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# Subject agenthood and non-culmination readings: Evidence from Spanish psychological verbs

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# Accomplishment predicates

- 2 types of readings in the Perfective:
  - **Non-culmination**: the result state does not take place. This is possible with **agent subjects** (1a).
  - **Culmination**: the change of state takes place. This is possible with **inanimate causers** (1b).

(1) *French* (Martin 2015, ex. 8, 9)

a. **Ils** l=ont réparé mais ça ne fonctionne toujours pas.

they it=have repaired but this NEG works still NEG

**'They** repaired it but it still doesn't work.'

b. **Le choc** l=a réparé #mais ça marche toujours pas.

the shock it=has repaired but this works still NEG

**'The shock** repaired it but it still doesn't work.'

In (1b): 1<sup>st</sup> clause and 2<sup>nd</sup> clause contradiction.

# Accomplishment verbs & defeasible causatives

- **Agent Control Hypothesis** (ACH, Demirdache & Martin 2015):

Source of non-culmination readings is the agenthood of the external argument (Mandarin: Demirdache et al. 2017; Hindi: Singh 1998; Korean: Beavers & Lee 2020; German and French: Martin & Schäfer 2017, a.o.)

- **Defeasible causatives'** features (Martin & Schäfer 2017)

- Accomplishment verbs

- Bi-eventive: causation event + change of state (CoS)

- Agentive subject = non-culmination reading (also known as *failed-attempt* reading, Tatevosov & Ivanov 2009)

The intentional action performed by subject does not produce the CoS in the object.

- Inanimate causer = culmination reading

- Also with agentive experiencer object verbs, or psych(ological) verbs

# Experiencer object verbs

- Also known as *verbs of emotion*
- Two arguments:
  - **Experiencer**: animate entity capable of feeling an emotion
  - **Stimulus**: source of a particular emotion

(2) [Manuel]<sub>STM</sub> asust-ó                      a [Laura]<sub>EXP</sub>.                      [EO]

Manuel        frighten-PST.3.SG    to Laura

‘Manuel frightened Laura.’

- 3 different interpretations (Arad 1998, Landau 2010):
  - Stative
  - **Eventive**
  - **Agentive**
- EO verbs are accomplishments (or achievements): involve CoS in the object experiencer (Landau 2010, Alexiadou & Iordachioaia 2014, a.o.).

# Spanish Experiencer object verbs

- However, EO verbs are different from accomplishments.
- Spanish EO verbs are complex eventualities (based on Marín & McNally 2005, 2011 and ES verbs):
  - Denote event where the experiencer starts a particular state
  - Inception of experiential state denoted by a left boundary (Marín & McNally 2005, 2011; Fábregas 2015; Fábregas & Marín 2015, based on Piñón 1997)
  - No reference to interval prior the inception of the state
  - Further specified for EO: causative inchoative states & causative punctual verbs
- Other languages: Korean experiencer subject (ES) verbs (Choi & Demirdache 2014), Polish EO and ES verbs (Rozwadowska 2012)

# Research Questions

Considering the properties of Spanish EO verbs:

1. Can Spanish EO verbs allocate an agentive subject?
2. Do Spanish EO verbs also allow for non-culmination (**zero-state**) readings?
3. Potential interaction of event structure & type of stimulus of EO verbs (cf. Pesetsky 1995)
4. A zero-state reading should be possible:
  - Causative inchoative state verbs only and in presence of an agent subject
  - Causative punctual verbs should not allow for a zero-state reading either with an agent subject or an inanimate causer

# Outline

1. Agentivity
2. Lexical aspect & event structure
3. Punctuality & zero-state readings
4. Experimental stage
5. Results & Discussion
6. Correlating agentivity
7. Result & Discussion

# 1. Agentivity

- **ACH:** external argument of the predicate associated with agenthood properties to allow non-culminating construals (Dermidache & Martin 2015:201)
- EO verbs: agentivity depends on the lexical item and context (Verhoeven 2017).
- Other languages show this effect: German (Verhoeven 2017) & Korean (Fritz-Huechante et al. under revision)
- **Test:** adverb *intencionalmente* ‘intentionally’
- Spanish native speaker’ intuitions show different acceptabilities depending on the lexical items.

(3) Carolina molest-ó            a la profesora intencionalmente.

Carolina bother-PST.3.SG to the teacher intentionally

‘Carolina bothered the teacher intentionally.’



# 1. Agentivity

(4) ?Carolina deprim-ió a la profesora intencionalmente.

Carolina depress-PST.3.SG to the teacher intentionally

‘Carolina depressed the teacher intentionally.’

- Why these different acceptabilities? (see also Section 6 here)
- Possibility to imagine a context where the verb can be used agentively (Verhoeven 2017)
- Verbs of acts of communication or social interaction (Martin & Schäfer 2015)

## 2. Lexical aspect & event structure

- Event structure of causative EO predicates is a problematic issue.
- EO verbs in their agentive and eventive readings:
  - causative dynamic events (Grimshaw 1990)
  - accomplishments or achievements (Van Voorst 1992)
  - causative states (Pylkkänen 2000)
- **Inchoative states** (Marín & McNally 2005, 2011):
  - Spanish reflexive psych verbs: refer to the onset of the state they are associated with.
  - Onset represented by a left boundary (Piñón 1997)
  - No reference to the change that produces the state

## 2. Lexical aspect & event structure

- Spanish causative EO verbs, e.g. *divertir* ‘entertain’ (cf. 5) (building on Fábregas & Marín 2015):
- denote an event where the **experiencer** starts a state
- state specified by the verb: e.g. the state of being entertained
- starting of the state caused by an **implied** and **unspecified** causing eventuality
- participant of causing eventuality: **agent** or **causer**
- **Crucially**, the state the experiencer is in (e.g. the state of being entertained) has a **starting** point (i.e. a left boundary).

(5) **Manuel/la película** divirt-ió                      /sorprend-ió                      a **Laura**.

Manuel/the movie    entertain-PST.3.SG /surprise-PST.3.SG    to Laura

‘Manuel/the movie entertained/surprised Laura.’

- Difference between causative inchoative state verbs and causative punctual verbs is that the former includes (there is a sum of) the state + the left boundary; whereas the latter does not.

## 2. Lexical aspect & event structure

- This is different from regular accomplishment verbs, e.g. *secar* ‘dry’ (cf. 6):
- denote an event with an **affected argument** (e.g. *la taza* ‘the cup’)
- affected argument undergoes a process
- process leads to a **final culminating endpoint**
- the causing eventuality is specified (e.g. the process of drying)
- participant of causing eventuality: **agent** or **causer**

(6) *Manuel/el viento* sec-ó        *la taza*.

Manuel/the wind dry-PST.3.SG   the cup

‘Manuel/the wind dried the cup.’

## 2. Lexical aspect & event structure

### Difference between accomplishments & EO verbs

- **Telicity test:** *In x time* measures interval which the eventuality took place (Dowty 1979)
- Felicitous with telic predicates

- **Accomplishment verbs:**

(7) Manuel sec-ó                la taza en 5 minutos.

Manuel dry-PST.3.SG the cup in 5 minutes

‘Manuel dried the cup in (throughout the period of) 5 minutes.’

- **EO inchoative state and punctual verbs:**

(8) Manuel divirt-ió                / sorprend-ió                a Laura ?en 5 minutos.

Manuel entertain-PST.3.SG / surprise-PST.3.SG to Laura in 5 minutes

‘Manuel entertained/surprised Laura in (after) 5 minutes.’

- Marginally acceptable with *in x time*. Reinterpretation of adverb: *after*

## 2. Lexical aspect & event structure

- **Test:** *For x time* measures event duration (Dowty 1979)
- Felicitous with atelic predicates
- **EO inchoative state verbs:** duration reading (cf. Machicao y Priemer & Fritz-Huechante 2018; Machicao y Priemer & Fritz-Huechante submitted)

(9) Manuel divirt-ió                      a Laura durante 5 minutos.

Manuel entertain-PST.3.SG to Laura for            5 minutes

‘Manuel entertained Laura (constantly throughout the period of) for 5 minutes.’

- **EO punctual verbs:** iterative reading (cf. Machicao y Priemer & Fritz-Huechante 2018; Machicao y Priemer & Fritz-Huechante submitted)

(10) Manuel sorprend-ió            a Laura durante 5 minutos.

Manuel surprise-PST.3.SG to Laura for            5 minutes

‘Manuel surprised (in repetitive occasions) Laura for 5 minutes.’

## 2. Lexical aspect & event structure

### Similarities between accomplishment & EO verbs: Bi-eventive structures

- **Test:** *almost* adverb ambiguity between 2 readings (Landau 2010:130)
  - **Reading A:** where the causing event almost takes place
  - **Reading B:** where the event of getting into the state almost takes place

#### –Accomplishment verbs:

(11) Manuel casi sec-ó la taza.

Manuel almost dry-PST.3.SG the cup

‘Manuel almost dried the cup.’

Reading A: Manuel almost dried the cup, but he didn’t do it.

Reading B: Manuel dried the cup, but not completely.

## 2. Lexical aspect & event structure

### – EO punctual verbs:

(12) Manuel casi sorprend-ió a Laura.

Manuel almost surprise-PST.3.SG to Laura

‘Manuel almost surprised Laura.’

Reading A: Manuel almost surprised Laura, but he didn’t do it.

Reading B: Manuel did a surprising action, but Laura was not really surprised.

### – EO inchoative state verbs:

(13) Manuel casi divirt-ió a Laura.

Manuel almost entertain-PST.3.SG to Laura

‘Manuel almost entertained Laura.’

Reading B: Manuel did an entertaining action, but Laura was not really entertained.

?Reading A: Manuel almost entertained Laura, but he didn’t do it.



# Interim summary

**Table 1.** PROPERTIES TESTED FOR CAUSATIVE EO VERBS & ACCOMPLISHMENT VERBS

TESTS		EO INCHOATIVE STATES	EO PUNCTUALS	ACCOMPLISHMENTS
<b>bi-eventivity</b>				
	<i>almost</i> -ambiguity	+/-	+	+
<b>agentivity</b>				
	<i>intentionally</i> -adverb	+/-	+	+
<b>telicity</b>				
	<i>in</i> -adverb	after	after	+
	<i>for</i> -adverb	+	iteration	-

### 3. Punctuality & zero-state readings

- Research argues that **achievement** verbs **disallow** non-culmination readings (cf. Bar-el 2005 on Salish languages; Tatevosov & Ivanov 2009 on Russian; Beavers 2013 on English; Altshuler 2014 on Hindi and Russian)
- These studies have been performed on intransitive or transitive non-agentive/non-causative verbs such as *arrive* and *reach*.
- EO punctual verbs should also disallow **zero-state** readings.
- **Causative achievement verbs** (e.g. *reventar* ‘burst’): seen as a compound eventuality (a non-lexicalized causing activity and a result state) which is asserted as **a whole** (cf. Rothstein 2004).
- Also **EO punctual verbs** (e.g. *sorprender* ‘surprise’) are seen as an **indivisible unit**.

### 3. Punctuality & zero-state readings

- **Test:** *progressive* tense
- Achievement verbs generate a preliminary circumstance reading in the progressive due to their non-duration (cf. Piñón 1997; Kearns 2003; Marín & McNally 2011).
- **Causative achievement verbs:**
- Sentence (16a): Manuel has not yet caused the balloon to burst.
- The balloon is in the stage prior to being burst (i.e. it is still whole).
- Sentence (16a) can be paraphrased as *about to* (Rothstein 2004) in (16b).

(16) a. Manuel está revent-ando el globo.

Manuel is burst-GER the balloon

‘Manuel is bursting the balloon.’

b. Manuel está por revent-ar el globo.

Manuel is for burst-INF the balloon

‘Manuel is about to burst the balloon.’

### 3. Punctuality & zero-state readings

- **Causative EO punctual verbs:** preliminary circumstance reading
- Sentence (17a): Manuel has not yet caused Laura to enter the state of being surprised.
- Laura is in the stage prior to enter the state.
- Sentence (17a) can be paraphrased as (17b)

(17) a. Manuel está sorprend-iendo a Laura.

Manuel is surprise-GER to Laura

‘Manuel is surprising Laura.’

b. Manuel está por sorprend-er a Laura.

Manuel is for surprise-INF to Laura

‘Manuel is about to surprise Laura.’

## 4. Experimental stage: Methodology

- Items from an inventory of alternating psych verbs.
- Inventory created by a survey for Spanish featuring the basic emotion domains (i.e. happiness, sadness, anger, fear and disgust) (see Rott & Verhoeven 2019; Rott et al. 2018)
- **Semantic diagnostics on event structures**
- Tests on inchoativity/punctuality, telicity, a.o. (Dowty, 1979; for Spanish, Fábregas & Marín, 2015; Marín & McNally, 2011; for Korean, Beavers & Lee 2020; Choi 2015; Choi & Demirdache 2014).
- All tests were conducted with several native Spanish speakers.

# 4. Experimental stage: Methodology

**Table 2:** SUMMARY OF SPANISH VERB INVENTORY BY VERB TYPE

INCHOATIVE ST.	ENG. TRANSLATION	PUNCTUALS	ENG. TRANSLATION
<i>divertir</i>	entertain, amuse	<i>sorprender</i>	surprise
<i>contentar</i>	please, make happy	<i>impresionar</i>	impress
<i>amargar</i>	depress	<i>desalentar</i>	demotivate
<i>deprimir</i>	depress	<i>conmocionar</i>	affect deeply
<i>molestar</i>	bother	<i>alterar</i>	agitate, upset
<i>disgustar</i>	annoy, upset	<i>enloquecer</i>	drive crazy
<i>preocupar</i>	worry	<i>asustar</i>	frighten
<i>inquietar</i>	make uneasy, worry	<i>espantar</i>	scare away
<i>confundir</i>	confuse	<i>ofender</i>	offend
<i>incomodar</i>	disturb	<i>escandalizar</i>	scandalize

# 4. Experimental stage: Methodology

- Based on the ACH (Demirdache & Martin, 2015):
- Availability of zero-state readings with EO causative psych verb sentences
- Expectations:

**Table 3:** EXPECTED EFFECT OF ZERO-STATE READINGS ACROSS FACTORS OF INTEREST

		ANIMACY (SUBJECT)	
		animate	inanimate
VERBAL ASPECT	Inchoative state	Zero-state possible	Zero-state not possible
	punctual	Zero-state not possible	Zero-state not possible

- 40 sentences:
- **Dependent variable:** Acceptability of a ZERO-STATE in the experiencer
- **Fixed factors:**
  - ANIMACY OF SUBJECT (2 levels): animate vs. inanimate
  - VERBAL ASPECT (2 levels): Inchoative states vs. Punctuals

## 4. Experimental stage: Methodology

- 10 verbs: VERBAL ASPECT factor
- Each verb appeared twice (STIMULUS factor)
- No fillers included
- Spanish native speakers: n. 32 (8 f., 24 m.; age  $M = 34,57$ )

- *Sample of sentences:*

(18) Pablo/la película sorprendió a Clara, #pero ella no se dio cuenta

Pablo/the movie surprise-PRT.3S to Clara but she not REFL gave account

y siguió indiferente.

and remained indifferent

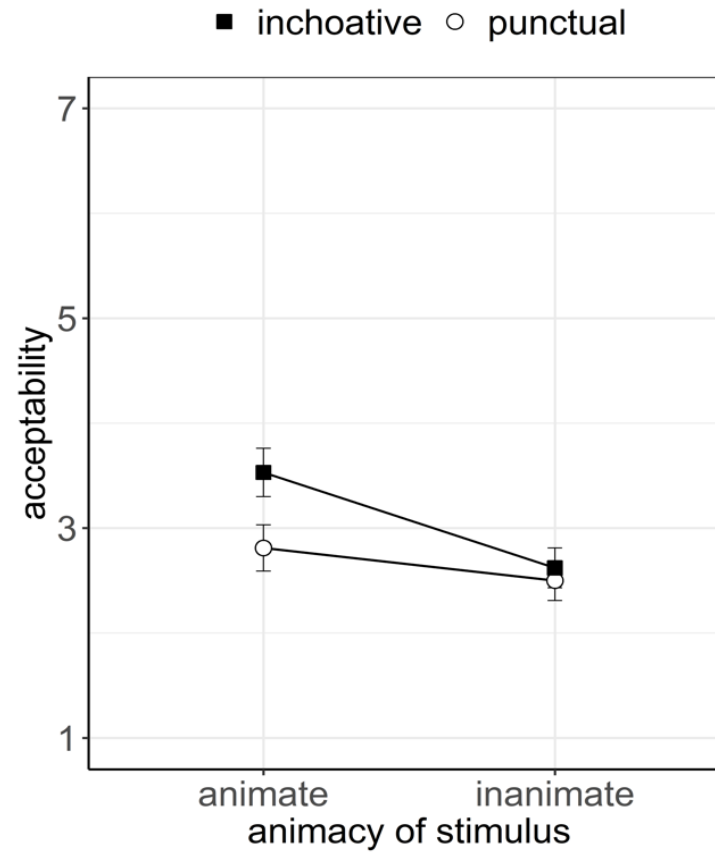
‘Pablo/the movie surprised Clara, but she didn’t realize it and remained indifferent.’

- Likert Scale sentence evaluation: 1 (very bad) to 7 (very good).
- Survey implemented on OnExp (University Göttingen).



## 5. Results & Discussion

**Figure 1:** ACCEPTABILITY OF ZERO-STATE READINGS IN SPANISH (MEANS AND 95% C.I.)



## 5. Results & Discussion

**Table 4:** MODEL PARAMETERS FOR THE SPANISH ZERO-STATE TEST

effect	estimate	st. error	<i>t</i> -test		model comparison (LogLikelihood Test)	
			<i>t</i> -value	<i>p</i>	$\chi^2$	<i>p</i>
INTERCEPT	3.53	.31	11.48	< .001		
ASPECT (punctual)	-.71	.27	-2.60	< .05		
ANIMACY (inanimate)	-.91	.25	-3.57	< .01		
ASPECT^ANIMACY	.59	.26	2.25	< .05	4.85	< .05

- Statistic inferences based on generalized linear mixed-effects models. Random factors: SUBJECTS and ITEMS.
- Significance of fixed effects estimated with a log-likelihood test on model comparison.

## 5. Results & Discussion

- Results in line with ACH Hypothesis
- Agenthood of subject makes zero-state readings possible.
- Inanimate causers cannot defeat the starting of the state.
- **ASPECT**: Punctuality overwrites agentivity, in line with Piñón (1997), Beavers (2013) and Demirdache & Martin (2015).
- **STIMULUS^ASPECT**: The type of verb plays a role only with potential agents and not so with causers.

## 6. Correlating agentivity

### – Agentivity Test:

- Subject control verb of decision: target verbs were embedded in *x **decided to** [verb] y* frame (see Grafmiller 2013; Verhoeven 2017 for German EO verbs).
- Matrix verb implies the subject has control over the event in the subordinate clause.
- EO verb salient for an agentive reading = compatibility with matrix verb (19a)

(19) a. El cajero decidió molestar a Karen.

the cashier decide.PST.3.SG bother to Karen

‘The cashier decided to bother Karen.’

b. ?La anciana decidió deprimir a Alejandra.

the elderly.woman decide.PST.3.SG depress to Alejandra

‘The elderly woman decided to depress Alejandra.’

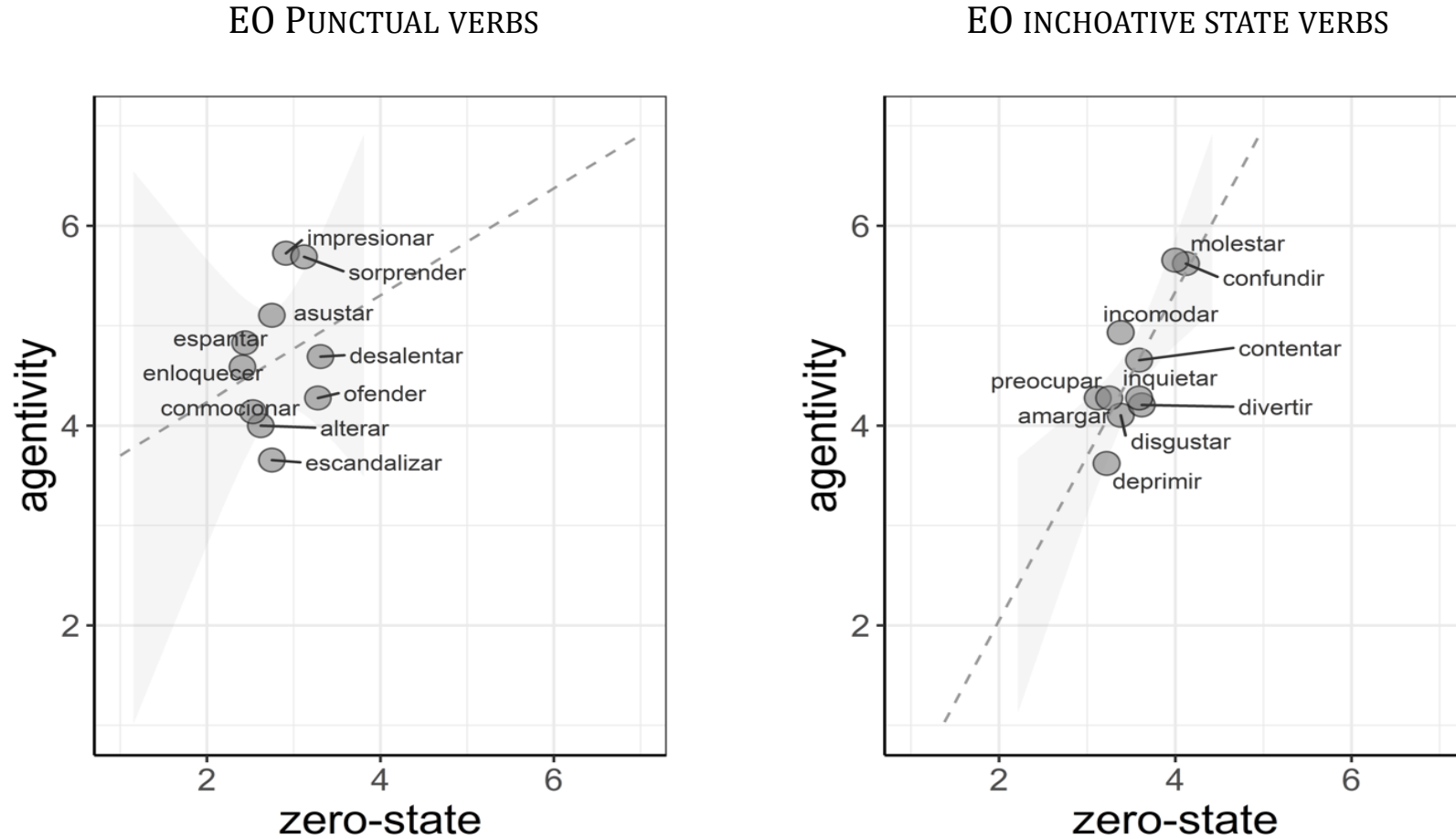
## 6. Correlating agentivity

- **Expectations:**

- Mean acceptabilities in *agentivity test* should predict results of *zero-state test*.
- Gradient agentivity with EO inchoative state verbs significantly correlates with mean results in zero-state test.
- EO punctuals verbs should not show this correlation since punctuality overwrites agentivity.
- All verbs used for the *zero-state test* in Spanish were used in the *agentivity test*.
- Spanish native speakers: n. 29 (13 f., 16 m.; age  $M = 34,34$ )
- Likert Scale sentence evaluation: 1 (very bad) to 7 (very good)
- Survey implemented on OnExp (University Göttingen)

## 6. Results & Discussion

**Figure 2:** AGENTIVITY & ZERO-STATE READINGS CORRELATION WITH SPANISH PUNCTUAL & INCHOATIVE STATE VERBS.



## 6. Results & Discussion

**Table 5:** MODEL PARAMETERS FOR THE IMPACT ON THE JUDGEMENTS OF ZERO-STATE

effect	estimate	st. error	t-test	model comparison (LogLikelihood Test)		
			t-value	p	$\chi^2$	p
<i>EO inchoative state verbs</i>						
INTERCEPT	2.27	.78	2.89	< .5		
AGENTIVITY	.36	.16	2.32	< .05	5.34	< .05
<i>EO punctual verbs</i>						
INTERCEPT	3.04	.33	9.13	< .001		

- Statistic inferences based on generalized linear mixed-effects models. Random factors: SUBJECTS
- Significance of fixed effects estimated with a log-likelihood test on model comparison

## 6. Results & Discussion

- In line with our predictions.
- **EO inchoative state verbs:** Means of agentivity test significantly correlate with the verbs availability to yield zero-state readings.
- **EO punctual verbs:** correlation not found.
- Punctuality overwrites agentivity.



# References

- Alexiadou, A. & Iordachioaia, G. (2014). The psych causative alternation. *Lingua* 148. 53-79.
- Arad, M. (1998). Psych-notes. *UCL Working Papers in Linguistics* 10. Retrieved from <http://www.phon.ucl.ac.uk/home/PUB/WPL/98papers/abstracts/arad.htm>
- Altshuler, D. (2014). A typology of partitive aspectual operators. *Natural Language and Linguistic Theory* 32(3). 735 – 775.
- Bar-el, L. (2005). Aspectual Distinctions in Skwxwu7mesh. Unpublished doctoral dissertation, University of British Columbia.
- Beavers, J. (2013). Aspectual classes and scales of change. *Linguistics* 54. 681–706.
- Beavers, John & Juwon Lee. 2020. Intentionality, scalar change, and non-culmination in Korean caused change-of-state predicates. *Linguistics* 58(aop). DOI: <https://doi.org/10.1515/ling-2020-0007>
- Choi, J-B. (2015). On the universality of aspectual classes: Inchoative states in Korean. In E. Labeau & Q. Zhang (Eds.), *Taming the Tame Systems*, pp. 123-135. Leiden: Brill Rodopi.
- Choi, J-B. & Demirdache, H. (2014). Reassessing the typology of states evidence from Korean (degree) inchoative states. *Workshop on the Ontology and the Typology of States*. France.
- Demirdache, H. & Martin, F. (2015). Agent control over non-culminating events. In E. Barraojón, J. L. Cifuentes, and S. Rodríguez (Eds.), *Verb Classes and Aspect*, pp. 185-217. Amsterdam: John Benjamins.

# References

- Demirdache, H., Liu, J., Martin, F. & Sun, H. (2017). Licensing non-culminating accomplishments in Mandarin. Experimental and theoretical evidence. TELIC 2017 Workshop on Non-Culminating Irresultative and Atelic Readings of Telic Predicates. Combining Theoretical and Experimental Perspectives. Universität Stuttgart at Stuttgart.
- Dowty, D. (1979). *Word Meaning and Montague Grammar*. Dordrecht: Reidel.
- Fábregas, A. (2015). No es experimentante todo lo que experimenta o cómo determinar que un verbo es psicológico. In Rafael Marín (ed.), *Los predicados psicológicos*, 51-79. Madrid: Visor Libros.
- Fábregas, A. & Marín, R. (2015). Deriving individual-level and stage-level psych verbs in Spanish. *The Linguistic Review* 32(2), 167–215.
- Fritz-Huechante, Paola, Verhoeven, Elisabeth & Rott, Julian A. (under revision). Agentivity and non-culminating causation in the psych domain: Cross-linguistic evidence from Spanish and Korean.
- Grafmiller, J. (2013). The Semantics of syntactic choice. An analysis of English emotion verbs. Unpublished doctoral dissertation, Stanford University.
- Grimshaw, J. (1990). *Argument Structure*. Cambridge. Cambridge, MA: MIT Press.
- Kearns, K. (2003). Durative achievements and individual-level predicates on events. *Linguistics and Philosophy* 26. 595-635.

# References

- Landau, I. (2010). *The Locative Syntax of Experiencers*. Cambridge, London: MIT Press.
- Machicao y Priemer, A. & Fritz-Huechante, P. (2018). Korean and Spanish psych-verbs: Interaction of case, theta-roles, linearization, and event structure in HPSG. In S. Müller & F. Richter (eds.), *The 25th International Conference on Head-Driven Phrase Structure Grammar (HPSG 2018)*, 155-175. Online Proceedings, University of Tokyo. CSLI Publications. URL: <http://web.stanford.edu/group/cslipublications/cslipublications/HPSG/2018/hpsg2018-machicaoypriemer-fritz-huechante.pdf>
- Machicao y Priemer, A. & Fritz-Huechante, P. (submitted). Boundaries at play: se in the Spanish psych-domain.
- Marín, R. & McNally, L. (2005). The aktionsart of Spanish reflexive psychological verbs and their English counterparts. In Emar Maier, Corien Bary & Janneke Huitink (eds.), *Proceedings of the 9<sup>th</sup> annual meeting of the gesellschaft für semantik (Sinn und Bedeutung 9)*, 212-225. Nijmegen: Nijmegen centre of semantics.
- Marín, R. & McNally, L. (2011). Inchoativity, change of state, and telicity: Evidence from Spanish reflexive psychological verbs. *Natural Language and Linguistic Theory* 29, 467-502.
- Martin, F. (2015). Explaining the link between agentivity and non-culminating causation. *Proceedings of SALT* 25. 246-266.
- Martin, F. & Schäfer, F. (2017). Sublexical modality in defeasible causative verbs. In A. Arregui, M. L. Rivero, and A. Salanova (Eds.), *Modality Across Syntactic Categories*, pp. 87-108. Oxford: Oxford University Press.

# References

- Pesetsky, D. (1995). *Zero Syntax: Experiencers and cascades*. Cambridge: MIT Press.
- Piñón, C. (1997). Achievements in an event semantics. In A. Lawson, & Cho, E. (Eds.), *Proceedings of Semantics and Linguistic Theory VII*, pp. 273-296. Ithaca, NY: CLC Publications.
- Pylkkänen, L. (2000). On stativity and causation. In C. Tenny and J. Pustejovsky (Eds.), *Events as grammatical objects: The converging perspectives of lexical semantics, logical semantics and syntax*, pp. 417-442. Stanford: CSLI Publications.
- Rothstein, S. (2004). *Structuring events. A study in the semantics of lexical aspect*. Oxford, UK: Blackwell Publishing Ltd.
- Rozwadowska, B. 2012. On the onset of psych eventualities. In Eugeniusz Cyran, Henryk Kardela & Bogdan Szymanek (eds.), *Sound, structure and sense, Studies in memory of Edmund Gussmann*, 533-554. Lublin: Wydawnictwo KUL.
- Singh, M. (1998). On the semantics of the perfective aspect. *Natural Language Semantics*, 6(2), 171-199.
- Rott, J. & Verhoeven, E. (2019). Tiers for fears and other emotions: A crosslinguistic approach to psych lexis and syntax. In A. Gattner, R. Hörnig, M. Störzer & Sam Featherston (eds.), *Proceedings of Linguistic Evidence 2018*, Tübingen: University of Tübingen (<https://publikationen.uni-tuebingen.de/xmlui/handle/10900/87132>).
- Rott, J., Verhoeven, E. & Fritz-Huechante, P (2018). Morphological directionality and psych effects: Towards a typology of the psych alternation. Humboldt-Universität zu Berlin, Manuscript.

# References

- Tatevosov, S. & Ivanov, M. (2009). Event structure of non-culminating accomplishments. In Lotte Hogeweg, Helen de Hoop Hogeweg & Andrej L. Malchukov (eds.), *Crosslinguistic semantics of tense, aspect, and modality*, 83-130. Amsterdam: John Benjamins.
- Van Voorst, J. (1992). The aspectual semantics of psychological verbs. *Linguistics and Philosophy*, 15, 338-345.
- Verhoeven, Elisabeth. 2017. Features or scales in verb meaning? Verb classes as predictors of syntactic behaviour. In Ludovic de Cuypere, Clara Vanderschueren & Gert De Sutter (eds.), *Current trends in analyzing syntactic variation*. *Belgian Journal of Linguistics*, 31. 164-193.