The Impact of Syntactic Alternations on Lexical Aspect of Ditransitive Verbs in Spanish

and English: A Master's Memoire

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1. Introduction

The interface of syntax and semantics is a well-studied domain in the linguistics field. Syntactic structures have an undeniable impact on the meaning of utterances. This memoire focuses on this relationship, further delving into an under-studied topic of how the syntactic construction of objects valenced by ditransitive verbs changes the lexical aspect of the verb itself.

The driving research question is whether or not diathesis, or syntactic changes to the ordering of objects, of sentences with ditransitive verbs affects telicity in Spanish or English. As stated, there is little empirical evidence supporting any claims made in the literature, thus the reason this study exists. Much of what is currently offered on the matter is purely theoretical with no experimental design to test any claims, so we thought it useful to carry out experimentation to evaluate the validity of the present discussion.

Constructed from the current literature, we hypothesize that sentences constructed with a double object would read as telic while sentences with prepositional objects would read as atelic. This meaning that *Mary taught the children Spanish* or *María le enseñó español a los niños* would be read as having a culminated endpoint while *Mary taught Spanish to the children* or *María enseñó español a los niños* would be read as being able to proceed into the future with no end. The way this phenomenon was tested was through a forced-choice task that asked participants to choose between adding an atelic *for*-adverbial or telic *in*-adverbial to the end of a presented sentence, such as *for a year* and *in a year*. It is concluded, however, that these two domains do not interact in Modern English nor Spanish.

In this memoire, the theoretical background on both the domains of semantics and syntax is reviewed first. In the semantics section, Vendler's (1967) classifications of verbs, otherwise

known as *Aktionsart,* along with Cuervo's (2003) verbal semantic event introducers are detailed. For syntax, thematic roles, transitivity and different diatheses of ditransitive verbs are explained. Then, the current literature is discussed, and finally the experimental study is presented including the experimental methodology and data analysis.

2. Theoretical Background

2.1 Semantics

All verbs act in accordance with time in that the action that they express happens over a certain period. Whether it be a short duration like dropping a coin from your hand which would be over in a second or a long duration such as learning a language which would extend over years, the acts of *dropping* and *learning* occur over periods of time. This expression is known as lexical aspect (Moens & Steedman, 1988).

This study is concerned with the lexical aspect, also known as Aktionsart (Vendler, 1967), which pertains to the inherent semantic quality of the verb's temporality. The actions of *running along the shore* and *running to the pier* differ in that the former event of *running* could go on for an indefinite amount of time or distance so long as a shore was present, while the latter action ends once the pier is reached.

2.1.1 Lexical Aspect

As previously stated, lexical aspect bears the semantic timeframe that a verb conveys. All verbs have an inherent aspectual type semantically encoded within them under which all verbs may be classified. These aspectual types denote the relative time of an utterance's action with respect to the time of the other actions in the discourse (Moens & Steedman, 1988). Originally expressed by Zeno Vendler in his book *Linguistics in Philosophy* (1967), these aspectual types were known as states, activities, achievements, semelfactives, and accomplishments. According to Van Valin (2005), these aspectual types have proven to be applicable cross-linguistically despite the original focus on the English language by Vendler (p. 32).

Before describing each aspectual type, it would be relevant to detail the method that this research will be using to identify aspectual typology which is by using time-adverbials. Time-adverbials modify the timespan in which a verb unfolds. They add the details of how long or short an action durates. The two adverbials that the literature makes use of when dealing with aspect are *for*-adverbials and *in*-adverbials (Van Valin, 2005; Moens & Steedman, 1967; Coppock, 2020). When added to a sentence, these adverbials will either be felicitous, meaning that they evoke sense and sound correct to a native speaker, or they will be infelicitous, meaning there is an awkward reading that sounds disjointed. Take for instance the examples:

(1) I ran along the shore <u>for</u> fifteen minutes.

(2) # I ran along the shore <u>in</u> fifteen minutes.

(3) I ran to the pier <u>in</u> fifteen minutes.

(4) # I ran to the pier <u>for</u> fifteen minutes.

Sentences 2 and 4 are infelicitous due to the time-adverbial modifying a verb that is semantically incongruous with its depiction of aspect.

States are verbs that do not express changes or actions. Van Valin (2005) and Moens & Steedman (1988) express that states are different from the other aspectual types in that they are essentially actionless. Perhaps evident by the name, their static quality permits steady temporal duration with no culmination or climax. Verbs such as *querer ('to want'), entender ('to understand'),* and *gustar ('to like')* are all states since neither convey events but rather fixed feelings that are unfettered by time. They may be modified by the *for*-adverbial due to their continual status. A sentence such as *te quiero por siempre ('I love you forever')* is felicitous because the act of loving someone may continue *for* a very long time, whereas a sentence like **estoy enojado en el día ('I am upset in the day')* is infelicitous because one cannot be angry *in* a

day. An issue that many non-native Spanish speakers, including myself, seem to encounter is the difference between *por* and *para.* According to an online blogpost, *por* evokes a sense of perpetuity, dealing more with duration not looking at temporal boundaries, while *para* expresses finality that is goal-oriented and adheres to a certain amount of time. In this study, *por* is used for atelic sentence constructions.

Accomplishments have the most action involved in them for they imply a progressive act that culminates to a climactic moment. Think of one's probable first academic accomplishment: *to learn the ABC's.* There is a finite number of letters that one works to master over a period of time, and once all 26 (or according to some sources, 30 in Spanish) letters are grasped, the act is complete. This act of mastery is what is referred to as *telic,* derived from the Greek word *telos* meaning 'the end' or 'the goal,' which means the act has met its end or climax. Moens & Steedman (1988) describe accomplishments, or as they call them culminated processes, as [+consequent] and extended. The consequent refers to a change of state, or a permission of difference that an action entails when analyzing the state of affairs before and after the action is done. In the sentence, *you ate a fish,* the consequence is that before the act of eating was carried out, there was a fish, but afterwards there is no fish. Van Valin adds that accomplishments are not punctual, which coincides with Moens & Steedman's (1988) *extended* descriptor, since they articulate a processional act that is carried out over time. Accomplishments are interesting when using the adverbial diagnostic in that they seem to allow for both *for* and *in* to be felicitous. By theory, they should only occur with *in*-adverbials due to their telic nature, but *for*-adverbials evoke a continuous reading. Saying *you ate a fish for an hour* implicates a blurred beginning and end, with no distinction of telos. Saying *you ate a fish in an hour* hardens the temporal bounds and distinguishes the telicity of the action.

Much like states, activities illustrate actions that have no culmination or climax but differ in that they do express action. Van Valin (2005) thus denotes this type as [– punctual, telic] in that they do not occur instantaneously nor do they have a manifestation of finalization. Moens & Steedman (1988) classify activities, or as they call them processes, as being [–consequent] and extended. As noted by accomplishments, the extended feature signifies that the action is carried out over periods of time. Inversely from accomplishments, however, the non-consequential feature means that there is no change in the state of affairs. This aligns with the negative value of telicity, coined as *atelic*. An example of an activity is *correr,* where the act of running, without any context, could extend for a minute, a day, or in Forrest Gump's case, three years, two months, 14 days and 16 hours (Zemeckis, 1994). Using the previous example, if one elided the *ABC's* part of the verb, *learning* is also an activity as it can extend through time without a clear end point that would mark its telos. Activities, thus, accept *for*-adverbials due to their processional nature. It is infelicitous to iterate that *someone walked in fifteen minutes,* but if you change it to *someone walked for fifteen minutes,* then the utterance is permissible.

Achievements are instantaneous actions that are temporally bound and mark changes of states. *To break a vase* is an example of an achievement, where the action marks a change from the ceramic structure being intact to being shattered; however, there is no process behind the act of breaking the vase, for there is no inference of scheming or operationalization in the verb. Thus, Van Valin (2005) classifies this aspectual type as [+ punctual, telic]. Moens & Steedman (1988) attribute a [+consequent] and atomic value to this type of verb. Atomicity is the counterpart feature to extended, denoting the absence of a process behind the action. Note that achievements do not have to have real world consequences entailed, *to recognize (someone)* is an interior achievement where the change of state goes from not recognizing the person to the telic

moment of having recognized that person. Because of their punctual nature, achievements accept *in*-adverbials. One can recognize someone *in* five seconds, but not *for* five seconds.

Finally, semelfactives, the only aspectual type not originally recognized by Vendler (Van Valin, 2005), denote a similar action to achievements of an instantaneous action, but do not invoke change in a similar fashion as activities. Bodily acts like *hiccuping, sneezing,* and *coughing* are all examples of semelfactives. Take, for example, the sentence, *The tree branch tapped on the window*. The act of tapping occurs–and may frighten a child–but there is no implication of a change of state inferred solely from the verb *to tap.* These actions are denoted as [+ punctual] by Van Valin, such that they are a prompt burst of an event, however are unbound by time. The tapping on the window could happen once or it could happen for the entire night, thus they are [– telic], which corresponds to Moens & Steedman's (1988) atomic value, and are likewise [–consequent] having no real impact on the state of affairs. Because semelfactives are atelic, they accept *for*-adverbials. One could hiccup *for* an hour but not *in* an hour.

This section has reviewed the aspectual types of Vendler's Aktionsart taxonomy of events. For summation purposes, Table 1 is a graphic representation of the types and their features that were discussed.

Table 1.

Summary of Aktionsart aspectual types

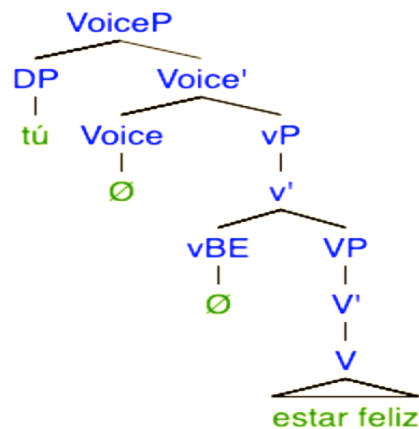|				
States	[–telic]	*for*		
Accomplishments	[+telic]	*in/for*	[+consequent]	[–punctual]
Activities	[–telic]	*for*	[–consequent]	[–punctual]
Achievements	[+telic]	*in*	[+consequent]	[+punctual]
Semelfactive	[–telic]	*for*	[–consequent]	[+punctual]

2.1.2 Linear and Branching Logical Structures of Events

A decompositional structure representation of each of the aspectual types is useful in analyzing the underlying nature of the verbs, as all predicates may be derived from an event introducer (Cuervo, 2003). Event introducers can be looked at as subliminal auxiliary verbs that are encoded into verbs themselves. Van Valin (2005, p. 42) explains the linear structures using role and reference grammar that combines the predicate, or verb itself, with the event introducer *vDO*. This is expanded upon by Cuervo (2003) in her dissertation *Datives at Large* with two other event introducers *vGO* and *vBE* where she demonstrates branching logical structures using the three introducers.

The event introducer *vBE* alone introduces a predicate as a state, thus correlates to the state aspectual type. In an intransitive sentence of, *tú estás feliz ('you are happy')*, the linear logical structure looks like 5.

> (5) **be'**(x, [feliz, x])

where *x* is the subject of the sentence, in this case *tú,* and be' introduces the event of *estar feliz*. In a branching logical structure, Cuervo (2003) argues that the event introducer licenses the root verb, thus is headed by *vP*. vP is headed by VOICE which projects the argument as a specifier. This can be seen below for the same example sentence *tú estás feliz* in tree 1:
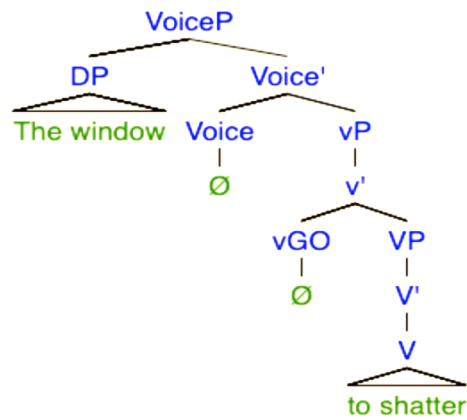
The second event introducer *vGO* represents events that invoke change. The example sentence, *The window shatters,* looks like 6

(6) **go'**(x, [shatter' (x)])

where *x* is the window and the predicate marks a change of state via shattering, licensed by the introducer *vGO*. A branching logical structure for the same sentence looks like tree 2:
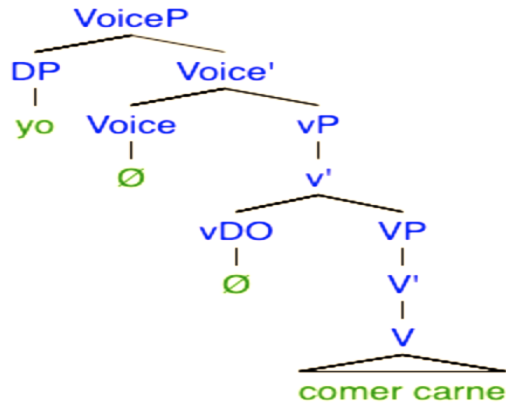

Tree 2.

The third unary event introducer *vDO* represents continual actions that correlate to the aspectual type of activities. Using the sentence *Yo como carne,* the linear logical structure would look like 7.

(7) **do'**(x, [comer' (x,y)])

where *x* is *yo* and *y* is *carne.* The logical structure would look as such in tree 3.

Tree 3.

These event introducers can then be combined to form bi-eventive models that account for causative predicates (Cuervo, 2003). The function of the two event introducers is to form a correspondence between a causing event and the caused event. The combinations of these causative structures are *vDO + vDO* and *vDO + vBE*. There is a third bi-eventive model called an inchoative which combines *vGO + vBE,* corresponding a causative event with a static event.

Bi-eventive structures require double argument structures, otherwise known as transitive predicates, which is unnecessary for the monoeventive structures. For example, *vDO + vDO* could be seen in the sentence, *él me hizo reír ('he made me laugh'),* where *él* and *me* are the two arguments. The action of *making* and *laughing* are both activities, and they combine to form a causative event where the subject's activity induces the object to do its own activity. The linear structure looks like 8.

(8) **do'**(x, [**do'**[reír' (x, y)]])

and the branching structure looks like tree 4:
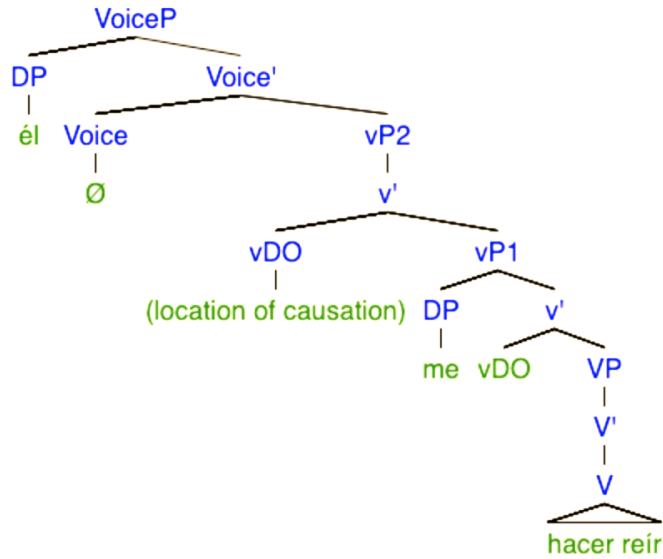
Tree 4.

Similarly, the linear structure looks like 9 for the bi-eventive *vDO + vBE,*

(9) **do'**(x, [**be'**(y, predicate' (x, y))]])

with causation occurring at the first event introducer *vDO.* An example of *vDO + vBE* is *I turned the page,* whose branching structure is pictured in tree 5:
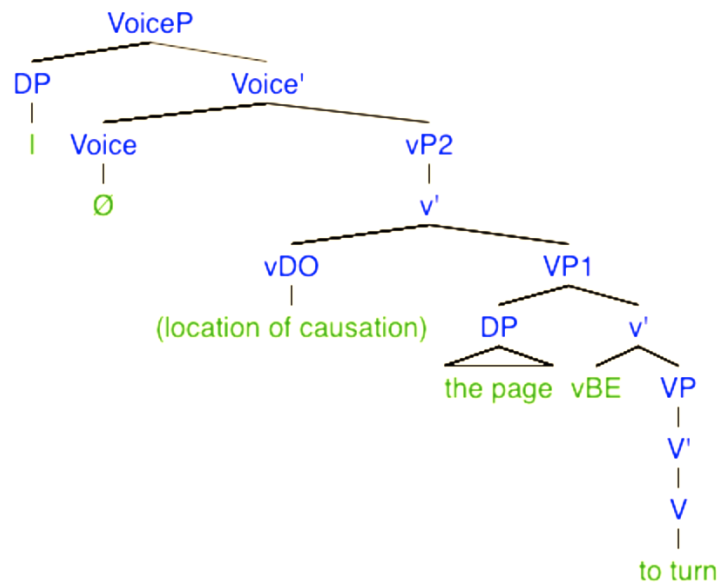
Tree 5.

The action of flipping the page of a book is causing the page of the book to be turned over. As redundant as that is, it may be seen that there is an action that causes a change of state. Again, notice that this example takes two arguments.

Inchoatives, *vGO + vBE,* combine activities and states to form reflexive passive sentences in Spanish such as *Se vende alcohol ('we sell alcohol'* or *'alcohol is sold')* and to form sentences in English such as *They got married.* Inchoatives correspond to a static event with a cumulative event to create phrases that express changes in states in a stative manner. The linear structure looks like 10:

(10) **go'**(x, [**be'**(vender, (y))])

where *x* is the implied 3-person and *y* is *alcohol.* The branching structure looks like the following tree 6, where the reflexive clitic is demarcated under the *vGO*:
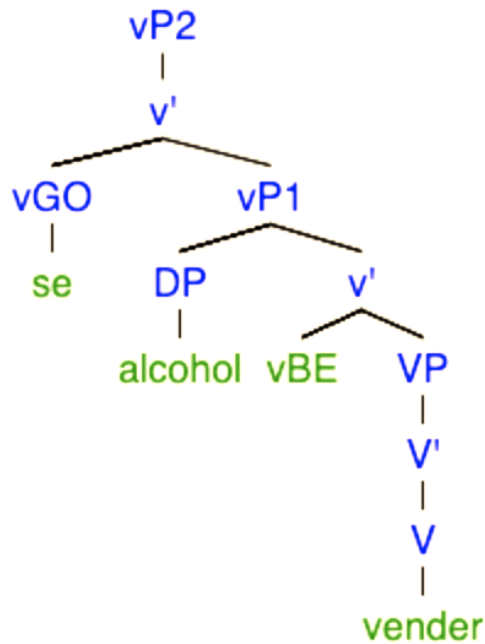
Tree 6.

In this section, branching and linear logical structures were demonstrated in order to be built upon in following sections. Using Cuervo's (2003) theory, it was shown how all events are licensed by three "little *v*" introducers: *vGO, vBE, vDO,* and combine to create causative and inchoative events. They provide insight into how an event is semantically encoded.

2.2 – Syntax

2.2.1 – Thematic Roles

Thematic roles, or theta-roles, in grammar are assigned to arguments and adjuncts by the verb they attach to (Van Valin, 2005). There are several types of theta-roles that convey how the noun takes part in the event of the verb, and they are widely debatable as to exactly how many there are and their specific purposes. Van Valin (2005) proposes that all theta-roles can be divided into five categories that correspond to the argument's place in the logical structure. Combining Van Valin's (2005) logical structures and Cuervo's (2003) logical structure involving event introducers, we get 11:

$$(11)\ \mathbf{vP_1}\text{'}(x, \mathbf{vP_2}\text{'}^1(\mathbf{predicate}\text{'}(x,y,z^2)))$$

In table 2, bolded are those in which Camacho (2017) in his book *Introducción a la Sintaxis* labels as the most widely acceptable core thematic roles, given that the list can be infinite. Van Valin (2005) makes a clear distinction between the role of an agent and the roles in the second category as well as the role of patient and the roles in the fourth category. He states that agents are solitary actors, usually the single argument of an intransitive activity verb, such as *he* in *he runs* or *William* in *William bakes;* whereas, those roles in the second category are usually the initiators of some sort of transitive verb.

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[1] vP_2 is implemented only for bi-eventive structures
[2] For ditransitive verbs (Camacho, 2017)

Table 2.

Table of thematic roles taxonomy

Argument of vP_1	x in vP_1'/**pred'**(x,y,z)	y in vP_1'/**pred'**(x,y,z)	z in vP_1'/**pred'**(x,y,z)	Argument of state **pred'**(x)
Agent	Effector Mover Performer Consumer Creator Observer User	Location Perceiver Cognizer Wanter Judger Possessor **Experiencer** Emoter Attributant Identified Variable Beneficiary	**Theme** Stimulus Content Desire Judgment Possessed Sensation **Target** Attribute Identity Value Performance Consumed Creation Implement	Patient Entity

(Van Valin, 2005, p. 58, slightly modified)

Similarly, on the other end of the spectrum, the patient, he claims, is the subject of unaccusative verbs such as *the tree* in *the tree fell* or *the ice* in *the ice melted.* For the purposes of this paper, however, we may consider that neither agent nor theme exist in this strict regard. The proposed distinction follows in this section.

For example purposes, take the sentence *Andrea sent a letter to her friends.* The logical structure may look like 12:

(12) **do'**(Andrea, (**send'**(Andrea, her friends, a letter)))

Following Table 2, we can identify *Andrea* as the first argument of the clause, thus is the agent. *A letter* occurs as the third argument for the activity of *sending,* therefore we may identify *the letter* as the theme. And finally, *her friends* is the second argument of the activity clause, thus we may label it as the beneficiary.

The agent is the deliberate, steering, and initiating participant entity of the event, the agent is the main actor. In the example, *Andrea* assumes the agent role of this sentence who causes a letter to be sent by her own volition. Instigation of the event is in essence the agent's role. This only slightly differs from Van Valin's explanation by whittling down the more verb-specific titles he includes in his second column.

The theme is the object in which transfer occurs. No change is being made to its state necessarily, but rather it is caused by the agent to undergo some sort of shift in the state of affairs in which it finds itself. In the example, *a letter* is undergoing a transfer of possession, but is not being altered in its state of being. Another example of a theme is in the sentence *He opened a window,* the theme is *the window* because there is an action done to cause its change, but it remains intact. Now take the sentence *He shattered the window.* The theta role changes from the theme in the previous example to the patient. This is due to its heavily affected quality after the event is over. Van Valin (2005) describes patients as the subject of unaccusative verbs, as demonstrated with the examples above. However, for our purposes, the patient can be described as synonymous with the theme of the sentence.

The last argument included in the example is *the friends.* It is the first argument of the predicate, thus we would identify *the friends* as the beneficiary. Experiencer, goals, beneficiaries, these theta-roles all carry a sort of semantic equivalency of animate targets (where a target may be inanimate), thus these names may arise in different literature for relatively the same meaning. What can be said about beneficiaries (or whatever name one may choose for them) is that they are the entity to which the theme is transferred. They are the recipient of the item that the agent is transferring. Beneficiaries may be identified by the verb's inherent semantic nature that encodes for possession transfer. This would be encoded in its theta-criterion (Chomsky, 1981).

Theta-criterion states that one and only one theta-role is prescribed to every argument in the clause, such that the verb assigns a certain number of arguments for it to be well-formed (Schreiner, 2014). This number of required arguments varies which is delineated by the verb's transitivity.

2.2.2 – Transitivity

Current syntactic theory posits that there is a core clause made up of a nucleus and its arguments with optional periphery clauses made up of adjuncts (Van Valin, 2005). The core clause's nucleus is the predicate or main verb and the argument noun phrases which are licensed by the verb. Take for instance the phrase *I arranged the flowers in the vase.* In a breakdown of the nucleic syntactic structure, it may look like the table 3:

Table 3.

Core			Periphery
Subject Argument	*Nucleus*	*Direct Object Argument*	*Adjunct Preposition*
I	arranged	the flowers	in the vase
Agent	*Predicate*	*Theme*	*Location*

In the core, the sentence *I arranged the flowers* has two arguments: a subject and an object. This is known as a transitive verb, where action transits from one argument to another (Tensnière, et. al, 2015). Transitive verbs are *not* well-formed when only one argument is involved in the core or if two arguments in the core are assigned the same theta-role, as shown in the following:

(13) *I arranged in the vase

(14) *Michael and I arranged.

(15) *Arranged the flowers.

Sentence 13 is missing a core object, sentence 14 has two entities with the thematic role assignment of agent and sentence 15 is missing a theme.

The adjunct, as has been demonstrated, does not need to be included in the sentence for the overall sentence to be well-formed, which is why it is in the periphery of the sentence. The verb *arrange* does not license a location, thus *in the vase* need not be present for grammatical well-formedness.

Some verbs do not need to have two objects in order to create a well-formed clause, rather just an agent will create a well-formed clause. These are called intransitive verbs which only require one argument in its core, and therefore do not transit action between two nouns. Take the sentence *He walked down the beach.* The phrase *he walked* is perfectly fine by itself since walking is an action that solely requires a single agent, thus, *to walk* is an intransitive verb. *Down the beach* is a prepositional adjunct that need not be there to achieve well-formedness. Below, the branching structure for the sentence is provided in tree 7. The tree structure 8 additionally is shown that *he walked* is capable of existing as a single clause, where *down the beach* is the periphery clause. Table 4 demonstrates the nucleic structure.
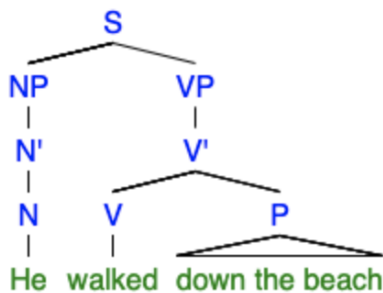
Tree 7

Tree 8

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Table 4.

Core		Periphery
He	walked	down the beach.
- *Subject* - *Agent*	- *Nucleus*	- *Preposition*

Finally, and most importantly to the current study, there are verbs that license three arguments. These are called ditransitive verbs. They take on a subject, a direct object, and an indirect object, transiting the indirect object between the subject and direct object. Verbs such as *to tell, to give,* and *to send* are all ditransitive verbs. For example, *Karen sent a package to my friend's apartment* requires that all three arguments be present. This is shown by the poorly formed sentences below:

(16) *Karen sent.

(17) ?Karen sent a package.

(18) *Karen sent to my friend's apartment.

Sentence 16 is missing both the objects, and sentence 18 is missing the direct object, eliciting an ungrammatical reading to both. Sentence 17 is ungrammatical given that there is no presupposed destination within the discourse. We may say it is ungrammatical with the lack of context.

Some ditransitive verbs allow for different transitivity assignments. These have been called unergative verbs and ambitransitive verbs, but for this paper, they are referred to as optional ditransitive verbs. Take, for example, the verb *to paint.* This is an example of an optional ditransitive verb where it may take on one, two, or three arguments. The following sentences demonstrate this point:

(18) I painted.

(19) I painted a portrait.

(20) I painted for my mother.

(21) I painted a portrait for my mother. [3]

Sentence 18 demonstrates the intransitive application that expresses the activity of creating visual artwork. Sentence 19 specifies the medium of art as the theme/direct object while sentence 20 specifies the beneficiary of the painting as the direct object, both creating a transitive example of the nuclear predicate. Sentence 21 demonstrates how the verb *to paint* can combine the previous sentences to become ditransitive where the transit of action happens between the artist (subject), medium (direct object), and beneficiary (indirect object).

In the present study, we analyze optional and obligatory ditransitive verb constructions with varying word order, which is henceforth referred to as diathesis. The following section delineates the taxonomy of the syntactic alternations analyzed in both Spanish and English.

2.2.3 – Diathesis

There are four types of diathesis this study analyzes: the standard, the double object, the passive, and the passive double object (Salanova, 2020). An sample sentence used in the study in each of the constructions is depicted in Table 5:

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[3] The Spanish equivalent *Pinté un retrato para mi madre* can also be said as *Pinté un retrato a mi madre* however the two utterances are interpreted differently. The personal *a* informs of a direct object while *para* does not. This is noticeable in the double clitic *Le pinté un retrato a mi madre* vs. **Le pinté un retrato para mi madre.* See Cuervo (2003) for more information.

Table 5.

Diathesis examples

Diathesis	English	Spanish
Standard	Hugo gave a cake to Leo.	Hugo dio un pastel a Leo.
Double Object	Hugo gave Leo a cake.	Hugo le dio un pastel a Leo.
Passive	A cake was given to Leo	Un pastel fue dado a Leo.
Passive Double Object	Leo was given a cake.	Un pastel le fue dado a Leo.

The construction for the standard diathesis is:

SUBJECT + VERB + DIRECT OBJECT + PERIPHERAL OBJECT

As can be analyzed in the example sentence in table 6:

Table 6.

Core			Periphery	
she	bought	a toy	for	her daughter
(ella)	compró	un juguete	a	su hija
Subject	*Verb*	*Direct Object*	*Preposition*	*Peripheral Object*

The peripheral object *her daughter* exists as an adjunct because in this optionally ditransitive verb, *for her daughter* may be removed while maintaining an utterable phrase *She bought a toy.*

To contrast this, regard the double object construction *She bought her daughter a toy,* where the adjunct *for her daughter* is stripped of its preposition and promoted from the periphery into the core clause creating what is known as the double object construction. The noun phrase *a*

toy is not an adjunct in the periphery due to its necessity to remain in the overall sentence. *She bought her daughter,* while felicitous to a native speaker, conveys that the daughter is the object of the purchase.

In a different light of contrast, take the obligatory ditransitive sentence *He gave the rocks to the gardener.* According to the structural breakdown, the second object *the gardener* must be a peripheral adjunct, however the phrase *He gave the rocks* is incomplete without a destination for the rocks. This furthers the important distinction that obligatory ditransitive verbs do not function similarly in their semantic nature as optional ditransitives do. Obligatory ditransitives do not make use of the periphery and mandatorily license three arguments, thus the following table 7 is how a nucleic syntactic structure for an obligatory ditransitive looks:

Table 7.

Core				
He	gave	the rocks	to	the gardener
(él)	dio	las piedras	a	el jardinero
Subject	*Verb*	*Direct Object*	*Preposition*	*Indirect Object*

And the following structures for the standard diathesis are modified for the verb's optionality of transitivity:

Standard Optional Ditransitive:

SUBJECT + VERB + DIRECT OBJECT + PERIPHERAL OBJECT

Standard Obligatory Ditransitive:

SUBJECT + VERB + DIRECT OBJECT + INDIRECT OBJECT

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As mentioned above, the double object structure promotes the peripheral object to the core by removing the preposition and placing it before the direct object. Take the following two sentences introduced above:

Standard	He gave the rocks to the gardener.
Double Object	He gave the gardener the rocks.

Both seem to convey the same meaning with the aforementioned altered syntactic constructions of promotion and stripping of the preposition. As previously mentioned, the double object structure does not make use of the periphery, thus obligatory and optional ditransitive verbs share the same structure that looks like:

Double Object:

SUBJECT + VERB + INDIRECT OBJECT + DIRECT OBJECT

A nucleic breakdown of this would look as table 8:

Table 8.

Core			
He	gave	the gardener	the rocks
- Subject *- Agent*	*Verb*	*- Indirect Object* *- Beneficiary*	*- Direct Object* *- Theme*

The notion of a double object construction does not exist in Spanish due to the obligatory dative case marker *a* that attaches to indirect objects (Camacho, 2017). Furthermore, it is optionally accompanied by a dative clitic *le* that occurs before the verb. This has been observed to act as the Spanish counterpart to the English double object structure (Demonte, 1995; Cuervo 2003). These markings are compulsory for Spanish datives, and if we consider that the English *to* is a somewhat equivalent marker, the phrases may align as such:

English	My	dad	told	stories		to	my	little brother.
Spanish	Mi	papá	contó	cuentos		a	mi	hermanito.

But once the English sentence is put in the double object *My dad told my little brother stories,* as we have discussed, the preposition is dropped. This is not possible given that in Spanish it obligatorily marks the dative case. We thus follow Demonte (1995) and Cuervo (2003) in that the double clitic using *le* is the Spanish double object, as shown below:

Standard	Mi papá contó cuentos <u>a mi hermanito</u>.
"Double Object"	Mi papá <u>le</u> contó cuentos <u>a mi hermanito</u> .

The third diathesis that is analyzed in this study is the passive voice alternation. Passive voice is utilized when the agent of the event is either unknown or masked for specific purposes (Valenzuela Manzanares, 2002). It promotes the direct object to the subject position, retaining the thematic role it serves as, and promotes the indirect object to direct object, either in the periphery or core. For example:

She bought a toy for her daughter → A toy was bought for her daughter.

Standard   Passive

As we may see, the agent *she* has disappeared and the direct object *a toy* is brought to the front of the sentence. This diathesis may look as the following

Passive:

SUBJECT + VERB + DIRECT OBJECT

The nuclear structure looks like table structure 9:

Table 9.

Core		Periphery
A toy	was bought	for her daughter
Un juguete	fue comprado	a su hija
- *Subject* - *Theme*	- *Nucleus*	- *Direct Object* - *Benefactor*

It is possible to passivize the double object construction as well which we will call the double object passive construction. This diathesis promotes the indirect object to the subject position, and likewise with the passive diathesis, the agent is left unmentioned. Take for instance the following sentences:

The guard denied the prisoner a phone call. → The prisoner was denied a phone call.

Double object   Passive double object

The prisoner who is the canonical indirect object of the Standard sentence is brought to the subject position and the direct object *the phone call* becomes the direct object of the core clause.

The construction of the Passive Double Object is as such:

SUBJECT + VERB + DIRECT OBJECT

The nucleic structure follows in table 10:

Table 10.

Core		
Sofia	was given	the keys.
- *Subject* - *Benefactor*	- *Nucleus*	- *Direct Object* - *Theme*

Because we cannot create a dative alternation in Spanish, we make use of the *le* clitic to construct a Spanish double object passive voice as we did with the double object diathesis. Using the structure of the passive, we add the clitic to the sentence. Table 11 demonstrates this:

Table 11.

Core			
Las llaves	le	fueron dadas	a Sofía.
- Subject *- Theme*	*- Clitic*	*- Nucleus*	*-Direct Object* *- Benefactor*

2.3 Literature Review

The current literature on how diathesis affects the telicity of verbs is stretched thin with no locatable empirical research analyzing the phenomenon, for which this memoire exists. Most of the findings presented in this section have been based on tendencies and implicit judgments of aspect.

Krifka (2004) reports on the semantic difference between the prepositional object construction (the standard) and the double object construction by presenting the examples 22 and 23:

> (22) Ann gave the car to Beth.

> (23) Ann gave Beth the car.   (Krifka, 2004)

It is commonly perceived that sentence 16 involves a more affected indirect object, meaning that the object is more involved or impacted in the act. It is comprehended that in 16 Beth was caused by Ann to have the car whereas in 15, it is suggested that the car was directed by Ann to go to the possession of Beth. The logical semantics for the standard sentence and the double object sentence are as followed in structures 24 and 25 respectively:

26

(24) [$_{EVENT}$ *give* [*Ann the car* [$_{EVENT}$ GO *the car* [$_{PATH}$ *to* [$_{PLACE}$ *Beth*]]]]]

(25) [$_{EVENT}$ *give* [*Ann Beth* [$_{STATE}$ HAVE *Beth the car*]]]   (Krifka, 2004)

As reported by Demonte (1995), the same sort of affectedness can be seen in the Spanish double object sentences where the clitic is doubled causing the indirect object in 26 to be more affected as opposed to a non-clitic doubling case of 27:

(26) Ann le dio el coche a Beth.

(27) Ann dio el coche a Beth.

Demonte states that in a case such as 26, Beth has more of an important role to fulfill in the transfer of possession than she does in 29.

This higher degree of affectedness, according to Krifka (2004), yields a telic reading. Take for instance the following sentences 30 and 31:

(30) Mary taught French to the children.

(31) Mary taught the children French.

Like example 22, 30 suggests the indirect object *the children* are more affected than in 31. Sentence 30 implies a higher degree of mastery or completion whereas in 31, there is no implication that French was fully learned. This completed notion causes a telic reading, demonstrated with temporally modified sentences 32 and 33:

(32) Mary taught French to the children for a year/?in a year.

(33) Mary taught the children French in a year/?for a year.

In English, this seems to have historical validity. Van Gelderen (2018) states that in Old English, the double object construction was interpreted as telic while the standard construction was durative. This was the case until Middle English, where the aspect seemed to shift from the

construction of the sentence to the verb's semantics itself. This counter argument was supported by Hovan & Levin (2008) that telicity is unaffected by diathesis and depends on the verb alone.

Spanish telicity, however, has been reported to be much more influenced by lexical components of syntactic structures. Von Heusinger & Kaiser (2007) report that the individuating preposition *a* yields a telic reading, supported by the fact that any inherently telic transitive verb will appear with *a* such as the verbal phrase *insultar a alguien.* This notion is substantiated by Bosque (1999) who compares the sentences 34 and 35:

(34) Besaron un niño.

(35) Besaron a un niño.

Bosque expresses that the lack of the preposition *a,* which denotes specificity, on the direct object renders sentence 35 atelic while 34 is read as telic.

On another note, Cepeda (2000) states that the clitic *se* inherently carries a telic reading to the verbs that it attaches to, apparent by sentences 36 and 37 which differ in telicity:

(36) Mi hermano leyó un libro.

(37) Mi hermano se leyó un libro.   (Cepeda, 2000)

The reading of 36, reported by Cepeda, is that the verb *read* is an activity whereas in 37 the reflexive clitic shifts *read* to that of an accomplishment. This notion is corroborated by MacDonald & Huidobro (2010), adding that the telicity is affected only when *se* is a referent of a core argument, and the same is said for the prepositional core argument in English. Thus, there may be differences in readings of optionally ditransitive verbs and obligatorily ditransitive verbs.

In summation, the degree of affectedness that is denoted by double object structures correlates with telic readings in both Spanish and English, thus we may hypothesize that telic readings will be permitted mostly by the double object construction.

2.4 Research Questions and Hypotheses

The research question is as follows:

What is the relationship between the changes to the syntactic construction of ditransitive verbs and the telicity of the verb in question in both Spanish and English? Do these two languages behave similarly in this domain?

Following the literature review, it is hypothesized that Spanish and English will behave similarly in the parallel constructions. Sentences with double object constructions (dative alternation in English and clitic doubling in Spanish) will be read as telic. Sentences with an object headed by a preposition or without clitic doubling will be read as atelic.

3. The Study

3.1 Participants

The experimental task was administered using the online Gorilla platform. Participants were recruited through social media posts and word-of-mouth from other participants. The biodata data was obtained from a background questionnaire given before the experimental task. They were asked their names, ages, places of residence, education levels, and proficiency levels in Spanish and/or English. The details are listed in Appendix II.

The average age of all participants was 50 years old, with ages ranging between 22 and 74 years. Spanish speaking participants majorly hailed from Madrid and Andalusia, Spain with a few from Ontario, Canada. English speaking participants hailed from Los Angeles and Orange County, California, Northern Utah, and Ontario, Canada. On average, all participants had some higher-level education, most having completed their undergraduate degree, and a few earned their Master's and Doctoral degrees.

Overall, 35 participants completed the English experimental task and 10 participants completed the Spanish task.

3.2 Elicitation Task

The participants were given a forced-choice sentence completion task. Shown a series of sentences, they were asked to choose between two time-adverbials: the *to*-adverbial and *for*-adverbial for English, and the *en*-adverbial and *por*-adverbial for Spanish. Examples 38 and 39 demonstrates the procedure for English and Spanish respectively:

(38) José passed the football to Harold…

    (a) for an hour.

(b) in an hour.

(39) José pasó el balón a Harold…

(c) por una hora.

(d) en una hora.

An image taken directly of the elicitation task is provided below in Image I:

The hiker was sold shoes

for less than
an hour.

in less than
an hour.
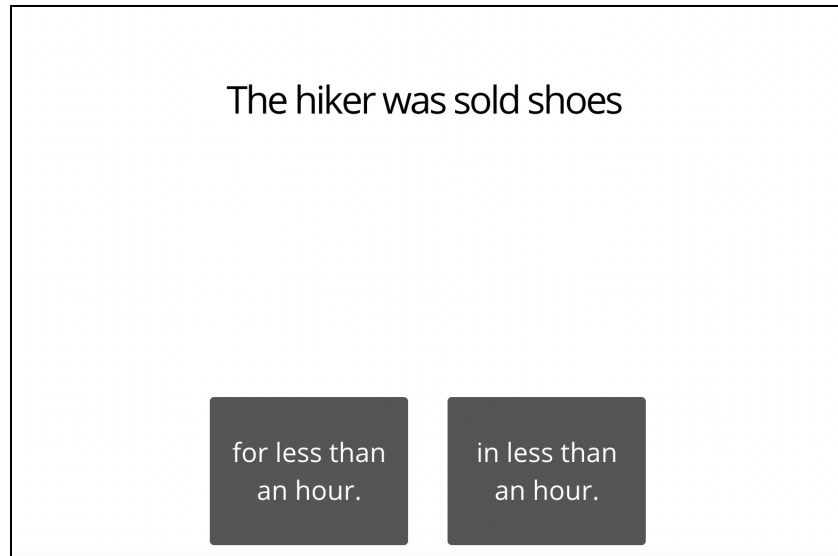
Image I. Example of experimental prompt

The sentences were shown in a randomized order from participant to participant. As well, the time adverbials were randomized as to which side they appeared on for each sentence.

We created 64 English sentences and 64 parallel Spanish sentences. The four syntactic structures discussed earlier were constructed for each verb: the Standard, Double Object, Passive, and PassiveDouble Object. Each verb was presented in all structures in both past and present tense. All stimuli can be found in Appendix I. A breakdown of the stimuli for the verb *to give* follows in table 12:

Table 12.

Stimuli breakdown for the verb 'to give'

Verb: *to give*	*Past*		*Present*	
Standard	Harry gave a cake to Timmy.	Hugo dio un pastel a Leo.	The passenger gives his ticket to the conductor.	El pasajero da su billete al conductor.
Double Object	Mary gave John the ticket.	María le dio el billete a Juan.	He gives his sister a candy bar.	Juan le da un caramelo a su hermana.
Passive	The coffee was given to your friend.	El café fue dado a su amigo.	A phone is given to the child.	Un móvil es dado al adolescente
Double Object Passive	The minister was given the flag.	La bandera le fue dada al ministro.	The patron is given his beer.	La cerveza le es dada al cliente.

3.4 Results & Data Analysis

In the experiment, we analyzed how the syntactic construction of a sentence with regard to object placement changes the lexical aspect of the verb. Our data, in short, yielded no pattern. All four diatheses wavered near chance percentages in both Spanish and English, with no correlating evidence between any analyzed domains. A summary of the results are shown in Table 13:

Table 13.

Overall average of choice for atelic for-adverbials

	Average Choice for English *for*	Average Choice for Spanish *por*
Standard	68.03%	53.75%
Double Object	64.39%	44.38%
Passive	49.11%	43.13%

Double Object Passive	52.68%	39.38%

In the English past tense, participants chose an atelic adverbial (e.g. *for an hour*) about 75% of the time for the standard constructions, 57% for double object structures, 45% for passive structures, and 50% for double object passive structures. For Spanish past tense sentences, atelic choice drops to 52% for standard, 42% for double object, 39% for passive, and 37% for passive double object. These numbers do not support the hypothesis that double object structures would be telic and prepositional structures would be atelic.

The present tense of verbs also do not yield any strong tendency aside from the double object construction. For English, the standard structures yielded 61% for atelicity, 72% for double object structures, 53% for passive, and 56% for passive double objects. The double object rise to 72% may have been significant had the passive double object mirrored this, however, because the two resulted in a wide margin, this could be simply from chance. Otherwise, the present double object sentences were somehow processed differently from all other diatheses. Spanish had clear differences in the data, with 55% of standard structures being deemed atelic, 46% for double object, 47% for passive, and 41% for double object passive.

Next, the obligatorily ditransitive verbs were compared to the optionally ditransitive verbs, and they also did not prove any reasonable affectedness. Obligatory verbs in English showed 65% of atelic readings for standard sentences, 52% for double object, 45% for passive, and 52% for double object passive. Spanish seemed to prefer, across the board, telic responses, however because they do not stray too far from chance, they are also not a clear indication of the telic/atelic dichotomy. The data showed 42% of standard sentences being atelic, 40% for double object, 39% for passive, and 36% for double object passive.

And finally for the optionally ditransitive verbs, English preferred atelic readings for both non-passive sentences, though this seems to only be a tendency. 70% reported atelicity for the standard and 76% for double object. This is, however, uncorroborated by the previous data and thus might not be indicative of much more than having been influenced by the verbal choice. 52% responded with atelicity for passive sentences and also 52% for passive double objects. Spanish data was also just as insignificant with the standard yielding 65% of atelic responses, 48% for double object, 47% for passive, and 42% for passive double object.

It is notable in English that the only diatheses that presented a slightly stronger tendency for atelic readings were the active (or non-passive) sentences. The standard sentences in past tense, the double object in present tense, and the optionally ditransitive sentences in both the past and present. Furthermore, Spanish presented a tendency for passive sentences to prefer telic adverbials (e.g. *en dos horas*) seen majorly in the past tense sentences and obligatory ditransitive sentences. This might indicate that there exists a contrast between active and passive voice in regards to how telicity is processed. The passive sentences constructed with *to be* or *ser* could fall into the category of inchoatives, previously mentioned in Section II given that they are causatives involving states of being. It could be that Cuervo's (2003) event introducer *vGO +vBE* has a strong preference for telic readings. But the relatively stable data for Spanish could be due to the lack of a traditional Double Object construction

Looking at this data, it is hard to conclude that diathesis has a major influence on the lexical aspect of verbs no matter the quality of the verb. Hovan & Levin (2008) stated that the lexical semantics of a verb are solely reliant on the verb itself, and these results seem to support that conclusion. Table 14 & 15 is a data summary of the atelic response across all domains of the verbs analyzed with notable results bolded:

Table 14.

Average atelic responses for each domain in English

	Past	*Present*	*Obligatory*	*Optional*
Standard	**74.64%**	61.43%	65.71%	**70.36%**
Double Object	56.99%	**71.78%**	52.35%	**76.43%**
Passive	44.64%	53.57%	45.71%	52.50%
Double Object Passive	49.64%	55.71%	52.86%	52.50%

Table 15.

Average atelic responses for each domain in Spanish

	Past	*Present*	*Obligatory*	*Optional*
Standard	52.50%	55.00%	42.50%	65.00%
Double Object	42.50%	46.25%	40.00%	48.75%
Passive	**38.75%**	47.50%	**38.75%**	47.50%
Double Object Passive	**37.50%**	41.25%	**36.25%**	42.50%

It was hypothesized that the double object constructions both active and passive would prefer telic readings based on the current literature. This would mean that the aktionsart of the verb would shift from an atelic classification to atelic one when the indirect object was promoted in the sentence to a direct object. Looking at the individual verbs themselves, there is no evidence that this is the case. Some verbs preferred the one specific reading in every construction and some were left to chance. This must mean that these two domains of syntax and semantics are independent of each other.

Table 16, 17, 18 & 19 offer the percentages of atelic readings for each verb analyzed in the experimental task.

Table 16.

Atelic response percentages for obligatory verbs in English

	give		pass		hand		lend	
	Past	*Present*	*Past*	*Present*	*Past*	*Present*	*Past*	*Present*
Standard	48.57%	5.71%	91.42%	31.43%	71.42%	85.71%	94.28%	97.14%
Double Object	51.42%	54.28%	5.71%	65.71%	41.67%	8.57%	97.14%	94.28%
Passive	40.00%	88.57%	8.57%	17.14%	17.14%	25.71%	88.57%	80%
Double Object Passive	31.43%	0%	8.57%	54.28%	91.43%	40%	97.14%	100%

Table 17.

Atelic response percentages for optional verbs in English

	sell		send		lease		teach	
	Past	*Present*	*Past*	*Present*	*Past*	*Present*	*Past*	*Present*
Standard	77.14%	82.86%	37.14%	2.86%	100%	94.28%	77.14%	91.43%
Double Object	54.28%	91.43%	14.29%	82.86%	100%	100%	91.43%	77.14%
Passive	8.57%	11.42%	2.86%	11.43%	100%	100%	91.43%	94.28%
Double Object Passive	2.86%	14.29%	34.28%	65.71%	100%	94.28%	31.43%	77.14%

Table 18.

Atelic response percentages for obligatory verbs in Spanish

	dar		*pasar*		*entregar*		*prestar*	
	Past	*Present*	*Past*	*Present*	*Past*	*Present*	*Past*	*Present*
Standard	20.00%	20.00%	20.00%	30.00%	30.00%	40.00%	90.00%	90.00%
Double Object	30.00%	0.00%	30.00%	40.00%	10.00%	10.00%	100%	100%
Passive	10.00%	60.00%	20.00%	40.00%	0.00%	10.00%	90.00%	80.00%
Double Object Passive	20.00%	0.00%	20.00%	30.00%	50.00%	10.00%	80.00%	80.00%

Table 19.

Atelic response percentages for optional verbs in Spanish

	vender		*enviar*		*alquilar*		*enseñar*	
	Past	*Present*	*Past*	*Present*	*Past*	*Present*	*Past*	*Present*
Standard	70.00%	70.00%	20.00%	20.00%	90.00%	90.00%	80.00%	80.00%
Double Object	10.00%	50.00%	10.00%	40.00%	80.00%	90.00%	70.00%	40.00%
Passive	30.00%	10.00%	0.00%	10.00%	100%	100%	60.00%	70.00%
Double Object Passive	10.00%	20.00%	10.00%	40.00%	90.00%	90.00%	20.00%	60.00%

From these tables, we can see that the verbs were assigned telicity independently from the diatheses or tense they were assigned. Verbs such as *lend/prestar, lease/alquilar* and *teach/enseñar* were overwhelmingly read as atelic in all four constructions and two tenses whereas verbs such as *enviar* and *entregar* were majorly read as telic in all domains. Most verbs

had varying responses that we have concluded do not pattern in any certain way, thus the conclusion is that the domains of syntax and semantics in this specific manner do not function together.

4. Conclusion

This memoire analyzed the under-studied relationship between object construction and verbal telicity. We asked if diathesis had an effect on telicity of ditransitive verbs, hypothesizing that sentences with double object constructions would be read as telic while the prepositional object constructions would be read as atelic. Overall, this was unsupported by the experimental task administered.

The experimental variables included in this study pertained to how the nucleic verb was presented. There were the four diathesis constructions and two tenses in which the sentences were presented. While English's dative alternation could not be explicitly duplicated in Spanish, we followed assertions from literature that the double clitic acted in a similar fashion to this phenomenon in English. Though, they both proved to be unaffected by variables we examined.

Vendler's verb classifications of state, activity, achievement, semelfactive and accomplishment were thoroughly detailed as well as Cuervo's event introducers *vGO, vBE, & vDO*. These are concluded to be independent from the information that was covered in the syntactic background about constructions of ditransitive verbs which warrant three thematic roles assignments to their nouns.

Further experimentation with a larger participant count may be advisable. The low number may have jeopardized the possibility of getting stronger percentages, however results may be predicted to even out closer to chance probability. Moreover, the issue of the adverbial choice may need reconsidering. In some cases, both the telic and atelic adverbial could be assigned to a single sentence. This may explain why the average percentages wavered near chance as much as they did. A clearer depiction of telicity/atelicity could be found in order to make the choice much more clear.

References

Bosque, I. (1999). Gramática descriptiva de la lengua española: Las construcciones sintácticas fundamentales. Relaciones temporales, aspectuales y modales (Vol. 2). *Espasa*.

Camacho, J. (2017). *Introducción a la sintaxis del español.* Cambridge University Press.

Cepeda, S. G. S. (2000). L2 acquisition of Spanish telic se constructions. University of North Texas.

Chomsky, N. (1981). On the Representation of Form and Function. , 1(1), 3-40.

Coppock, E. (2020). *Lecture 5: Aspect* [PowerPoint Slides]. Retrieved from Boston University LX 331 Blackboard.

Cuervo, M.C. (2003). *Datives at large*. Thesis (Ph. D.)–Massachusetts Institute of Technology, Dept. of Linguistics and Philosophy, 2003.

Demonte, V. (1995). Dative alternation in Spanish. *Probus, 7*(1), 5–30.

Haegeman, L.M.V., & Guéron, J. (1999). *English grammar : a generative perspective*. Blackwell Publishers.

Hovan, M. R., & Levin, B. (2008). The English dative alternation: The case for verb sensitivity. *Journal of linguistics*, 129-167.

Krifka, M. (2004). Semantic and pragmatic conditions for the dative alternation. *Korean Journal of English Language and Linguistics, 4*(1), 1-31.

MacDonald, J. E., & Huidobro, S. (2010). The lack of Spanish non-argumental clitic doubling. *Selected Proceedings of the 12th Hispanic Linguistics Symposium.* Somerville (MA), Cascadilla (pp. 50-62)

Moens, M. & Steedman, M. (1988). Temporal Ontology and Temporal Reference. *Computational Linguistics - Association for Computational Linguistics*, *14*(2), 15–28.

Salanova, A. (2021). *Syntax I: Diathesis and case agreement* [Word Document]. Retrieved from University of Ottawa LIN 5317 Brightspace.

Schreiner, S. (2014) The syntax–semantics/pragmatics interface. *In The Routledge Handbook of Syntax (pp. 325–339)*. Routledge. https://doi.org/10.4324/9781315796604-25

Tesnière, L., Osborne, T. J., & Kahane, S. (2015). *Elements of structural syntax* (Tesnieř̀e, Ed.; Osborne & S. Kahane, Trans.). John Benjamins Publishing Company.

Valenzuela Manzanares, J. (2002) *Lingüística contrastiva inglés-español: una visión general.* In Cognitive Linguistics Bibliography (CogBib). Berlin, Boston: De Gruyter Mouton.

Van Gelderen, E. (2018). Ditransitives. *The Diachrony of Verb Meaning* (1st ed., pp. 194–219). Routledge.

Van Valin, R. (2005). *Exploring the syntax-semantics interface*. Cambridge University Press.

Vendler, Z. (1967). *Linguistics in philosophy.* Cornell University Press.

Von Heusinger, K., & Kaiser, G. A. (2007, July). Differential object marking and the lexical semantics of verbs in Spanish. *Proceedings of the workshop definiteness, specificity and animacy in Ibero-Romance languages* (pp. 85-110).

Appendix I

Stimuli

I. English Obligatory Ditransitive

Construction	Sentence	Option 1	Option 2
Standard	Harry gave a cake to Timmy	for a minute.	in a minute.
Double Object	Mary gave John the ticket	for a minute.	in a minute.
Passive	The coffee was given to your friend	for a second.	in a second.
Passive Double Object	The minister was given the flag	for under five minutes.	in under five minutes.

Construction	Sentence	Option 1	Option 2
Standard	The passenger gives his ticket to the conductor	for under a minute.	in under a month.
Double Object	John gives his sister a candy bar	for a second.	in a second.
Passive	A cell phone is given to the adolescent	for a month.	in a month.
Passive Double Object	The patron is given his beer	for less than a minute.	in less than a minute.

Construction	Sentence	Option 1	Option 2
Standard	Joe passed the football to Harold	for a minute.	in a minute.
Double Object	Calvin passed Susie a note	for under a minute.	in under a minute.
Passive	The salt was passed to Juan	for under a minute.	in under a minute.
Passive Double Object	Karen was passed the keys	for under a second.	in under a second.

Construction	Sentence	Option 1	Option 2
Standard	Linda passes pepper to her mother	for half a minute.	in half a minute.
Double Object	Jacob passes his dad a program	for a second.	in a second.
Passive	The program is passed to the audience	for less than an hour.	in less than an hour.
Passive Double Object	The customer is passed a menu	for a second.	in a second.

Construction	Sentence	Option 1	Option 2
Standard	Kim handed the ball to my friend	for a minute.	in a minute.
Double Object	Al handed Steve a soda	for a minute.	in a minute.
Passive	A coin was handed to the children	for under a minute.	in under a minute.

Passive Double Object	The girl was handed a frisbee	for under a minute.	in under a minute.

Standard	The child hands a ball to his dad	for a minute.	in a minute.
Double Object	Your dad hands your friend a banana	for under a minute.	in under a minute.
Passive	An egg is handed to her aunt	for less than thirty minutes.	in less than thirty minutes.
Passive Double Object	The swimmer is handed the prize	for a second.	in a second.

Standard	Ann lent a doll to her friend	for a day.	in a day.
Double Object	The man lent his son the car	for a week.	in a week.
Passive	Money was lent to Joe	for a week.	in a week.
Passive Double Object	Paul was lent a watch	for five days.	in five days.

Standard	Joann lends her computer to Becca	for a month.	in a month.
Double Object	The farmer lends neighbour three hens	for three weeks.	in three weeks.
Passive	A dollar is lent to my little sister	for a week.	in a week.
Passive Double Object	The man is lent a boat	for a month.	in a month.

II. English Optional Ditransitive

Standard	Maria sold apples to the customers	for a month.	in a month.
Double Object	I sold my friend stamps	for a week.	in a week.
Passive	The car was sold to Peter	for under a week.	in under a week.
Passive Double Object	The hiker was sold shoes	for less than an hour.	in less than an hour.

Standard	Bessie sells pies to neighbors	for two months.	in two months.
Double Object	The blacksmith sells the villagers horseshoes	for a year.	in a year.
Passive	A heater is sold to Kevin	for under a week.	in under a week.
Passive Double Object	A seamstress is sold a machine	for less than a day.	in less than a day.

Standard	Andrea sent a postcard to her friends	for a week.	in a week.
Double Object	Isabel sent her cousin a present	for a day.	in a day.
Passive	A file was sent to the office	for less than a week.	in less than a week.
Passive Double Object	My boss was sent a gift	for a week.	in a week.

Standard	Sofia sends a card to her mother	for under a day.	in under a day.
Double Object	Camila sends her kids candy	for a week.	in a week.
Passive	A box is sent to Valentina	for less than a week.	in less than a week.
Passive Double Object	Diego is sent some money	for a month.	in a month.

Standard	The landlord leased the apartment to the couple	for a year.	in a year.
Double Object	The bank owner leased the man office space	for less than a year.	in less than a year.
Passive	A car was leased to my uncle	for a month.	in a month.
Passive Double Object	My father was leased the house	for a year.	in a year.

Standard	Elise leases her apartment to students	for a year.	in a year.
Double Object	Samuel leases his customers cars	for six months.	in six months.
Passive	The house is leased to the owners	for a year.	in a year.
Passive Double Object	Sara is leased the two apartments	and it done for half a year.	in half a year.

Standard	Maria taught Spanish to the children	for a month.	in a month.
Double Object	Alex taught the students French	for a semester.	in a semester.
Passive	Algebra was taught to the kids	for six months.	in six months.
Passive Double Object	The students were taught Calculus	for under a year.	in under a year.

Standard	Stacy teaches German to her kids	for a semester.	in a semester.
Double Object	Sandra teaches her friends Chinese	for a year.	in a year.

Passive	History is taught to our students	for half a year.	in half a year.
Passive Double Object	My cousin is taught math	for a month.	in a month.

III.   Spanish Obligatory Ditransitive

Construction	Sentence	Option 1	Option 2
Standard	Hugo dio un pastel a Leo	por un minuto.	en un minuto.
Double Clitic	María le dio el billete a Juan	por un minuto.	en un minuto.
Passive	El café fue dado a su amigo	por un segundo.	en un segundo.
Passive Doubled Clitic	La bandera le fue dado al ministro	por menos de cinco minutos.	en menos de cinco minutos.

Standard	El pasajero da su billete al conductor	por menos de un minuto.	en menos de un mes.
Double Clitic	Juan le da un caramelo a su hermana	por un segundo.	en un segundo.
Passive	Un móvil es dado al adolescente	por un mes.	en un mes.
Passive Doubled Clitic	La cerveza le es dada al cliente	por menos de un minuto.	en menos de un minuto.

Standard	José pasó el balón a Horacio	por un minuto.	en un minuto.
Double Clitic	Martin le pasó una nota a Lucía	por menos de un minuto.	en menos de un minuto.
Passive	La sal fue pasada a Juan	por menos de un minuto.	en menos de un minuto.
Passive Doubled Clitic	Las llaves le fueron dado a Sofía	por menos de un segundo.	en menos de un segundo.

Standard	Linda pasa la pimienta a su madre	por medio minuto.	en medio minuto.
Double Clitic	Adrian le pasa el programa a su padre	por un segundo.	en un segundo.
Passive	El programa es pasado a los asistentes	por menos de un minuto.	en menos de un minuto.
Passive Doubled Clitic	El menú le es pasado al cliente	por un segundo.	en un segundo.

Standard	Martina entregó el balón a mi amigo	por un minuto.	en un minuto.
Double Clitic	Alicia le entregó un refresco a Esteban	por un minuto.	en un minuto.
Passive	Una moneda fue entregada a los niños	por menos de un minuto.	en menos de un minuto.

Passive Doubled Clitic	El frisbi le fue entregado a la niña	por una hora.	en una hora.

Standard	El niño entrega un balón a su padre	por un minuto.	en un minuto.
Double Clitic	Tu padre le entrega un plátano a su amigo	por menos de un minuto.	en menos de un minuto.
Passive	Un huevo es entregado a su tía	por menos de treinta minutos.	en menos de treinta minutos.
Passive Doubled Clitic	Un documento le es entregado al juez	por un segundo.	en un segundo.

Standard	Ana prestó una muñeca a su amiga	por un día.	en un día.
Double Clitic	El hombre le prestó el coche a su hijo	por una semana.	en una semana.
Passive	El dinero fue prestado a Joe	por una semana.	en una semana.
Passive Doubled Clitic	Un reloj le fue prestado a Daniel	por cinco días.	en cinco días.

Standard	Alejandro presta el ordenador a Carla	por un mes.	en un mes.
Double Clitic	El granjero le presta tres gallinas a su vecino	por tres semanas.	en tres semanas.
Passive	Un dólar es prestado a mi hermanita	por una semana.	en una semana.
Passive Doubled Clitic	Un barco le es prestado a ese hombre	por un mes.	en un mes.

IV.   Spanish Optional Ditransitive

Standard	Maria vendió manzanas a los compradores	por un mes.	en un mes.
Double Clitic	Mi hermano le vendió sellos a mi amigo	por una semana.	en una semana.
Passive	El coche fue vendido a Enzo	por menos de una semana.	en menos de una semana.
Passive Doubled Clitic	Unos zapatos le fueron vendido al montañero	por menos de un minuto.	en menos de un minuto.

Standard	Carmen vende tartas a sus vecinos	por dos meses.	en dos meses.
Double Clitic	El herrero les vende herraduras a los	por un año.	en un año.

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Passive	Un calentador es vendido a Oliver	por menos de una semana.	en menos de una semana.
Passive Doubled Clitic	Una máquina le es vendida a la costurera	por menos de un día.	en menos de un día.

Standard	Andrea envió una tarjeta postal a sus amigos	por una semana.	en una semana.
Double Clitic	Isabel le envió un regalo a su prima	por un día.	en un día.
Passive	Un archivo fue enviado a la oficina	por menos de una semana.	en menos de una semana.
Passive Doubled Clitic	Un regalo le fue enviado a mi jefe	por una semana.	en una semana.

Standard	Sofía envía una carta a su madre	por menos de un día.	en menos de un día.
Double Clitic	Camila le envía caramelos a su hija	por una semana.	en una semana.
Passive	Una caja es enviada a Valentina	por menos de una semana.	en menos de una semana.
Passive Doubled Clitic	Dinero le es enviado a Diego	por un mes.	en un mes.

Standard	El propietario alquiló el apartamento a la pareja	por un año.	en un año.
Double Clitic	El banco le alquiló al hombre una oficina	por menos de un año.	en menos de un año.
Passive	Un coche fue alquilado a mi tío	por un mes.	en un mes.
Passive Doubled Clitic	La casa le fue alquilada a mi padre	por un año.	en un año.

Standard	Elisa alquila su apartamento a estudiantes	por un año.	en un año.
Double Clitic	Samuel le alquila coches a su cliente	por seis meses.	en seis meses.
Passive	La casa es alquilada a los vecinos	por un año.	en un año.
Passive Doubled Clitic	Dos apartamentos le son alquilados a Sara	por medio año.	en medio año.

Standard	Paula enseñó español a los niños	por un mes.	en un mes.
Double Clitic	Alex le enseñó francés a la estudiante	por un semestre.	en un semestre.

Passive	El álgebra fue enseñada a los niños	por seis meses.	en seis meses.
Passive Doubled Clitic	Cálculo le fue enseñado al alumno	por menos de un año.	en menos de un año.

Standard	Lola enseña alemán a sus niños	por un semestre.	en un semestre.
Double Clitic	Alba le enseña chino a su amiga	por un año.	en un año.
Passive	La historia es enseñada a nuestros estudiantes	por medio año.	en medio año.
Passive Doubled Clitic	Matemáticas le es enseñado a mi primo	por un mes.	en un mes.

Appendix II

Participant Data

Place of Residence	Highest Level of Education	Age
Madrid, Spain	Doctoral degree / Doctorado	44
Granada, Spain	Some college / Un poco de universidad	51
Nepean, ON	Graduate degree / Máster	67
Allston, MA	Undergraduate degree / universidad diplomatura	23
Ottawa, ON	Undergraduate degree / universidad diplomatura	74
Granada, Spain	Doctoral degree / Doctorado	48
Duchesne, UT	Undergraduate degree / universidad diplomatura	54
Salt Lake City, UT	Undergraduate degree / universidad diplomatura	57
Chic, CA	Undergraduate degree / universidad diplomatura	70
South Jordan, UT	Graduate degree / Máster	26
Whittier, CA	Undergraduate degree / universidad diplomatura	68
Brigham City, Utah	Some college / Un poco de universidad	52
Irvine, California	Undergraduate degree / universidad diplomatura	23
Latrobe, Pennsylvania	Undergraduate degree / universidad diplomatura	24
Duchesne, Utah	Some graduate school / Un poco de escuela graduada	56
Paradise, Utah	Graduate degree / Máster	60
Diamondville, UT	Some college / Un poco de universidad	61
South Jordan, UT	Graduate degree / Máster	30

La Habra Heights, CA	Graduate degree / Máster	73
Bell Gardens, CA	Some college / Un poco de universidad	49
Torrance, CA	Some college / Un poco de universidad	58
Filer, Idaho	Undergraduate degree / universidad diplomatura	55
Brigham, Utah	Some college / Un poco de universidad	60
La Habra Heights, CA	High school / la escuela secundaria	37
Salt Lake City, UT	Some college / Un poco de universidad	24
Salt Lake City, UT	Some college / Un poco de universidad	51
Latrobe Pennsylvania	Some college / Un poco de universidad	25
Fullerton, CA	Graduate degree / Máster	55
Long Beach, CA	Some college / Un poco de universidad	61
Myton, utah	Some graduate school / Un poco de escuela graduada	62
Fullerton, CA	Undergraduate degree / universidad diplomatura	57
Salt Lake City, UT	Some college / Un poco de universidad	22
La Habra Heights,CA	Undergraduate degree / universidad diplomatura	60
Whittier, CA	Graduate degree / Máster	50
Fullerton, CA	Some college / Un poco de universidad	70