1st International Workshop on "Language Comparison and Typology: German and the Mediterranean languages"

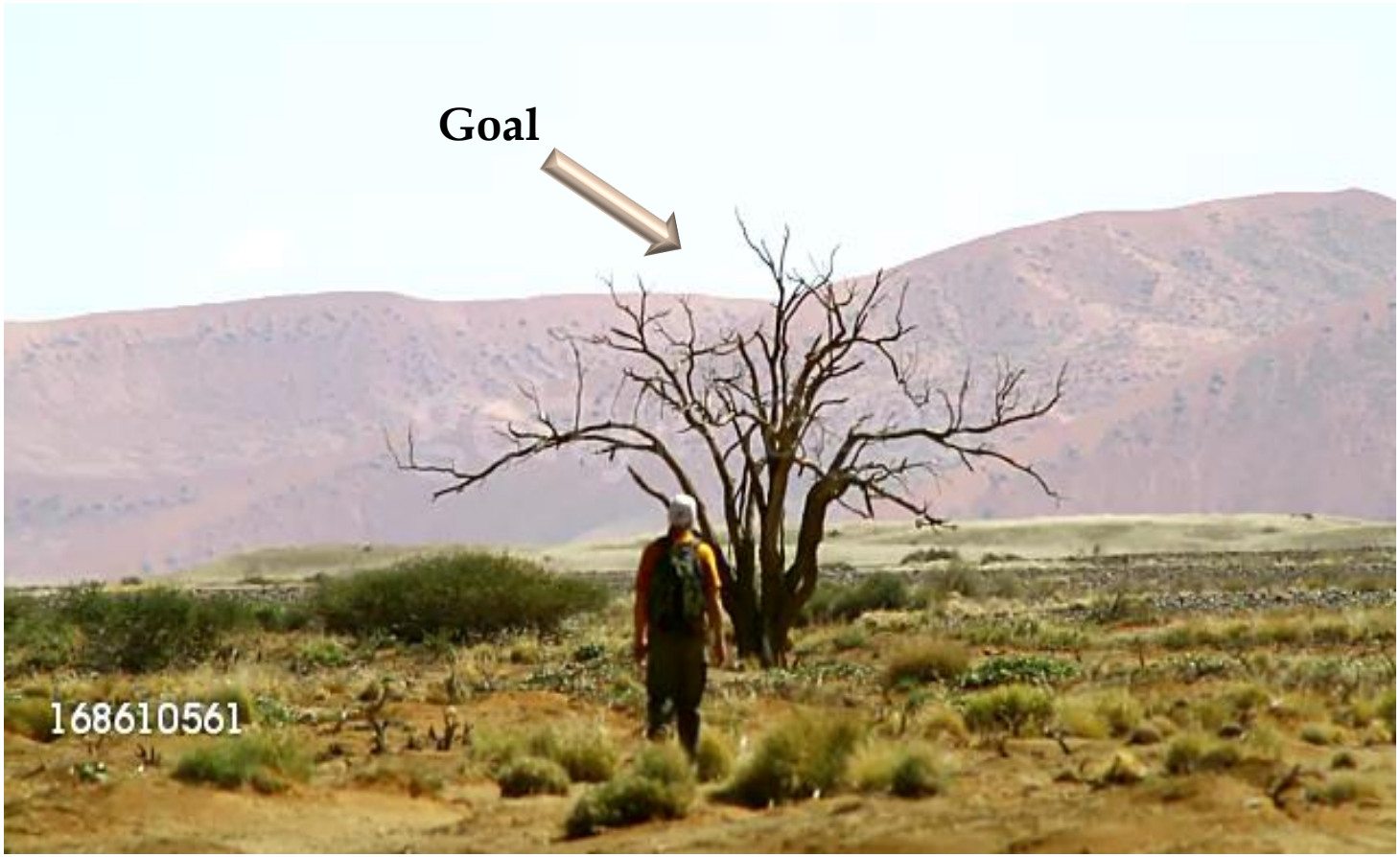
12 October 2018

Typological differences and their ramifications for motion encoding: comparing German to English and Greek

Thanasis Georgakopoulos (Université de Liège)
Holden Härtl (University of Kassel)
Athina Sioupi (Aristotle University of Thessaloniki)

Introduction

Goal of motion: "the entity or place towards which something moves" (Crystal 2008).



© http://www.gettyimages.com/detail/video/man-walking-towards-solo-tree-in-barren-landscape-stock-video-footage/168610561

Introduction

Goal of motion:

- The (potential) final point of motion
  - Instances in which the figure finally **reaches** this point.
  - Instances in which the figure simply heads **towards** it.
    (see, e.g., von Stutterheim et al., 2009)

Outline

1. Introduction
2. Lexicalisation patterns
   - Satellite-framed *vs.* Verb-framed languages
   - Goal preference across languages: The effect of the lexicalization pattern
3. Aspect *vs.* non-aspect languages
   - Goal preference across languages: The effect of grammatical aspect
4. The present study:
   - Verbalization study
     - Focus on English, German, Greek
     - Findings based on different categorisations of the stimuli
5. Conclusion

*Based on: Georgakopoulos, Härtl & Sioupi (2018); Georgakopoulos & Härtl, *submitted*

Introduction

There are two main streams of research dealing with goals of motion:

- The first one addressing the so-called source-goal asymmetry or goal-bias hypothesis:
  - Goals and sources of motion behave asymmetrically;
  - A clear preference for the endpoint of motion is reported

  (see, among others, Ikegami, 1987; Landau & Zukowski, 2003; Stefanowitsch & Rohde, 2004; Lakusta & Landau, 2005; Gehrke, 2008; Papafragou, 2010; Georgakopoulos & Sioupi, 2015; Lakusta & DiFabrizio 2016; Luraghi et al. 2017; Georgakopoulos, 2018).

- The second one viewing goal preference in motion events as a reflector of cross-linguistic differences.

Today's talk

Introduction

The background:

Two distinct factors have been reported to determine goal preference:

- The cross-linguistic differences in lexicalization patterns of motion events
  (see Slobin, 1996; Georgakopoulos & Sioupi, 2015)

- The presence of grammatical viewpoint aspect encoding
  (Athanasopoulos & Bylund, 2013; Bylund, 2009; Schmiedtová, von Stutterheim, & Carroll, 2011; von Stutterheim & Nüse, 2003; Stutterheim, Bouhaous, & Carroll 2017)

Introduction

Introduction

The background:

Two distinct factors have been reported to determine goal preference:

- The cross-linguistic differences in lexicalization patterns of motion events
  (see Slobin, 1996; Georgakopoulos & Sioupi, 2015)

- The presence of grammatical viewpoint aspect encoding
  (Athanasopoulos & Bylund, 2013; Bylund, 2009; Schmiedtová, von Stutterheim, & Carroll, 2011; von Stutterheim & Nüse, 2003; Stutterheim, Bouhaous, & Carroll 2017)

Table 1. Properties of the languages under investigation

		Language		
		English	German	Greek
	Grammatical aspect	Yes	No	Yes
Property	*Lexicalization pattern*	Satellite-framed	Satellite-framed	Verb-framed

Lexicalisation pattern: S-framed *vs.* V-framed

- Languages that express the path in the verb (map the core schema of the event onto the verb): **verb-framed languages.**

Path: in the verb root

- Languages that express the path out of the verb via "satellites": **satellite-framed languages.**
  (Talmy, 1985; 2000)

Path: out of the verb

- Satellites are defined as "certain immediate constituents of a verb root other than inflections, auxiliaries, or nominal arguments".
  (Talmy, 1985: 102)
  - "The Satellite is thus intended to encompass all of the following grammatical forms: English verb particles, German separable and inseparable verb prefixes, Latin or Russian verb prefixes, […] ."
    (Talmy, 2000: 222; cf. Beavers et al., 2010, Goschler et al., 2013, who include also PPs)

Lexicalisation pattern: S-framed *vs.* V-framed

The dog *ran* into the house.

Main verb encodes manner

SATELLITE-FRAMED PATTERN:
→ path encoded in a satellite

Der Hund *lief* **ins** Zimmer hinein.

Main verb encodes manner

SATELLITE-FRAMED PATTERN:
→ path encoded in a satellite

Lexicalisation pattern: S-framed *vs.* V-framed

O skílos **bíke** sto δomátio *tréhodas*.
'The dog entered the house by running.'

Participle encodes manner

VERB-FRAMED PATTERN:
→ path encoded on main verb

Le chien est entré dans la maison *en courant*.
'The dog entered the house by running.'

PP encodes manner

VERB-FRAMED PATTERN:
→ path encoded on main verb

Goal preference across languages: The effect of the lexicalization pattern

- In motion events, when the PP is optional (e.g. *They fell in the water*), a V-framed language omits the PP more frequently than a S-framed language

(Slobin, 1996: 199–201)

- Similar differences were reproduced in non-prototypical motion events, such as CHANGE OF POSSESSION EVENTS

(Georgakopoulos & Sioupi, 2015)

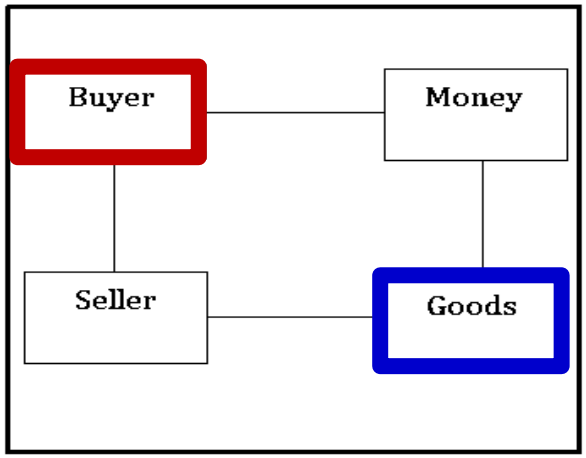


Fig. a. The profiled attributes (in bold) of BUY in the COMMERCIAL EVENT frame

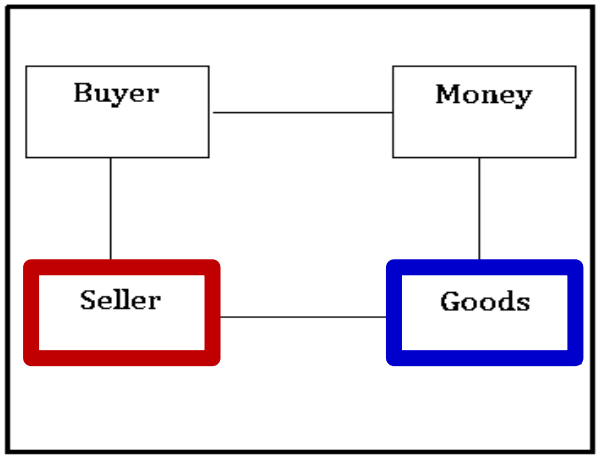


Fig. b. The profiled attributes (in bold) of SELL in the COMMERCIAL EVENT frame

Lexical units of the COMMERCIAL EVENT FRAME: **BUY, SELL**

(cf. Fillmore, 1982 [2006]: 378)

Goal preference across languages: The effect of the lexicalization pattern

Thing (Theme)
Buyer/ Seller

German

(1) Aus Verzweiflung **verkaufte** schon jede zweite Frau ihr Baby.
from desperation sell:3SG.PAST already each second woman her baby
'Every second woman **sold** her baby out of desperation'. [HMP12]

(2) Schon mit 19 Jahren **kaufte** sie ihr erstes Kunstwerk.
Already with 19 years buy:3SG.PAST she her first work of art
'When she turned 19 (years old), she **bought** her first work of art'. [HMP08]

Greek

(3) O proeðros θa **pulisi** tin omaða to Δekemvrio.
the President FUT.PART sell:3SG.PFV.NONPAST the team:ACC the December:ACC
'The President will sell the team in December'. [WOPG18-0378]

(4) O pelatis θeli na **aɣorasi** ena cd musikis.
the customer:NOM wants SUBJ buy:2SG.PFV.NONPAST a cd music:GEN
'The customer wants to **buy** a CD'. [WRPG16-9284]

Goal preference across languages: The effect of the lexicalization pattern

Thing (Theme)
Buyer/ Seller
Optional element

German

(5) Die Firma **verkaufte** in den Folgejahren Rechner **an Universitäten.**
the company sell:3SG.PAST in the following.years computers to universities
'In the following years, the Company sold computers to the Universities'. [SPK]

(6) Er **kaufte** Beruhigungspillen **von einem Junkie.**
he buy:3SG.PAST sedative pills from INDEF.DAT junkie
'He **bought** sedative pills **from a junkie**'. [HMP11]

BUY and SELL can explicitly express an optional element

Goal preference across languages: The effect of the lexicalization pattern

Thing (Theme)
Buyer/ Seller
Optional element

Greek

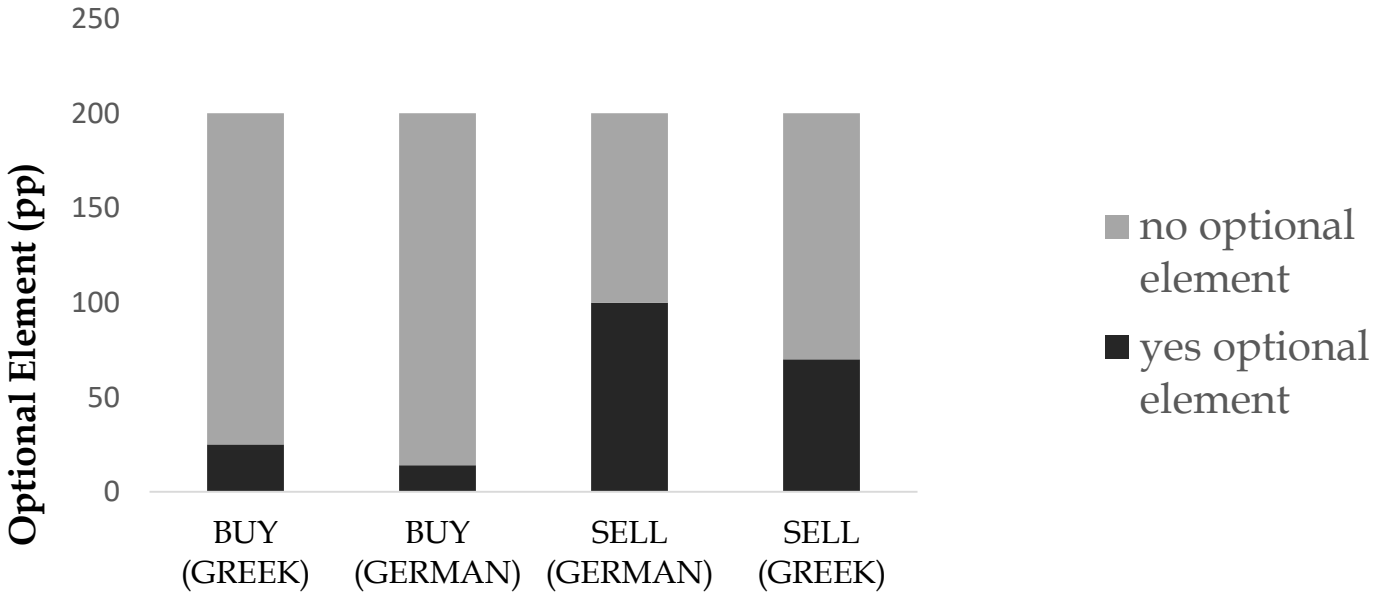
(7) Os to etos 1974 **pulisa** ke ta 6 ðiamerismata
until the year 1974 sell:3SG.PFV.PAST and the 6 apartments
se 6 ðiaforetikus ayorastes.
to 6 different buyers
'By 1974, I **had sold** all 6 apartments to 6 different buyers'. [WRPG17-1791]

(8) Sintoma apektise ke ðeftero plio pu to
soon acquire:3SG.PFV and second ship that CL.ACC.3SG.N
ayorase apo tin eteria Evyeviði.
buy:3SG.PFV.PAST from the company:ACC Eugenides'
'He soon had a second ship which he **bought from the Eugenides company**'.
[WRPG17-2380]

BUY and SELL can explicitly express an optional element

Goal preference across languages: The effect of the lexicalization pattern

Q: Does the typological difference between German and Greek affect some aspects of the bias toward the expression of the Goal?



- The optional PP is explicitly expressed more often in German than in Greek.
- The critical factor for the observed difference is the goal optional element in German

  ⇒ German shows a more robust goal bias compared to Greek.

Aspect vs. non-aspect languages

Grammaticalized aspect

- Aspects are different ways of viewing the internal structure of a situation

(cf. Comrie, 1976)

- **Perfective aspect**: a situation is viewed as a single whole or from outside

  Imperfective aspect: describes situations from within, focusing on their internal structure

(see Comrie, 1976: 24; Herweg, 1990; Lübbe & Rapp, 2011)

An apple fell from the tree.

An apple is falling from the tree.

The English progressive has much in common with the cross-linguistic notion of imperfective

(see Herweg, 1990; also Stutterheim, et al., 2012; Klein, 1994; Krause, 2002)

Aspect vs. non-aspect languages

- This contrast is:
  - either grammaticized in the language (e.g. English, Greek, and Spanish)
  - or realized periphrastically

- The imperfective aspect in **German** is expressed by means of verbal periphrases, like *am/beim, dabei sein zu* + *inf* as well as with the adverb *gerade* (cf. 9–11):

(9) Ich bin ***am/beim*** Lesen.

(10) Als Peter ankam, ***war*** Hans ***dabei***, einen Roman ***zu lesen***.

(11) Als Peter ankam, las Hans ***gerade*** einen Roman.

- In **Greek**: Grammatical viewpoint aspect is morphologically encoded in verb forms, which are morphologically either imperfective or perfective, and in all tenses

(see Moser, 1994; Holton et al. 1997; Horrocks & Stavrou, 2007)

Aspect vs. non-aspect languages

- This contrast is:
  - either grammaticized in the language (e.g. English, Greek, and Spanish)
  - or realized periphrastically

Table 2. Aspect systems in English, German and Greek

	Language		
	English	German	Greek
Imperfective	no	no	yes
Perfective	no/yes	no	yes
Progressive	yes	no	no

The effect of grammatical aspect on Goal realization

A variety of studies argue that:

- There is a relationship between aspect and language-specific behavior in the domain of goals of motion in language production
- Speakers of non-aspect languages are more prone to encoding event endpoints than are speakers of aspect languages

(Athanasopoulos & Bylund, 2013; Bylund, 2009; Schmiedtová, von Stutterheim, & Carroll, 2011; von Stutterheim & Nüse, 2003; Stutterheim, Bouhaous, & Carroll, 2017)

The effect of grammatical aspect on Goal realization

A variety of studies argue that:

- **English** speakers focus on the **progression** of an event and mention a possible endpoint rarely ('phasal decomposition')

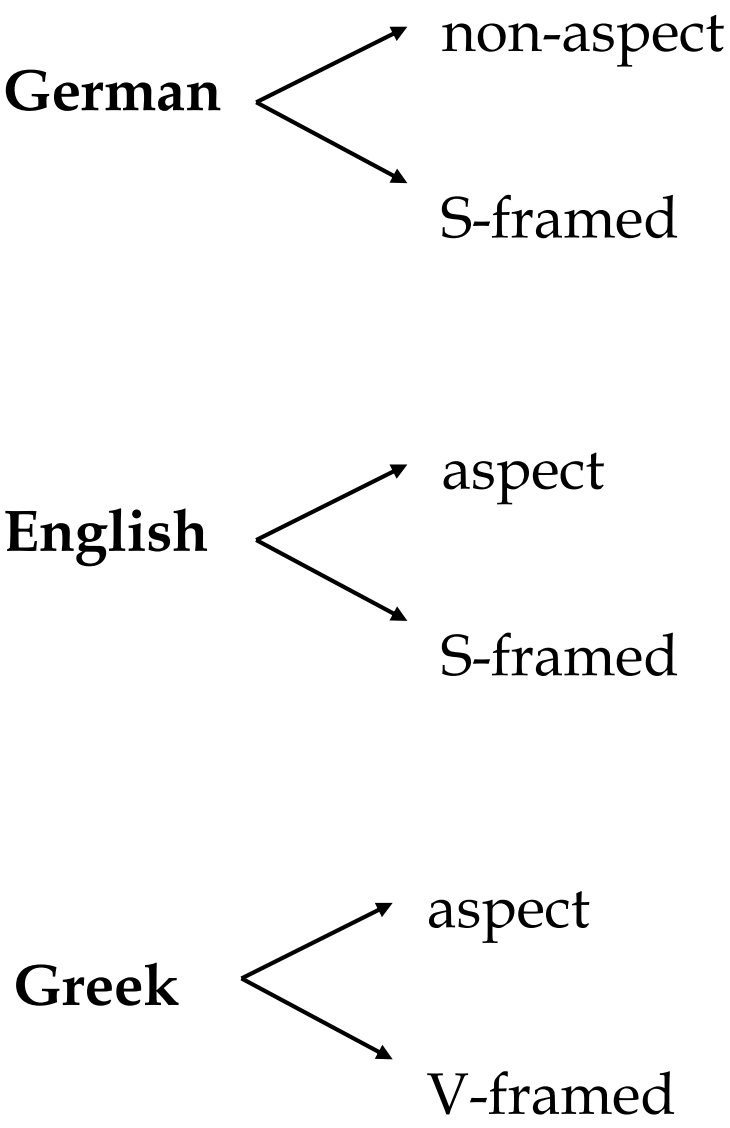
  E.g.: *A car is driving along the road*

- **German** speakers conceptualize an event through a '**holistic**' perspective, including a possible **endpoint**

  E.g.: *Ein Auto fährt zu einem Dorf*
  'a car drives to a village'

(see Stutterheim, et al. 2012 among others)

The present study



The present study: hypothesis

- Assuming that (i) lexicalization pattern and (ii) grammatical viewpoint affect the realization of goals, we can expect an interdependency of the two factors to occur in processes related to event conceptualization

Two possibilities:

The present study: hypothesis

- Assuming that (i) lexicalization pattern and (ii) grammatical viewpoint affect the realization of goals, we can expect an interdependency of the two factors to occur in processes related to event conceptualization

Two possibilities:

(a) additive effect of the two factors:

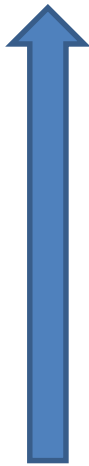
H1a: Goals will be more frequent in German than in English and in Greek

H1b: Goals will be more frequent in English than in Greek

German
(non-aspect, S-framed)

English
(aspect, S-framed)

Greek
(aspect, V-framed)



The present study: hypothesis

- Assuming that (i) lexicalization pattern and (ii) grammatical viewpoint affect the realization of goals, we can expect an interdependency of the two factors to occur in processes related to event conceptualization

Two possibilities:

(a) additive effect of the two factors:

H1a: Goals will be more frequent in German than in English and in Greek

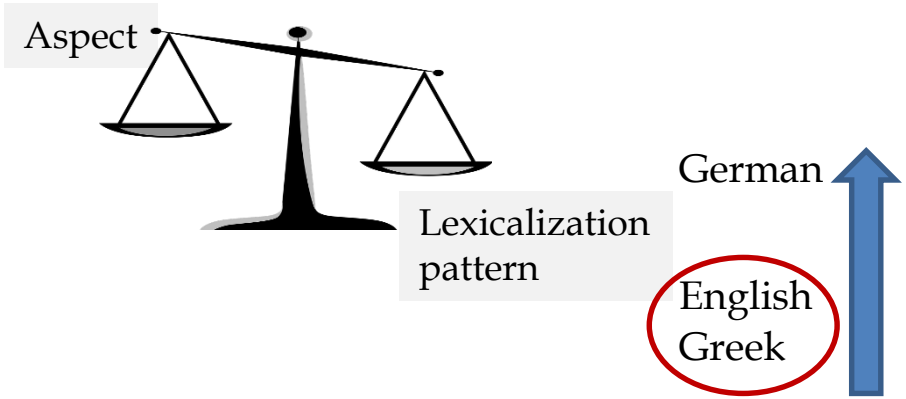
H1b: Goals will be more frequent in English than in Greek

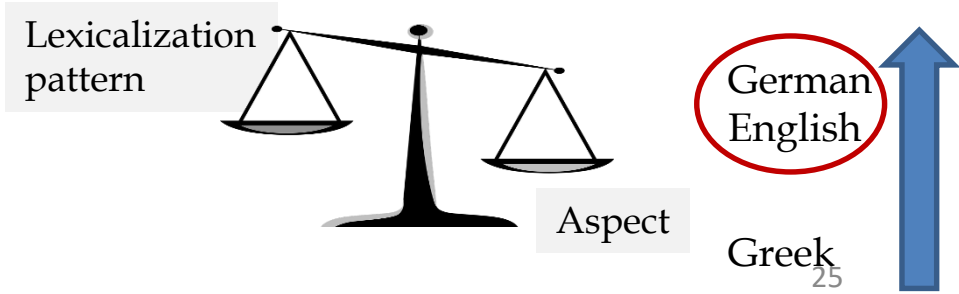
German
(non-aspect, S-framed)

English
(aspect, S-framed)

Greek
(aspect, V-framed)

(b) different weight of each factor





Verbalization study – Method

Participants:

- 20 Native speakers of English (University of Westminster, London; UK)
- 20 Native speakers of German (University of Kassel; Germany)
- 20 Native speakers of Greek (University of Athens; Greece)

- All participants were students and postgraduates
- Age: between 18 and 30
- Gender: balanced

Verbalization study – Method

- The stimuli used in the study were 40 real-world video clips created by the research team of Schmiedtová, von Stutterheim and Carroll at the University of Heidelberg.
    - We present our findings based on two different distinction of the stimuli material:
        - A **bipartite** distinction (see Georgakopoulos, Härtl & Sioupi 2018)
            - Goal not reached condition
            - Goal reached condition
        - A **tripartite** distinction (see Georgakopoulos & Härtl, *under review*)
            - Goal not reached condition A
            - Goal not reached condition B
            - Goal reached condition

Verbalization study – Method – Bipartite

- The stimuli used in the study were 40 real-world video clips created by the research team of Schmiedtová, von Stutterheim and Carroll at the University of Heidelberg.

- The clips were depicting different event types:

  a) Ongoing motion events, where the Goal is not reached (**10 items; Goal not reached condition [Condition A]**)
  b) Goal-oriented motion events, where the moving entity actually reaches the endpoint (**10 items; Goal reached condition [Condition B]**)
  c) A simple action that did not involve the movement of an entity along a trajectory (e.g., a person wrapping a present) were used as fillers **(20 items; fillers)**

- Two versions of each condition were created, which contained 20 video clips (presented in a pseudorandomized order)

Verbalization study – Method – Bipartite

- In the **Goal not reached group**, participants were asked to describe the event shown **right after the beginning** of each video.

- The exact wording in the important part of the English instruction:
  - *We kindly ask you to briefly describe the shown event right after the beginning of each video*

- In the **Goal reached group**, participants were asked to briefly describe **the events they were about to watch**

- The exact wording in the important part of the English instruction:
  - *We kindly ask you to briefly describe the shown event right after each video*

Verbalization study – Method – Bipartite

Verbalization study – Method – Bipartite

Verbalization study – Method – Bipartite

GNR

GR

(12) Eine Frau läuft über Gras.
INDEF.NOM woman walk.3SG over grass:ACC
'A woman is walking across the grass'.

(13) Eine Frau läuft durch einen Park zu einer Bank.
INDEF.NOM woman walk:3SG through INDEF.ACC park to INDEF.DAT bench
'A woman is walking through a park to a bench'.

(14) Ein Mann geht in eine Kirche.
INDEF.NOM man go:3SG in INDEF.ACC church:ACC
'A man is walking into a church'.

(15) There is an older looking lady walking through a park towards a bench.

(16) A man walking in a park.

(17) A man walking into a church.

GNR=Goal not reached condition
GR=Goal reached condition

Verbalization study – Method – Bipartite

GNR
GR

(18) Mia γineka aneveni enan lofisko.
A woman climb.up:3SG a hill:ACC.SG

'A woman is walking up a hill'.

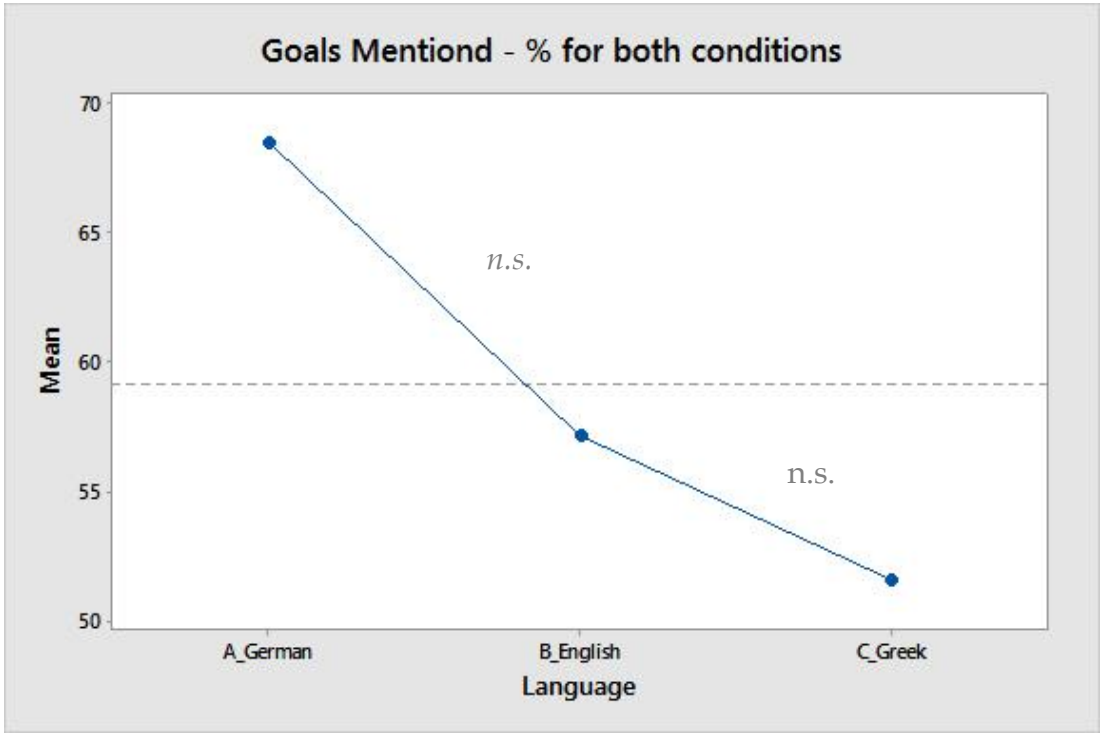
(19) Enas nearos beni se mia eklisia
a young.man enter:3SG at a church:ACC

'A young man is walking into a church'.

GNR=Goal not reached condition
GR=Goal reached condition

Verbalization study – Results – Bipartite

- **Main effect for language**

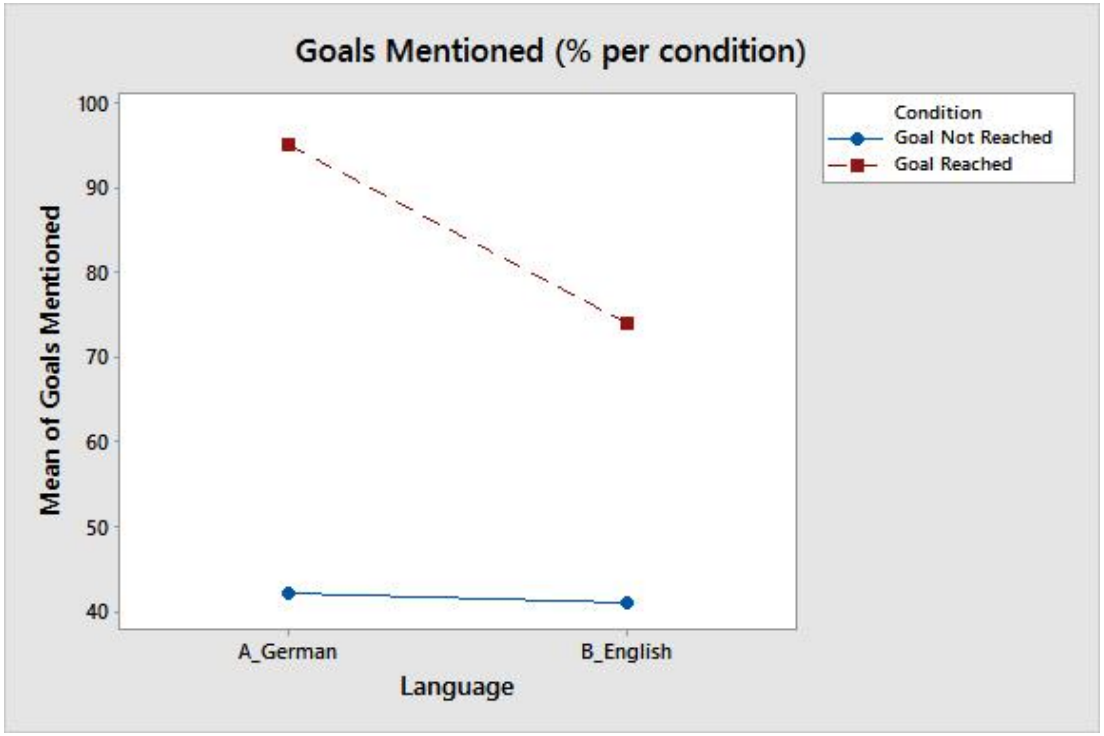


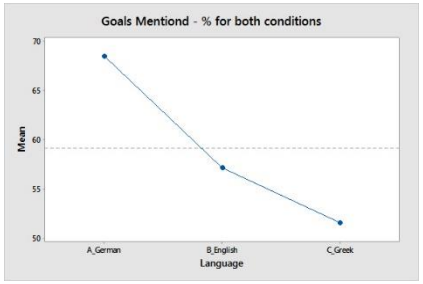
N_{total}=586

German<*N=134*> – Greek<*N=99*>: t(1)=3.19, $p < .005$
German<*N=134*> – English <*N=108*>: t(1)=2.11, $p = .08$, *n.s.*
English<*N=108*> – Greek<*N=99*>: t(1)=1.08, $p = .52$, *n.s*

Verbalization study – Results – Bipartite

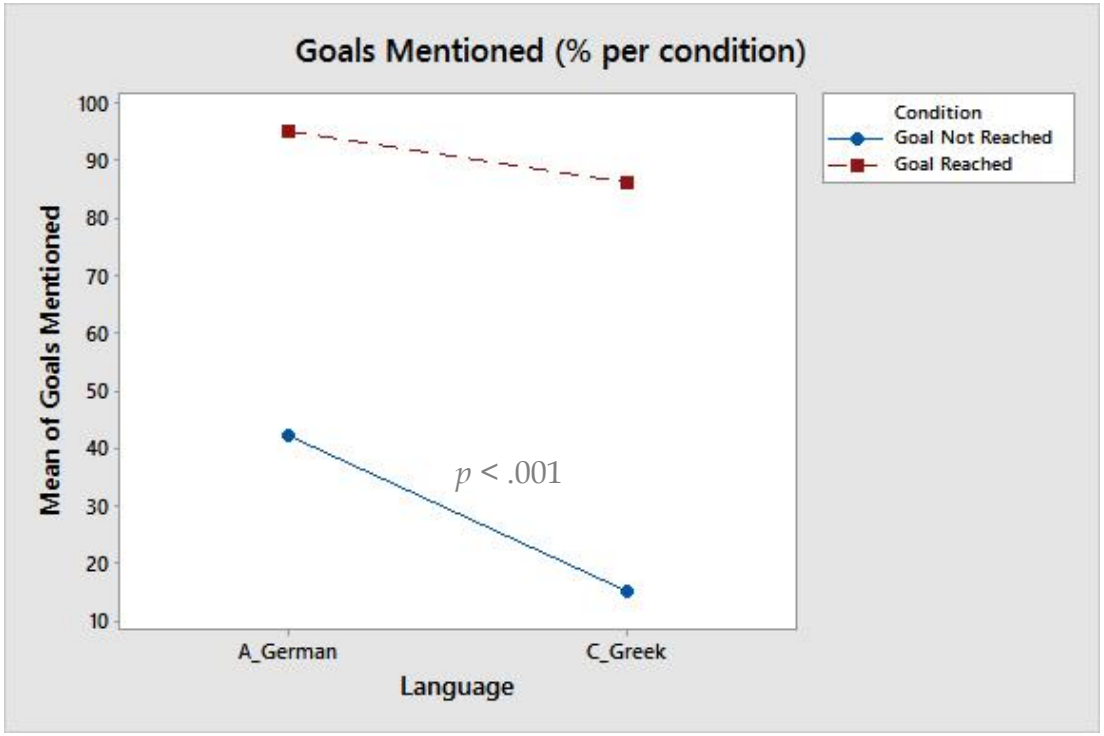
- **Breaking down the effect:**





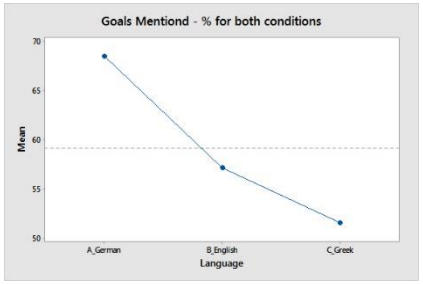
Verbalization study – Results – Bipartite

- **Breaking down the effect:**



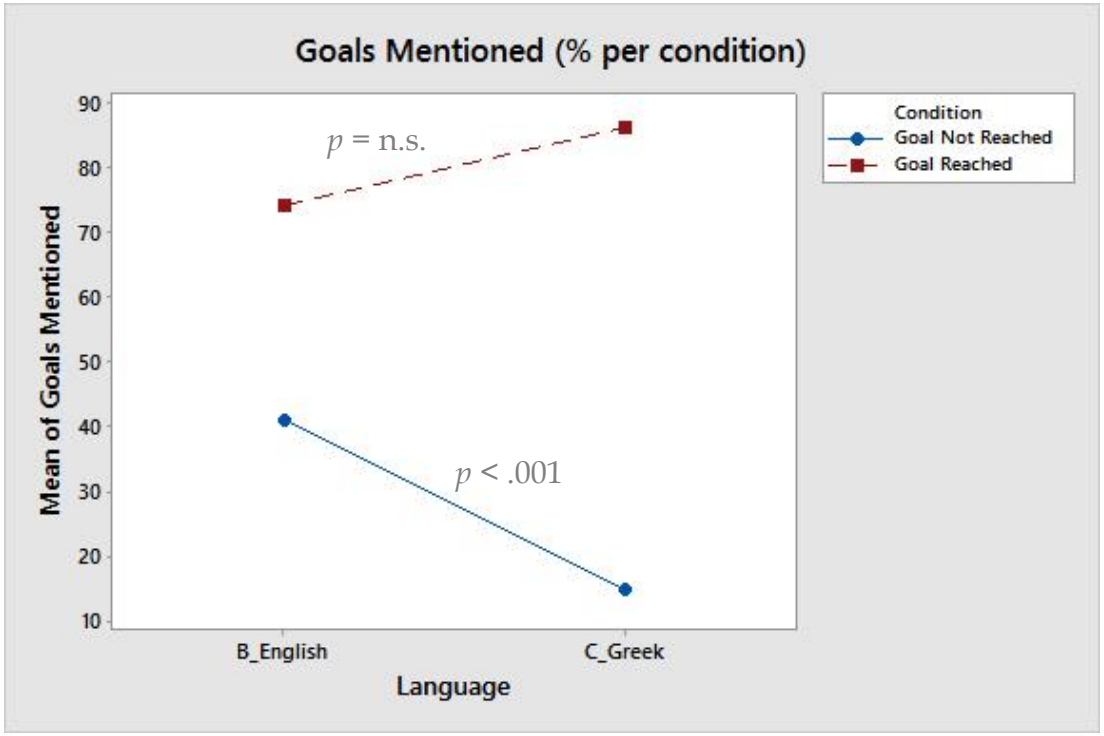
- **Goal not Reached**

German<*N*=42> – Greek<*N*=13>: $t(19) = 4.82$, $p < .001$



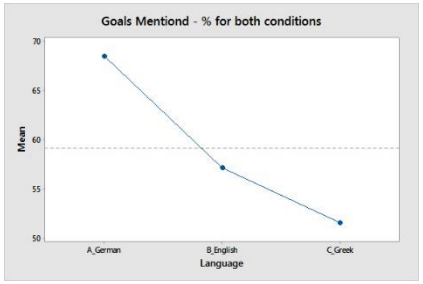
Verbalization study – Results – Bipartite

- **Breaking down the effect:**

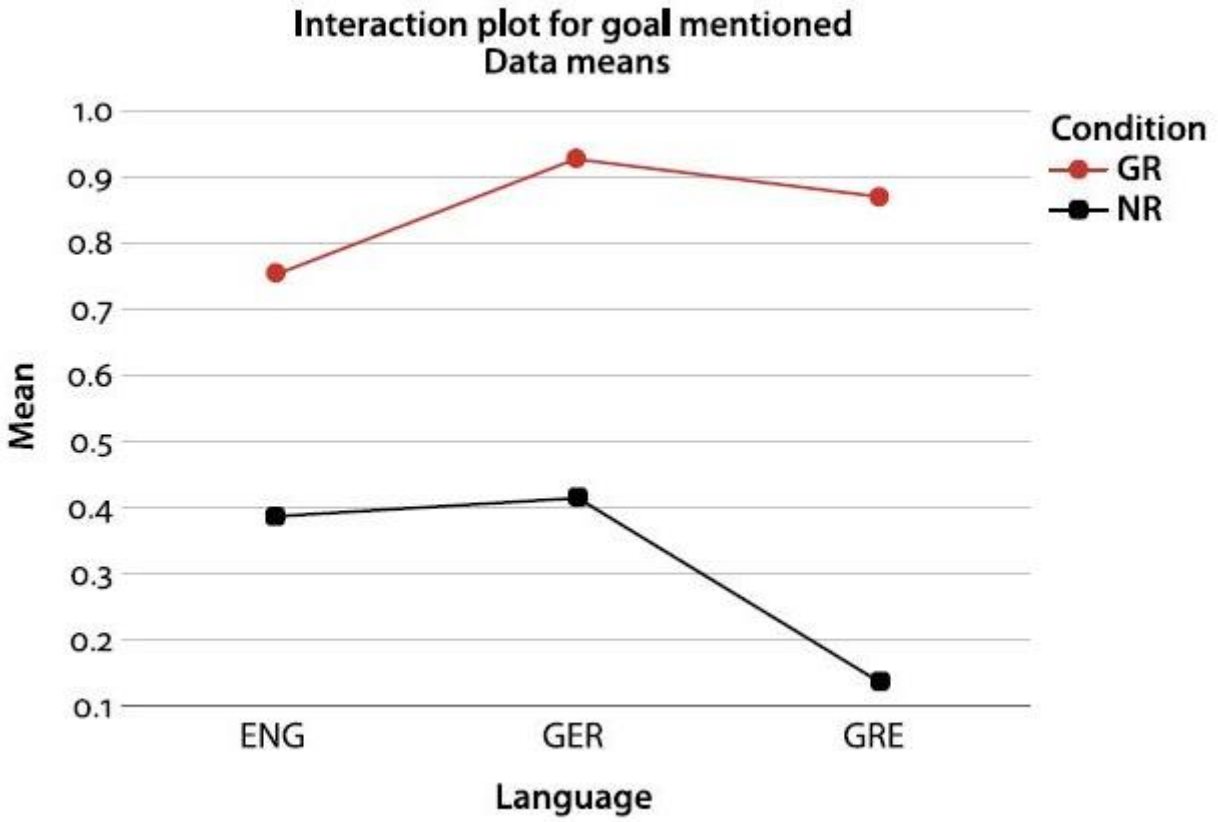


- **Goal not Reached**

English<*N=39*> – Greek<*N=13*>:$t(19) = 4.82$, $p < .001$



Verbalization study – Results – Bipartite



Interaction LANGUAGE × CONDITION

Language*Condition: $F(2, 59) = 9.8$, $p < .001$

Verbalization study – Results – Bipartite

German
English

Greek

Goals

Verbalization study – Results – Bipartite

Verbalization study – Results – Bipartite

Table 3. Types of Verbs Used in Greek

Manner	**Path**
kavalao 'ride'	*proχoro* 'advance'
ipevo 'ride'	*katefθinome* 'head-for'
oðiγo 'drive'	*iserχome* 'enter'
perpato 'walk'	*pao* 'go'
strivo 'turn'	*ðiasχizo* 'cross'
treχo 'run'	*kinume* 'move'
parkaro 'park'	*perno* 'pass'
periferomai 'roam-around'	*beno* 'enter'
peritriγirizo 'move around	*aneveno* 'ascend'
vaðizo 'walk'	*perno* 'pass'
	vγeno 'exit'

Verbalization study – Results – Bipartite

Table 4. Types of Verbs Used in German

Manner	**Path**
fahren 'drive'	*betreten* 'enter'
laufen 'walk'	
gehen 'go'	
spazieren 'walk'	
wandern 'wander'	
steigen 'steigen'	

Verbalization study – Results – Bipartite

Table 5. Types of Verbs Used in English

Manner	Path
walk	*enter*
drive	*head*
hurry	*leave*
ride	*return*
run	
toddle	
rush	
turn	
park	

Verbalization study – Results – Bipartite

Table 6. List of Adpositions Accompanying the Motion Verbs of the Study

Language		
German	**Greek**	**English**
in *NP* 'into NP'	**pros** *NP* 'towards *NP*'	**to**
auf *NP* 'to NP'	**se** *NP* 'at/to *NP*'	**towards**
in Richtung *NP* 'towards NP'	**mesa se** *NP* 'in + at/to NP'	**into**
zu *NP* 'towards NP'		

Verbalization study – Method – Tripartite

*Given the findings in Georgakopoulos, Härtl & Sioupi (2018)

Verbalization study – Method – Tripartite

- The clips were depicting different event types (von Stutterheim, Bouhaous, and Carroll 2017)
  - Type A: events that show a figure 'moving along **a short trajectory** […] **towards a highly evident goal** point marked by an object
  - Type B: and events in which a figure moves 'along an extended trajectory with **a potential, but not an evident goal point**
  - Type C: **Goal reached condition**

Verbalization study – Method – Tripartite

- The clips were depicting different event types (von Stutterheim, Bouhaous, and Carroll 2017)

Type A beginning

intermediate

final

Type B beginning

intermediate

final

Type C beginning

intermediate

final

Verbalization study – Results – Tripartite

Table 7a. Mentions of Endpoints for Greek and German per Motion Event (Type A)

Motion events	Situation type	Valid	Greek Goal	German Goal
Woman towards church	Type A	10	2	2
Woman towards stop	Type A	10	0	9
Woman towards booth	Type A	9/10 GER	4	8
Woman towards bench	Type A	10	0	6
Man towards car	Type A	10	1	6
Man towards building	Type A	10	5	6

Verbalization study – Results – Tripartite

Table 7a. Mentions of Endpoints for Greek and German per Motion Event (Type A)

Motion events	Situation type	Valid	Greek Goal	German Goal
Woman towards church	Type A	10	2	2
Woman towards stop	Type A	10	0	9
Woman towards booth	Type A	9/10 GER	4	8
Woman towards bench	Type A	10	0	6
Man towards car	Type A	10	1	6
Man towards building	Type A	10	5	6

Verbalization study – Results – Tripartite

Table 7b. Mentions of Endpoints for Greek and German per Motion Event (Type B)

Motion events	Situation type	Valid	Greek Goal	German Goal
Car towards village	Type B	7/10 GR	0	2
Car towards church	Type B	9/10 GR	0	1
Couple towards village	Type B	10	0	1
Bus towards village	Type B	7/10 GR	0	1

Verbalization study – Results – Tripartite

Table 7c. Mentions of Endpoints for Greek and German per Motion Event (Type C)

Motion events	Situation type	Valid	Greek Goal	German Goal
Man into church	Type C	10	9	9
Horse into stall	Type C	10	9	10
Car into garage	Type C	10	9	10
Van into yard	Type C	10	10	9
Kid into playground	Type C	10	9	10
Cat into room	Type C	10	5	9
Woman into shop	Type C	10	9	9
Woman into station	Type C	10	8	9
Horseman into stall	Type C	10	8	8
Dog into house	Type C	10	10	9

Verbalization study – Results – Tripartite

Table 8. Mentions of Endpoints per Situation Type

Situation Type	Greek	German
Type A	**12**	**42**
Type B	0	5
Type C	86	92

- Georgakopoulos, Härtl & Sioupi (2018): the difference between German and Greek could be attributed to the different lexicalization patterns

- **An addition:** the realization of Goals in motion event descriptions is sensitive to the salience of the goal point towards which the motion is targeted.

Verbalization study – Results – Tripartite

Table 8. Mentions of Endpoints per Situation Type

Situation Type	Greek	German
Type A	**12**	**42**
Type B	0	5
Type C	86	92

Verbalization study – Results – Tripartite

Table 8. Mentions of Endpoints per Situation Type

Situation Type	Greek	German
Type A	**12**	**42**
Type B	0	5
Type C	86	92

Verbalization study – Results – Tripartite

Table 8. Mentions of Endpoints per Situation Type

Situation Type	Greek	German
Type A	**12**	**42**
Type B	0	5
Type C	86	92

Verbalization study – Results – Tripartite

Verbalization study – Results – Tripartite

- **Responses from all situation types**

German speakers:

- Mainly: **S-framed** constructions

  (20) Ein Auto fährt in eine Garage (‘A car is driving into a garage’)

- Marginally: **V-framed** strategies

  (21) Ein Mann betritt eine Kirche (‘A man is entering a church.’)

- Marginally: **bare manner verbs**

  (22) Ein älteres Ehepaar wandert (‘An old couple wanders’)

Verbalization study – Results – Tripartite

- **Responses from all situation types**

Greek speakers:

(a) bare manner verbs

(23) Mia γineka perpatai

A woman walk:PRS.3SG

'A woman is walking.'

Verbalization study – Results – Tripartite

- **Responses from all situation types**

  Greek speakers:

  (b) Manner verbs + relators that express general localization

(24) Mia ɣineka perpatai se ena ðromo

A woman walk:PRS.3SG at/to a road

'A woman is walking on a road.'

Verbalization study – Results – Tripartite

- **Responses from all situation types**

Greek speakers:

(c) Manner verbs + dynamic relators denoting the Goal

(25) Vlepo mia γineka na perpataei pros ena tilefoniko θalamo

See:PRS.1SG a woman that walk:PRS.3SG to a phone booth

'I see a woman walking towards a phone booth'

Verbalization study – Results – Tripartite

- **Responses from all situation types**

Greek speakers:

(d) Paths verbs without any relators

(26) O kirios aneveni tis skales

The man ascend:PRS.3SG the stairs

'The man is climbing up the stairs'

Verbalization study – Results – Tripartite

- **Responses from all situation types**

Greek speakers:

(e) Path verbs with relators that express general localization

(27)	Enas anðras	proxorai	sto ðromo
	A man	ascend:PRS.3SG	at/to the road
	‘A man is moving on a road’		

Verbalization study – Results – Tripartite

- **Responses from all situation types**

  Greek speakers:

  (f) Path verbs with dynamic relators denoting the Goal

(28) Mia kiria pu katefθinete pros ena spiti

A woman that head:PRS.3SG towards a house

'A woman that is heading towards a house'

Verbalization study – Results – Tripartite

- **Responses from all situation types**

Greek speakers:

(g) A main path verb + another path verb as a subordinate element

(29) Eðo ine enas kirios o opios aneveni ti skala

Here is a man who ascend:PRS.3SG the stairs

γia na bi se ena ktirio

in order enter:PRS.SUBJ.3SG at/to a building

'There is a man climbing up the stairs to enter a building'

Verbalization study – Results – Tripartite

- **The type of information expressed in the verbalizations**

Table 9. Proportion of [MP] vs. [M] vs. [P] vs. [M/P] descriptions for Greek and German

Language	**Category**				
	P	**M**	**MP**	**M/P**	**Ø**
German	6 (3%)	8 (4%)	180 (91%)	1 (0.5%)	3 (1.5%)
Greek	96 (48%)	70 (35%)	12 (6%)	11 (5.5%)	11 (25.5%)

***Does the description include:**

- Only the manner of motion **(M)**
- Only the path **(P)**
- Both manner and path in a single clause **(MP)**
- Both manner and path in more than one clauses which were either juxtaposed or coordinated (M/P);
- Some other information not related to a motion event **(Ø)**

Verbalization study – Results – Tripartite

- **The type of information expressed in the verbalizations**

Table 9. Proportion of [MP] vs. [M] vs. [P] vs. [M/P] descriptions for Greek and German

Language	Category				
	P	**M**	**MP**	**M/P**	**Ø**
German	6 (3%)	8 (4%)	180 (91%)	1 (0.5%)	3 (1.5%)
Greek	96 (48%)	70 (35%)	12 (6%)	11 (5.5%)	11 (25.5%)

***Does the description include:**

- Only the manner of motion **(M)**
- Only the path **(P)**
- Both manner and path in a single clause **(MP)**
- Both manner and path in more than one clauses which were either juxtaposed or coordinated (M/P);
- Some other information not related to a motion event **(Ø)**

Verbalization study – Results – Tripartite

- **The type of information expressed in the verbalizations**

Table 9. Proportion of [MP] vs. [M] vs. [P] vs. [M/P] descriptions for Greek and German

Language	Category				
	P	**M**	**MP**	**M/P**	**Ø**
German	6 (3%)	8 (4%)	180 (91%)	1 (0.5%)	3 (1.5%)
Greek	96 (48%)	70 (35%)	12 (6%)	11 (5.5%)	11 (25.5%)

- Greek speakers tend to produce either path-only or manner-only sentences (*N*gr=166 vs. *N*ger=14, $\chi 2(1) = 231.6$ $p < .001$)

Verbalization study – Results – Tripartite

- **The type of information expressed in the verbalizations**

Table 9. Proportion of [MP] vs. [M] vs. [P] vs. [M/P] descriptions for Greek and German

Language	Category				
	P	**M**	**MP**	**M/P**	**Ø**
German	6 (3%)	8 (4%)	180 (91%)	1 (0.5%)	3 (1.5%)
Greek	96 (48%)	70 (35%)	12 (6%)	11 (5.5%)	11 (25.5%)

- Greek speakers: when they express both manner and path:
  - they encode both in one clause (S-framed constructions; see also Selimis and Katis 2010; Soroli 2011; 2012; Soroli and Verkerk 2017)
  - they split the two types of information into two clauses

Verbalization study – Results – Tripartite

- **The type of information expressed in the verbalizations**

Table 9a. Proportion of descriptions for Greek and German per Situation Type

Language	Category				
	P	**M**	**MP**	**M/P**	**Ø**
German	0 (0%)	4 (10.3%)	35 (89.7%)	0 (0%)	0 (0%)
Greek	14 (35.9%)	15 (38.5%)	0 (0%)	0 (0%)	10 (28.6%)

Type B

***Does the description include:**

- Only the manner of motion **(M)**
- Only the path **(P)**
- Both manner and path in a single clause **(MP)**
- Both manner and path in more than one clauses which were either juxtaposed or coordinated (M/P);
- Some other information not related to a motion event **(Ø)**

Verbalization study – Results – Tripartite

- **The type of information expressed in the verbalizations**

Table 9b. Proportion of descriptions for Greek and German per Situation Type

Type C

Language	Category				
	P	**M**	**MP**	**M/P**	**Ø**
German	6 (6%)	2 (2%)	89 (89.9%)	1 (1%)	1 (1%)
Greek	69 (68.3%)	17 (16.8%)	10 (9.9%)	4 (3.96%)	1 (1%)

***Does the description include:**

- Only the manner of motion **(M)**
- Only the path **(P)**
- Both manner and path in a single clause **(MP)**
- Both manner and path in more than one clauses which were either juxtaposed or coordinated (M/P);
- Some other information not related to a motion event **(Ø)**

Verbalization study – Results – Tripartite

- **The type of information expressed in the verbalizations**

Table 9c. Proportion of descriptions for Greek and German per Situation Type

Language	Category				
	P	**M**	**MP**	**M/P**	**Ø**
German	0 (0%)	2 (3.3%)	56 (93.3%)	0 (0%)	2 (3.3%)
Greek	13 (22%)	38 (64.4%)	2 (3.4%)	6 (10.2%)	0 (0%)

Type A

***Does the description include:**

- Only the manner of motion **(M)**
- Only the path **(P)**
- Both manner and path in a single clause **(MP)**
- Both manner and path in more than one clauses which were either juxtaposed or coordinated (M/P);
- Some other information not related to a motion event **(Ø)**

Verbalization study – Results – Tripartite

- **Type A Situations**
  - The preference of Greek speakers for only manner verbalizations in Type A situations is not entirely atypical for V-framed languages
  - Both S- and V-framed languages seem to have 'neutral everyday verbs' (e.g., *walk* see Slobin 1997: 459)
  - Greek speakers accompany very often such verbs with non-dynamic relators that express general localization (in 28/38 tokens; cf. Soroli and Verkerk 2017: 34)
  - Paths are also frequently included in the speakers' verbalizations (32.2%) (cf. German: *N*=0)

Conclusion

- Our study shows that:
  - Goal prominence is **language-specific** and **condition-specific**
  - Goal prominence must be investigated from a global **comparative** perspective including **possible combinations** of the relevant factors
  - The lexicalization pattern is a stronger predictor than grammatical aspect for the realization of Goal expression

Conclusion

- Within GOAL NOT REACHED motion events, there is structured variation

- The overall difference between the two languages comes from Type A situations.

Type A beginning intermediate final

- In the clips that contain a highly evident Goal, German speakers produce a higher proportion of Goals than Greek speakers

Conclusion

- In the clips that contain a highly evident Goal, German speakers produce a higher proportion of Goals than Greek speakers

- **A possible explanation**: S-framed languages have an advantage over V-framed languages, when it comes to the realization of the Goals in peripheral elements
- But the sensitivity to this typological distinction is activated under certain circumstances: **the salience of Goal**

Acknowledgements

Special thanks to those who participated in the study

UNIVERSITY OF WESTMINSTER

UNIKASSEL VERSITÄT