# International Conference on Construction Grammar – ICCG10 Paris, 16-18 July 2018

# On the importance of lexical constructions: Accounting for the distribution and polysemy of a motion verb

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# The Research Project



"Motion verbs in Ancient Greek and Ancient Egyptian: A diachronic study on the linguistic, cognitive and cultural encoding of space"

# Research scholarships- IKYDA









# The Research Project



#### General aims:

- To shed light on the encoding of motion events in Ancient Greek and Ancient Egyptian by putting forward a corpusbased, diachronic study of motion verbs
- To provide a plausible route of the semantic change that motion verbs undergo
- To address the cognitive underpinnings in and cultural differences between the two languages, as reflected in the language of motion

## This talk...



## We focus on:

- The ancient Greek motion verb  $\beta aiv\omega$  (baínō 'go')
- **Arguing** that:
  - Lexical polysemy in general inheres in particular contextual features
    - Long standing tradition in cognitive linguistics
      - "From words as building blocks to usage events, in all their contextual detail" (Cuyckens et al. 2003: 21).
  - Focusing exclusively on de-contextualized semantic nodes or niches is inadequate

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    - Long standing tradition in cognitive linguistics
      - "From words as building blocks to usage events, in all their contextual detail" (Cuyckens et al. 2003: 21).
  - Focusing exclusively on de-contextualized semantic nodes or niches is inadequate
  - Enriched lexical constructions containing morphosyntactic,
     lexical, semantic, and discoursal information are necessary

# This talk...



## We focus on:

- The ancient Greek motion verb  $\beta aiv\omega$  (baínō 'go')
- **Showing** that its various meanings correlate with:
  - a) the type of syntactic complement they appear with
  - b) morphological features
  - c) the verb-complement word order
  - d) the type of sentence they are found in
  - e) the lexical fillers of the complements

# Theoretical background



## In Synchrony

- Corpus-based or -driven approaches that seek for objective measures to distinguish between senses
  - Atkins (1987): "ID tags": "syntactic or lexical markers in the citations which point to a particular dictionary sense of the word".
  - Fillmore & Atkins (1992): analysis of the polysemy of *risk* relies on the distinction of the different types of complements in corpus-derived examples (cf. Hanks 1996; Croft 2009)
  - Gries (2006) and Berez & Gries (2009): behavioral profiles of the verbs *run* and *get* respectively
  - Newman & Rice (2006): semantic properties of the verbs *eat* and *drink* may inhere not only in the type of complement but also in individual inflections of the verb

# Theoretical background



## In Diachrony

- **Corpus-based** or **-driven** approaches that seek for objective measures to distinguish between senses
  - In semantic change:
    - Jansegers and Gries (2017): dynamic behavior profile of the Spanish *sentir* (cf. Ioannou 2017)
    - Hilpert (2016): highlights the relationship between the collocates of *may* and its different senses
      - Shift in collocational preferences correlates with semantic change and the different meanings of the modal

# Theoretical background



## Why Construction Grammar for AG motion verbs?

 Motion events in AG have been investigated from either a semantic or syntactic perspective

(see Skopeteas 2002, Skopeteas 2008a, 2008b, Nikitina 2013, Nikitina & Maslov 2013, Georgakopoulos *forthcoming*[2018])

 By adopting a constructional perspective, we expect to arrive at holistic descriptions of the verbs we analyze since particular senses arise in particular morpho-syntactic, lexical and/or discoursal configurations

(see Georgakopoulos et al. *submitted*)

# (Some) previous accounts of bainō

#### Problems:

- Diverging treatment in dictionaries
- Diverging treatment in the literature (e.g., Spano 2015)
- Different rendering of the relevant passages in the translations of these texts
- Napoli (2006: 165): telic verb inherently denoting "a goal-directed movement"
  - "This basic semantics interacts with perfective and imperfective morphology respectively in order "to represent the movement by including its final goal" or "to represent the movement as not having attained its final goal, or indicate that such a goaldirected movement is habitual or iterative"

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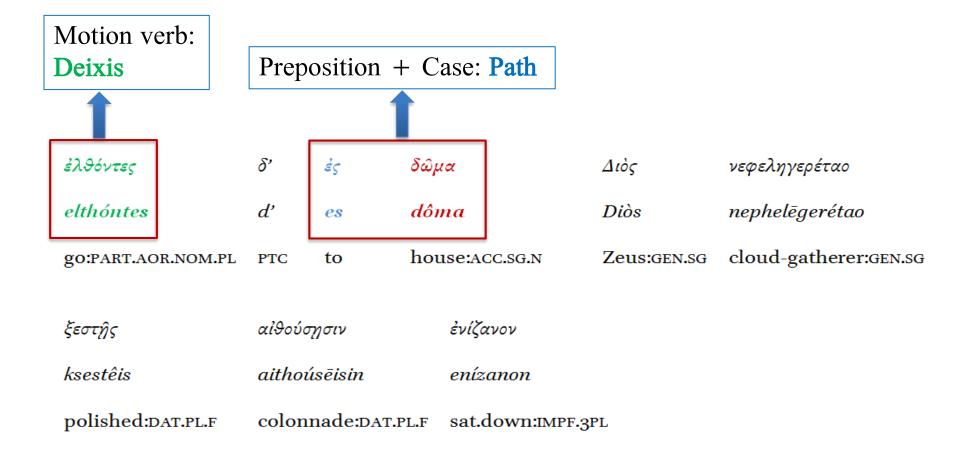
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But: In no way accounts for the full range of actual uses in AG

## **Ancient Greek motion events**

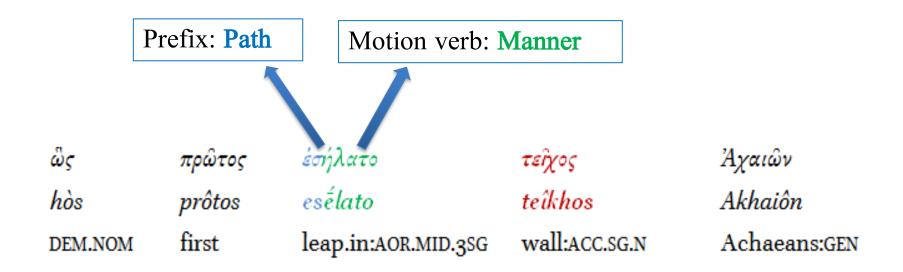




'And being come to the house of cloud-gatherer Zeus, they sat them down within the polished colonnades' (Homer, *Illiad* 20.10-11)

## **Ancient Greek motion events**





'who was first to leap into the wall of the Achaeans' (Homer, *Iliad* 12.438)

• Homeric and Classical Greek: mostly use Satellite-framed patterns (see Skopeteas 2002; Imbert 2010; Nikitina 2013; cf. Verkerk 2014)



Table 1.The corpus constructed for the current study

Diachronic	Date	Author	Work	Text types	Words
Stage					
Homeric	8 <sup>th</sup> B.C.	Homer	Iliad, Odyssey	Epic poetry	≈ 200T
	5 <sup>th</sup> B.C.	Euripides	Andromache, Phoenissae,	Tragedy	> 96T
			Iphigenia in Aulis, Hecuba,		
			Iphigenia in Tauris,		
			Hippolytus, Medea, Heracles,		
Classical			Electra, Bacchae, Orestes		
	5 <sup>th</sup> B.C.	Plato	Euthydemus, Protagoras,	Philosophy	> 108T
			Gorgias, Meno, Euthyphro,		
			Apology, Crito, Phaedo		

Source: Perseus digital library (http://www.perseus.tufts.edu/hopper)



- Retrieve and clean up:
  - *N*=339 in Homer
  - *N*= 195 in Classical Greek
- Coding of data (cf. Gries 2006: 73–75, for the English *run*).
- Separate pivot tables for each language with MS Excel 2016
  - Display data in a multidimensional chart and extract significant patterns
  - Which senses are attracted to which morpho-syntactic, and lexical and semantic features.
  - We have adopted a corpus-based approach: our analysis sought to confirm certain observations made from the perusal of the data.



# Table 2. The morpho-syntactic, lexical, and semantic features coded

Animacy of subject	Animate (Human vs. Non human)	Inanimate			
Transitivity	Transitive	Intransitive			
Syntactic complement	Prepositional Phrase	Noun in Accusative	Infinitive	Participle	Zero
Semantic specification of the complement	Source	Path	Goal	Other	
Sentence type	Main (Declar., Inter., Imper.)	Subordinate			
Inflection of Verb	Tense	Mood			
Number/ Person	1sg, 2sg, 3sg	1pl, 2 pl, 3pl	3du		
Word order	Verb-Complement	Complement- Verb	Complement- Verb- Complement		
Type of text	Epic poetry	Philosophy	Tragedy		



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Table 3. The meanings and their contextual cues of baínō in Ancient Greek

	Meaning	Constructional Cues	N of the pattern	Total $N$
	GO	<ol> <li>Human, intransitive, Goal element (PP, noun in accusative, adverb or suffix)</li> </ol>	114	163
		<ul> <li>Human, intransitive, Goal element (PP, noun in accusative, adverb or suffix), aorist</li> </ul>	88	
		2. Human, intransitive, PP, Path	22	3
		<ol> <li>Human, intransitive, infinitive, declarative, aorist, Indicative</li> </ol>	76	
Homer	SET OUT	<ul> <li>Human, intransitive, infinitive, declarative, aorist, indicative, 3<sup>rd</sup> person (3SG or 3PL), Verb-Complement</li> </ul>	72	80
	MOUNT	Human, intransitive, Goal PP (lexically specified, in particular the nouns naûs 'ship', díphros 'stool', pûrgos 'tower, castle', ókhea 'chariot', and hárma 'chariot')	26	38
	LEAVE	Human, intransitive, Source element (PP or adverb or suffix)	19	37
		<ol> <li>Human, intransitive, zero complement, declarative, aorist, indicative</li> </ol>	13	
	MAKE GO	Human, transitive	6	6
	GO	Human, intransitive, Goal element (PP, Noun in accusative, adverb or suffix)	35	62
	DIE	Human, intransitive, zero complement, past tense (aorist, perfect, pluperfect)	5	6
	LEAVE	Human, intransitive, Source PP	3	10
Euripides		2. Human, intransitive, Zero complement	5	10
3	COME	1. Human, intransitive, PP/ adverb or suffix, Source	6	
		<ol> <li>Human, intransitive, PP/ adverb or suffix/ NP, Goal/ Goal animate</li> </ol>	13	38
		3. Past tense (Aorist, Perfect)	21	
Plato	OVERSTEP	Human, intransitive, PP, Source non location (lexically specified, in particular nouns relating to justice, e.g., dikē, or legislation, e.g., nomothesia)	3	5
- 1410	STAND	PP, other non location, perfect, CV	3	
		2. Inanimate, perfect	4	6



# Homer

# The 'go' construction

(1) énth' ébē eis eunèn pollà phresì there go:AOR.3SG to bed:ACC.SG.F many:NOM.PL.N heart:DAT.SG.FEM

mermērizōn.

be\_anxious:PTCP.NOM.SG.M

'thither went to his bed, pondering many things in mind' (Homer, *Odyssey* 1.427)

#### Contextual cues:

- Human subject
- Goal or path prepositional complement



## **Principal meaning:**

Directed, self-propelled motion



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#### **Contextual cues:**

- Human subject
- Goal or path prepositional complement (Core Frame Element)

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Perfective aspect

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	STAND	1. PP, other non location, perfect, CV	3		
		2. Inanimate, perfect	4	6	



# **Homer**

#### The 'leave' construction

(2) hồs éphat', oud' ára patròs anēkoústēsen Apóllōn,
PTC say:IMPRF.3SG NEG PTC father:GEN.SG.M disobey:3SG.AOR Apollo:NOM

bê dè kat' Idaíōn oréōn írēki go:AOR.3SG PTC down of\_Ida:GEN.PL.N mountain:GEN.PL.N falcon:DAT.SG.M

eoikồs ōkéi phassophónōi, like quick:DAT.SG.M dove-killing:DAT.SG.M

'So he spoke, nor was Apollo disobedient to his father's bidding, but went down from the hills of Ida, like a fleet falcon, the slayer of doves' (Homer, *Iliad* 15.236-37)

- Human subject
- Source complement



# Homer

#### The 'leave' construction

(3) hốs pháto, bê dè suphorbós, epeì PTC say:IMPRF.3SG go:AOR.3SG PTC swineherd:NOM.SG.M when

tòn mûthon ákouse.

DEF.ACC.SG.M saying:ACC.SG.M hear:3SG.AOR

'So he spoke, and the swineherd went when he had heard this saying.'

(Homer, *Odyssey* 17.574)

#### **Contextual cues:**

- Human subject
- Zero complement



"Source-oriented" (Fillmore 1971)

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	STAND	PP, other non location, perfect, CV	3		
		2. Inanimate, perfect	4	6	



# Homer

## The 'mount/climb' construction

(4) ..., toì mèn pálin aûtis ébainon nēòs épi ship:GEN.SG.F on

glaphurês: emè d' ékrupsan theoì autoì hollow:GEN.SG.F 1SG.ACC PTC hide:AOR.3PL god:NOM.PL.M DEM.NOM.PL.M

'they went back again on board their hollow ship and the gods themselves hid me' (Homer, Odyssey 14.356-57)

- In the context of lexically specified complements:
  - naûs 'ship'
  - díphros 'stool'
  - pûrgos 'tower, castle'
  - *ókhea* 'chariot'
  - hárma 'chariot'

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## **Homer**

## The inchoative 'start/ set out' construction

(5) *bê d' iénai pròs dôma, phílon* go:3SG.AOR PTC go:INF towards house:ACC.SG.N beloved:NOM.SG.M

tetiēmėnos êtor, sorrowing:PTCP.PRF.M/P.NOM.SG.M heart:NOM.SG.N 'but went his way to the house, his heart heavy within him.' (Homer, *Odyssey* 2.297)

- a) (Perfective) aorist
- b) Mostly 3<sup>rd</sup> person singular
- c) Unaugmented
- d) Followed by the present infinitive of another (motion) verb, primarily iénai 'go'
- e) Fixed order ( $bain\bar{o} + infinitive$ )
- f) When the infinitive starts with a vowel, the construction includes a euphonic particle (d' or r')
- g) Sentence-initial position



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	emotor operation	PP, other non location, perfect, CV	3 6	
	STAND			



## Homer

# The 'make go' construction

(6) tèn dè néon klisiethen éban kérukes

DEM.ACC.SG.F PTC young:ACC.SG.F tent:ABL go:3PL.AOR heralds:NOM.PL.M

ágontes koúrēn Brisêos

lead:PTCP:PRS.NOM.PL.M daughter:ACC.SG.F Briseus:GEN

'but the heralds have just taken from my tent the daughter of Briseus'

(Homer, Iliad 1.391)

- Marginal pattern (exclusively in *Iliad*)
- Transitive verb with an accusative-marked NP as the object.
  - The causal component in the meaning can be attributed to the transitive construction (cf. Goldberg 1995: 118)
  - Additional contextual cues:
    - the semantics of the accusative object
    - neighboring spatial modifiers



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Table 3. The meanings and their contextual cues of  $bain\bar{o}$  in Ancient Greek

	Meaning	Constructional Cues	N of the pattern	Total $N$
Homer	GO	Human, intransitive, Goal element (PP, noun in accusative, adverb or suffix)	114	163
		<ul> <li>Human, intransitive, Goal element (PP, noun in accusative, adverb or suffix), aorist</li> </ul>	88	
		2. Human, intransitive, PP, Path	22	
	SET OUT	Human, intransitive, infinitive, declarative, aorist,     Indicative	76	80
		<ul> <li>Human, intransitive, infinitive, declarative, aorist, indicative, 3<sup>rd</sup> person (3SG or 3PL), Verb-Complement</li> </ul>	72	
	MOUNT	Human, intransitive, Goal PP (lexically specified, in particular the nouns naûs 'ship', díphros 'stool', pûrgos 'tower, castle', ókhea 'chariot', and hárma 'chariot')	26	38
	LEAVE	Human, intransitive, Source element (PP or adverb or suffix)	19	37
		Human, intransitive, zero complement, declarative, aorist, indicative	13	
	MAKE GO	Human, transitive	6	6
Euripides	GO	<ol> <li>Human, intransitive, Goal element (PP, Noun in accusative, adverb or suffix)</li> </ol>	35	62
	DIE	Human, intransitive, zero complement, past tense (aorist, perfect, pluperfect)	5	6
	LEAVE	Human, intransitive, Source PP	3	10
		2. Human, intransitive, Zero complement	5	
8	COME	1. Human, intransitive, PP/ adverb or suffix, Source	6	38
		<ol> <li>Human, intransitive, PP/ adverb or suffix/ NP, Goal/ Goal animate</li> </ol>	13	
		3. Past tense (Aorist, Perfect)	21	
Plato	OVERSTEP	Human, intransitive, PP, Source non location (lexically specified, in particular nouns relating to justice, e.g., dikē, or legislation, e.g., nomothesia)	3	5
	STAND	PP, other non location, perfect, CV	3	6
			Grand Control	



# **Euripides**

### The 'go' and 'come' constructions

```
pronópios
(7)
                                      phainēi
                                                                  oíkois
     pôs
                                                      pròs
                                      appear:2SG.M/P
            before.the door:NOM.SG.M
                                                       PROX
                                                                  house: DAT.PL.M
     ADV
                                             bebős:
     toîs
                     emoîs,
                                  éksō
                     POSS.1PL.DAT
     ART.DAT.PL.M
                                    out
                                             go:PTCP.PRF.NOM.SG.M
     'How do you appear in front of my house? How did you manage to go out?'
     (Euripides, Bacchae 645-646)
```

• *Baínō* acquires truly deictic uses that cover both '**go**' and 'come' meanings



# **Euripides**

## The 'go' and 'come' constructions

(8) Antigónē tâide tâide **bâthí** moi, tâide
Antigone:NOM DEM.ACC.PL.N DEM.ACC.PL.N go:2SG.IMP.AOR 1SG.DAT DEM.ACC.PL.N

tâide póda titheís, hốst' óneiron iskhún.

DEM.ACC.PL.N foot:ACC.SG.M place:2SG as dream:ACC.SG.N strength:ACC.DG.F

'This way, this way, **come** to me Antigone, place your steps here, like a dream in your strength.' (Euripides, *Phoenissae* 1720-1722)

• *Baínō* acquires truly deictic uses that cover both 'go' and 'come' meanings



# **Euripides**

### The 'go' and 'come' constructions

(9) pôs pronópios phaínēi pròs oíkois ADV before.the door:NOM.SG.M appear:2SG.M/P PROX house: DAT.PL.M

toîs emoîs, **éksō bebốs**; ART.DAT.PL.M POSS.1PL.DAT **out** go:PTCP.PRF.NOM.SG.M

'How do you appear in front of my house? How did you manage to **go** out?' (Euripides, *Bacchae* 645-646)

Distinguishing 'come' and 'go':



• The semantics of the complement:

Éksō forces a 'go' interpretation



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- Distinguishing 'come' and 'go':
  - The explicit mention of the speaker
  - Perfective aspect
  - Appears mostly in chorus passages (N=23 (out of 38))



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	STAND	1. PP, other non location, perfect, CV	3	6
		2. Inanimate, perfect	4	



#### **Plato**

## The 'overstep' construction

(9) doûnai tà paradeígmata toîsi dikastaîs give:INF.AOR ART.ACC.PL.N examples:ACC.PL.N ART.DAT.PL.M judge:DAT.PL.M

toû mếpote <mark>baínein éksō</mark> tês dikês

ART.GEN.SG ever go:INF out ART.GEN.SG.F trial:GEN.SG.F

'and gave the judges examples, so as to prevent their ever overstepping the bounds of justice' (Plato, *Laws* 9.876e)

#### Metaphorical meaning:

- With prepositional complements headed by ektós and éksō 'outside of'
- The complement filler is further specified to belong to a semantically definable class, that of nouns relating to legislation and justice



#### **Plato**

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'and gave the judges examples, so as to prevent their ever overstepping the bounds of justice' (Plato, *Laws* 9.876e)

trial:GEN.SG.F

go:INF out ART.GEN.SG.F

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ART.GEN.SG

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## Conclusions



 The generality of meaning and the multiplicity of possible interpretations in the context of ancient languages, where native intuition is not relevant, highlights the need for descriptive adequacy.

### Tagging:

- Has included all major categories relevant to verbs.
- Can provide reliable indications for a particular meaning.
- The variability of these features and their convergence in particular senses point to the appropriateness of a constructional framework for these data.

#### Conclusions



 Upgraded role of lexical constructions representing the individual senses of the verb

(cf. Croft 2003; Nemoto 2005; Boas 2005, 2008)

#### When in transitive contexts:

- Not enough to say that the interpretation comes from the interaction of the transitive construction with verbal semantics
- The meaning depends on specific lexical complements and contextual cues
- All this information needs to be incorporated in enriched lexical entries ("mini" constructions; Boas 2013:191)
- > **Some of its intransitive uses** correlate with:
  - Particular inflectional forms (cf. Newman & Rice's inflectional island)
  - Particular types of complements that need to be syntactically and lexically specified.

#### **Conclusions**



- Along with Boas (2005, 2013), we do not dispute the existence of general, schematic constructions such as the intransitive motion, the ditransitive, or the resultative.
- But we entertain the possibility that lexical constructions may exist redundantly and independently of the "over-generating" of schematic patterns.
- As per Croft (2012: 382), "if linguists make different abstractions from verb + argument structure construction combinations in verb-specific constructions, speakers might do so as well".

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# Thank you!