

Time and Space V

Pavel Caha

March 31 2022

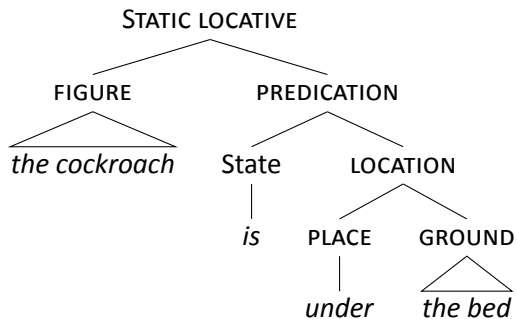
What we know so far

Meaning vs. marking

Verbs of motion

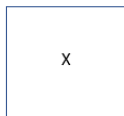
Paths and aspect (Zwarts 2005)

(1)



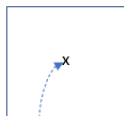
Paths and locations

in the box



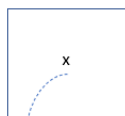
IN-ESSIVE

into the box



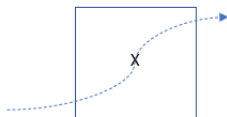
I(N)-LATIVE

out of the box



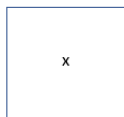
E(X)-LATIVE

through the box



PRO-LATIVE

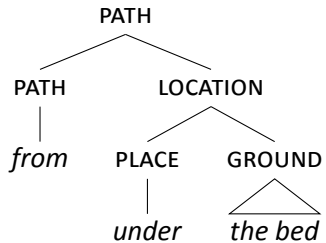
towards the inside of the box



VERSATIVE

1.png 1.bb

(2)



(3)

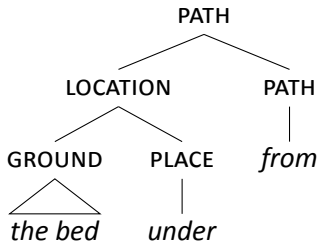


Table 3. Tsez local case forms: non-distal.

	Case			
	essive	allative	ablative	versative (‘towards’)
Spatial orientation 'in'	-ā	-ā-r	-āy	-āyor
'among'	-λ	-λ-er	-λ-āy	-λ-xor
'on (horizontal)'	-λ'(o)	-λ'o-r	-λ'-āy	-λ'-āyor, -λ'-ār
'under'	-λ̄	-λ̄-er	-λ̄-āy	-λ̄-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-āy	-q-āyor, -q-ār

What we know so far

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Verbs of motion

Paths and aspect (Zwarts 2005)

Fusional/portmanteau marking

- (4) plural
 - a. laptop — laptop-s, ...

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- (5) comparatives
 - a. tall — tall-er, ...

Fusional/portmanteau marking

(4) plural

a. laptop — laptop-s, ...

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a. tall — tall-er, ...

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Fusional/portmanteau marking

(4) plural

- a. laptop — laptop-s, ...
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- a. tall — tall-er, ...
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- c. good — bett-er (to bett-er something, to cool-er something)

Fusional/portmanteau marking

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(6) past tense

- a. walk — walk-ed

Fusional/portmanteau marking

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- b. come — came

Fusional/portmanteau marking

(4) plural

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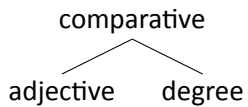
- a. tall — tall-er, ...
- b. bad — worse (= bad-er)
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(6) past tense

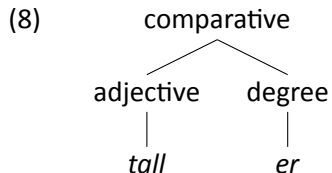
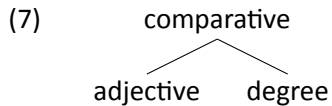
- a. walk — walk-ed
- b. come — came
- c. keep — kep(-)t

realizational approaches to morphology

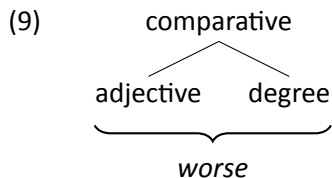
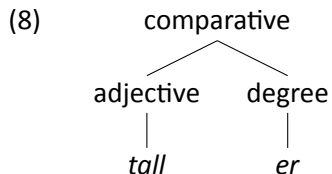
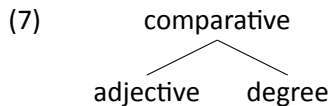
(7)



realizational approaches to morphology



realizational approaches to morphology



sg (make)

- 1 děl-á-**m**
- 2 děl-á-**š**
- 3 děl-á

sg (make)

1 děl-á-**m**

2 děl-á-**š**

3 děl-á

sg (ask)

1 pros-í-**m**

2 pros-í-**š**

3 pros-í

sg (make)

1 děl-á-**m**

2 děl-á-**š**

3 děl-á

sg (ask)

1 pros-í-**m**

2 pros-í-**š**

3 pros-í

sg (carry)

1 ??

2 nes-e-**š**

3 nes-e

sg (make)

- 1 děl-á-m
 - 2 děl-á-š
 - 3 děl-á
-

sg (ask)

- 1 pros-í-m
 - 2 pros-í-š
 - 3 pros-í
-

sg (carry)

- 1 nes-e-m
- 2 nes-e-š
- 3 nes-e

sg (make)

- 1 děl-á-m
 - 2 děl-á-š
 - 3 děl-á
-

sg (ask)

- 1 pros-í-m
 - 2 pros-í-š
 - 3 pros-í
-

sg (carry)

- 1 nes-e-m
 - 2 nes-e-š
 - 3 nes-e
-

sg (carry)

- 1 nes- u (u = tense + 1st person)
- 2 nes-e-š
- 3 nes-e

back to space

(10) a. above – from above

back to space

- (10)
- a. above – from above
 - b. below – from below

back to space

- (10)
- a. above – from above
 - b. below – from below
 - c. inside – from inside

back to space

- (10)
- a. above – from above
 - b. below – from below
 - c. inside – from inside
 - d. in – *from in

back to space

- (10)
- a. above – from above
 - b. below – from below
 - c. inside – from inside
 - d. in – *from in
 - e. in – out of

(11) (Turkish)

- a. Kitap masa-da.
Book table-loc
'A/the book is on the table.

(11) (Turkish)

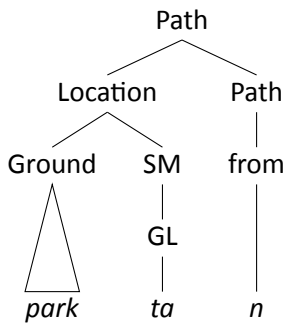
- a. Kitap masa-da.
Book table-loc
'A/the book is on the table.'
- b. kitap-ta
book-loc
'in the book'

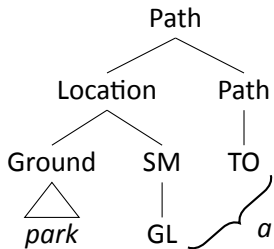
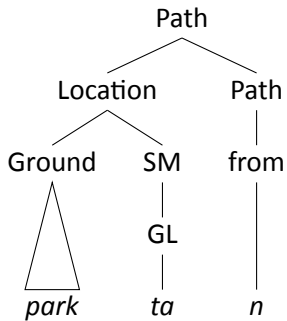
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- c. o.adam park-**tan** kostu.
he park-from ran
'He ran from the park.'

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he park-from ran
'He ran from the park.'
- d. ben park-a kostum.
I park-to ran
'I ran to the park.'





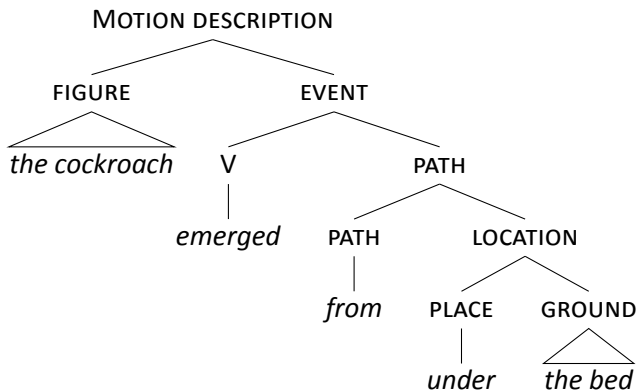
What we know so far

Meaning vs. marking

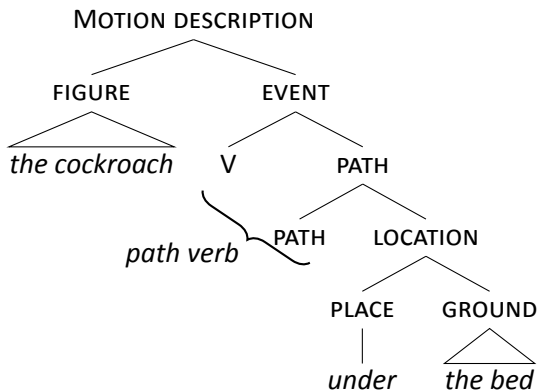
Verbs of motion

Paths and aspect (Zwarts 2005)

(12)



(13)



Verb-framed vs. satellite framed languages

(14) Spanish

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

Verb-framed vs. satellite framed languages

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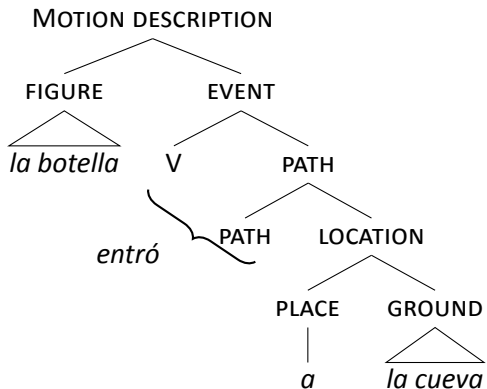
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Juan ran/ walked/ crawled LOC the store
'John ran/walked/crawled to the store'
- b. La botella entró a la cueva (flotando).
the bottle moved.in LOC the cave floating
'The bottle floated into the cave'
(Lit. 'The bottle went into the cave floating')

Verb-framed vs. satellite framed languages

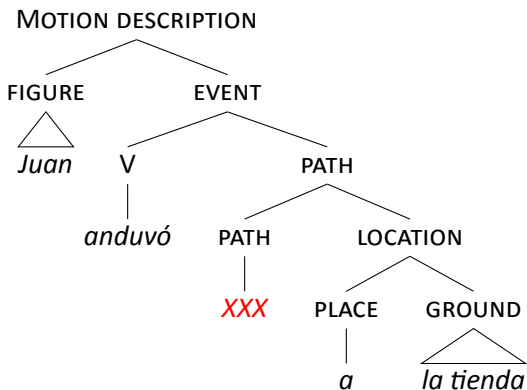
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(15)



(16)



Path verbs

(17) Path verbs in English

a. He jumped in the lake (directional)

Path verbs

- (17) Path verbs in English
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 - b. He swam in the lake (only locative)

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(18) Path verbs in Czech

- a. Dej ten kabát vedle bundy
put the coat next to jacket (directional)

Path verbs

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put the coat next to jacket (directional)
- b. Kabát visí vedle bundy
coat is hanging next to jacket (locative)

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coat is hanging next to jacket (locative)

- ▶ The point: motion can be coded in the spatial marker or in the verb.

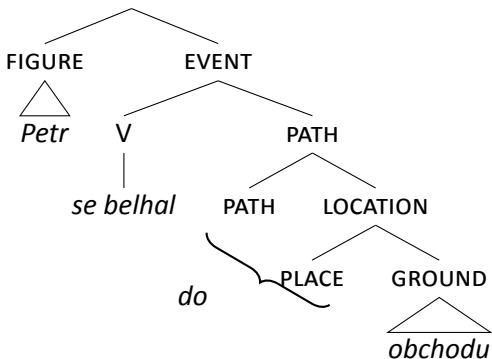
(19) Czech

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

(19) Czech

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

(20) MOTION DESCRIPTION



What we know so far

Meaning vs. marking

Verbs of motion

Paths and aspect (Zwarts 2005)

3 types of paths

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

3 types of paths

- (21)
- a. Alex swam (*in/**for** an hour)
 - b. Alex swam **to the beach** (in/*for an hour)

3 types of paths

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- a. Alex swam (*in/**for** an hour)
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 - c. Alex swam **towards the beach** (*in/**for** an hour)

3 types of paths

- (21)
- a. Alex swam (*in/**for** an hour)
 - 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 / through the grass** (in/**for** an hour)

Telicity (situation aspect)

- ▶ Telos: the natural endpoint of an event

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(22) Atelic verbs (states, activities)

Telicity (situation aspect)

- ▶ Telos: the natural endpoint of an event

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a. John remained under the bed for an hour / *in an hour

Telicity (situation aspect)

- ▶ Telos: the natural endpoint of an event

(22) Atelic verbs (states, activities)

- John remained under the bed for an hour / *in an hour
- The children laughed for a minute / *in a minute

Telicity (situation aspect)

- ▶ Telos: the natural endpoint of an event

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- a. John remained under the bed for an hour / *in an hour
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(23) Telic verbs (achievements, accomplishments)

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- a. John remained under the bed for an hour / *in an hour
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- a. John broke the stick in a second/*for seconds.

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- Michael found gold in just ten minutes/*for two minutes.

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divisivity, cumulativity

- (24) a. Michael ate apples/chocolate for an hour/??in an hour.

divisivity, cumulativity

- (24)
- a. Michael ate apples/chocolate for an hour/??in an hour.
 - b. Michael ate the apple/five apples in an hour.

divisivity, cumulativity

- (24) a. Michael ate apples/chocolate for an hour/??in an hour.
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- (25) divisivity: Take a predicate P (e.g., *chocolate* vs. *five apples*).

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a. The predicate is divisive if it is possible to split it in two parts, and the predicate applies to each part (*apples*, *chocolate*)

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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 \neq five apples*)

divisivity, cumulativity

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

divisivity, cumulativity

- (27)
- a. The children laughed for a minute / *in a minute.
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divisivity, cumulativity

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- (28) divisivity: Take a predicate P (e.g., *laugh* vs. *arrive*).
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- (29) cumulativity: Take a predicate P (e.g., *laugh* vs. *arrive*).

divisivity, cumulativity

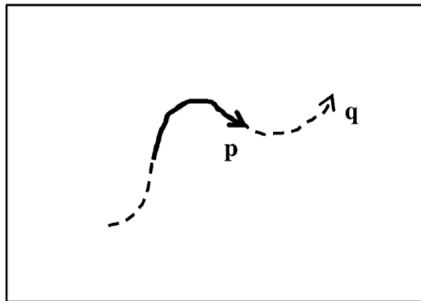
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- (29) cumulativity: Take a predicate P (e.g., *laugh* vs. *arrive*).
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divisivity, cumulativity

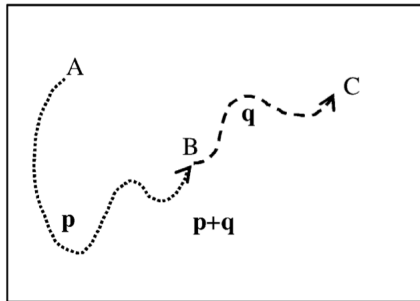
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- (29) cumulativity: Take a predicate P (e.g., *laugh* vs. *arrive*).
- a. The predicate is cumulative if it applies to the sum of two objects in its denotation (*laugh + laugh = laugh*)
- b. The predicate is non-cumulative if it does not apply to the sum of two objects in its denotation (*arrive + arrive ≠ arrive*)

Back to space

(a) p is a subpath of q



(b) the concatenation of p and q



Back to space

(30) He walked through the tunnel for hours.

Back to space

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

Back to space

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

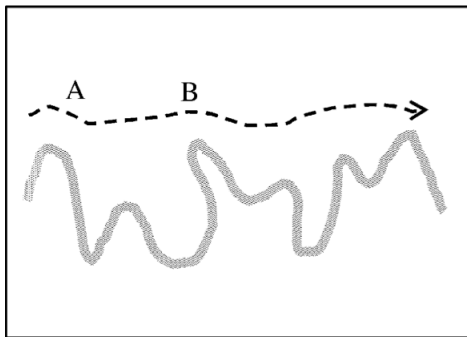
(31) He walked along the river for hours / *in an hour.

Problems with sub-paths I

- ▶ We get atelic events that unfold along non-divisive paths

(31) 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

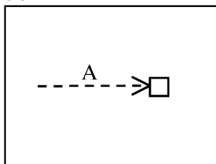
Problems with sub-paths II

- ▶ We get telic events that unfold along divisive paths

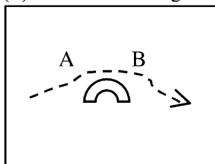
- (23) a. Alex ran to the house (in/*for a minute)
b. Alex walked over the bridge (in/*for two minutes)
c. Alex crawled out of the room (in/*for three minutes)

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

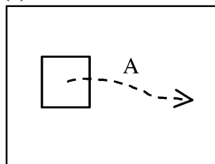
- (24) (a) to the house



- (b) over the bridge



- (c) out of the room



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.

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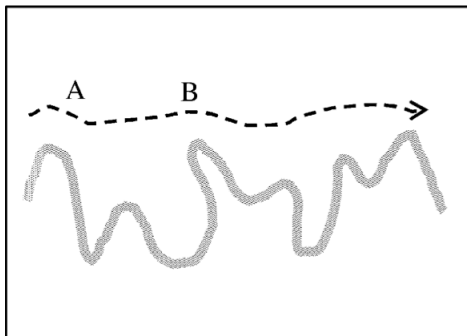
(32) He walked along the river for hours / *in an hour.

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.

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

A path along the river



Cumulativity works fine II

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.
NB: such concatenation must be possible for at least some paths.

Cumulativity works fine II

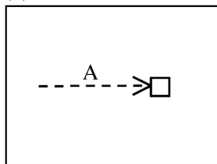
A path is cumulative if you can connect two paths in the denotation of the preposition, and the resulting path is still in the denotation.

NB: such concatenation must be possible for at least some paths.

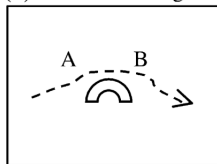
- (23) a. Alex ran to the house (in/*for a minute)
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Intuitively, we can draw paths from the PP denotations of these sentences as follows:

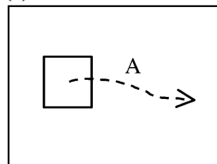
- (24) (a) to the house



- (b) over the bridge



- (c) out of the room



Summary

- ▶ 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)

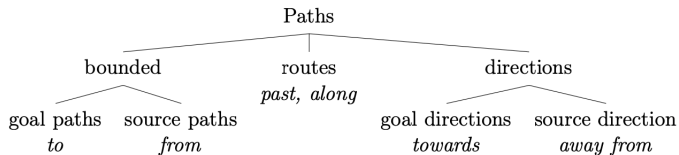


Figure 2.1: Jackendoff's (1983) typology of paths

Path typology (Pantcheva 2011)

		Oriented		Non-oriented		
		Goal	Source	Route		
		Cofinal <i>to X</i>	Coinitial <i>from X</i>	Transitive <i>past X</i>		
With transition	Transitional	-----++++	++++-----	-----++++	-----	
		0	1	0	1	0
With transition	Delimited	-----+	+-----			
		0	1	0	1	
No transition	Non-transitional	-----	-----	+++++		
		0	1	0	1	0

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, Tromsø dissertation.

Zwarts, Joost. 2005. Prepositional aspect and the algebra of paths. *Linguistics and Philosophy* 28. 739 – 779.