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(Citation)

Proceedings of the International Argument Alternation Workshop:88-98

(Issue Date)

2026-01-20

(Resource Type)

conference paper

(Version)

Version of Record

(JaLCD0I)

<https://doi.org/10.24546/0100499711>

(URL)

<https://hdl.handle.net/20.500.14094/0100499711>



Internally caused change-of-state verbs in transitivity alternations*

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1. Introduction

This short paper presents a preliminary study of two under-researched transitive uses of so-called internally caused change-of-state (ICCOS) verbs (Levin 1993), such as *blossom*, in Basque and Spanish. These verbs have been typically characterized as denoting changes of state that originate internally, and are therefore expected to resist causativization and combination with agentive subjects. However, both Basque and Spanish display constructions in which verbs that canonically belong to the ICCOS class appear in syntactically transitive frames and with agentive external arguments. The existence of such uses calls into question the traditional assumption that ICCOS verbs are lexically specified as “internally caused,” and suggests that their argument and event structure may instead be derived syntactically.

To account for the data, it is proposed that ICCOS verbs involve a possessive layer in their syntactic derivation. This layer introduces a relation between an argument and the entity denoted by the root of the verb, and provides the structural basis for the alternations observed in the two languages.

The paper is structured as follows. Section 2 introduces the notion of ICCOS verb and outlines the theoretical framework. Section 3 presents the main empirical evidence for a possession-based account. Section 4 applies this analysis to explain the relevant transitivity alternations. Section 5 concludes.

2. Background

This section briefly introduces the theoretical assumptions underlying the analysis and reviews previous work on ICCOS verbs, laying the foundation for the proposal developed in the following sections.

2.1. Theoretical framework

The analysis proposed in this paper is framed in the theory of Distributed Morphology (Halle & Marantz 1993), which assumes that language is a generative system whose combinatory capacity derives from the syntactic component alone. Words are thus built directly in the syntax. Within this framework, the lexical core of a word is incarnated by a root, $\sqrt{}$, an acategorical element that acquires a syntactic category through combination with dedicated functional heads.

In the verbal domain, the head responsible for categorization is *v*, which is also associated with event semantics. External arguments are assumed to be introduced by a

* This investigation was possible thanks to a predoctoral research grant from the Basque Government and the PID2022-136610NB-I00 (MICIU/AEI/10.13039/501100011033 and ERDF/EU) project (*Argument structure across theoretical, experimental and applied domains: Unergativity at large and related interface phenomena*; PI: Isabel Oltra-Massuet) granted by the Spanish Ministry of Science and Innovation. Special thanks go to Isabel Oltra-Massuet and Jaume Mateu.

higher functional head, Voice (Kratzer 1996; but see Alexiadou 2014 and the discussion in the next section), merged on top of the *v*P.

2.2. On internally caused change-of-state verbs

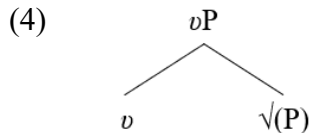
When discussing ICCOS verbs, Levin and Rappaport-Hovav (1995) argued that these cannot be used transitively, based on the unacceptability of sentences like (1).

- (1) **The gardener blossomed the cherry tree.*

However, McKoon and Macfarland (2000) and Wright (2001, 2002) provide further evidence that contests this claim. Building on these authors' work, Alexiadou (2014) proposes that ICCOS verbs can be subdivided into two classes: verbs from the *blossom* class are compatible with a pure cause as subject (2a) but cannot be passivized (2b); verbs from the *ferment* class, on the other hand, behave like any other regular change-of-state predicate, allowing both agentive subjects (3a) and passivization (3b).

- (2) a. *Early summer heat blossomed fruit trees across the valley.*
(Wright 2002: 340, ex. (6a))
b. **The fruit trees were blossomed by the early summer heat of June.*
- (3) a. *I don't think I would ferment tomatoes nearly as long as I fermented cabbage for sour kraut.*
(Alexiadou 2014: 887, ex. (14a))
b. *Low-fat ice cream mix was fermented with probiotic-supplemented and traditional starter culture systems.*
(Alexiadou 2014: 897, ex. (35))

Based on these facts, Alexiadou proposes the structure in (4) for *blossom*-type verbs.



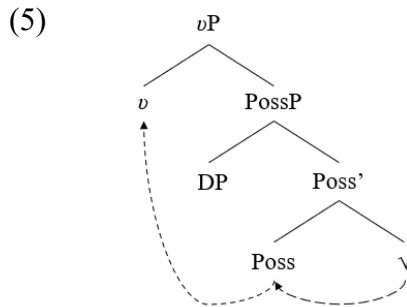
To cut a long story short, Alexiadou argues that these verbs do not project Voice, the head that introduces agents and is associated with non-active morphology in languages like Greek. The lack of Voice in these verbs predicts the unavailability of agentive subjects and the impossibility to passivize. In Alexiadou's view, these structural restrictions emanate from the encyclopedic content of the relevant roots. A root like $\sqrt{\text{BLOSSOM}}$, for example, refers to an internally caused change-of-state event, a fact that makes it uninterpretable in the context of Voice. Pure causers, however, are licensed and introduced by the verbalizing eventive head *v*, which explains their availability with verbs of the *blossom* class.

Although this paper provides additional data in support of the idea that verbs belonging to the *blossom* class can occur in transitive frames, it challenges the general conclusion that they are incompatible with agentive subjects. The conclusion that follows is that roots are not specified as "internally caused", as verbs that receive an ICCOS interpretation in the inchoative frame can be compatible with agentive subjects when used

transitively. An alternative syntactic account for these verbs will be developed in the next sections.

3. Possession in internally caused change-of-state verbs

The core proposal of this paper is that *blossom*-type verbs contain a possessive layer in their syntactic structure. The root is first merged as the complement of a Poss head, and subsequently incorporates into it, forming a complex head [Poss + $\sqrt{\text{ }}$]. This complex head, in turn, incorporates into the verbalizing head *v*, yielding a verb. The Possessor argument, which ultimately surfaces as the clausal subject, is introduced in the specifier position of the possessive phrase. The proposal is schematically represented in (5), where dotted arrows indicate incorporation.



Two pieces of evidence support the idea that *blossom*-type ICCOS verbs involve a possessive projection in their structure.

3.1. Entailment of a possessive result state

A first indication that *blossom*-type ICCOS verbs involve a possessive layer comes from their result-state interpretation. Canonical change-of-state verbs entail an adjectival result state, as is shown in (6) for Spanish.

- (6) *La ventana se ha roto* → *La ventana está rota.*
 the window SE has broken the window is broken
 ‘The window broke → The window is broken.’

By contrast, ICCOS verbs of the *blossom*-type entail a possessive result state, as shown in (7) and (8) for Spanish and Basque, respectively.

- (7) *El cerezo ha florecido* → *El cerezo tiene flores.*
 the cherry.tree has blossomed the cherry.tree has flowers
 ‘The cherry tree has blossomed → The cherry tree has flowers.’
- (8) *Txita luma-tu da* → *Txitak lumak ditu.*
 chick.ABS.SG feather-VBZ is chick.ERG.SG feather.ABS.PL has.ABS.PL
 ‘The chick has feathered → The chick has feathers.’

In both cases, the result state corresponds to an inherent possession relation between the entity denoted by the clausal subject (the cherry tree and the chick) and the entity referred to by the root of the verb (flowers and feathers). The entailment relations between each of the two sentences in the pairs above can be schematically represented as in (9).

- (9) P: x BECOME [y HAVE z] → Q: y HAVE z

3.2. Denominal flavor of *blossom*-type verbs

A second piece of evidence in favor of the possession hypothesis concerns the observation that, crosslinguistically, verbs belonging to the *blossom* class tend to display a denominal character. This can be seen clearly in the following examples from Spanish (10) and Basque (11).

- (10) a. *flor-ecer* < *flor* ‘(to) blossom, flower’
 b. *gran-ar* < *grano* ‘(to produce) grain’
 c. *en-moh-ecer* < *moho* ‘(to) mold’
 d. *en-roñ-ar* < *roña* ‘(to) rust’
 (11) a. *lora-tu* < *lore* ‘(to) blossom, flower’
 b. *luma-tu* < *luma* ‘(to) feather’
 c. *ale-tu* < *ale* ‘(to produce) grain’
 d. *herdoil-du* < *herdoil* ‘(to) rust’

To the best of my knowledge, the systematic denominal character of *blossom*-type ICCOS verbs has not been explicitly noted in previous literature, and it clearly calls for a theoretical explanation. The possession hypothesis can straightforwardly explain this pattern. I assume here that the Poss head denotes a possession relation between two entities (see Pylkkänen’s (2002) and Cuervo’s (2003) Low Applicative; see also Wood & Marantz’s (2017) account of possession). Consequently, the complement of Poss must itself be an entity-denoting element, either an *nP*/*DP*, or a Thing root in Harley’s (2005) typology. If a State or Event root were to appear as the complement of Poss, the derivation would result in a type mismatch at LF. The prevalent denominal character of *blossom*-type verbs thus follows from the semantic properties of the Poss head.

Taken together, the two diagnostics discussed above provide strong support for the view that *blossom*-type ICCOS verbs project a possessive layer. As will be shown in the next section, this structural property not only accounts for their interpretive and morphological properties, but also offers a principled explanation for two transitivity alternations that further corroborate the possession-based analysis.

4. Internally caused change-of-state verbs in two transitivity alternations

Having established that *blossom*-type ICCOS verbs involve a possessive layer in their syntax, this section will provide an analysis of two under-researched transitivity alternations involving these verbs, the first one attested in both Basque and Spanish, and the second one only present in Basque. I will argue that their existence provides additional support for the possession-based account.

4.1. Alternation 1: *florece* vs. *dar flor*

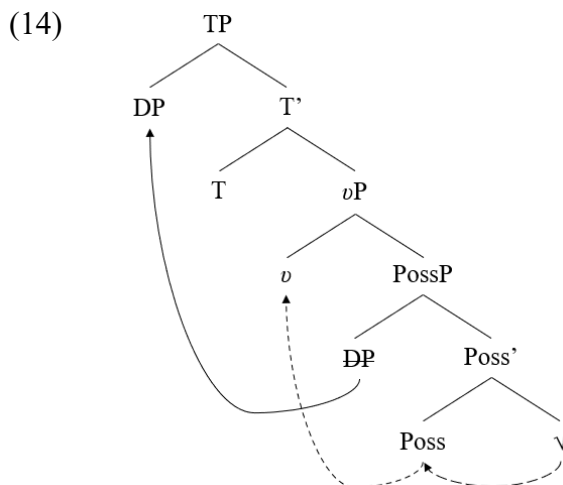
In both Basque and Spanish, *blossom*-type ICCOS verbs alternate with analytic constructions that involve the counterpart of *give* in these languages. The alternation is illustrated in (12) for Basque and (13) for Spanish.

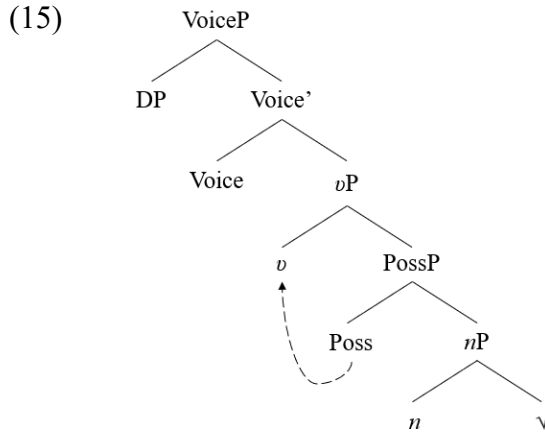
- (12) a. *Sagarrondoa fruitu-tu da.*
 apple.tree.ABS.SG fruit-VBZ is

- ‘The apple tree has fruited.’
 b. *Sagarrondoak fruitu eman du.*
 apple.tree.ERG.SG fruit give has
 ‘The apple tree has yielded fruit.’
 (13) a. *El cerezo ha florecido.*
 the cherry.tree has blossomed
 ‘The cherry tree has blossomed.’
 b. *El cerezo ha dado flor.*
 the cherry.tree has given flower
 ‘The cherry tree has blossomed.’

Harley (2002) argues that both verbal *have* and *give* in the double object construction are the surface realization of the same abstract possessive head, P_{HAVE} , in different syntactic contexts. More specifically, *give* is the spell-out of this possessive element in a transitive/causative context.

It is worth emphasizing that, as illustrated by the Basque examples in (12), the two constructions differ systematically in both case marking and auxiliary selection, and that these differences have clear structural implications. In the analytic construction (12b), the subject surfaces with ergative case and combines with the transitive auxiliary *du* ‘has.’ This straightforwardly indicates that the subject is merged as an external argument and signals the presence of Voice. In contrast, in the synthetic ICCOS verb construction (12a), the subject bears absolutive case and the auxiliary selected is *da* ‘is,’ which belongs to the class of intransitive auxiliaries. These facts jointly suggest that no external argument is projected in the structure, and that the clausal subject originates as an internal argument. This is entirely consistent with the hypothesis defended in the previous section, schematized in (4) above, that (i) the subject of *blossom*-type verbs is generated within a possessive phrase in *v*-complement position, functioning as the possessor of the entity denoted by the root, and (ii) that these verbs lack a Voice projection (in this respect, see also Alexiadou 2014). In other words, data from case marking and auxiliary selection provide independent empirical support for the presence vs. absence of a Voice projection in the two variants of the alternation. The proposed structures for each variant are represented in (14) and (15), respectively.





In (14), the structure proposed for the synthetic variant of the alternation, the clausal subject is externally merged as the specifier of PossP, as has been argued for previously. Consistent with the transitivity facts discussed above, this structure lacks a Voice projection, and therefore contains no dedicated position for an external argument. From its base position within PossP, the possessor DP can undergo A-movement to Spec-TP, where it ends up receiving absolutive case. As the dotted arrows signal, the entity-denoting root incorporates into Poss, and the resulting complex head [$\sqrt{\text{+ Poss}}$] further incorporates into v , yielding a synthetic verb. Crucially, if the root were to be independently categorized by a nominalizing head rather than incorporating into Poss, the created nominal element would remain without structural case due to the absence of case-assigning Voice, leading to an ungrammatical derivation.

The structure in (15), however, does involve the presence of a Voice layer. The presence of Voice introduces an additional case assigner besides T, making it possible for the root to be independently categorized by a Little n head rather than incorporating into Poss and v . Poss, in contrast, does incorporate into v , and since the resulting complex head [$\text{Poss} + v$] appears within a transitive configuration including Voice, it is morphologically realized as *give*, in line with Harley's (2002) proposal. The relevant Spell-Out instruction for the Basque case appears in (16).

(16) $\text{Poss} + v \rightarrow /e'man/ \mid [\text{Voice} \text{ ______ }]$

The fact that the possessor is merged as an external argument in (14), however, calls for an explanation. I take sentences involving analytic predicates such as *fruitu eman* or *dar flor* to be cases of external possession constructions, where external possession is broadly defined as a configuration in which the syntactic introduction of the possessor is dissociated from its semantic licensing. Following Wood & Marantz (2017), I assume that the possessor role introduced by Poss may remain unsaturated within the possessive phrase. This open role is subsequently saturated by a DP externally merged in a higher functional projection, specifically, VoiceP. In the analytic construction, therefore, the licensing of the possessor role and the introduction of the DP that ultimately bears that role are carried out by two distinct syntactic heads. Voice is expletive here in the sense that it introduces an argument but does not assign an independent semantic role to it. This mechanism elegantly captures the dual nature of the analytic construction: while it is

syntactically transitive, it remains semantically intransitive, preserving the denotation that characterizes *blossom*-type verbs.

To summarize, the *florece* vs. *dar flor* alternation provides further evidence for the presence of a possessive layer in the syntax of *blossom*-type ICCOS verbs. The contrast between the synthetic and the analytic constructions correlates systematically with the presence versus absence of a Voice projection, reflected in both case marking and auxiliary selection, as the Basque data show. In the synthetic configuration, the possessor argument is generated within the possessive phrase and no Voice is present, yielding a syntactically unaccusative pattern that matches its semantically intransitive interpretation. In the analytic construction, by contrast, the possessor is introduced externally via an expletive Voice head, giving rise to a syntactically transitive structure that nonetheless preserves the underlying intransitive semantics.

4.2. Alternation 2: The growing/removal alternation

The second alternation that this short paper aims to elucidate is found in Basque with denominal verbs such as *lumatu*, derived from *luma* ‘feather,’ *ale*tu, from *ale* ‘grain,’ and *kimatu*, from *kima* ‘bud.’ As originally noted by Etxepare (2003), these verbs display a remarkable and, to the best of my knowledge, crosslinguistically unique transitivity alternation. When they appear in an intransitive frame, the verbs in question receive an internally caused change-of-state interpretation, parallel to that of *blossom*-type verbs. In their transitive counterpart, however, they are interpreted as removing predicates, also known as *pit* verbs in Levin’s (1993) terminology. As will be argued below, this alternation, exemplified by (17) and (18), provides further empirical support for the view that a possessive layer plays a central role in the syntax of *blossom*-type ICCOS verbs.

- (17) *Txitak luma-tu dira.*
 chick.ABS.PL feather-VBZ are
 ‘The chicks have grown feathers.’
- (18) *Amonak oiloak luma-tu ditu.*
 grandma.ERG.SG hen.ABS.PL feather-VBZ has.ABS.PL
 ‘Grandma has plucked the hens.’

Syntactically, sentence (17) is intransitive, as shown by the fact that its subject surfaces with absolutive case (*txitak*) and the selected auxiliary belongs to the BE class (*dira*). Semantically, it roughly means that the chicks underwent a change of state from not having feathers to having feathers, and that this change happened by inner predisposition of the chicks (Bentley 2023). It should be stressed that the transition from a state of not having feathers to a state of having them is part of the meaning of the predicate. The sentence would be infelicitous in a context where the chicks already had feathers and one merely wants to describe these as having grown longer or denser. This restriction mirrors what we find with *blossom*-type predicates. For instance, sentence (19) cannot be used to describe a situation in which a cherry tree that was already in blossom has simply produced more flowers. Even a sentence like (20) presupposes that the cherry tree had previously lost all its blossoms.

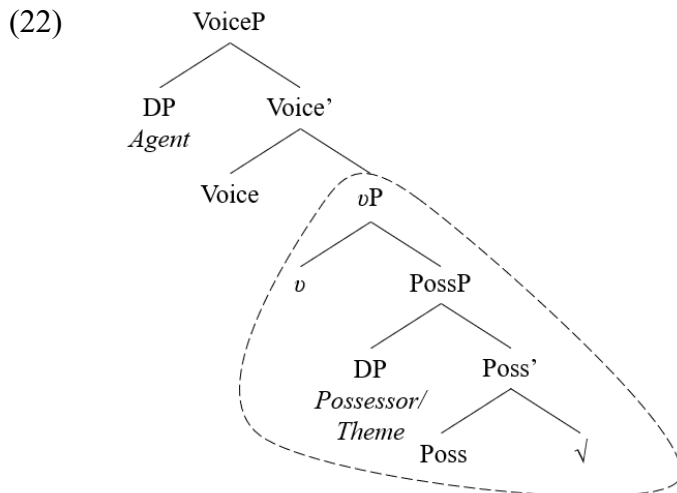
- (19) *Gereziondoa lora-tu da.*
 cherry.tree.ABS.SG flower-VBZ is
 ‘The cherry tree has blossomed.’

- (20) *Gereziondoa bir-lora-tu da.*
 cherry.tree.ABS.SG re-flower-VBZ is
 ‘The cherry tree has reblossomed.’

On the other hand, sentence (18) is transitive, an observation supported by the presence of an ergative-marked subject (*amonak*) and an auxiliary from the HAVE class (*ditu*). Semantically, this variant conveys the reverse of the change described by the intransitive sentence in (17): it denotes a transition from a state of having feathers to a state of not having them. Crucially, this removal reading arises only in the presence of an agentive external argument (*amonak*, in this case). The interpretation of the verbal predicate in (18), therefore, aligns with the lexical semantics of other *pit* verbs, in which the event involves an agent that causes a patient to cease possessing an inherent part. The proposed denotation has observable truth-conditional consequences. For instance, sentence (18) cannot be used in a situation where the hens are only partially plucked or where they still retain some of their feathers, because, as argued, the predicate entails a transition to a complete absence of the inherently possessed entity. The infelicity of (21) as a continuation to (18) further illustrates this point.

- (21) #... *baina oiloek oraindik lumak dituzte.*
 but hen.ERG.PL still feather.ABS.PL have.ABS.PL.ERG.PL
 ‘... but the hens still have feathers.’

The crucial observation here is that both variants of the alternation are semantically anchored in the same inherent possessive relation between the theme and the entity denoted by the root of the verb: in both cases, the event consists of a change in that possessive relation, differing only in the directionality of the change. The alternation can therefore be given a unified account if both variants contain a possessive subcomponent in their syntax. The structure for the inchoative variant, as argued earlier, is represented in (5) above. The tree diagram in (22) below represents the structure of the transitive variant. As can be seen, the alternation is derived from a common base consisting of a possessive phrase and the verbalizing/eventivizing head (circled in (22) below), and ultimately reduces to the presence *vs.* absence of a Voice projection, an analysis consistent with what has been independently proposed for other transitivity alternations (see, e.g., Alexiadou et al. 2015).



A crucial question, however, needs to be answered at this point: How is the removal interpretation obtained in the transitive variant? A tentative hypothesis is that a Neg head is merged on top of the possessive phrase in the structure in (22). Looking at (18), apart from the semantic denotation of the predicate (roughly paraphrasable as CAUSE NOT to HAVE *x*, where *x* stands for the entity denoted by the root) there seems to be no further proof of the presence of such Neg head in the syntax. However, the fact that other *pit* verbs in Basque are formed by means of the affix *-gabe* ‘without’ might be illuminating. Consider example (23):

- (23) *Amonak olibak hezur-gabe-tu ditu.*
 grandma.ERG.SG olive.ABS.PL stone-without-VBZ has.ABS.PL
 ‘Grandma has stoned the olives.’

Under the assumptions of Distributed Morphology, the morpheme *-gabe* must be the phonological realization of one or more abstract syntactic heads. I propose that *-gabe* is the negated non-verbal counterpart of *have* (see, e.g., Le Bruyn et al. 2013), decomposing syntactically into a Neg head and a Poss head (or P_{HAVE} in Harley’s 2002 terms). Therefore, if (18) and (23) have the same syntactic structure, an assumption that does not seem preposterous, (18) must involve a Neg head that is not overtly realized.

This hypothesis offers a principled explanation for the obligatory removing semantics of the transitive construction: the addition of a negating operator over the possessive layer reverses the direction of the change denoted by the predicate, turning an inchoative “come-to-have” event into a causative “make-not-have” event. If the removing interpretation were not grammatical, but rather derived from a pragmatic inference, it would be hard to explain why the predicate in a sentence like (18) can never mean “provide with feathers.” In fact, there is an independent verbal form, *lumaztatu*, that has this “provide-with-feathers” interpretation, although this verb can take complements for whom the entity denoted by the root, *luma* in this case, is not a defining property, as (24) shows, where feathers are not a defining property of hats.

- (24) *Amonak txapela luma-z-tatu du.*
 grandma.erg.sg hat.abs.sg feather-with-VBZ has
 ‘Grandma has feathered the hat.’

All in all, while the data discussed here is preliminary, the negation hypothesis does have some credit, as there seems to be independent morphosyntactic evidence in favor of it. A more comprehensive exploration of this issue, however, must be left for future research.

5. Conclusions

This paper has explored two transitivity alternations involving *blossom*-type ICCOS verbs in Basque and Spanish, arguing that both alternations can be accounted for by positing the presence of a syntactic possessive layer.

The first alternation examined concerned analytic constructions involving the counterparts of *give* in Basque and Spanish, such as *fruitu eman* ‘give fruit’ and *dar flor* ‘give flower.’ These were shown to alternate with synthetic ICCOS verbs such as *fruitutu* ‘fruit’ and *florece* ‘blossom.’ Building on Harley’s (2002) analysis of *give* as the surface realization of an abstract possessive head in a transitive context, the paper proposed that the analytic variant involves the projection of a Voice head introducing an external

argument, while the synthetic variant lacks Voice. The ergative marking of the subject in the Basque analytic construction and the selection of the transitive auxiliary *du* ‘has’ confirm the presence of an active Voice layer, in contrast with the absolutive marking and the intransitive auxiliary *da* ‘is’ of the synthetic form.

Importantly, the analytic construction was analyzed as an instance of external possession, following Wood and Marantz (2017). In this configuration, the possessor role introduced by the possessive head remains unsaturated within the possessive phrase and is subsequently linked to an argument externally merged in the specifier of an expletive Voice projection. This dissociation between syntactic introduction and semantic licensing explains why these constructions behave syntactically as transitives yet semantically preserve the anticausative character typical of ICCOS predicates. Thus, the present account, if on the right track, gives credit to the autonomy of the syntax from semantics, as two different syntactic structures can give rise to the same LF representation. Moreover, if this analysis is correct, and if external possession is indeed a syntactic phenomenon, then the present account provides additional support for a syntactically based theory of argument structure alternations, one that locates the source of variation in the presence, absence, or configuration of specific functional heads in the syntax.

The second alternation examined, involving denominal verbs such as *lumatu* ‘feather’ in Basque, offered another case of syntactico-semantic alignment around possession. In their intransitive form, these verbs denote a change of state whereby the subject acquires the entity denoted by the root; in their transitive form, however, they are interpreted as removing predicates. The alternation thus expresses opposite directions of change along the same possessive axis: acquisition versus loss of an inherently possessed entity. Crucially, the transitive variant requires an agentive external argument. The possibility of having agents with ICCOS roots thus argues against semantically specified event roots (*contra* Alexiadou 2014), supporting instead a strongly syntactic approach to argument structure where roots can be freely inserted into different syntactic configurations.

Beyond the specific empirical facts discussed here, the analysis proposed in this paper carries broader theoretical implications for the study of event and argument structure. If the possession hypothesis for ICCOS verbs proves to be on the right track, this would support the idea that possession is a fundamental primitive in the syntax–semantics interface, underlying not only canonical possessive constructions but also a wider range of verbal predicates.

Future research should explore whether the Basque and Spanish patterns described here have parallels in other languages and to what extent the possession hypothesis can capture those patterns. In addition, a more thorough study of the morphosyntax of removing predicates in different languages will help us improve our understanding of the role that negation plays in their derivation. Ultimately, the questions raised here point toward a more unified, syntactic understanding of how verbal meaning and argument structure interact.

References

- Alexiadou, Artemis (2014). The problem with internally caused change-of-state verbs. *Linguistics* 52.4, 879–909. <https://doi.org/10.1515/ling-2014-0011>
- Alexiadou, Artemis, Elena Anagnostopoulou and Florian Schäfer (2015). *External Arguments in Transitivity Alternations. A Layering Approach*. Oxford: Oxford University Press.

- Bentley, Delia (2024). Internally caused change as change by inner predisposition: Comparative evidence from Romance. *Journal of Linguistics* 60(3), 483–525. <https://doi.org/10.1017/S0022226723000154>
- Cuervo, M. Cristina (2003). *Datives at Large*. Doctoral dissertation, MIT.
- Etxepare, Ricardo (2003). Valency and argument structure in the Basque verb. In José Ignacio Hualde and Jon Ortiz de Urbina (eds.) *A Grammar of Basque*, 363–425. Berlin: Mouton de Gruyter.
- Halle, Morris and Alec Marantz (1993). Distributed Morphology and the pieces of inflection. In Ken L. Hale and Samuel J. Keyser (eds.) *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, 111–76. Cambridge, MA: MIT Press.
- Harley, Heidi (2002). Possession and the double object construction. *Linguistic Variation Yearbook* 2(1), 31–70.
- Harley, Heidi (2005). How do verbs take their names? Denominal verbs, manner incorporation and the ontology of roots in English. In Nomi Erteschik-Shir and Tova Rapoport (eds.) *The Syntax of Aspect*, 42–64. Oxford: Oxford University Press.
- Kratzer, Angelika (1996). Severing the external argument from its verb. In Johan Rooryck and Laurie Zaring (eds.) *Phrase Structure and the Lexicon*, 109–137. Dordrecht: Kluwer.
- Levin, Beth (1993). *English Verb Classes and Alternations: A Preliminary Investigation*. Chicago: University of Chicago Press.
- Levin, Beth and Malka Rappaport Hovav (1995). *Unaccusativity at the Syntax-Lexical semantics interface*. Cambridge, MA: MIT Press.
- Le Bruyn, Bert, Henriëtte de Swart and Joost Zwarts (2013). 'Have', 'with' and 'without'. *Proceedings of SALT23*, 535–548.
- McKoon, Gail and Talke Macfarland (2000). Externally and internally caused change of state verbs. *Language* 76, 833–858. <https://doi.org/10.2307/417201>
- Pylkkänen, Liina (2002). *Introducing Arguments*. Doctoral dissertation, MIT.
- Wood, Jim and Alec Marantz (2017). The interpretation of external arguments. In Roberta D'Alessandro, Irene Franco, and Ángel J. Gallego (eds.) *The Verbal Domain*, 255–278. Oxford: Oxford University Press.
- Wright, Sandra (2001). *Internally Caused and Externally Caused Change of State Verbs*. Doctoral dissertation, Northwestern University.
- Wright, Sandra (2002). Transitivity and change of state verbs. *BLS* 28, 339–350.