

# CHRONOS 13

tense aspect modality evidentiality

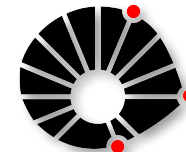
## Is Aspectual Coercion Aspectual? Evidences of coercion in durative events

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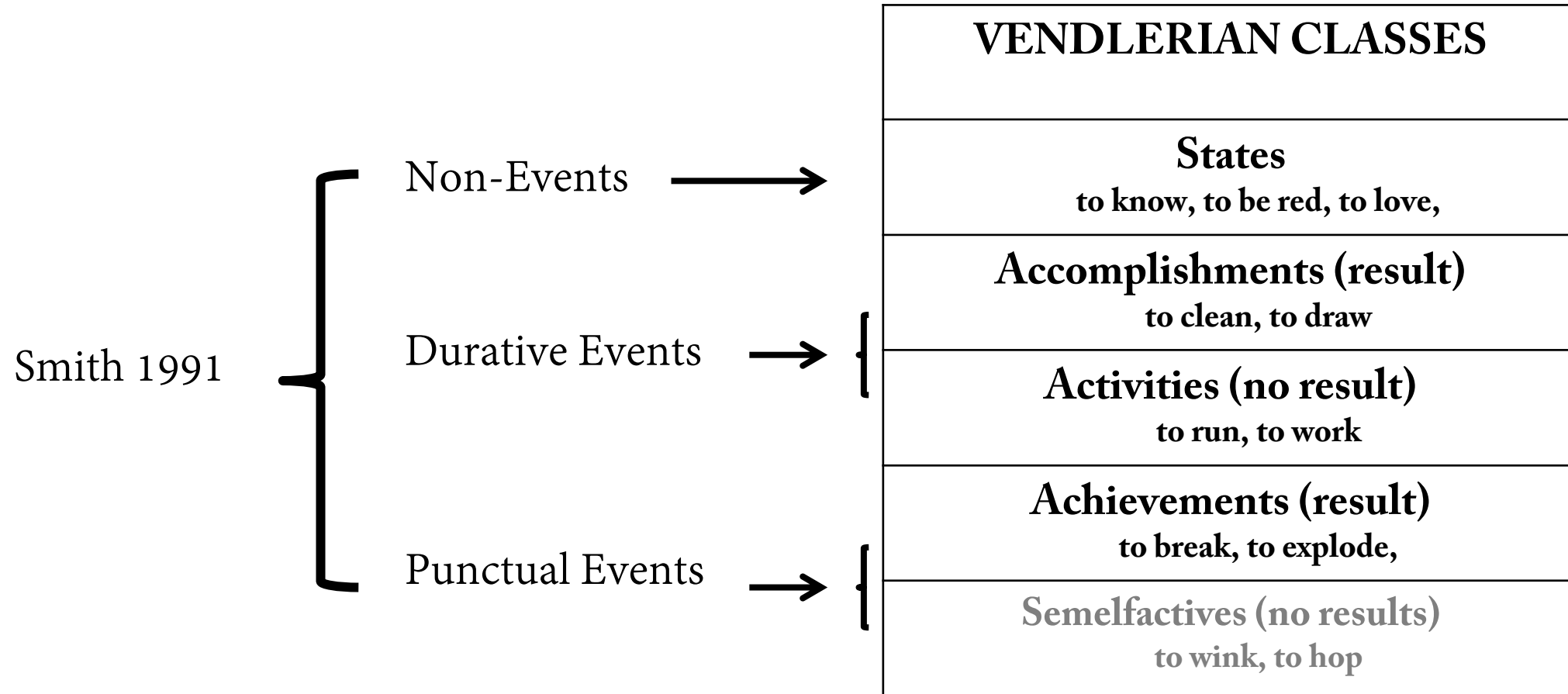
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# Vendler 1967



# EVENT CLASSIFICATION

Sua parametrização faz duas oposições paramétricas: + ou - *consequência* (*consequence*), que tem a ver com a delimitação do evento, e *extensão* (*extended*) x *atômico* (*atomic*), de acordo com a extensão temporal do evento.

Classe / Parâmetros	Extenso/Atômico	Consequência
Estados	X	X
Processos (Atividades)	Extenso	-
Culminations (Achievements)	Atômico	+
Processos Culminados (Accomplishments)	Extenso	+
Pontuais (Semelfactivos)	Atômico	-

Tabela 3: Proposta de Classificação Eventos e de Parametrização de Moens (1987)

Classe / Parâmetros	Extensão / Pontualidade	Continuidade
Estados	Pontual	+
Atividades	Extenso	+
Achievements	Pontual	-
Accomplishments	Extenso	-

Tabela 2: Proposta de Parametrização da Classificação Vendleriana de Carlson (1981)

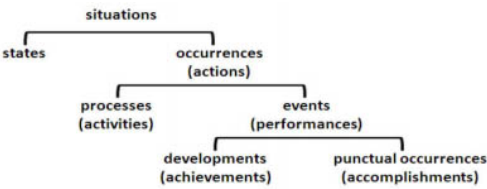
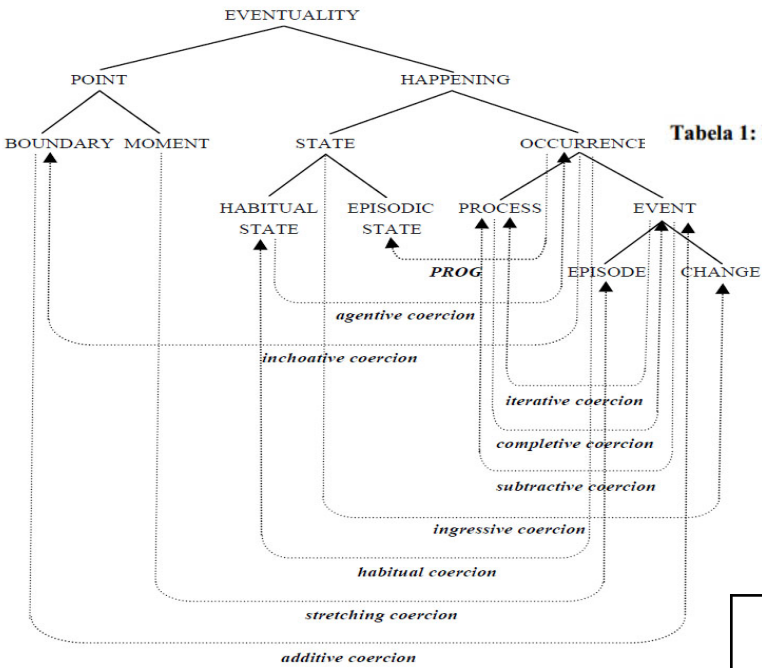


Figura 3: hierarquia de classificação de eventos (Moerelatos 1978: 423)

Classe / Parâmetros	Contabilidade	Duração
Estados	-	-
Atividades	-	+
Achievements	+	-
Accomplishments	+	+

Tabela 4: Proposta de parametrização das classificações de evento em Hoeksema (1983)



Classe / Parâmetros	Delimitação	Continuidade
Estados	-	-
Atividades	-	+
Achievements	+	-
Accomplishments	+	+

Tabela 1: Proposta de Parametrização da Classificação Vendleriana em Verkuyl (1993)

## Vendler 1967

### Vendlerian Classes

#### Estados

saber, ser vermelho, amar,

#### Accomplishments (result)

limpar, desenhar

#### Atividades (no result)

correr, trabalhar

#### Achievements (result)

quebrar, explodir,

#### Semelfactivos (no results)

piscar, saltar, pular...

Smith 1991

Não eventos

Eventos Durativos

Eventos Pontuais

# EVENT CLASSIFICATION

Sua parametrização faz duas oposições paramétricas: + ou - *consequência* (*consequence*), que tem a ver com a delimitação do evento, e *extensão* (*extended*) x *atômico* (*atomic*), de acordo com a extensão temporal do evento.

Classe / Parâmetros	Extenso/Atômico	Consequência
Estados	X	X

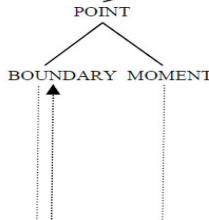
O semelfactivo de Smith parece não ter alcançado tanta força e a classificação mais citada hoje em dia continua mesmo sendo a original de Vendler. O trabalho de Meulen (1983) ratifica a existência das quatro classes vendlerianas e se utiliza de diagnósticos baseados em acarretamentos semânticos semelhantes aos de Kenny:

- (9) Estados: referência externa ao verbo já que é preciso estar fora para reconhecer um estado.
- Atividades: referência homogênea, todas as partes equivalem ao todo.
- Accomplishments: indivisíveis, as partes não equivalem ao todo.
- Achievements: instantâneos, logo, indivisíveis.

Meulen propõe ainda que as classes estejam organizadas em uma hierarquia semântica. Achievements seriam um caso especial dos accomplishments, os accomplishments um caso especial das atividades e, as atividades, um caso especial dos estados.

Classe / Parâmetros	Contabilidade	Duração
Estados	-	-
Atividades	-	+
Achievements	+	-
Accomplishments	+	+

Tabela 4: Proposta de parametrização das classificações de evento em Hoeksema (1983)



## 3.1 CLASSIFICAÇÕES BASEADAS NO COMPORTAMENTO DOS VERBOS

Um dos primeiros a observar a existência de diferentes classes de eventos foi o filósofo Aristóteles, no livro IX da *Metafísica* (apud. Barnes, 1984). Um dos principais pontos de seus estudos foi o reconhecimento e diferenciação de eventos que possuem um ponto final e os que carecem dele. Ele se utiliza do tempo *perfeito* grego para distinguir entre os verbos que ele chama de *kinesis* (traduzido como ações, como *construir*, *chegar*, *nascer*) e os verbos chamados de *energeia* (traduzido como movimentos, como *trabalhar*, *ver*, *viajar*). O diagnóstico utilizado é imaginar o interrompimento do evento em um determinado ponto antes do seu final esperado. Os verbos *kinesis* são *télicos*, possuindo um ponto final inerente ao evento, o que quer dizer que o evento de fato se encerra quando é considerado completo (7a). Os verbos *energeia*, ao contrário, são *atélicos* e, por não possuírem um ponto final inerente, podem continuar a se estender no tempo, apesar de já terem sido realizados (7b):

- (7) a) Eventos Télicos (Kinesis)
- João chega (hoje).*
- \*João continuará chegando.*
- b) Eventos Atélicos (Energeia)
- João trabalha (hoje).*
- João continuará trabalhando.*

Eventos Pontuais →

correr, trabalhar
<b>Achievements (result)</b> quebrar, explodir,
<b>Semelfactivos (no results)</b> piscar, saltar, pular...



# And what about Aspectual Coercion?

What do we understand when someone says something as:

However, the later sentence is different from:

**The clown ran for 10 minutes...**

Moens & Steedman 1988

Pustejovsky 1995

Jackendoff 1997

Dölling 2011

WHY?

**The clown jumped for 10 minutes?**

**This trick only works for non-resultative punctuals**

John did dive all the day long  
??The jar broke all the day long



# Iterative Coercion Hypothesis

No Coercion:  
Punctual Event



John sneezed at five o'clock

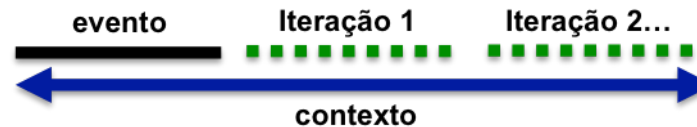


No Coercion:  
Durative Event



John gave a talk for three minutes

Iterative Coercion  
Iterative Event



John sneezed for three minutes



Is it just a hypothesis?  
Both sentences are read in the same way.... right?

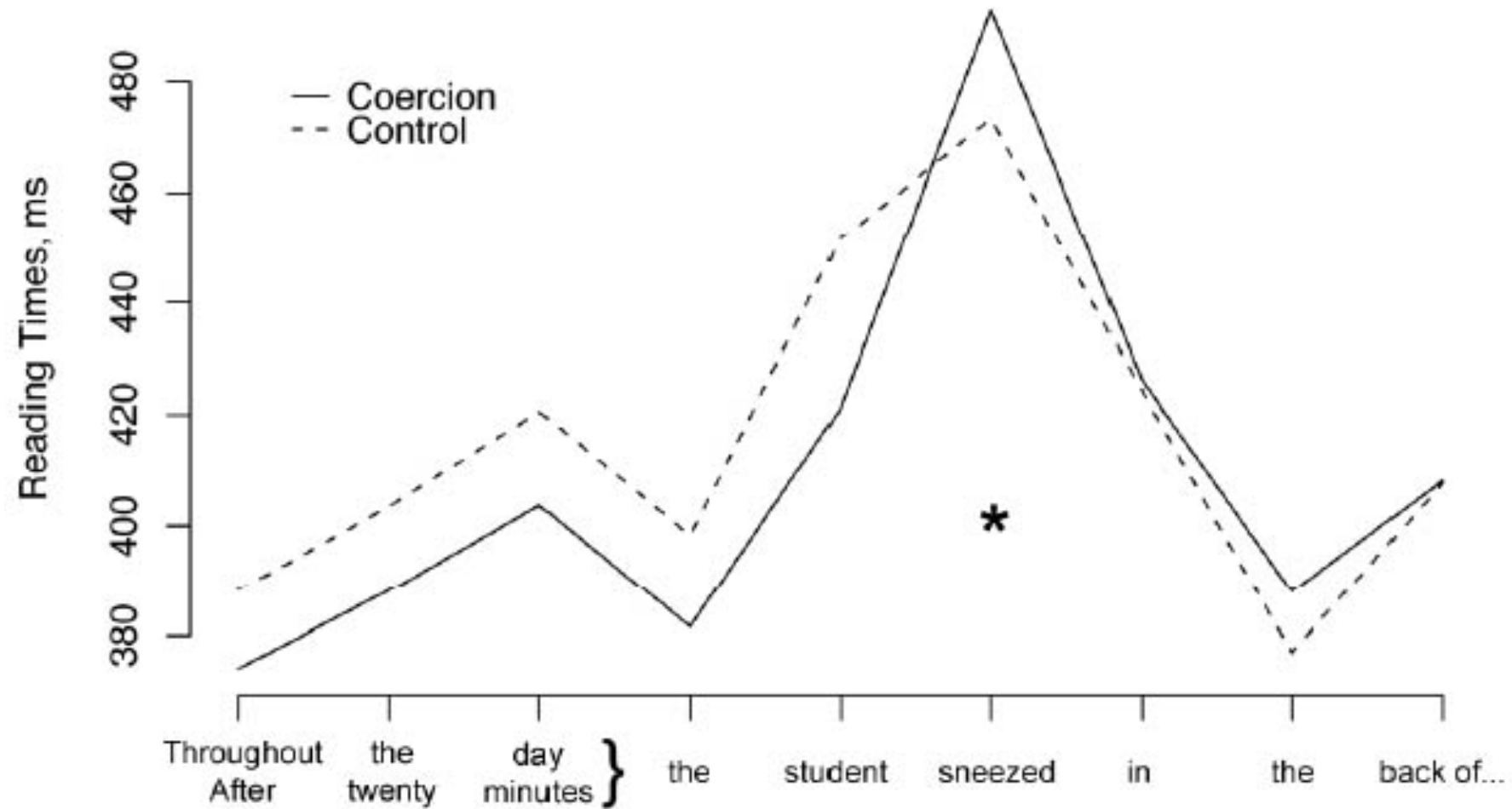
**NEGATIVE EVIDENCES: Pickering et al. 2006**

**PSYCHOLINGUISTIC EVIDENCES:** Piñango et al. 1999, 2006; Proctor et al. 2004; Husband, Beretta & Stockall 2006, 2008; Brennan & Pylkkannen 2008; Bott 2008, 2010; Townsend 2012; Chen 2013....

**NEUROLINGUISTIC EVIDENCES:** Brennan & Pylkkannen 2008, Packzysky & Kuperberg 2011; 2014, Blaszcack & Klimek-Yankowska 2015, Yano 2016

## Brennan & Pylkkanen (2008)

### Behavioral Effect





# Todorova et al. (2000)

- a) Even though / Howard *[sent / a large check]* / to his daughter / *[for many years]* / , she refused to accept his money
- b) Even though / Howard *[sent / large checks]* / to his daughter / *[for many years]* / , she refused to accept his money
- c) Even though / Howard *[sent / a large check]* / to his daughter / *[last year]*, / she refused to accept his money
- d) Even though / Howard *[sent / large checks]* / to his daughter / *[last year]*, / she refused to accept his money

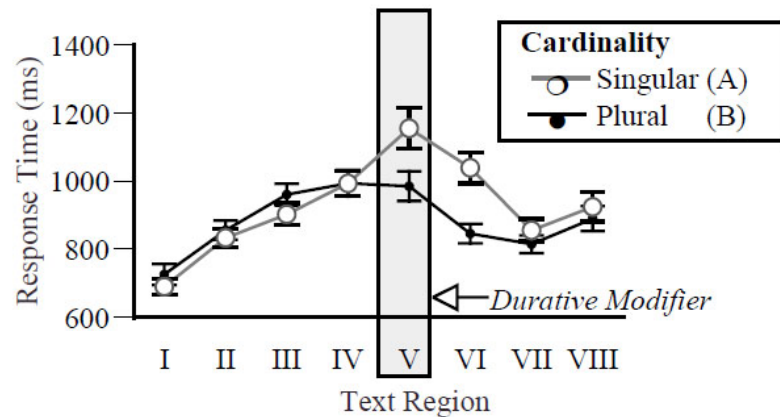


Figure 1: Response latency by text region for **Duratives** by Cardinality of Object

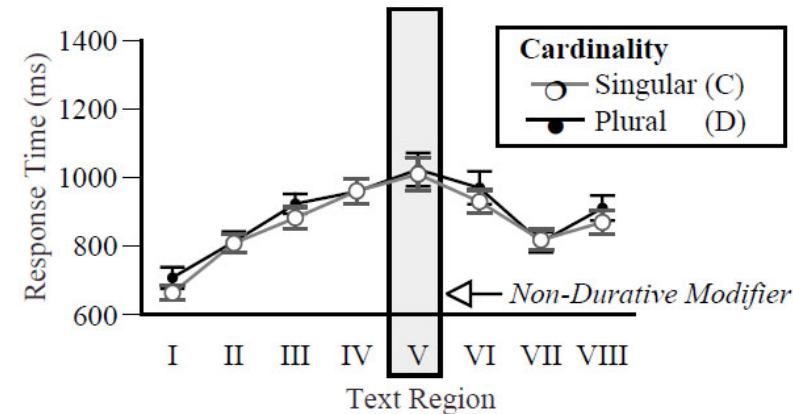


Figure 2: Response latency by text region for **Non-Duratives** by Cardinality of Object

Twice rejection rate for “iterative coercion” condition in (a) than for the other conditions (19%, 7%, 8% e 9%), and longer reading times in temporal modifiers area.

# Piñango et al 1999

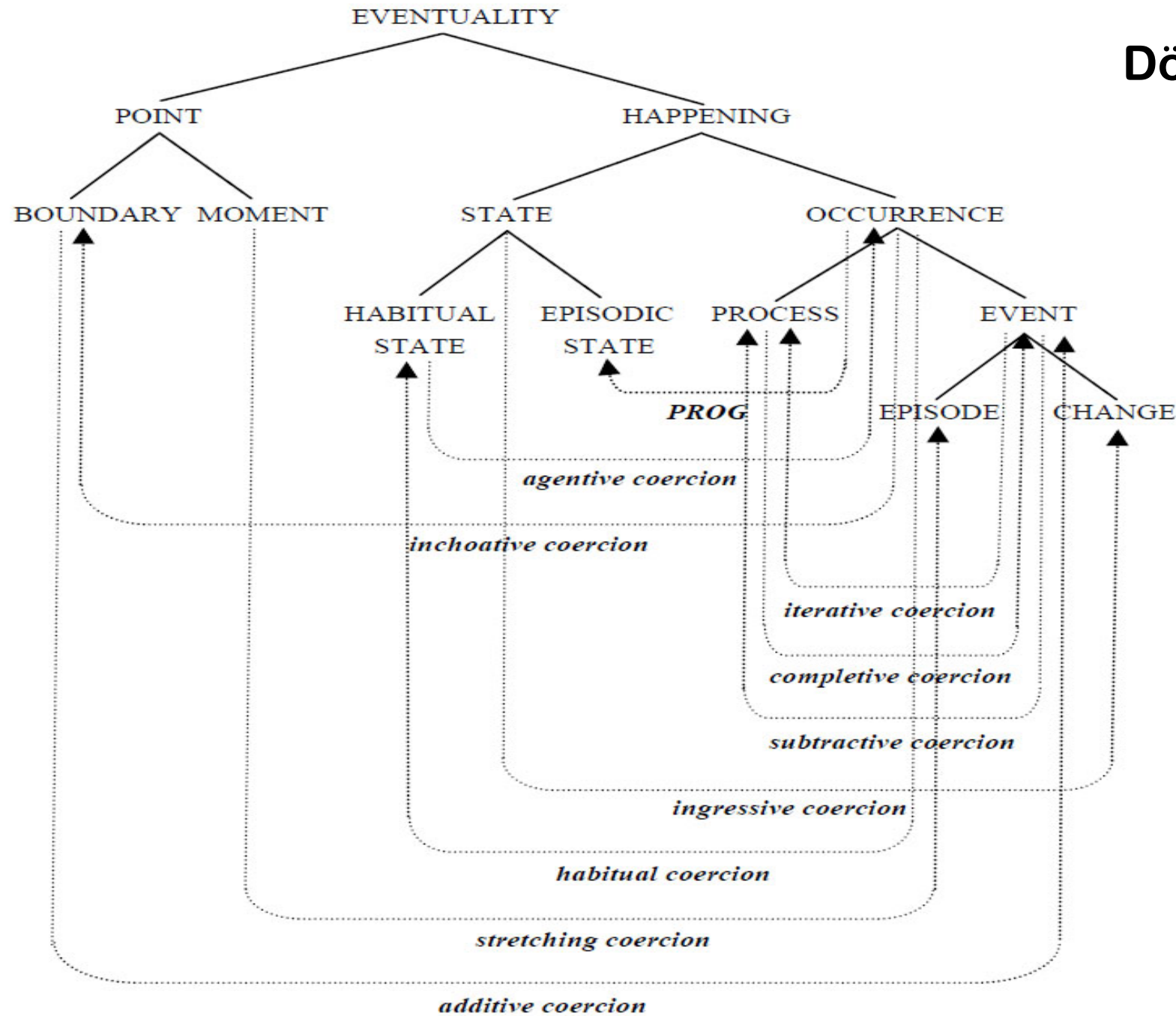
- Dual Task Paradigm
- Auditory stimuli with a visual word/non-word decision in the moment marked with a “\*”.
  - a) The man **examined** the little bundle of fur **for a long time** \* to see if it was alive
  - b) The man **kicked** the little bundle of fur **for a long time** \* to see if it was alive

Larger RTs “iterative coercion” condition

**Table I.** Mean and Standard Deviation for Each Experimental Condition

	Transparent	Enriched (composition)
Mean	742.68	782.16
Standard deviation	83.1	94.21

Dölling (2014: Figure 3)



Verb have no fixed event classification and bounce back and forth among his 13 event classes and subclasses. Among them, 9 changes of classes are described by the author. Each one is considered a different type of aspectual coercion.

**Dölling (2014: Figure 3)**

**“9” categories of  
aspectual coercion!!**

For example, a moment, such as the one John slept, can be turned into an event by stretching coercion (a), the state of “be clever” can be used in a specific occurrence by agentive coercion (b), and an event can be clearly interpreted as an incomplete process as the sentence context is not enough for event completion (c).

- a. John slept at 3 o'clock => John slept for 3 hours (stretching coercion)
- b. John is clever => John is being clever (agentive coercion)
- c. The musician played a sonata for 2 minutes (subtractive coercion)

# Event Duration Hypothesis (Sampaio 2015)

**No coercion:**



John listened to a song for three minutes

**Iterative Coercion:**



John listened to a song for three hours



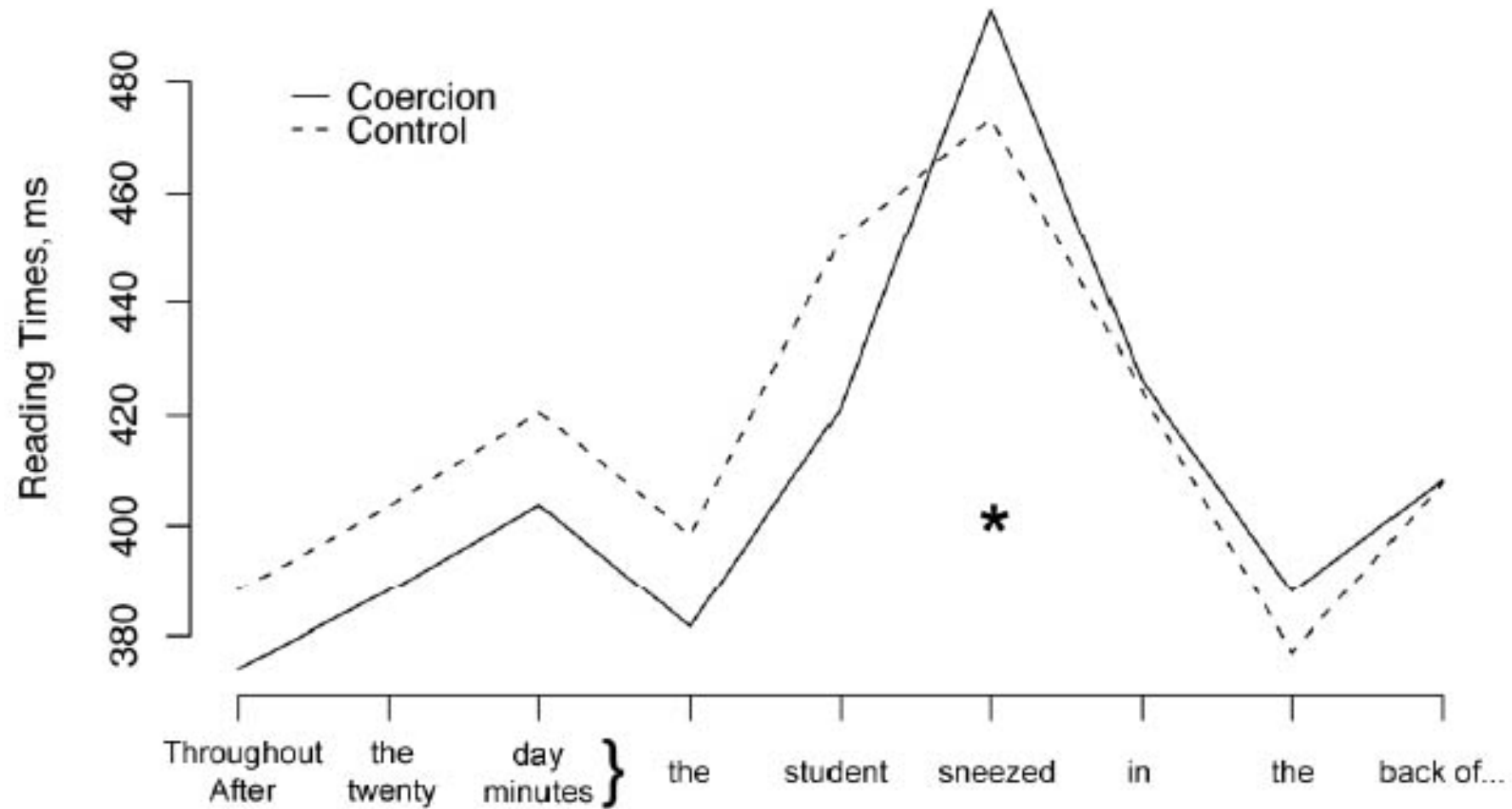
**Subtractive Coercion:**



John listened to a song for three seconds

## Brennan & Pylkkanen (2008)

### Behavioral Effect







# Experiment

## Iterative Coercion of Durative Events In French

Sampaio, Wassenhove (in prep – IAT Test)

Sampaio, Fonseca, Pestke, França, Wassenhove (in prep – Self-paced reading)



université  
PARIS-SACLAY



**Minute**

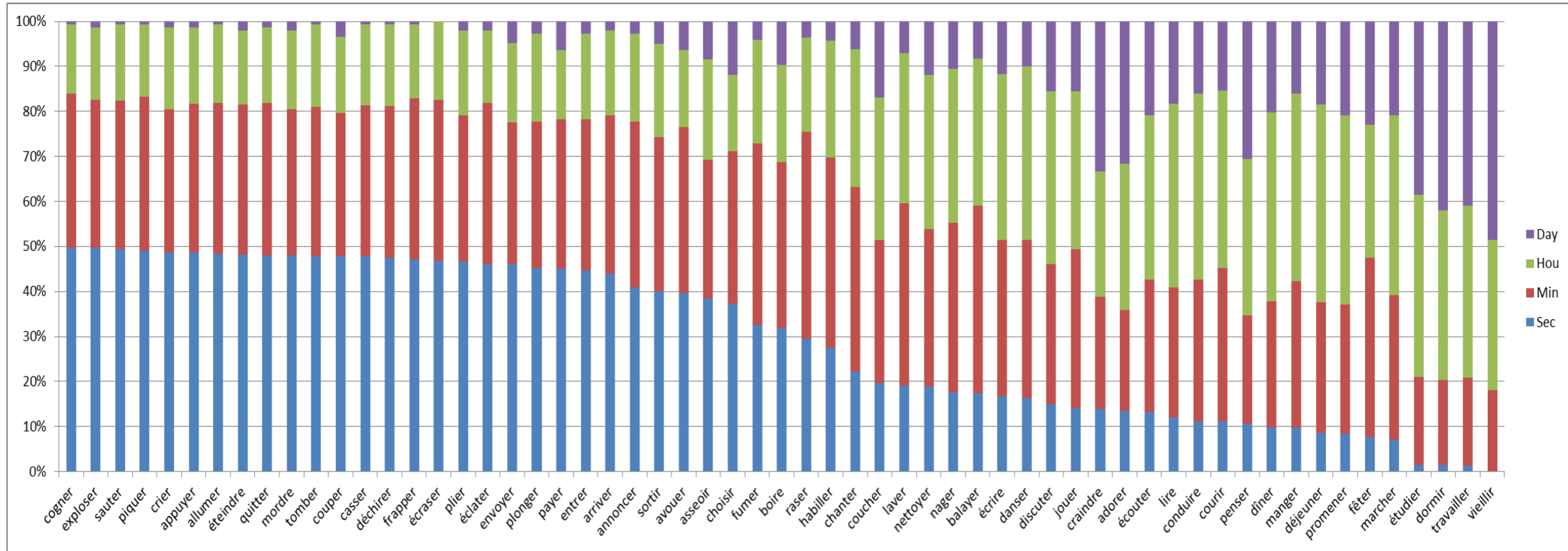
**Duratif**

**Seconde**

**Punctuel**

**discuter**

# “Pre-test” (IAT Test) for the subjective duration of events



# Experiment: Self-paced Reading- durative events in French

## Participants

- 24 native speakers of French
- aged 18-25
- Right handed
- Bac or undergrad students

## Materials

12 durative sentences  
(revised by native speakers)  
62 filler sentences with similar structure

## STIMULI

Pendant **quelques** [ $\Delta t$ ] la femme **a nettoyé la fenêtre dans la chambre** de son fils  
*T - During **some** [ $\Delta t$ ] the woman **cleaned the window in the room** of her son*

Pendant **quelques** [ $\Delta t$ ] le monsieur **a fumé la pipe dans le jardin** de la maison  
*T - During **some** [ $\Delta t$ ] the man **smoked the cigar in the garden** of the house*

$\Delta t$		
Cond 1	Cond 2	Cond 3
Seconds	Minutes	Hours

+

1s

Durante





quelques [  $\Delta t$  ]

some



l'étudiant  
the student



a lu  
read



le livre  
the book



**Spill Over**

área imediatamente após o segmento crítico

à la bibliothèque  
at the library



du quartier  
of the neighborhood





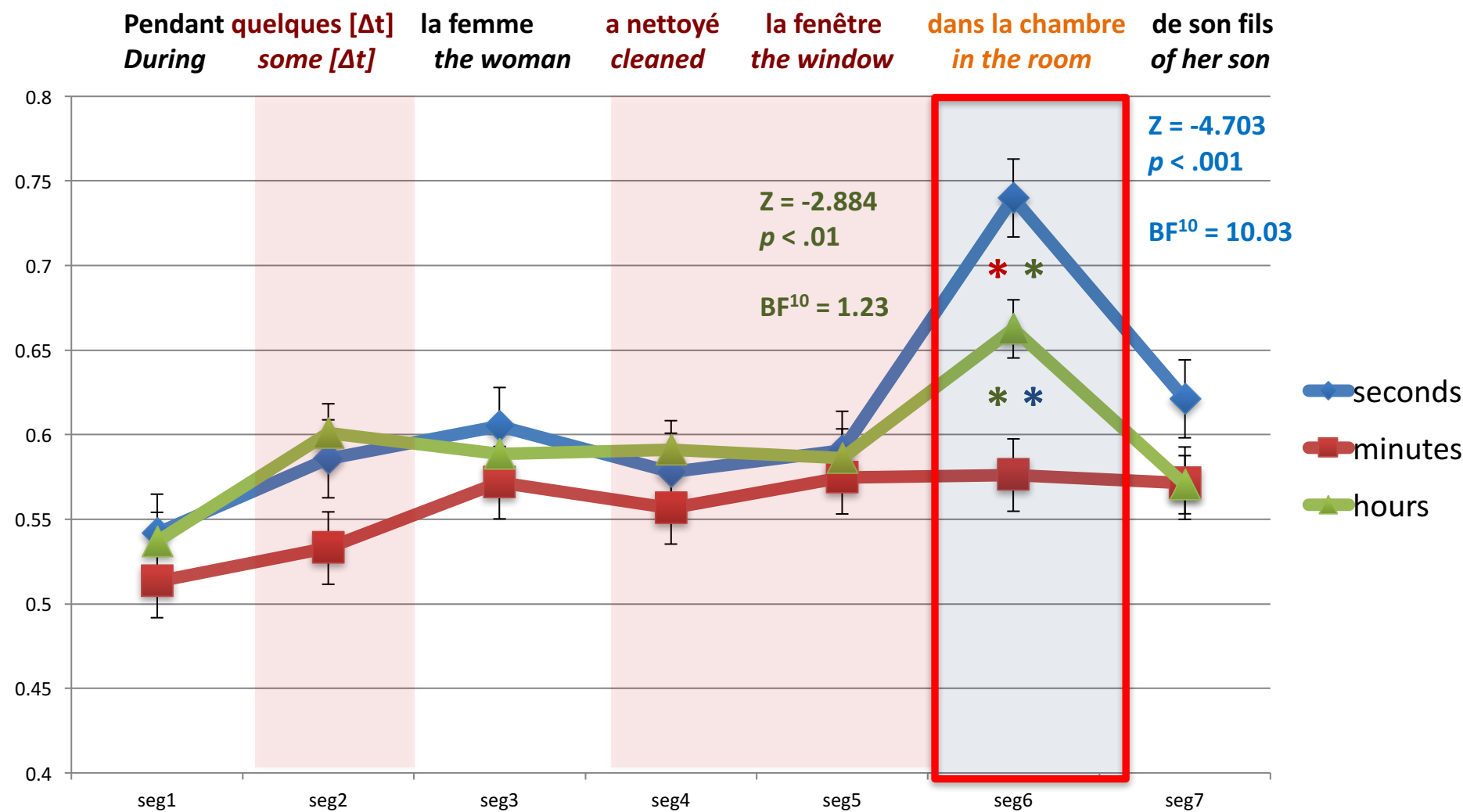
livre

book

H

J

# Results: Self-paced reading - durative events in French



Wilcoxon Signed Rank Test + Bayesian ANOVA

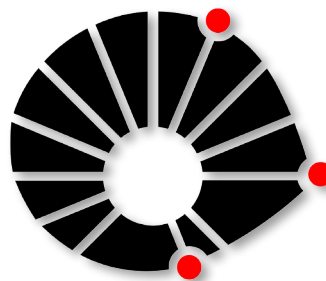
Error bars



# Experiment

## Iterative Coercion of Durative Events In Brazilian Portuguese

Sampaio, Fonseca, França, Wassenhove (in prep)



**1. Pontual**

**2. Segundos**

**3. Minutos**

**4. Horas**

**cantar**

**285 verbs - 10 volunteers**

# Experiment: Self-paced Reading of durative events

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$\Delta t$			
Cond 1	Cond 2	Cond 3	Cond 4
Seconds	Minutes	Hours	Days

16 durative sentences + 72 fillers  
32 undergrads – 1st and 2nd year

Durante alguns [ $\Delta t$ ] Ana desenhou o boneco no caderno de rascunho  
During some [ $\Delta t$ ] Ana drew the doll in the notebook for drafts



Ana desenhou o boneco?

Did Ana draw the doll?

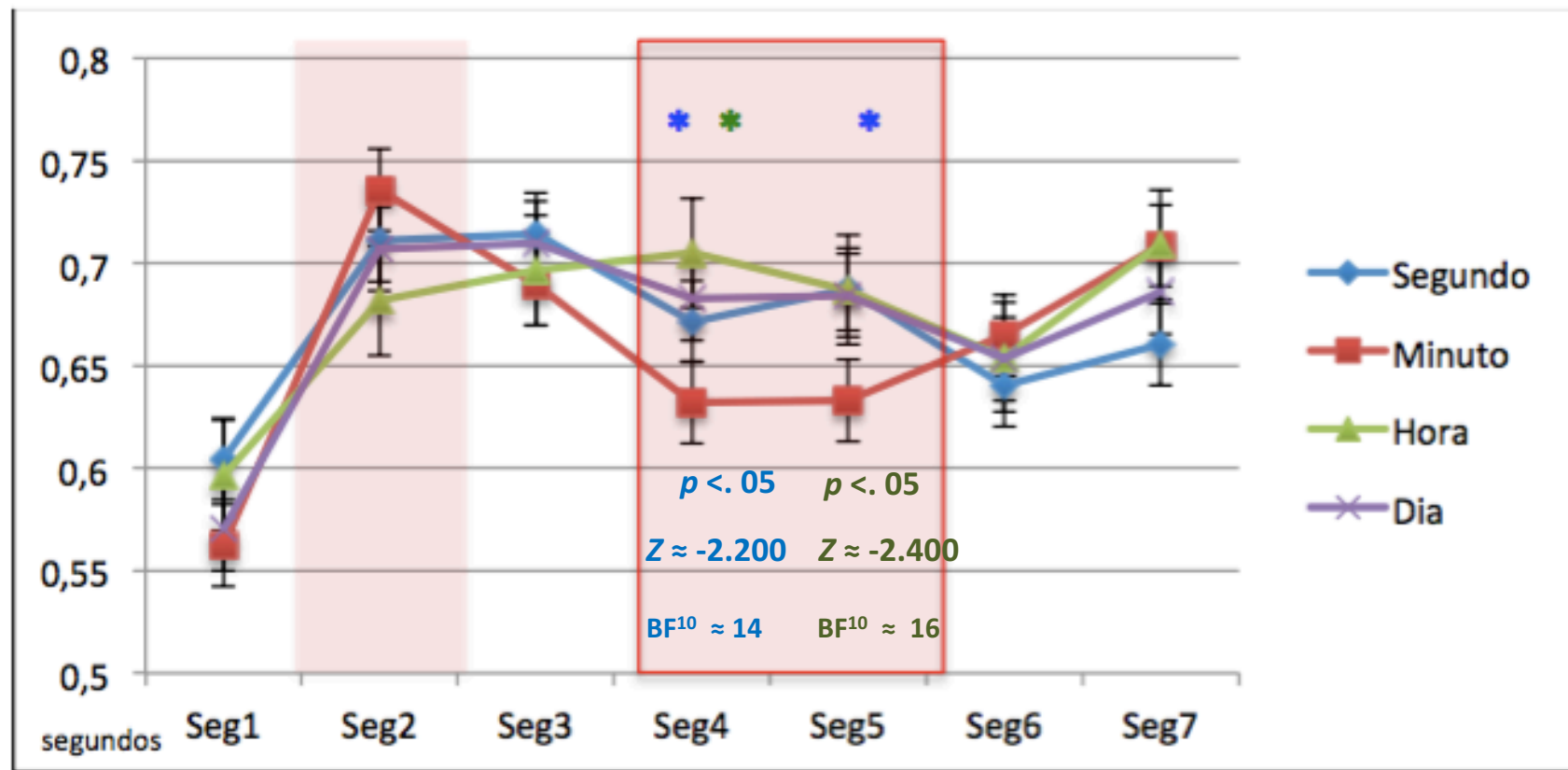
H

J



# Experiment: Self-paced Reading of durative events

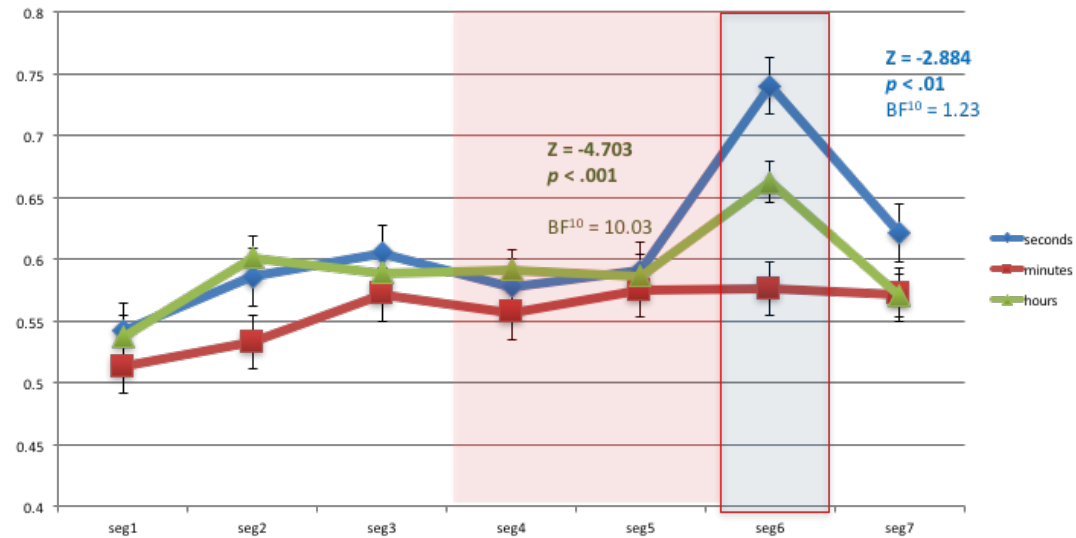
Durante alguns  $[\Delta t]$  Ana desenhou o boneco no caderno de rascunho  
During some  $[\Delta t]$  Ana drew the doll in the notebook for drafts



Wilcoxon Signed Rank Test + Bayesian ANoVA

Error bars

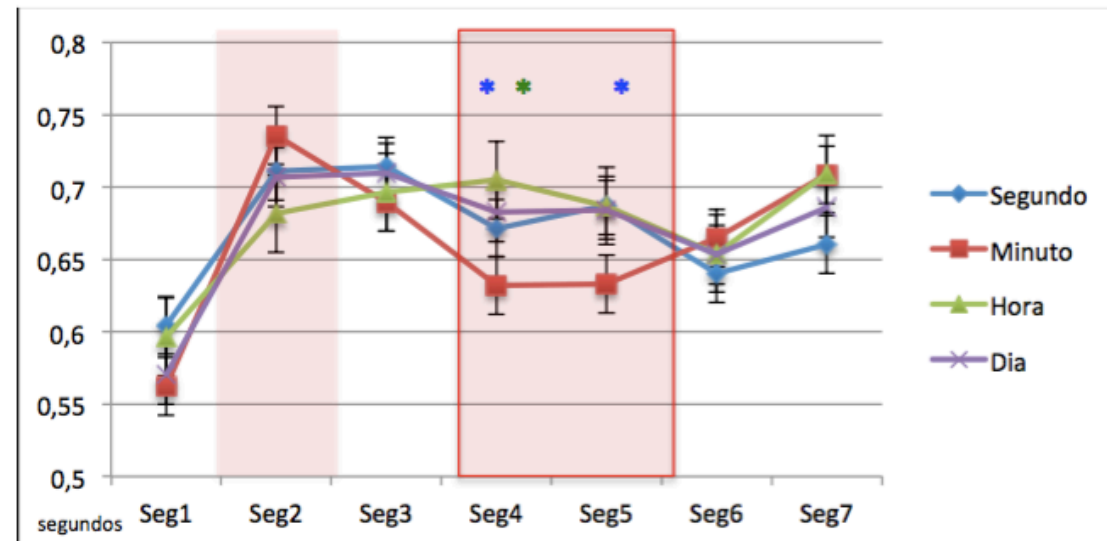
Wilcoxon



## Probe word

Participants just need to remember a word.

Minimal or Incomplete Commitment



## Question

Participants need to fully understand the sentence to answer a question at the end.

Full Commitment

**MISC**

**Segundos**

**Minutos**

**Horas**

**Dias**

**correr**

# PRE TEST EXP #04

SNARC		duration				
		missed	second	minute	hour	day+
participant	1.00	1,33206	1,83334	1,48971	1,52510	1,37202
	2.00	2,05898	2,44809	2,90320	3,49004	3,22492
	3.00		1,59403	1,75320	2,05541	2,01904
	4.00	2,32475	2,21862	3,07475	4,07254	3,35158
	5.00		1,85076	2,03439	2,25899	2,38079
	6.00	2,35069	2,20708	3,21020	3,18293	2,42437
	7.00		1,67888	2,00097	2,38660	2,08780
	8.00	5,62265	1,72954	2,11331	2,41023	2,73800
	9.00	2,23182	2,10209	2,28338	3,31136	2,51124
	10.00	3,39377	2,50215	2,85282	2,80072	2,90372
	11.00		2,01725	2,68198	2,93497	3,07907
	12.00	3,06828	2,62140	3,04540	3,58631	2,88483
	13.00	4,10402	2,52552	3,27386	2,94497	2,72477
	14.00		1,90047	2,37121	2,75410	2,16104
	15.00	4,92105	2,39731	2,81065	3,01306	3,13052
	16.00	2,09759	1,36052	1,40793	2,25996	2,47518
	17.00	2,19598	1,90647	2,35330	2,64808	2,35396
	18.00	2,79973	2,79322	3,49019	3,54444	3,44317
	19.00	2,78085	2,64617	2,71980	2,86822	2,96762
	20.00	2,92306	1,61236	2,13620	2,02941	2,25617

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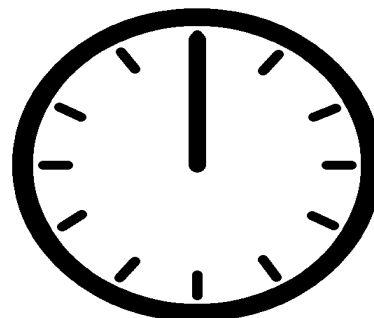
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Thank you for your time!

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