

# PRODUCTIVITY ACROSS LANGUAGES AND CONSTRUCTIONS

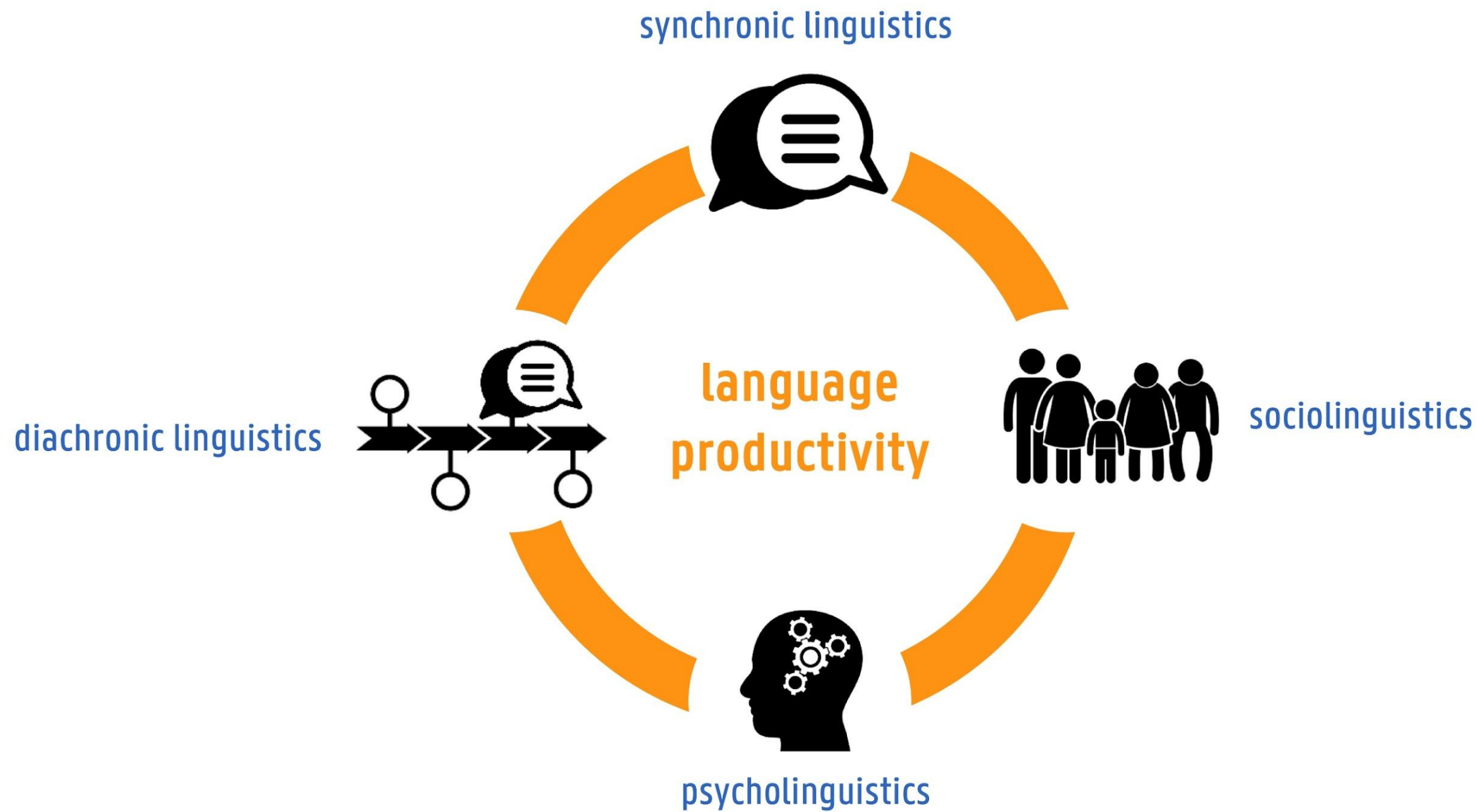
*Inchoatives, negation reinforcement, anti-causatives, & case alternations*

# OVERVIEW

1. Language productivity
2. Inchoatives (in Spanish)
3. Negation reinforcement (in French and in Dutch)
4. Anti-causatives (in English and in French)
5. Case alternations (in Icelandic and in German)

# 1. LANGUAGE PRODUCTIVITY

# THE GOA CONSORTIUM



# PRODUCTIVITY (BARÐDAL 2008)

## Productivity as **generality**

- e.g. ‘having a wide coverage’
- English *-er* as a productive morphological rule  
(*teacher, worker*)

# PRODUCTIVITY (BARÐDAL 2008)

## Productivity as **regularity**

- e.g. ‘rule-based’
- Regular vs. irregular verbs

# PRODUCTIVITY (BARÐDAL 2008)

## Productivity as **extensibility**

- ‘attracting existing items’
  - ‘occurring with new items’
  - ‘developing new functions’
- (cf. case studies)

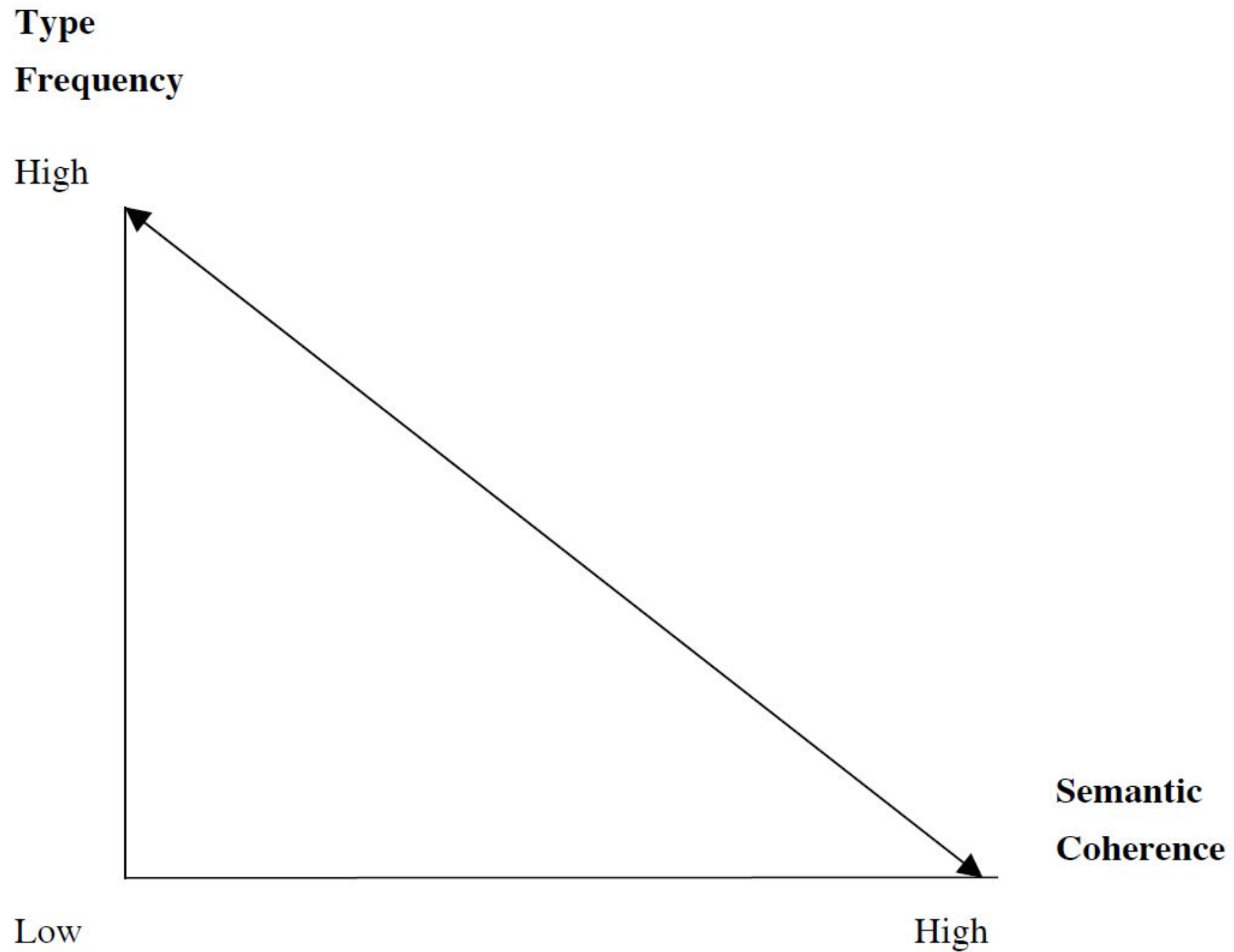
# PRODUCTIVITY (BARÐDAL 2008)

“Syntactic productivity is a function of a construction’s type frequency, semantic coherence and an inverse correlation between the two.”

- Type frequency: “the total number of types which can instantiate a construction”
- Token frequency: “the total occurrences of either one or all the types of a construction in a text or corpus”
- Semantic coherence: “the semantic consistency between the members of the construction”

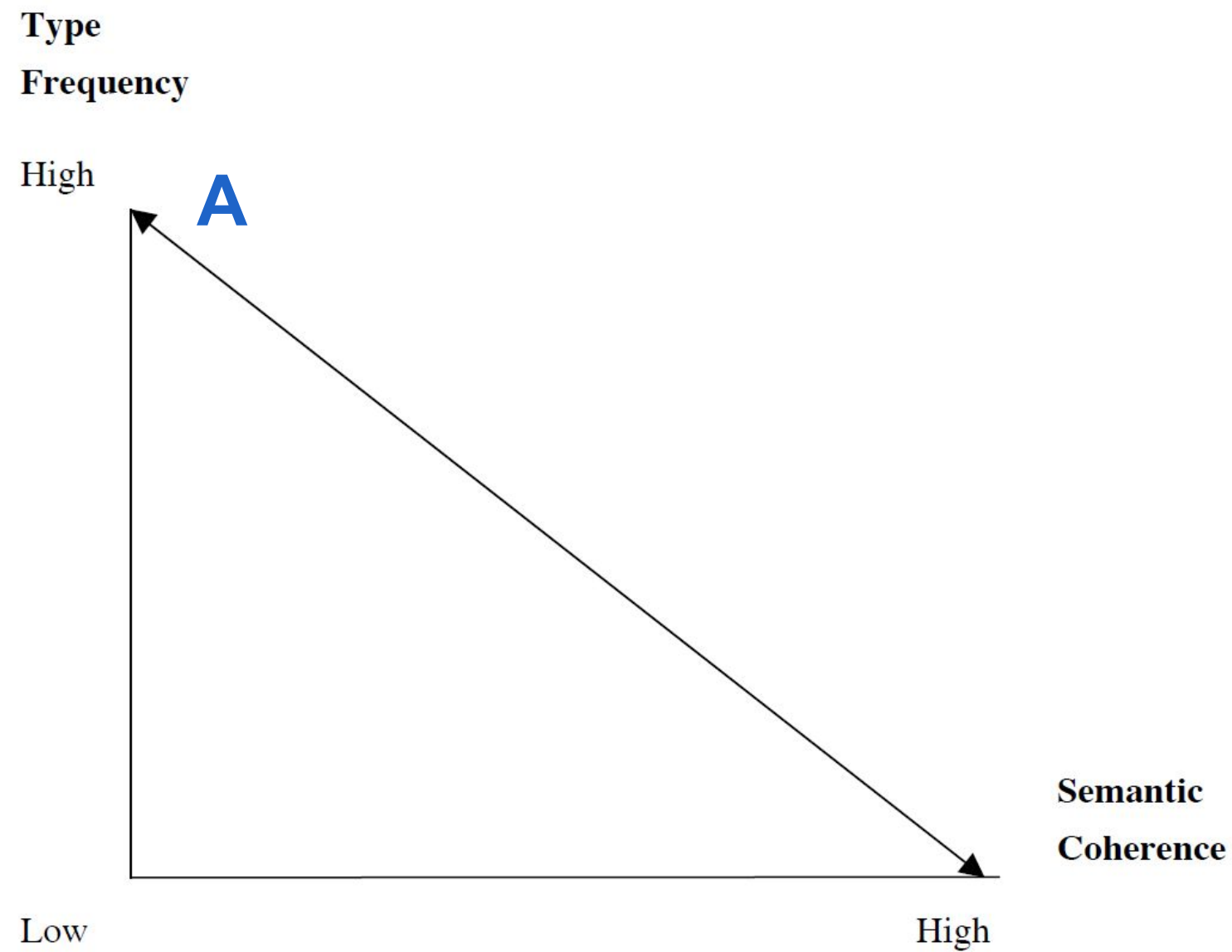


# PRODUCTIVITY (BARÐDAL 2008)



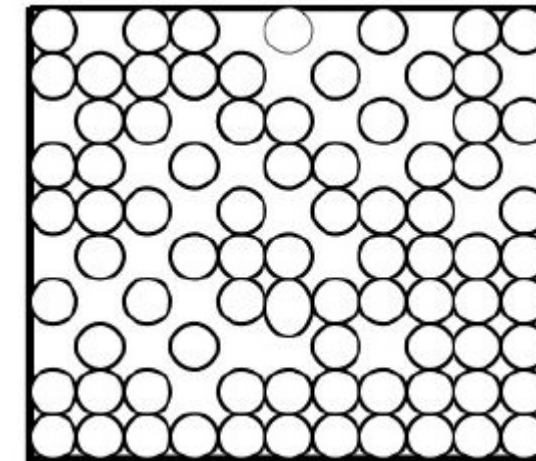
# PRODUCTIVITY (BARÐDAL 2008)

## Productivity cline:



## Functional-semantic space:

○ = instance of use (type)

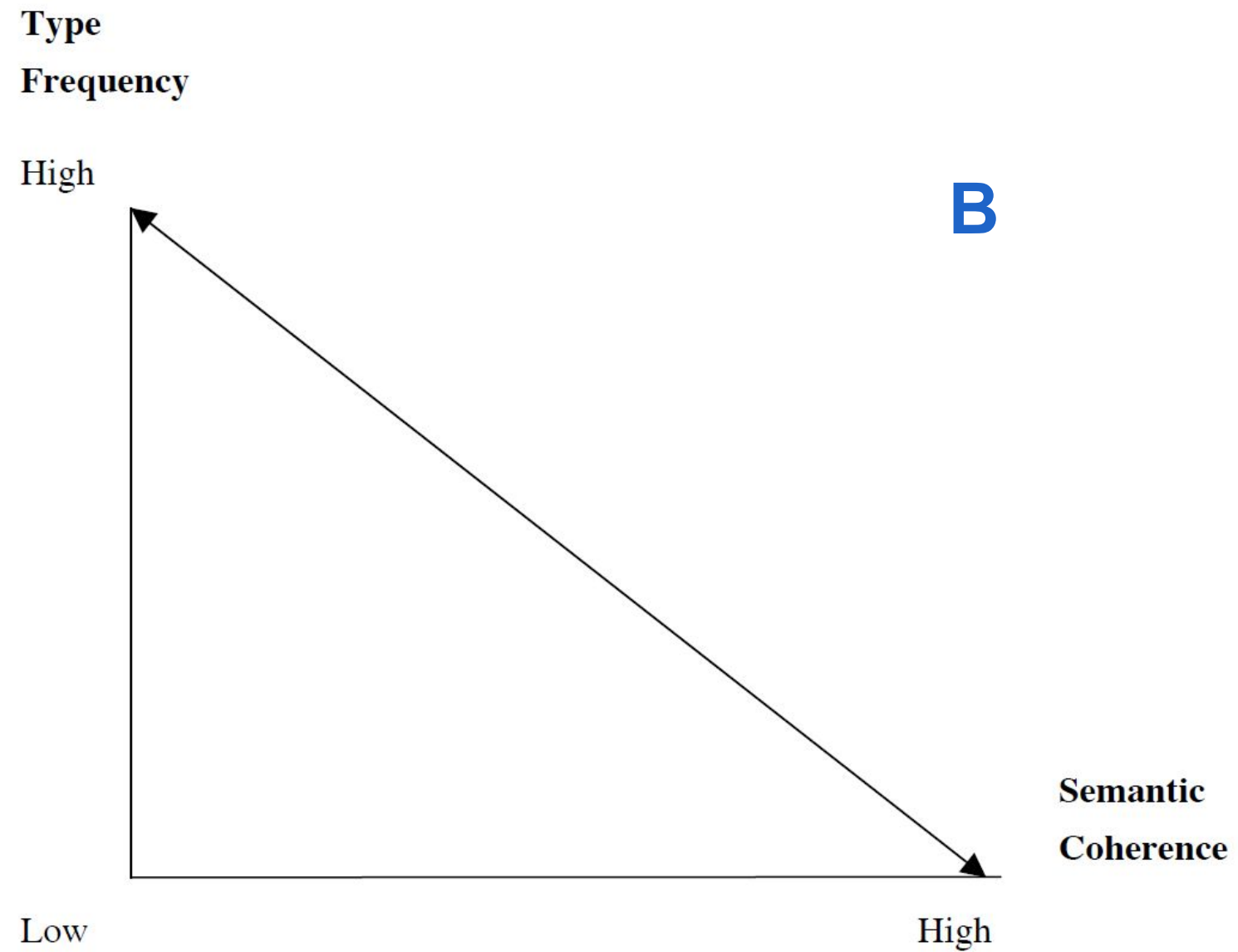


High type frequency  
Low semantic coherence

# PRODUCTIVITY (BARÐDAL 2008)

**Productivity cline:**

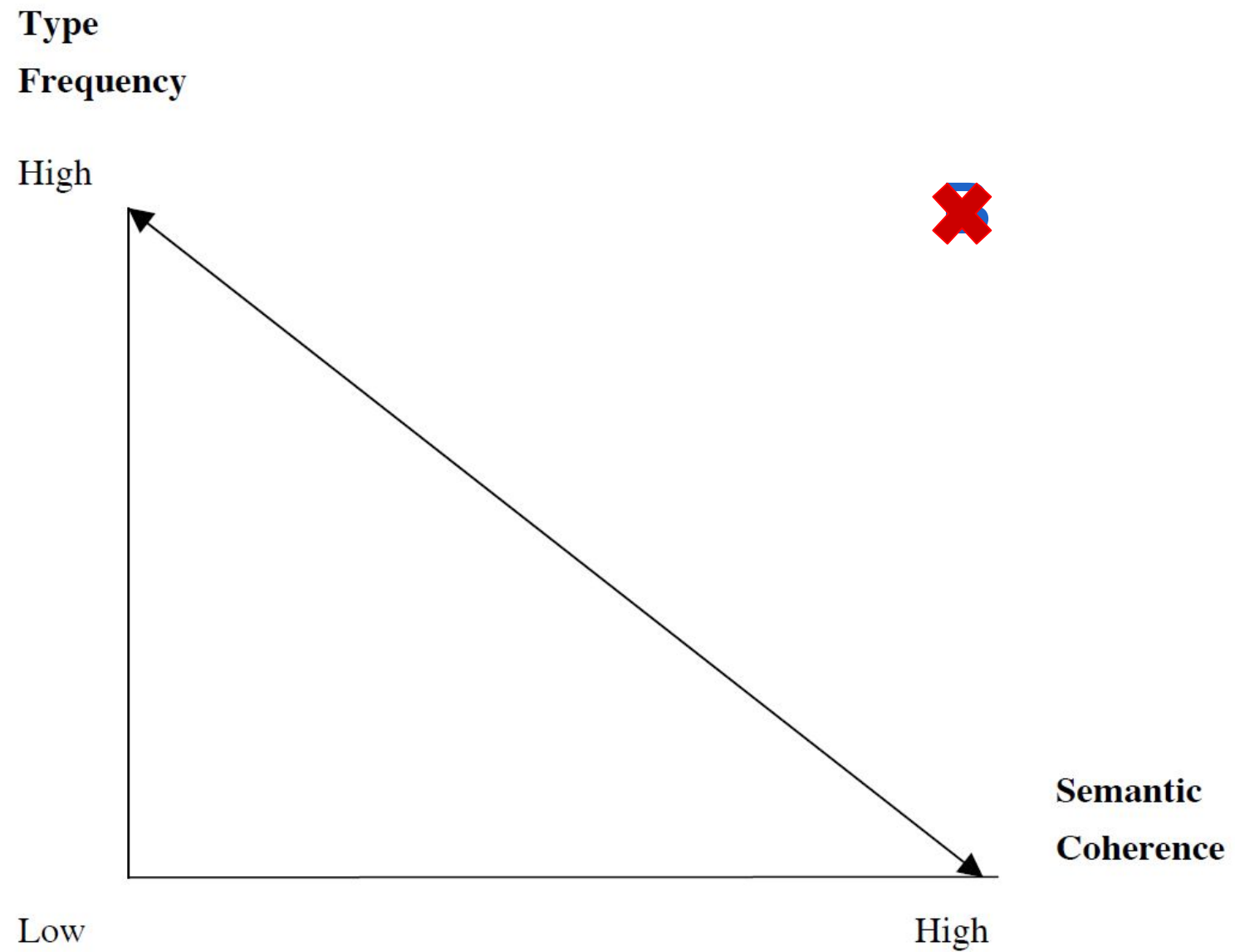
**Functional-semantic space:**



# PRODUCTIVITY (BARÐDAL 2008)

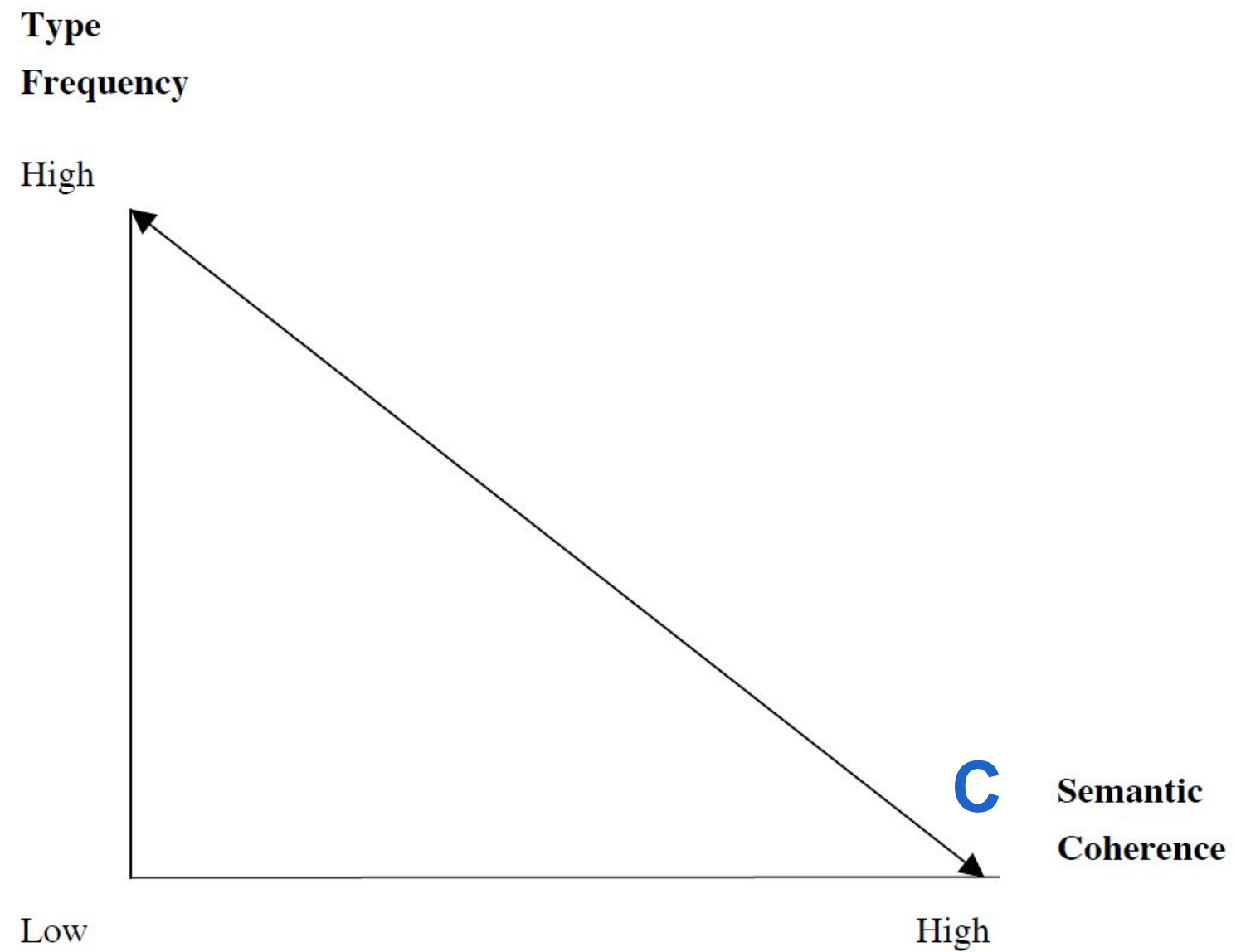
**Productivity cline:**

**Functional-semantic space:**



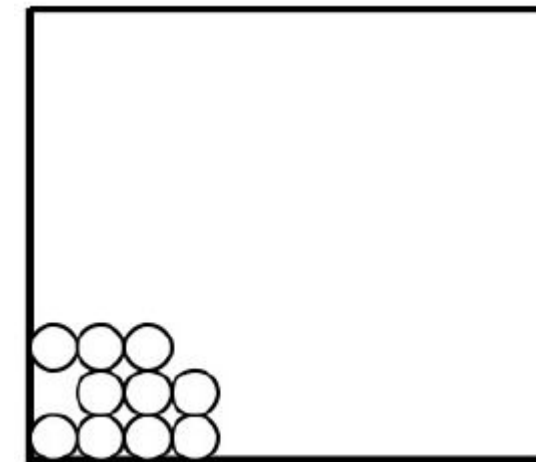
# PRODUCTIVITY (BARÐDAL 2008)

## Productivity cline:



## Functional-semantic space:

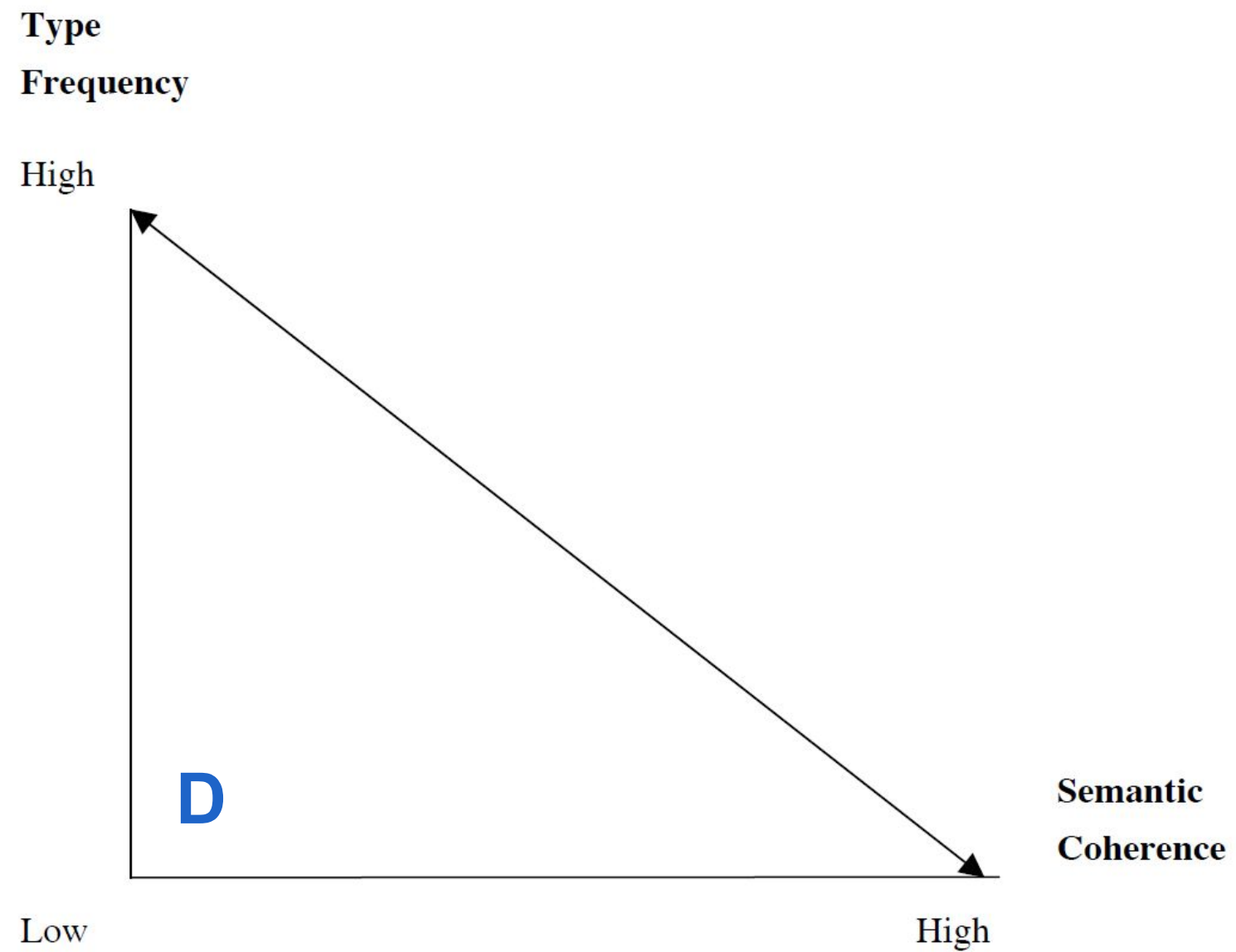
○ = instance of use (type)



Low type frequency  
High semantic coherence

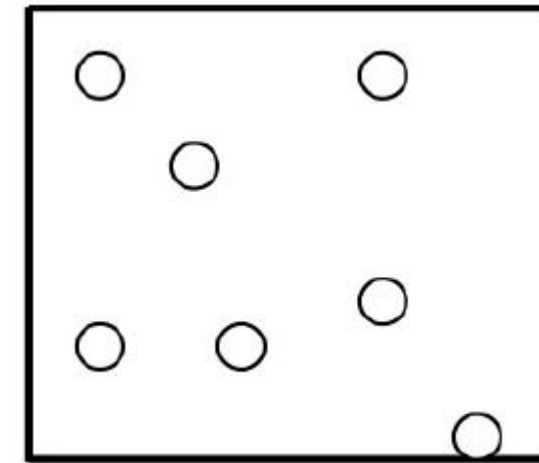
# PRODUCTIVITY (BARÐDAL 2008)

## Productivity cline:



## Functional-semantic space:

○ = instance of use (type)



Low type frequency  
Low semantic coherence

# 2. INCHOATIVES

## MY RESEARCH

- The inchoative construction in (Peninsular) Spanish
- Synchronic + diachronic corpus study
- TenTen Web Corpus (Sketch Engine) (Kilgariff et al. 2014)



# THE INCHOATIVE CONSTRUCTION

– *Juan empieza a trabajar*  
[Sub] [AUX] [a] [INF]

– *Pedro se pone a estudiar, María rompe a llorar, Javier se echa a reír*  
'Peter puts himself to study', 'Maria breaks to cry', 'Javier throws himself to laugh'

– 4 slots: Subject, Auxiliary, Preposition, Infinitive

– (adverb)

– (se)

– Auxiliary: grammaticalized V ?

– *empezar / comenzar* VS *romper / echar*

– Put verbs (*ponerse, meterse*), change of state verbs (*romper*), motion verbs (*echar*),

...

– Preposition: *a, en, or* ∅ ?

– Semantic classes of infinitives ?

# ORIGINS OF THE CONSTRUCTION

- Inherent inchoative verbs
  - *empezar, comenzar, iniciar, principiar*
  
- *Ponerse* (Heine 2002)
  - Initial stage: *Juan se pone en el cuarto.* (source meaning)
  - Bridging context: *Juan se pone en el cuarto a estudiar.*
  - Switch context: *Juan se pone a estudiar en el cuarto.*
  - Conventionalization: *Juan se pone a estudiar.* (target meaning)

# RESEARCH QUESTIONS

- Properties of the inchoative construction
  - Types?
  - Semantic differences and correspondences between the different subconstructions (i.e. the question of near-synonymy)?
  - Which semantic classes allowed in INF-slot?
- Diachronic part
  - Historical development of the filler classes in both slots
- Is the construction productive? And how productive?

# INCREASE IN TYPE FREQUENCY ?

Inchoative auxiliaries					
Peninsular auxiliary	# (tot)	# (es)	Latin American auxiliary	# (tot)	# (es)
arrancar	7.170	989	abrir	46.378	6.163
comenzar	2.725.583	312.089	agarrar	1.113	56
echarse	100.509	13.531	arrastrarse	2.672	338
empezar	2.940.857	448.135	aventarse	731	16
explotar	2.038	84	coger	1.226	135
liarse	2.928	627	dar	1.092.086	154.616
meterse	18.864	2.307	decir	43.651	2.319
ponerse	535.745	72.874	dentrar	21	0
romper	13.973	2.174	largarse	5.492	217
soltarse	2.498	152	pegar	2.273	112

*Iniciar, principiar, apartar, destapar, ... ?*

# SOME EXAMPLES ...

- *Alfonso, un niño de 7 u 8 años, **rompió a llorar** en un momento determinado de las deliberaciones.*  
'Alfonso, a boy of 7 or 8 years old, **started to cry** at a determined moment of the deliberations.'
- *Apenas me vio, se cubrió la cara y se **echó a reír**.*  
'As soon as he saw me, he covered his face and **started to laugh**.'
- *Estar siempre en oración continua con Jesús me llena de gozo, me hace **explotar a reír** sin saber por qué.*  
'Always being in constant prayer with Jesus fills me with joy, it makes me **start to laugh** without knowing why.'
- *Ustedes se **agarran a decir** cómo van a presentar un presupuesto alternativo.*  
'You **start to say** how you will present an alternative budget.'
- *Desde la una de la mañana, como los gallos saben hacerlo en el campo, **se destapó a cantar**.*  
'From one o' clock in the morning, like the roosters know how to do in the countryside, **he started to sing**.'
- *A las seis y diez **se destapó a llover**.*  
'At ten past six, **it started to rain**.'

# SEMANTIC TYPES (1)

Semantic Types				
<b>Type 1</b>	SN (animate)	INF ( + dynamic)	<i>el padre se pone a leer</i>	'the father puts himself to read'
<b>Type 2</b>	SN (animate)	INF ( - dynamic)	<i>me pongo a ser mal</i>	'I put myself to be bad'
<b>Type 3</b>	SN (inanimate)	INF ( + dynamic)	<i>su labio se puso a temblar</i>	'his lip started to tremble'
<b>Type 4</b>	SN (inanimate)	INF ( - dynamic)	<i>su dedo se puso a sangrar</i>	'his finger started to bleed'
<b>Type 5</b>	SN (impersonal)	INF ( + dynamic)	<i>se puso a llover</i>	'it started to rain'
<b>Type 6</b>	SN (impersonal)	INF ( - dynamic)	<i>se pone a hacer sol</i>	'it starts to be sunny'

	1		2		3		4		5		6		total	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
XIII	48	96	2	4	-	-	-	-	-	-	-	-	50	100
XV	140	94.6	4	2.7	4	2.7	-	-	-	-	-	-	148	100
XVII	702	95.6	19	2.6	12	1.6	1	0.2	-	-	-	-	734	100
XIX	1163	96.1	20	1.7	23	1.9	4	0.3	-	-	-	-	1210	100
XXI	2848	94.9	21	0.7	86	2.9	27	0.9	2	0.1	17	0.6	3001	100

# SEMANTIC TYPES (2)

	1		2		3		4		5		6		total	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
XIII	48	96	2	4	-	-	-	-	-	-	-	-	50	100
XV	140	94.6	4	2.7	4	2.7	-	-	-	-	-	-	148	100
XVII	702	95.6	19	2.6	12	1.6	1	0.2	-	-	-	-	734	100
XIX	1163	96.1	20	1.7	23	1.9	4	0.3	-	-	-	-	1210	100
XXI	2848	94.9	21	0.7	86	2.9	27	0.9	2	0.1	17	0.6	3001	100

Evolution of the semantic types of *ponerse* (Enghels & Van Hulle 2018)

	1		2		3		4		5		6		total	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
XIX	170	95.5	-	-	8	4.5	-	-	-	-	-	-	178	100
XX	203	91.4	-	-	18	8.1	-	-	1	0.5	-	-	222	100
XXI	339	74.3	-	-	111	24.3	-	-	6	1.4	-	-	456	100

Evolution of the semantic types of *romper* (Enghels & Van Hulle 2018)

# SEMANTIC TYPES (3)

- Type 1:
  - *Aquí **rompió a llorar** la hermana de Tolín, como si el alma se le saliera por la boca.* (CORDE: de Pereda J.M., 1885)  
'Here Tolin's sister **started to cry**, as if her soul were coming out of her mouth.'
  - *Como los mayores **rompieron a reír**, Miguelí se figuró que la escena debió resultar bastante cómica.* (CREA: Rivarola Matto, J.B., 1970)  
'As the older people **started to laugh**, Migueli figured that the scene must seem quite comical.'
- Type 3:
  - *Cuando **rompa a hervir**, subimos el fuego y los dejamos cocer un par de minutos.* (CORPES XXI: Sanjuán G., 2004)  
'When it **begins to boil**, we turn up the heat and let it cook a few minutes.'
- Type 5:
  - *Afuera **rompió a llover** con fuerza.* (CORPES XXI: Abella R., 2009)  
'Outside it **started to rain** with power.'



# 3. NEGATION REINFORCEMENT

# NEGATION REINFORCEMENT

**Geen kat te zien bij  
signeersessie The Voice**

*nieuwsblad.be*

**Hamilton: "J'ai appris que dalle"**

*eurosport.fr*

**“Met pensioen? Nooit van mijn leven”**

*hln.be*

# MY RESEARCH

–Comparative:

Dutch (Belgian & Netherlandic Dutch) and Hexagonal French

–Quantitative, synchronic corpus study:

Dutch and French TenTen Web Corpora (Sketch Engine)

(Kilgariff et al. 2014)

# THREE CONSTRUCTIONS REINFORCING NEGATION

Example:	Elements of the construction:
Geen kat te zien bij signeersessie The Voice	verb + negative element + noun phrase referring to a 'small quantity'
"Met pensioen? Nooit van mijn leven"	negative particle + generalizing prepositional phrase
Hamilton: "J'ai appris que dalle"	restrictive expression: ( <i>ne</i> )... <i>que</i> + noun

# THREE CONSTRUCTIONS REINFORCING NEGATION

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"Met pensioen? Nooit van mijn leven"	negative particle + generalizing prepositional phrase
Hamilton: "J'ai appris que dalle"	restrictive expression: ( <i>ne</i> )... <i>que</i> + noun

+ negative nouns that occur without *geen*: *Ik begrijp er de ballen van*  
'I understand the balls of it'

# THE MINIMIZING CONSTRUCTION

– Minimizers = “a class of negative polarity items denoting minimal measures (along dimensions such as size, length, duration, value, weight etc.)” (Suleymanova & Hoeksema 2018)

## Different dimensions:

Size: *geen druppel* ‘no drop’

Length: *voor geen meter* ‘for no meter’

Duration: *geen seconde* ‘no second’

Value: *geen rotte frank* ‘no rotten frank’

Weight: *geen gram(metje) vet* ‘no gram of fat’

**Negative polarity items** only occur in negative, interrogative or conditional contexts.

For example: (Hoeksema 2000)

*I don't think I could **ever** trust you.*

*\* I think I could **ever** trust you.*

# THE MINIMIZING CONSTRUCTION

**verb + neg. + NP referring to a 'small quantity'**

Fillers NPs

Example: *Ik begrijp geen [snars, sikkepit, bal, jota...] van dit project.*

'I understand no [SNARS, SIKKEPIT, ball, iota...] of this project.'

**verb + neg. + NP referring to a 'small quantity'**

Reinforcement of the noun

Example: *Ik versta geen [half] woord.* 'I understand no [half] word.'

*Hij bezit geen [rooie] duit.* 'He owns no [red] penny.'

**verb + neg. + NP referring to a 'small quantity'**

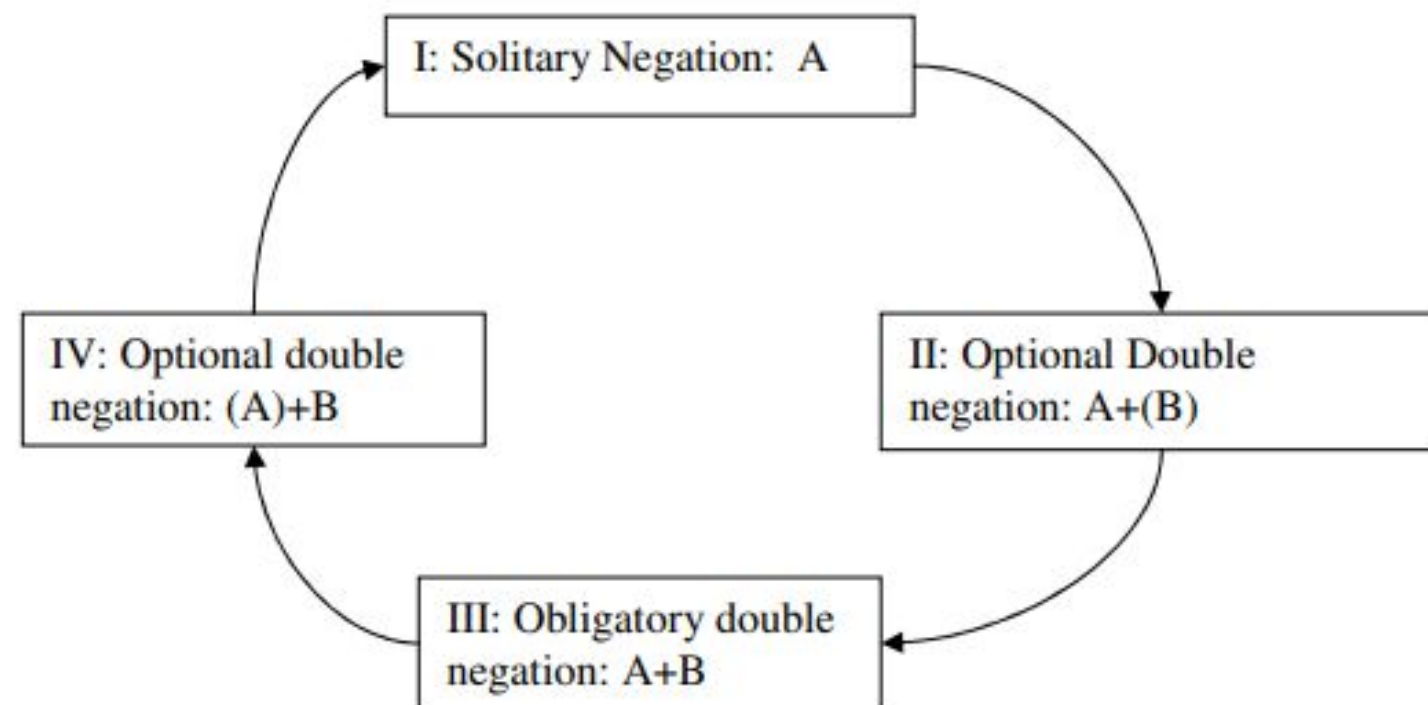
Fillers verb

Example: *Ik [begrijp, snap, geloof...] er geen snars van.*

'I [understand, believe] no SNARS of it.'

# RESEARCH QUESTIONS

1. Contrastive analysis (Dutch vs. French) of the constructions' productivity
2. Internal and external properties of the constructions
3. Synchronic snapshot of Jespersen's cycle (Hoeksema 1997, 2009; Mosegaard Hansen 2009)



French: *(ne) pas*

Middle Dutch: *Ik en was niet siec*  
'I NEG was not sick'

Modern Dutch: *Ik was niet ziek*  
'I was not sick'



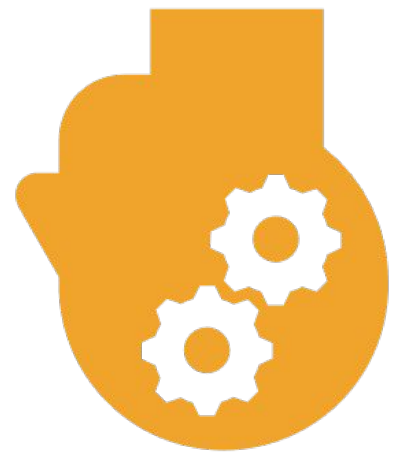
# 4. ANTI-CAUSATIVES

# CAUSATIVE AND ANTI-CAUSATIVE CONSTRUCTIONS



Agent  Process / Event Patient

(Agent) Patient  Process / Event



# CAUSATIVE AND ANTI-CAUSATIVE CONSTRUCTIONS

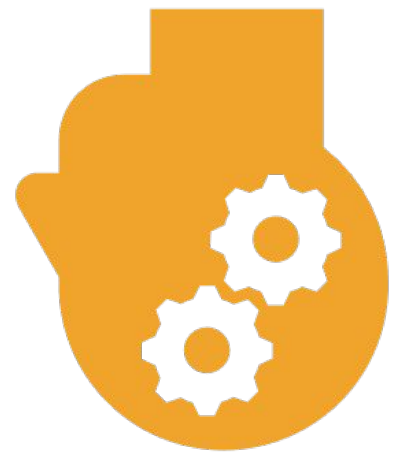


John opened the door.

Agent  Process / Event Patient

(Agent) Patient  Process / Event

The door opened.



# CONSTRUAL: WHAT DO WE MEAN?

- speaker/writer choice to convey a situation/event
- finite choices (according to the language system and its mechanisms)
- different choices may differ in their 'presentation' or construal of a situation/event
- In that sense, the speaker's choice to use one construction over the other can be considered a matter of **construal**\*

\*see Halliday & Matthiessen (2014) for more extensive explanation

# LEVELS OF LANGUAGE

- The relations here are not merely **syntagmatic**, but can also be conceived of as *paradigmatic relations between constructions* (cf. Davidse 1998)
- We can also consider the level of schematicity (cf. Langacker 1990)

# RESOURCES FOR ALTERNATE CONSTRUALS

- English
  - P-Labile Verbs (cf. McMillion 2006)
- French
  - Reflexive Pattern
- Dutch
  - Periphrastic Copular Pattern

# EXAMPLE MECHANISMS ACROSS LANGUAGES

Language	Causative	Mechanism	Anti-Causative
English	John opened the door.	[P-labile verb strategy] →	The door opened.
French	Jean ouvrait la porte.	[Reflexive strategy] →	La porte s'ouvrait.
Dutch	Jan deed de deur open.	[Periphrastic strategy] →	De deur ging open.

# RESEARCH QUESTIONS AND AREAS

- Broadly: Which of the competing constructions is more productive?
- How do the different mechanisms used in each selected language affect the productivity of the constructions?
- How does the causative/anti-causative complementarity relate to other constructions, *e.g. resultative constructions*?



## RESEARCH QUESTIONS AND AREAS (CONT.)

- How do semantic classes of the argument structure slots affect construction choice? (*e.g. +/- animate*)
  - Does this introduce (further) syntactic constraints?
- How are these constructions (and the differing construals they convey) developed throughout discourse?
- And more (theoretical implications, diachronic perspective(s), etc.)

# RESEARCH DESIGN


- Using Synchronic Corpus Data
  - EnTenTen and FrTenTen corpora on Sketch Engine (Kilgariff et al. 2014)
- Typological contrast with English and French (maybe Dutch)
- Quantitative, collocation analyses
- Starting from Semantic Verb Classes

# SEMANTIC VERB CLASSES

- Why start from the semantics?: our “way in”
- Semantic verb classes (e.g. Levin 1993)

- Beginning/ending
- Opening/closing
- Change of state verbs
- Verbs of temperature change, etc.

Opening semantic verb  
class variation examples:

- 
- The door **swung** open.
  - The door **burst** open.
  - The door **flew** open.

## MEASURING PRODUCTIVITY

- Operationalizing semantic coherence measure
- Type Frequency measure in terms of verbal lexemes which compose the semantic verb sets (collostructional analysis)
- Compare within each language as well as across languages

# 5. CASE ALTERNATIONS

# THE CONSTRUCTION

- Oblique subjects in Icelandic (Barðdal 2008: 60)

Acc-subject	Dat-subject	Gen-subject
ca. 200	ca. 700	ca. 10-15

- Dat-subject verbs: Dat – **Dat-Nom** – Dat-PP – Dat-S

- Dat-Nom verbs

- Alternating, e.g. *falla í geð* ‘please’
- Non-alternating, e.g. *líka* ‘like’

# THE CONSTRUCTION

## – Subjecthood tests, e.g. S-V inversion

### – Alternating, e.g. *falla í geð*

- *Hefur bér alltaf fallið þessi bók vel í geð?*  
'has you.dat always fallen this book.nom in good liking'
- *Hefur þessi bók alltaf fallið bér vel í geð?*  
'has this book.nom always fallen you.dat in good liking'

### – Non-alternating, e.g. *líka*

- *Hefur bér alltaf líkað þessi bók vel?*  
'has you.dat always liked this book.nom well'
- *\*Hefur þessi bók alltaf líkað bér vel?*  
'has this book.nom always liked you.dat well'

# THE CONSTRUCTION

– Alternating predicates in German?

– *Gefällt* *das Buch* *dir?*

‘pleases **that book.nom** **you.dat**’

– *Gefällt* *dir* *das Buch?*

‘pleases **you.dat** **that book.nom**’

– Topicalisation or alternation?

– “Both word orders have been claimed to be equally neutral (...)”

(Barðdal et al. 2019)

– Corpus data, psycholinguistic experiments



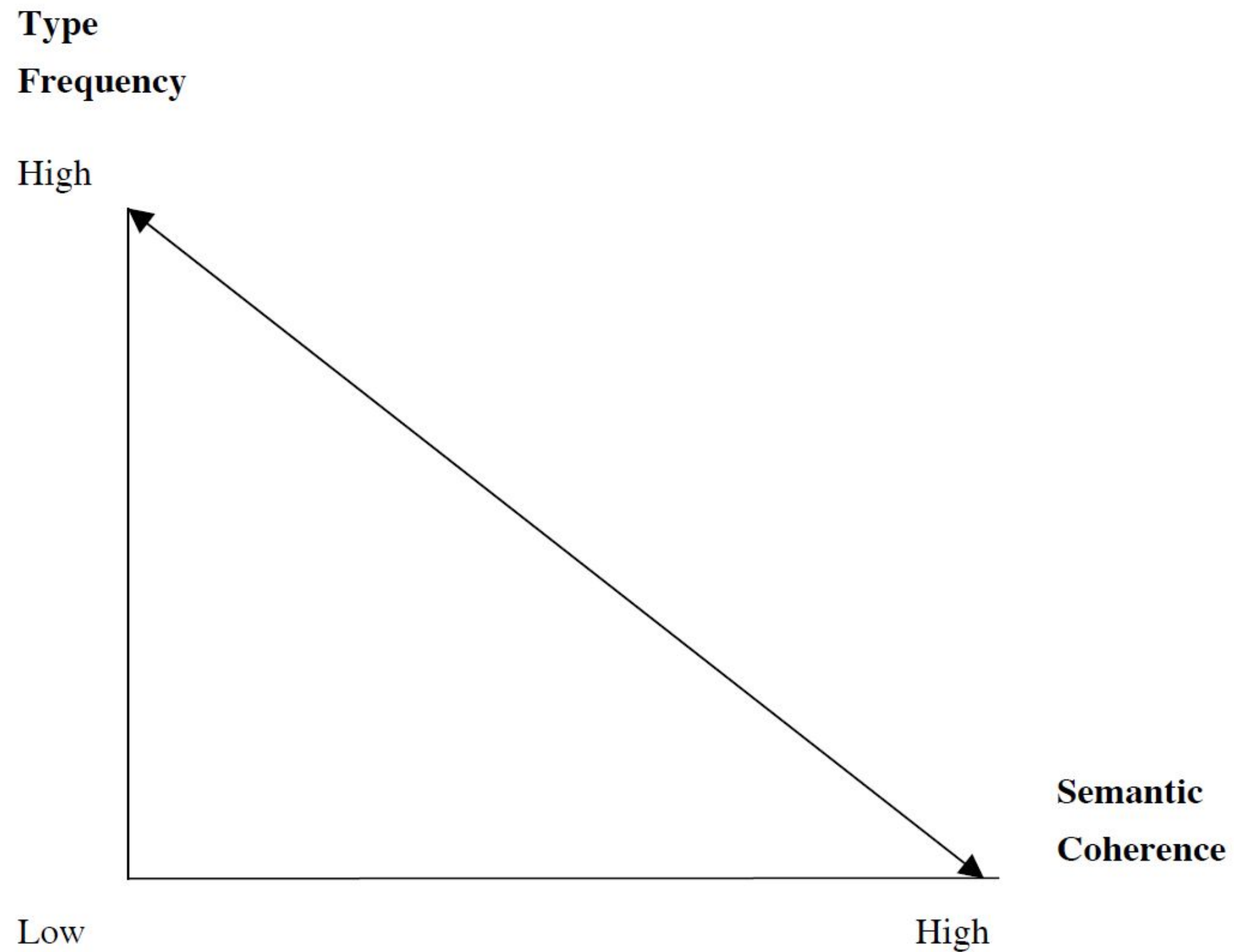
# RESEARCH QUESTIONS

- Are all German Dat-Nom verbs alternating?
- If they are, which language (i.e. Icelandic or German) reflects the Proto-Germanic situation best?
- Is the verb slot “open”?
- If not, when was the Dat-Nom construction productive?
- (What is the status of similar verbs in Dutch?)

# METHODOLOGY

- Compilation of list with German Dat-Nom predicates: *Duden + dict.is*
- Quantitative, synchronic corpus study: TenTen Corpus (Sketch Engine) & Gigaword Corpus (Loftsson & Östling 2003)
- Diachronic study (time allowing)

# Expectations and hypotheses (BARÐDAL 2008)



Thank you for your attention!

Bedankt voor uw aandacht!

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