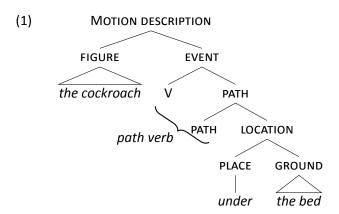
### Time and Space VI

Pavel Caha

April 7 2020



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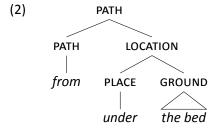
Broadly construed in this way, cartography is not an approach or a hypothesis: it is a research topic asking the question: what are the right structural maps for natural language syntax?

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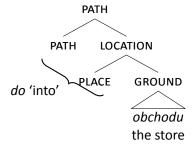
Broadly construed in this way, cartography is not an approach or a hypothesis: it is a research topic asking the question: what are the right structural maps for natural language syntax?

Answers may differ, and very different maps may be, and have been, proposed, but the question as such inevitably arises as a legitimate and central question for syntactic theory.

### Our map so far



### Maps can be compressed



#### **Revisiting Tsez**

Decomposing Path (Pantcheva 2011)

## Tsez paradigm proximal (Comrie & Polinsky 1998)

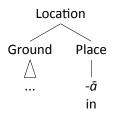
	essive	allative	Case ablative	versative ('towards')
'in'	-ā	-ā-г	-āy	-āyor
'among'	- <b>λ</b>	-l-er	-λ-āy	-λ-xor
'on (horizontal)'	-λ'(o)	-λ'o-r	-Ã'-āy	-\(\lambda'\)-\(\bar{a}\)yor, -\(\lambda'\)-\(\bar{a}\)r
'under'	-X	-\lambda-er	-λ-āy	-Ã-xor
'at'	-x(o)	-xo-r	-x-āy	-x-āyor, -x-ār
'near'	-de	-de-r	-d-āy	-d-āyor, -d-ār
'on (vertical)'	-q(o)	-qo-r	-q-ay	-q-āyor, -q-ār

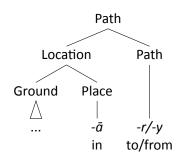
# Tsez paradigm distal (Comrie & Polinsky 1998)

	essive	allative	Case ablative	versative ('towards')
'in'	-āz	-āz-a-r	-āz-ay	-āz-a
'among'	$-\lambda - \bar{a}z$	-λ-āz-a-r	-λ-āz-ay	-λ-āz-a
'on (horizontal)'	-λ'-āz-	-X'-āz-a-r	-X'-āz-ay	-\lambda'-\bar{a}z-a
'under'	-\lambda-\text{\arabe}az	-\(\lambda\)-\(\bar{a}z\)-\(\ba	-λ̃-āz-ay	-λ-āz-a
'at'	-x-āz	-x-āz-a-r	-x-az-ay	-x-āz-a
'near'	-d-āz	-d-āz-a-r	-d-āz-ay	-d-āz-a
'on (vertical)'	-q-āz	-q-āz-a-r	-q-āz-ay	-q-az-a

	essive	allat	ive	abla	tive
in	-ā	-ā	-r	-ā	-у

# Location $\bar{\mathbf{G}}$ Place $\bar{\mathbf{G}}$ $\bar{\mathbf{G}}$ ... $-\bar{\mathbf{G}}$ in





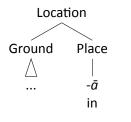
	essive	allat	ive	abla	tive
in	-ā	-ā	-r	-ā	-у

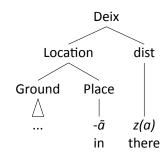
	essive	allati	ve	ablat	tive
in	-ā	-ā	-r	-ā	-у
in (distal)	-ā- <b>z</b>	-ā- <b>za</b>	ı-r	-ā- <b>z</b>	а-у

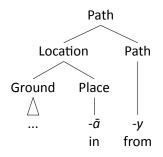
	essive	allative	ablative
in	-ā	-ā -r	-ā -y
in (distal)	-ā- <b>z(a)</b>	-ā- <b>za</b> -r	-ā- <b>za-</b> y

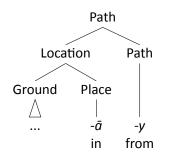
	essive	allative	ablative
in in (distal)	-ā -ā- <b>z(a)</b>	-ā -ı -ā- <b>za</b> -ı	- ,
on( support)	-λ(o)	-λο -ι	ſ

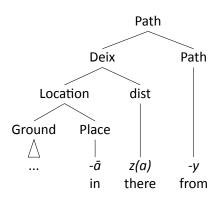
# Location $\bar{\mathbf{G}}$ Place $\bar{\mathbf{G}}$ $\bar{\mathbf{G}}$ ... $-\bar{\mathbf{G}}$ in











	essive	allative	ablative
in in (distal)	-ā -ā- <b>z(a)</b>	-ā -r -ā- <b>za</b> -r	- ,
on( support)	-λ(o)	-λο -r	

	essive	allat	ive	abla	tive
in in (distal)	-ā -ā- <b>z(a)</b>	-ā -ā- <b>z</b>	-r <b>:a</b> -r	-ā -ā- <b>z</b>	•
on( support)	-λ(o)	-λο	-r	-λο	-у

	essive	allat	ive	abla	tive
in in (distal)	-ā -ā- <b>z(a)</b>	-ā -ā- <b>z</b>	-	-ā -ā-z	,
on( support)	-λ(o)	-λο	-r	*-λο	-у

	essive	allative	ablative
in in (distal)	-ā -ā- <b>z(a)</b>	-ā -r -ā- <b>za</b> -r	-ā -y -ā- <b>za</b> -y
on( support)	-λ(o)	-λο -r	-λāy

	essive	allative	ablative
in in (distal)	-ā -ā- <b>z(a)</b>	-ā -r -ā- <b>za</b> -r	• ,
on( support)	-λ(o)	-λο -r	-λ(o)-āy

	essive	allative	ablative
in in (distal)	-ā -ā- <b>z(a)</b>	-ā -r -ā- <b>za</b> -r	-ā -y -ā- <b>za</b> -y
on( support)	-λ(o)	-λο -r	-λ(o)- <b>ā</b> y

	essive	allat	tive	abla	tive
in in (distal)	-ā -ā- <b>z(a)</b>	-ā -ā-z	-	-ā -ā-z	'
on( support)	-λ(o)	-λο	-r	-λ(o)-ā	-у

	essive	allat	ive	abla	tive
in in (distal)	-ā -ā- <b>z(a)</b>	-ā -ā-z	-	-ā -ā-z	,
distal on( support)	-λ(o)	-λο	-r	-λ(o)-ā	-у

	essive	allative	ablative
in	-ā	-ā -r	-ā -y
in (distal)	-ā- <b>z(a)</b>	-ā- <b>za</b> -r	-ā <b>-za</b> -y
distal	$-\lambda$ (o)-ā- <b>z(a)</b> $-\lambda$ (o)	-λ(o)-ā- <b>za</b> -r	$-\lambda$ (o)-ā- <b>za</b> -y
on( support)		-λο -r	- $\lambda$ (o)-ā -y

	essive	allative	ablative
in in (distal)	-ā -ā- <b>z(a)</b>	-ā -r -ā- <b>za</b> -r	-ā -у -ā- <b>za</b> -у
distal on( support)	$-\lambda$ (o)-ā- <b>z(a)</b> $-\lambda$ (o)	-λ(o)-ā- <b>za</b> -r -λο -r	$-\lambda$ (o)-ā- <b>za</b> -y $-\lambda$ (o)-ā -y

	essive	allative	ablative
in in (distal)	-ā -ā- <b>z(a)</b>	-ā -r -ā- <b>za</b> -r	-ā -у -ā <b>-za</b> -у
distal on( support)	$-\lambda$ (o)-ā- <b>z(a)</b> $-\lambda$ (o)-ā	$-\lambda$ (o)-ā- <b>za</b> -r - $\lambda$ (o)-ā -r	$-\lambda$ (o)-ā- <b>za</b> -y $-\lambda$ (o)-ā -y

	essive	allative	ablative
in in (distal)	-ā -ā- <b>z(a)</b>	-ā -r -ā- <b>za</b> -r	-ā -y -ā- <b>za</b> -y
distal on( support)	$-\lambda$ (o)-ā- <b>z(a)</b> $-\lambda$ (o)-ā	$-\lambda$ (o)-ā- <b>za</b> -r - $\lambda$ (o)-ā -r	$-\lambda$ (o)-ā- <b>za</b> -y $-\lambda$ (o)-ā -y

	essive	allative	ablative
in in (distal)	-ā -ā- <b>z(a)</b>	-ā -r -ā- <b>za</b> -r	-ā -у -ā- <b>za</b> -у
distal on( support)	-λ-ā- <b>z(a)</b>	-λ-ā- <b>za</b> -r	-λ-ā- <b>za</b> -y -λ-ā -y

	essive	allative	ablative
in in (distal)	-ā -ā- <b>z(a)</b>	-ā -r -ā- <b>za</b> -r	-ā -у -ā- <b>za</b> -у
distal on( support)	-λ-ā- <b>z(a)</b>	-λ-ā- <b>za</b> -r	-λ-ā- <b>za</b> -y -λ-ā -y
distal under			

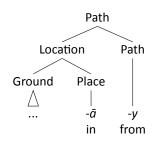
	essive	allative	ablative	
in in (distal)	-ā -ā- <b>z(a)</b>	-ā -r -ā- <b>za</b> -r	-ā -y -ā- <b>za</b> -y	
distal on( support)	-λ-ā- <b>z(a)</b>	-λ-ā- <b>za</b> -r	-λ-ā- <b>za</b> -y -λ-ā -y	
distal under	λ-ā- <b>z(a)</b>	-λ-ā- <b>za</b> -r	-λ-ā- <b>za</b> -y -λ-ā -y	

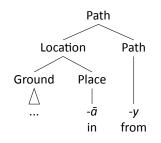
# Tsez paradigm distal

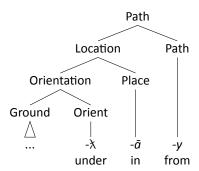
	essive	allative	Case ablative	versative ('towards')
'in'	-āz	-āz-a-r	-āz-ay	-āz-a
'among'	$-\lambda - \bar{a}z$	-λ-āz-a-r	-λ-āz-ay	-λ-āz-a
on (horizontal)'	λ'-āz	-X'-āz-a-r	-λ'-āz-ay	-λ'-āz-a
'under'	-X-āz	-\(\lambda\)-\(\bar{a}z\)-\(\ba	-λ̃-āz-ay	-λ-āz-a
'at'	-x-āz	-x-āz-a-r	-x-az-ay	-x-āz-a
'near'	-d-āz	-d-āz-a-r	-d-āz-ay	-d-āz-a
on (vertical)'	-q-āz	-q-āz-a-r	-q-āz-ay	-q-az-a

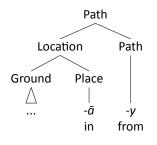
#### Tsez paradigm proximal

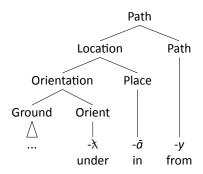
Table 3. Tsez local case forms: non-distal. Case essive allative ablative versative ('towards') 'in' -ā -а-г -āyor Spatial orientation -ay -l-er -λ-āy -\(\lambda\)-xor 'among' 'on (horizontal)' -\(\cdot\)(o) -λ'o-r -\lambda'-ay -\u00e7'-\u00e4yor, -\u00e7'-\u00e4r 'under' -Ã -\lambda-er -A-ay -Ã-XOT 'at' -x-ay -x-ayor, -x-ar -x(o) -XO-T -d-āy -d-āyor, -d-ār 'near' -de -de-r -q-āyor, -q-ār on (vertical)' -q(o) -q-ăy -qo-r

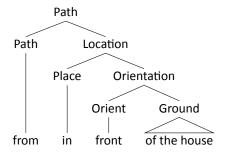


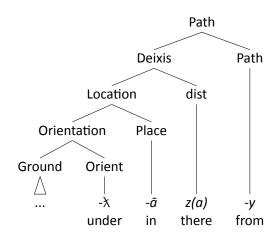


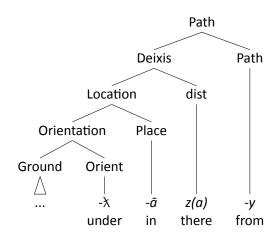












(3) a. The boat drifted from **down** inside the cave

- (3) a. The boat drifted from **down** inside the cave
  - b. The boat drifted from **up** above the dam

- (3) a. The boat drifted from **down** inside the cave
  - b. The boat drifted from **up** above the dam
  - c. The boat drifted from **over** in front of the palace

- (3) a. The boat drifted from **down** inside the cave
  - b. The boat drifted from **up** above the dam
  - c. The boat drifted from **over** in front of the palace

Particles which modify locative PPs do not restrict the space denoted by the PP.

- (3) a. The boat drifted from **down** inside the cave
  - b. The boat drifted from **up** above the dam
  - c. The boat drifted from **over** in front of the palace

Particles which modify locative PPs do not restrict the space denoted by the PP. Instead, particles introduce viewpoint for the space, generally as a presupposition.

- (3) a. The boat drifted from **down** inside the cave
  - b. The boat drifted from **up** above the dam
  - c. The boat drifted from **over** in front of the palace

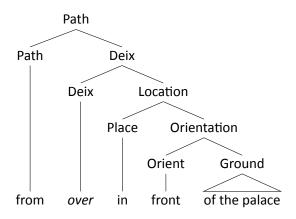
Particles which modify locative PPs do not restrict the space denoted by the PP. Instead, particles introduce viewpoint for the space, generally as a presupposition. To determine whether a Figure, say someone's stray reindeer, is inside the cave, it is sufficient to examine the location of the reindeer and the spatial extent of the cave.

- (3) a. The boat drifted from **down** inside the cave
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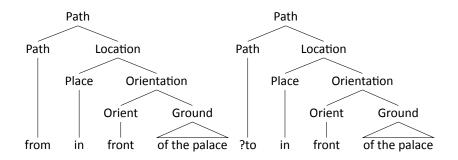
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  - c. The boat drifted from **over** in front of the palace

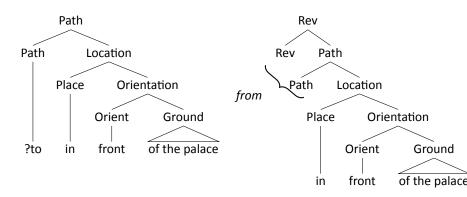
Particles which modify locative PPs do not restrict the space denoted by the PP. Instead, particles introduce viewpoint for the space, generally as a presupposition. To determine whether a Figure, say someone's stray reindeer, is inside the cave, it is sufficient to examine the location of the reindeer and the spatial extent of the cave. If the reindeer occupies the space bounded by the cave, then it is inside. In evaluating an assertion that a reindeer is down inside the cave, the truth conditions are essentially the same, but it is presupposed that the region bounded by the cave is lower than some logophoric center, e.g. the speaker or the subject is above the cave, or imagines himself at the mouth of the cave, looking downward.



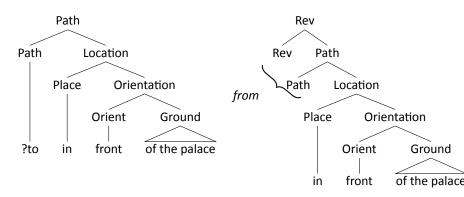
**Revisiting Tsez** 

Decomposing Path (Pantcheva 2011)

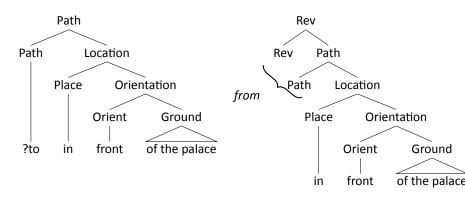




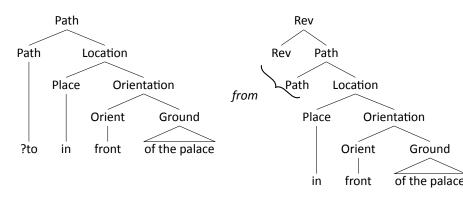
(4) a. wrap – un-wrap



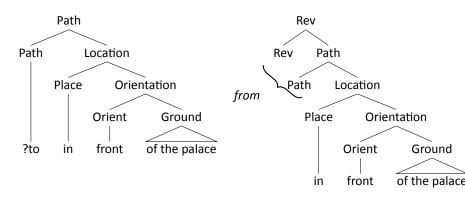
- (4) a. wrap un-wrap
  - b. tie un-tie



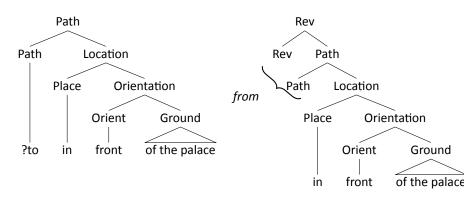
- (4) a. wrap un-wrap
  - b. tie un-tie
  - c. do un-do



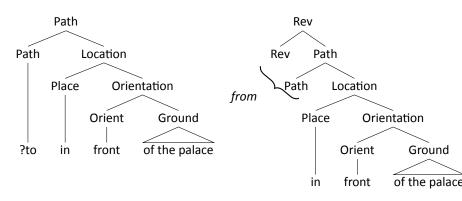
- (4) a. wrap un-wrap
  - b. tie un-tie
  - c. do un-do
  - d. healthy un-healthy



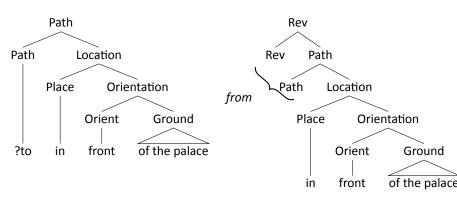
- (4) a. wrap un-wrap
  - b. tie un-tie
  - c. do un-do
  - d. healthy un-healthy
  - e. wise un-wise



- (4) a. wrap un-wrap
  - b. tie un-tie
  - c. do un-do
  - d. healthy un-healthy
  - e. wise un-wise
  - f. good bad (=un-good)



- (4) a. wrap un-wrap
  - b. tie un-tie
  - c. do un-do
  - d. healthy un-healthy
  - e. wise un-wise
  - f. good bad (=un-good)
  - g. bad \*un-bad



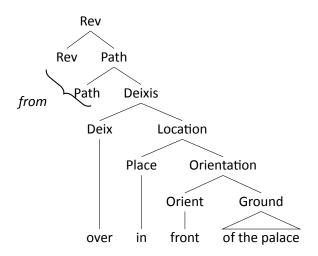
- (4) a. wrap un-wrap
  - b. tie un-tie
  - c. do un-do
  - d. healthy un-healthy
  - e. wise un-wise
  - f. good bad (=un-good)
  - g. bad \*un-bad
  - h. there back (=un-there)



#### source-goal containment (Pantcheva 2011)

Language	Location	Goal	Source	Reference
Bulgarian	pri	kəm	ot-kəm	Pashov (1999)
Dime	-se	-bow	-bow-de	Mulugeta (2008)
Chamalal	-i	-u	-u- $r$	Magomedbekova (1967b)
Ingush	$-reve{g}$	-ga	- $ga$ - $ra$	Nichols (1994)
Jingulu	-mpili	- $\eta ka$	- $\eta ka$ - $mi$	Blake (1977)
Mansi	-t	-n	- $n$ - $\partial l$	Keresztes (1998)
Quechua	- $pi$	-man	- $man$ - $da$	Jake (1985), Cole (1985)
Uchumataqu	- $tcute{a}$	- $ki$	- $ki$ - $stani$	Vellard (1967)

Table 4.2: Languages where the Source marker morphologically contains the Goal marker



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