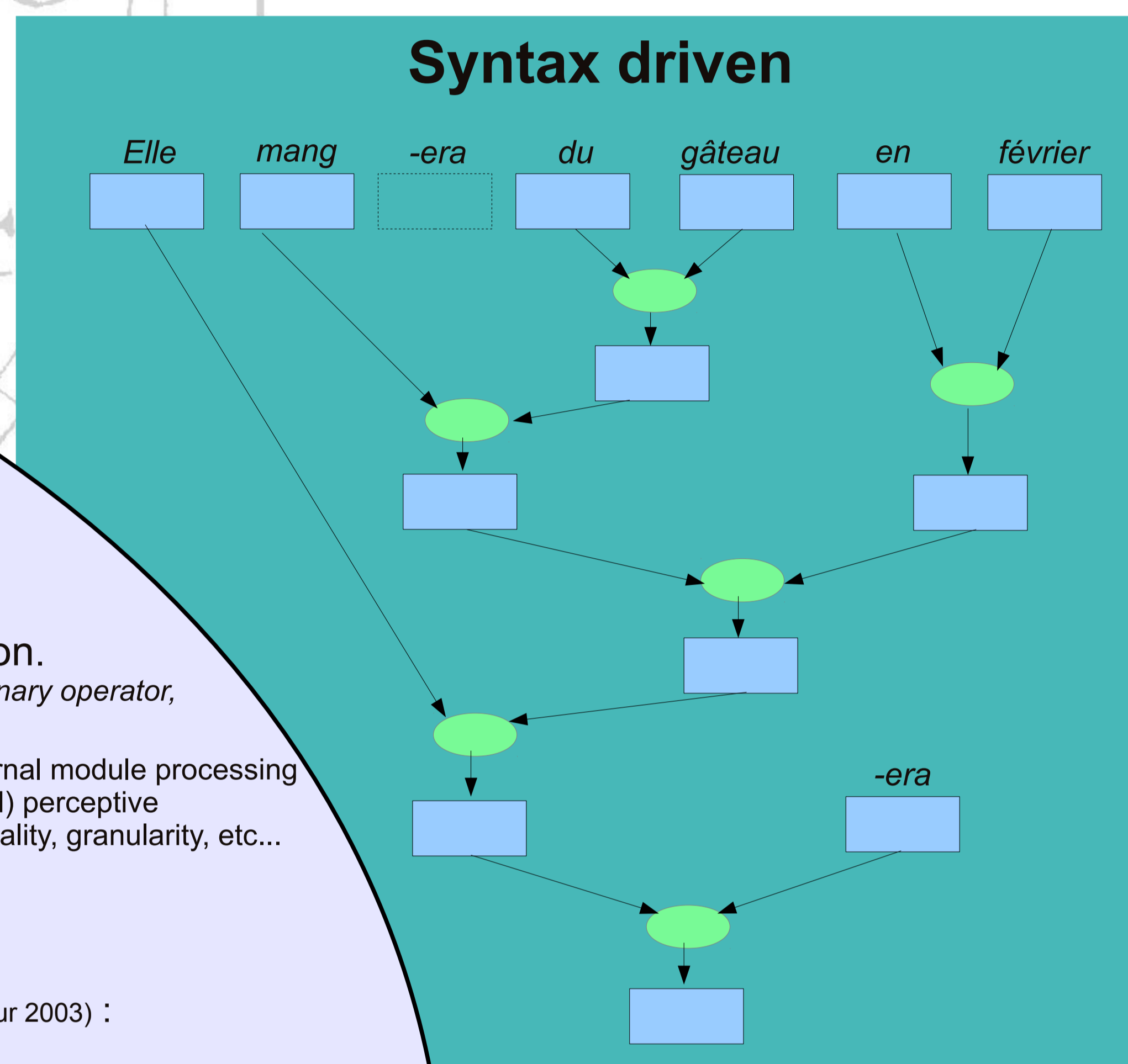
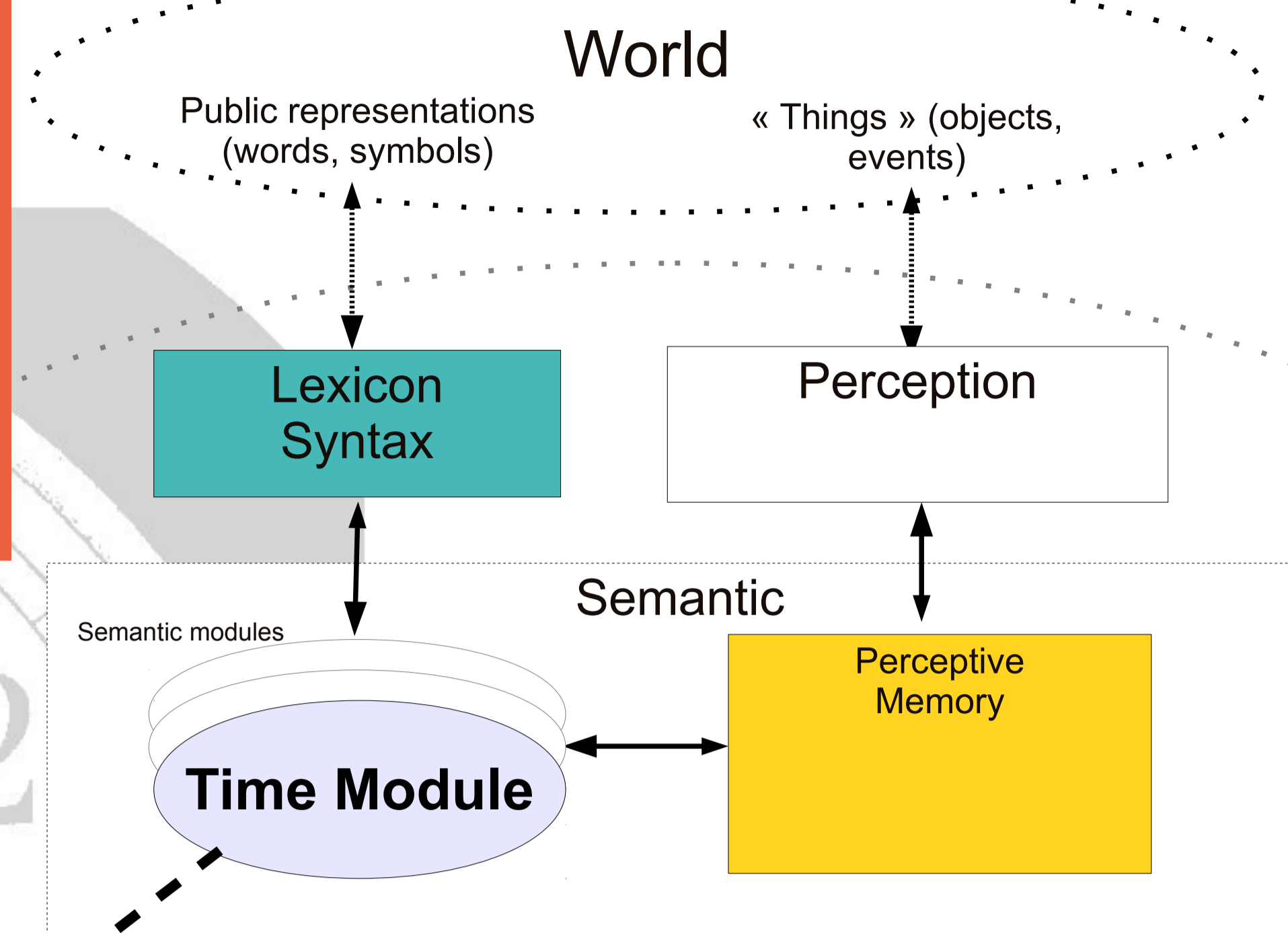
Link to perception. The image can be a unary operator, Perception is an external module processing (stored or constructed) perceptive representations, causality, granularity, etc...
- tSS**
 - Image id
 - Viewpoint
 - Anchoring
 - Multiplicity

(Carlota 1991, Gadhakpour 2003) :

 - **Figure** : A temporal phenomenon, seen globally.
 - **Ground** : A temporal phenomenon, seen from the inside, with no perception of boundaries.

Ex: She has eaten* (figure).
She was eating* (ground).
- tSS**
 - Image id
 - Viewpoint
 - Anchoring
 - Multiplicity
 - **Anchored** (the following day, 2012)
 - **Unanchored** (some day, ten minutes)
- tSS**
 - Image id
 - Viewpoint
 - Anchoring
 - Multiplicity
 - **Unique**
 - **Multiple**

NLP Global Architecture



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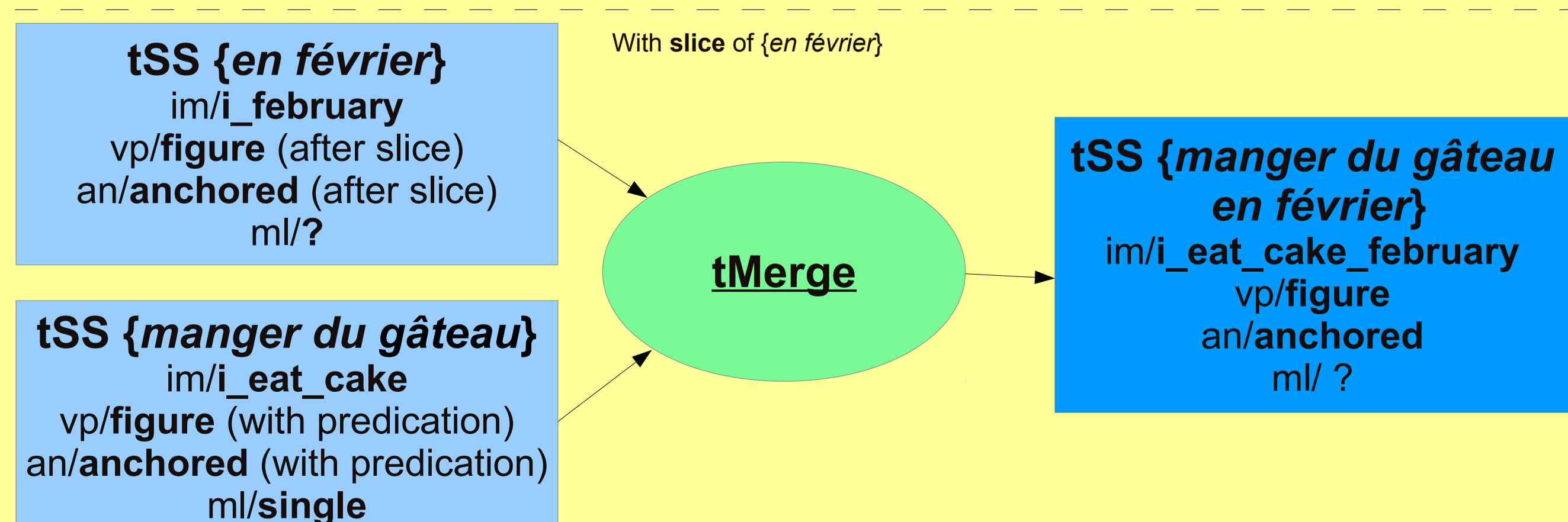
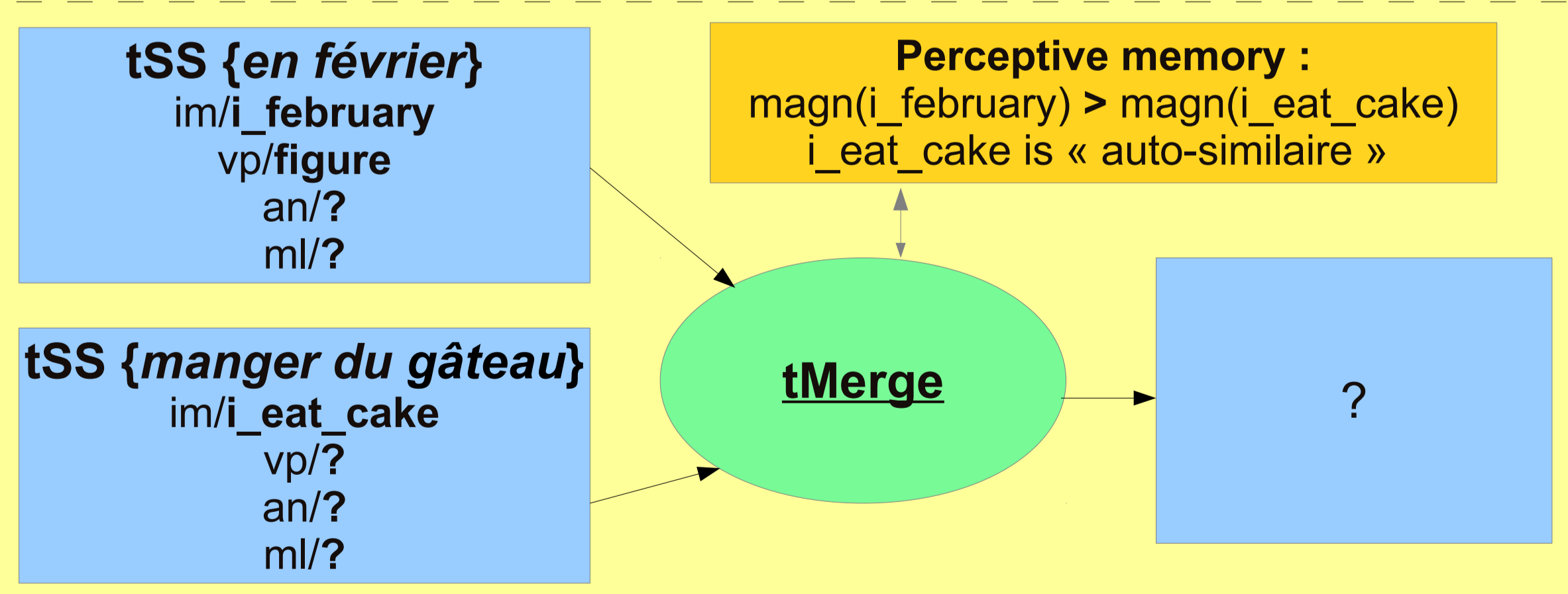
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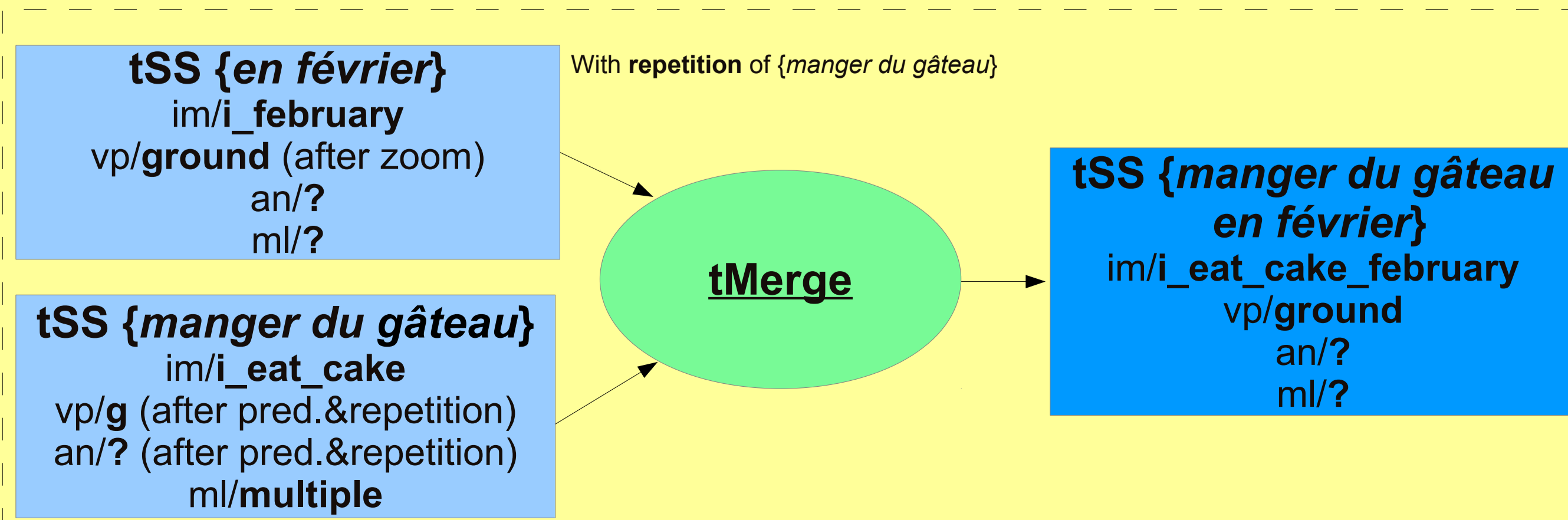
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Example

- (2) Elle mangera du gâteau en février
She will eat/be eating cake in February



OR



<http://icc.enst.fr/time/>