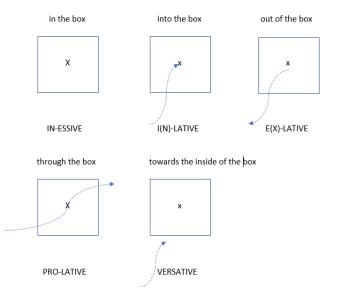
Time and Space V

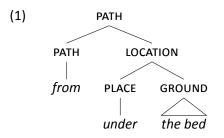
Pavel Caha

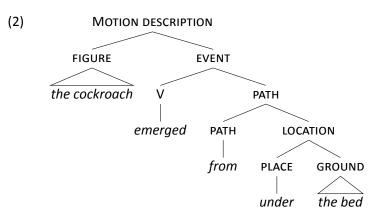
March 27 2023

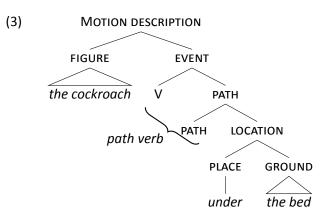
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Paths and locations









Verb-framed vs. sattelite framed languages

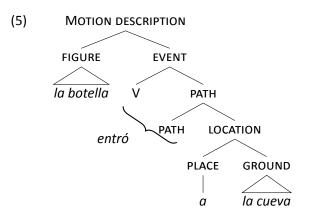
- (4) Spanish
 - Juan { ??corrió/ *anduvó/* gateó } a la tienda.
 Juan ran/ walked/ crawled LOC the store
 'John ran/walked/crawled to the store'

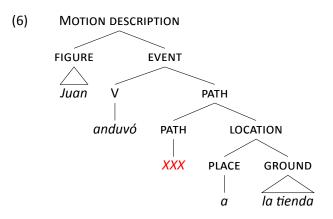
Verb-framed vs. sattelite framed languages

(4) Spanish

- Juan { ??corrió/ *anduvó/* gateó } a la tienda.
 Juan ran/ walked/ crawled LOC the store
 'John ran/walked/crawled to the store'
- b. La botella entró a la cueva (flotando). the bottle moved.in LOC the cave floating 'The bottle floated into the cave'
 (Lit (The battle want into the cave floating'))

(Lit. 'The bottle went into the cave floating')

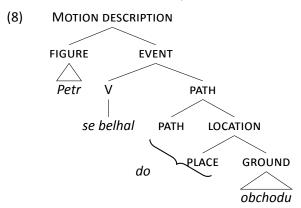




(7) Czech

Petr { se plazil/ belhal } do obchodu
 Petr crawled limped into store
 'Petr crawled/limped to the store.'

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Paths and aspect (Zwarts 2005)

(9) a. Alex swam (*in/for an hour)

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 - b. Alex swam to the beach (in/*for an hour)

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- b. Alex swam to the beach (in/*for an hour)
- c. Alex swam towards the beach (*in/for an hour)
- d. Alex ran **around the lake / though the grass** (in/for an hour)

- Telos: the natural endpoint of an event
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(12) a. Michael ate apples/chocolate for an hour/??in an hour.

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 - a. The predicate is cumulative if it applies to the sum of two objects in its denotation (*chocolate + chocolate = chocolate*)
 - b. The predicate is non-cumulative if it does not apply to the sum of two objects in its denotation (*five apples + five apples*)

(15) a. The children laughed for a minute / *in a minute.

- (15) a. The children laughed for a minute / *in a minute.
 - b. Marry arrived in two minutes/*for two minutes.

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 - b. Marry arrived in two minutes/*for two minutes.
- (16) divisivity: Take a predicate P (e.g., *laugh* vs. *arrive*).

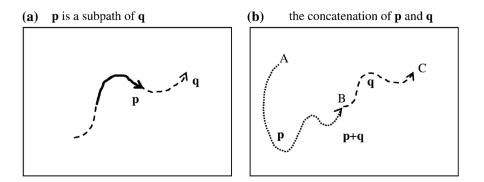
- (15) a. The children laughed for a minute / *in a minute.
 - b. Marry arrived in two minutes/*for two minutes.
- (16) divisivity: Take a predicate P (e.g., *laugh* vs. *arrive*).
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- (17) cumulativity: Take a predicate P (e.g., *laugh* vs. *arrive*).
 - a. The predicate is cumulative if it applies to the sum of two objects in its denotation (*laugh + laugh = laugh*)
 - b. The predicate is non-cumulative if it does not apply to the sum of two objects in its denotation (*arrive* + *arrive* \neq *arrive*)



(18) He walked through the tunnel for hours.

- (18) He walked through the tunnel for hours.
 - a. divisivity: every sub-path counts as a path through the tunnel

- (18) He walked through the tunnel for hours.
 - a. divisivity: every sub-path counts as a path through the tunnel
 - b. cumulativity: yes

Problems with sub-paths I

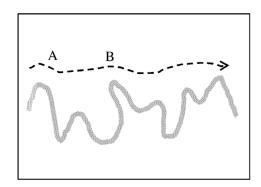
We get atelic events that unfold along non-divisive paths

Problems with sub-paths I

- We get atelic events that unfold along non-divisive paths
- (19) He walked along the river for hours / *in an hour.

Problems with sub-paths I

- We get atelic events that unfold along non-divisive paths
- (19) He walked along the river for hours / *in an hour.



A path along the river

Problems with sub-paths II

We get telic events that unfold along divisive paths

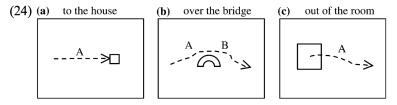
Problems with sub-paths II

We get telic events that unfold along divisive paths

(23) a. Alex ran to the house (in/*for a minute)

- b. Alex walked over the bridge (in/*for two minutes)
- c. Alex crawled out of the room (in/*for three minutes)

Intuitively, we can draw paths from the PP denotations of these sentences as follows:



Cumulativity works fine I

A path is cumulative if you can connect two paths in the denotation of the preposition, and the resulting path is still in the denotation.

Cumulativity works fine I

A path is cumulative if you can connect two paths in the denotation of the preposition, and the resulting path is still in the denotation.

(20) He walked along the river for hours / *in an hour.

Cumulativity works fine I

A path is cumulative if you can connect two paths in the denotation of the preposition, and the resulting path is still in the denotation.

(20) He walked along the river for hours / *in an hour.

A B

A path along the river

Cumulativity works fine II

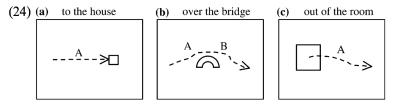
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イロト イポト イヨト イヨト



cumulative: along the river, towards the house,

Summary

- cumulative: along the river, towards the house,
- non-cumulative: into the drawer, out of the drawer

Summary

- cumulative: along the river, towards the house,
- non-cumulative: into the drawer, out of the drawer
- ambiguous: through the tunnel, around the house

Path typology (Jackendoff 1983)

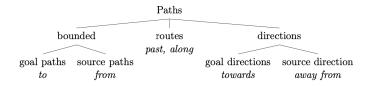


Figure 2.1: Jackendoff's (1983) typology of paths

Path typology (Pantcheva 2011)

		Oriented				Non-oriented Route	
		Goal		Source			
With transition	Transitional	Cofinal to X		Coinitial from X		$\begin{array}{c} \text{Transitive} \\ past \ X \end{array}$	
		++++++		++++		+++	
		0	1	0	1	0	1
	Delimited	$\begin{array}{c} \text{Terminative} \\ up \ to \ X \\+ \\ 0 \\ \end{array}$		Egressive starting from X +			
No transition	Non- transitional	Approximative towards X 0 1		Recessive away from X 0 1		$\begin{array}{c} \text{Prolative}\\ along X\\ ++++++++\\ 0 & 1 \end{array}$	

Table 2.2: Classification of paths

References

- Jackendoff, Ray. 1983. *Semantics and cognition*. Cambridge, Ma.: MIT Press.
- Pantcheva, Marina. 2011. *Decomposing Path. The nanosyntax of directional expressions*: CASTL, Tromsødissertation.
- Zwarts, Joost. 2005. Prepositional aspect and the algebra of paths. *Linguistics and Philosophy* 28. 739 – 779.