Judgment Types and the Structure of Causatives

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Abstract: This paper examines two types of causative construction in Spanish, referred to here as *hacer₁* and *hacer₂* constructions. Various properties of these constructions suggest that they should respectively be analyzed as involving ECM and object control. Notwithstanding, *hacer₂* constructions contrast with uncontroversial object control constructions in terms of the object status of the causee, the constituency of the embedded clause, and the interpretation of indefinites. To resolve this paradox, this paper proposes that the *hacer₁*/*hacer₂* distinction follows from a fundamental difference in judgment types, whereby the embedded clause of an *hacer₁* construction represents a THETIC judgment and that of *hacer₂* a CATEGORICAL judgment. This is of interest because this distinction is not usually discussed in the context of embedded clauses. I argue that putative control properties of *hacer₂* constructions are a consequence of the predication associated with categorical judgments. Furthermore, the interpretive correlates of the thetic/categorical distinction accounts for the interpretation of indefinite causees. In this way, it is possible to posit a single causative predicate, *hacer*, whose contrasting syntactic and semantic properties follow from the different realizations afforded by this contrast in judgment type.

1. Introduction: the Valence of Causative Predicates

Romance causatives have been the subject of intense research for the last twenty five years. As illustrated for Spanish in (1), these constructions consist of a causative predicate (*hacer* 'make'), a causee argument (*Pedro*), and an event argument (*[leer el libro]* '[read the book]'):

(1) Curro le *hizo* [leer el libro]$_{Event}$ *a Pedro*.

'Curro *made Pedro* [read the book]$_{Event}$.'

A long-standing controversy in the study of Romance causative constructions has to do with the valence of the causative predicate. At issue is whether the causative predicate is a two-place or a three-place predicate. Two interpretations of these positions, where the contrast is implemented as ECM versus object control, are illustrated in (2):[1]

(2) a. **2-place, ECM analysis:** *hacer* selects a sentential event only. *Hacer* exceptionally Case-marks the subject of the event argument.

b. **3-place, control analysis:** *hacer* selects both an NP causee and a sentential event. The causee controls the subject of the event argument.

A middle ground is proposed in Dorel 1980. She proposes that the French

causative predicate is ambiguous in its valence. Moore 1996 argues that Spanish

causatives should be analyzed in a similar manner; that is, *hacer* should be

lexically ambiguous as illustrated in (3).

(3)　　*hacer₁*　　Selects a sentential event

　　　　hacer₂　　Selects an NP causee and a sentential event

This approach provides a way to account for a number of alternations found in

Spanish causative constructions. With respect to *hacer₁* causatives, we find that

the causee tends to be post-infinitival, is encoded alternatively as a direct or

indirect object, and tends to be construed as undergoing INDIRECT CAUSATION.

Furthermore, *hacer₁* causatives exhibit various mono-clausal properties. These

phenomena are consistent with an analysis where *hacer₁* selects a VP

complement, and the causee is an exceptionally Case-marked, post-posed VP-

internal subject:[2]

(4)　　VP
　　　／＼
　　V　　　VP
hacer₁　／＼
　　　V′　　NP
　　　△　　CAUSEE
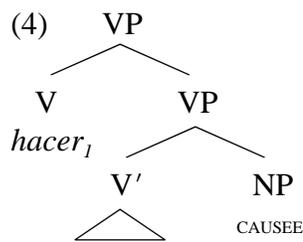
In contrast, *hacer₂* causatives favor a pre-infinitival causee that is encoded as a

direct object and is construed as directly affected by the causation. These

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constructions lack the mono-clausal properties associated with *hacer₁*. A bi-

clausal, direct object control analysis can account for these facts:

(5)　　　　VP

　　　V　NP$_i$　　IP

　　hacer₂ CAUSEE

　　　　　NP$_i$　　　V′

　　　　　PRO
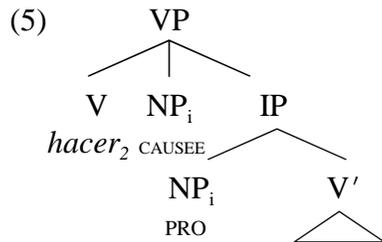
Hence, the strength of the analysis in (3) is that it factors these contrasting aspects

of Spanish causatives into a structural ambiguity that makes the correct

correlations with respect to subject position, Case-marking and clausality.

　　This success of (3) notwithstanding, such an account turns out to be

problematic for two reasons. First, as noted by Treviño 1992 and Farrell 1995,

there are systematic syntactic differences between causatives of the *hacer₂* variety

and other object control constructions.   Secondly, the approach in (3) runs into

trouble when faced with data presented in Mejías-Bikandi and Moore 1994. This

work notes that Diesing's 1992 Mapping Hypothesis is correctly able to predict

the quantificational force of indefinite causee arguments, depending on whether

the causee occurs VP-internally or VP-externally. A problem then arises when

this approach is combined with the analysis sketched in (3). Given the control

analysis of *hacer₂*, it would seem that the quantificational force of indefinite

causees in control, *hacer₂* constructions should be identical to the quantificational force found in other control constructions. This prediction is not borne out, showing yet another area where *hacer₂* causatives differ from object control constructions.

As an alternative to the analyses in (3), I propose that the *hacer₁*/*hacer₂* distinction follows from a fundamental difference in judgment type, whereby *hacer₁* constructions represent embedded THETIC judgment and *hacer₂* embedded CATEGORICAL judgments. Building on work by Kuroda (1972, 1995), Mejías-Bikandi (1993), and Ladusaw (1994), I propose that the syntactic and semantic differences between the two causative constructions is a consequence of the basic cognitive distinction in judgment type, as illustrated in (6):

   (6)   *hacer*   selects a reduced, VP-complement, thetic judgment ('*hacer₁*')

           -or-   selects a full, IP-complement, categorical judgment ('*hacer₂*')

The significance of this approach is that it provides another example of grammatical consequences of the thetic/categorical distinction. Furthermore, it makes crucial use of this distinction in embedded contexts; as far as I am aware, Mejías-Bikandi 1993, Lenci 1994, and Kuroda 1995 are the only other works that proposes that embedded clauses may contrast in this manner.

The paper will be structured as follows: section 2 will outline the basic

theory of judgment types as presented in Kuroda 1972, and as interpreted with

respect to Mapping Hypothesis effects in Mejías-Bikandi 1993, Ladusaw 1994,

and Kuroda 1995. This section will highlight aspects of this contrast in judgment

types that will be relevant to the *hacer$_1$/hacer$_2$* distinction. Section 3 will consider

the Spanish causative data in some detail, and show how the differences between

the two causative constructions can be attributed to contrasting judgment types.

Section 4 will examine how an analysis like that in (3) would handle the same

facts by positing a contrast between ECM and object control. Various problems

with this approach will be discussed. Section 5 concludes with a discussion of

how a contrast in judgment types extends to embedded infinitival clauses in

causative constructions, and how it interacts with the STAGE-INDIVIDUAL-LEVEL

distinction.

Throughout I will attempt to cast my analysis within a minimally articulated

syntactic framework. For concreteness I have represented mono- versus bi-

clausality as a contrast between VP- and IP-complements. As a point of

departure, I assume a *Barriers*-style phrase structure (Chomsky 1986).

Nevertheless, I do not believe that the points made here are crucially tied to this

mid-1980s GB tradition. Most, if not all, of my analysis could be cast in a number

of different frameworks. Crucially, some notion of mono- versus bi-clausality is

needed; this could be represented via CLAUSE REDUCTION as in a Relational

Grammar framework, as VP- versus V′- complements, as in Abeillé, Godard, and

Miller's 1994 HPSG approach, as a doubly headed VP as in Alsina's 1996 LFG

account, as AgpSP- versus VP-complements as in a post-Pollock Principles and

Parameters approach (cf. Guasti 1992), or as a difference in degree of tranparency

(cf. Langaker 1995). Hence, a theoretical distinction between mono- and bi-

clausal complement types is crucial, while the theoretical implementation could

be translated into any of these approaches. Also crucial to my account is the

possibility of two subject positions. Roughly following work in the tradition of

the VP-INTERNAL SUBJECT HYPOTHESIS (Zagona 1982, Kuroda 1988, Koopman

and Sportiche 1991, among others), I represent these as Spec of VP and Spec of

IP; however, this can be cached out in a number of ways, e.g., Spec of TP versus

Agr_SP (Bobalijk and Jonas 1996) or as a difference in profiling, as in Achard's

1996 Cognitive Grammar approach.   Again, what is important is that the data

imposes such a partition that motivates such a basic distinction.

2. The Thetic/Categorical Contrast

    Based on a 19th century philosophical tradition (cf. Marty 1918), Kuroda

(1972) proposes that grammatical phenomena may be keyed to contrasting

COGNITIVE ACTS; in particular, to the contrast between THETIC and CATEGORICAL

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judgments described in (7):

(7)　a. THETIC/SIMPLE JUDGMENT　　-　Recognition/perception of an event

(eventuality)

[_event There is a cat in the room]

b. CATEGORICAL/DOUBLE JUDGMENT -　Recognition/perception of an

individual (subject) as it is

involved in a proposition

[_proposition [_subj Three cats] are in the room]]

Note that while presentational-*there* constructions unambiguously represent

THETIC judgments, the example in (7b) could potentially represent either a thetic

or categorical judgment. Because thetic judgments represent the mere recognition

of an event, their linguistic expression may be called a DESCRIPTION. In contrast,

categorical judgments are expressed by a PREDICATION where the subject is

singled out. This singling out of the subject of categorical judgments itself

constitutes a cognitive act. Hence, categorical judgments are sometimes called

DOUBLE JUDGMENTS to express the idea that both the subject is recognized and the

subject is applied to a proposition in predication. Thetic judgments, on the other

hand, involve the mere recognition of an eventuality, and are, therefore, SIMPLE

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judgments. Kuroda's original work was instrumental in showing how this

contrast in judgment types has grammatical reflexes (e.g. *wa* versus *ga* in

Japanese). More recently, this distinction has been used to derive some of the

quantificational effects associated with Diesing's 1992 Mapping Hypothesis.

2.1 Tree Splitting

Diesing 1992 proposes a distinction that turns out to be very similar to the

THETIC/CATEGORICAL contrast. She proposes that the mapping between a

syntactic representation and its semantic representation is mediated by a tree-

splitting procedure, whereby the representation is divided into VP-internal and

VP-external material, as illustrated in (8):

(8)   TREE SPLITTING (Diesing 1992)

$$[_{IP} \quad NP \qquad [_{VP} ...]]$$

restrictive   nuclear
clause   scope
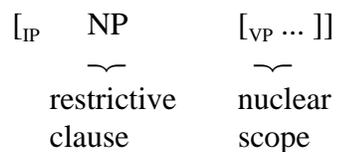
The MAPPING HYPOTHESIS in (9) determines what goes in the restrictive clause

and what goes in the nuclear scope.

(9)   MAPPING HYPOTHESIS:

Material from the VP is mapped into the nuclear scope.

Material external to the VP is mapped into a restrictive clause.

Diesing employs the Mapping Hypothesis to determine which indefinite nominals
receive a STRONG interpretation, and which receive a WEAK construal. The
weak/strong distinction follows Milsark 1974, where quantifiers are divided
according to their ability to occur in existential constructions:

(10) a.　　　There are *two firemen* in the firehouse.

　　　b.　　　There are *sm firemen* in the firehouse.

　　　c. *　There are *most firemen* in the firehouse.

Based on facts like these, cardinal numerals and *sm* can be classified as weak
determiners, while *most* is strong. It is possible to abstract away from the
particular determiners and treat NPs as strong or weak, depending on their
interpretation.   An NP modified by a strong determiner will be construed as a
strong NP, while one with a weak determiner is weak. The situation is a
complicated a bit by the fact that some NPs , such as bare plurals and those
modified by cardinal numerals, have both strong and weak construals. Thus, the
examples in (11) are ambiguous:

(11) a. *Firemen* are available.　　　*generic* or *existential*

　　　b. *Two firemen* are available.　　*partitive* or *cardinal*

Under the strong reading of *firemen* in (11a), the NP refers to the KIND 'firemen',
and is a generic statement about their availability. Under the weak interpretation

of *firemen*, (11a) asserts the existence of available firemen. The NP *two firemen* is similarly ambiguous in (11b). Under the strong construal, it refers to two out of a presupposed set of firemen (the partitive reading), while under the weak interpretation, it refers to the mere existence of two firemen.

In order to derive the effects in (10-11), Diesing makes a number assumptions about the syntactic representation and the level of representation relevant for the Mapping Hypothesis. In particular, she assumes the VP-Internal Subject Hypothesis (Zagona 1982, Kuroda 1988, Koopman and Sportiche 1991, among others). Under this hypothesis, subjects may originate inside the VP and move to the specifier of a higher functional projection. In English, it is normally assumed that all subjects occur in this higher position at S-structure for Case reasons. Hence, Diesing assumes, following May 1985, that some subjects may reconstruct to their D-structure positions. This requires that the Mapping Hypothesis apply after this reconstruction. Briefly, indefinite subjects that reconstruct to a VP-internal position will be mapped to the nuclear scope, and receive a weak interpretation (via existential closure), while those that remain in the higher position at LF are mapped to the restrictive clause and receive a strong interpretation. As illustrated in (12), the ambiguity of numerically quantified nominals is attributed to the structural ambiguity of the subject:

(12)   a. [$_{IP}$ [$_{VP}$ *Three cats* are in the room]].   Weak, cardinal

    b. [$_{IP}$ *Three cats* [$_{VP}$ are in the room]].   Strong, partitive

Ladusaw 1994 and Kuroda 1995 point out the parallels between Diesing's

tree splitting system and the thetic/categorical distinction. As summarized in (13),

a thetic judgment corresponds to a simple VP-clause, and a categorical judgment

corresponds to a bifurcated IP:

(13) a. THETIC (SIMPLE) JUDGMENT

    →   [$_{IP}$ [$_{VP}$ *Three cats* are in the room]].

    b. CATEGORICAL (DOUBLE) JUDGMENT

    →   [$_{IP}$ *Three cats* [$_{VP}$ are in the room]].

Ladusaw 1994 derives the weak/strong contrast from the thetic/categorical

distinction as a consequence of the assumptions in (14):

(14) a. THETIC JUDGMENT

    →   unselective existential closure over its subconstituents

    b. CATEGORICAL JUDGMENT

    → subject is first affirmed, then the property is applied to it

Unselective existential closure yields weak construals, whereas the affirmation of

the subject entails its presupposition, hence a strong construal. Both these

researchers suggest that the syntactic manifestations of these judgment types can

be along the lines proposed by Diesing; i.e., it can be cached out as a contrast in syntactic subject positions.

It is important to note that the derivation of Mapping Hypothesis effects via the thetic/categorical distinction does not preclude strongly quantified nominals in thetic judgments. This is because nominals with strong determiners will carry their own quantificational force, and will not be bound as the result of existential closure. Rather, the main prediction is that subjects of categorical judgments must be strong. This is due to the assumption that nominals that could be weak will be construed as strong due to the presupposition associated with the categorical judgment. Hence, the following possibilities obtain:

(15)   CATEGORICAL JUDGMENT $\rightarrow$ Strong subject, * Weak subject

     THETIC JUDGMENT $\rightarrow$ Weak or strong subject, depending on
                        the quantifier

2.2   Spanish Clause Structure

While the mapping between thetic/categorical judgments and different English clause structures must take place at a rather abstract level of representation, other languages seem to encode this distinction more directly. Mejías-Bikandi 1993 argues that the alternative word orders in Spanish encode the thetic/categorical distinction directly at S-structure. (16) illustrates verb-initial

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and subject-initial word orders:

(16) a. Jugaban *tres niños* en el patio.   VSX

    b. *Tres niños* jugaban en el patio.   SVX

      'Three kids played in the patio.'

Under the fairly standard analysis in (17), the word order alternation corresponds

to a contrast in the structural position of the subject (VP-internal in (17a) vs. VP-

external in (17b); (cf. Contreras 1991 and Suñer 1994)).[3]

(17) a. *VSX:*   IP   b. *SVX:*   IP

           I′   NP$_i$ I′
                       tres niños

      I$_k$ VP   I$_k$ VP
   jugaban   *jugaban*

       NP   V′   NP$_i$ V′
     tres niños   *e*

         V$_k$ PP   V$_k$ PP
         e   *e*
            en el patio   *en el patio*
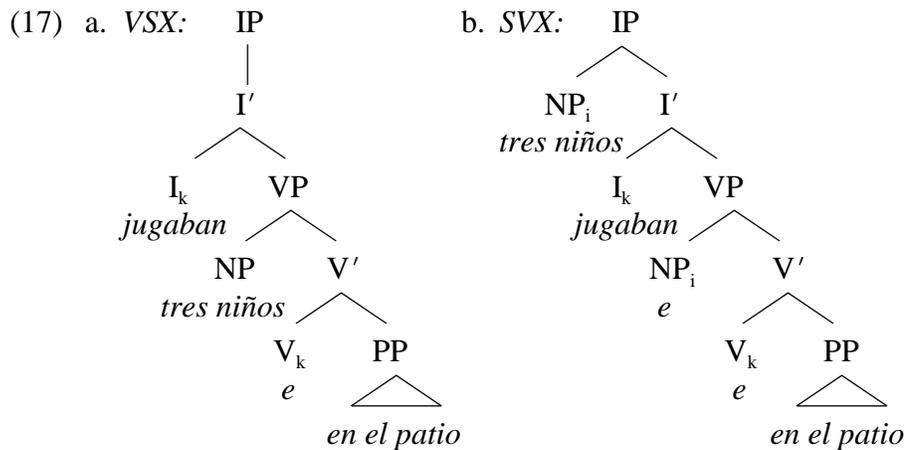
Mejías-Bikandi argues that different subject positions correspond to

different judgment types, as illustrated in (18):

(18) a. VSX → thetic judgment

    b. SVX → categorical judgment (usually)[4]

Support for his proposal comes from the Mapping Hypothesis effects illustrated in

(19-20):

(19) a. Jugaban *tres niñas* al truque.   Weak, cardinal

        'There were *three girls* playing hopscotch.'

     b. *Tres niñas* jugaban al truque.   Strong, partitive

        '*Three (of the) girls* played hopscotch.'

(20) a. Llega *un tren* al anden.   Weak, existential

        '*A train* (existential) arrives at the platform.'

     b. *Un tren$_i$* llega al anden.   Strong, generic

        '*A train* (generic) arrives at the platform.'

As mentioned above, the analysis of these alternative word orders as instantiating different judgment types does not preclude strongly quantified nominals from the VP-internal subject position. Thus, strong determiners such as *todos* 'all' and *cada* 'each' may modify post-verbal subjects, as in (21). The claim is that these examples, nevertheless, represent thetic judgments, all be they ones in which existential closure applies vacuously:

(22) a. Llegaban *todos los trenes* al mismo anden.

        '*All trains* arrived at the same platform.'

     b. Llegaba *cada niño* con una sorpresa diferente.

        '*Each child* arrived with a different surprise.'

Hence, there is evidence that the thetic/categorical distinction is directly encoded in the alternative subject positions of Spanish root clauses. Notice that these word orders crucially correspond to different subject positions, which in turn correlate with judgment types in exactly the manner described in Ladusaw 1994 and Kuroda 1995. In what follows, I will argue that the same contrast holds in the embedded clause of causative constructions.

2.3 Summary

To summarize, the basic distinctions between thetic and categorical judgments relevant to the present discussion are given in (23):

(23) THETIC JUDGMENTS:

- Are VPs at the appropriate level of representation.

- Involve the recognition of an event without singling out a subconstituent.

- Yield weak construals for indefinite subjects.

CATEGORICAL JUDGMENTS:

- Are IPs at the appropriate level of representation.

- Single out a subject that participates in a predication.

- Yield strong construals for indefinite subjects.

3. Thetic and Categorical Judgments in Spanish Causatives

This section will discuss aspects of Spanish causatives, with an aim to providing motivation for a distinction between causative constructions in terms of

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judgment types. While the labels *hacer₁* and *hacer₂* will be retained for expository

purposes, the goal is to posit a single two-place causative predicate that is able to

select either judgment type as its complement. In particular, I will argue for the

analysis diagramed in (24):

(24) a. VP   b.   VP

         V   VP   V   IP
      hacer₁   *hacer₂*

              V′   NP   NP   I′
                         CAUSEE   CAUSEE
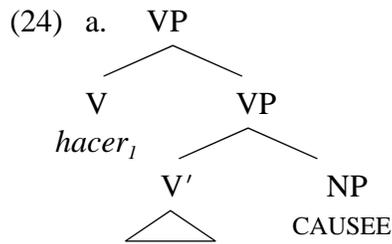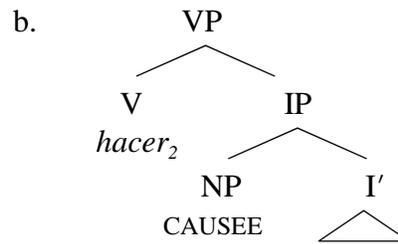
   embedded THETIC judgment   embedded CATEGORICAL judgment

The analysis in (24) is motivated by the following data: the position of the causee,

whether the constructions exhibit mono- or bi-clausal properties, the presence or

lack of selectional restrictions with respect to the causee, the directness of

causation, the Case-marking of the causee, and the interpretation of indefinite

causees. We will see that there is a crucial correlation between these dimensions

of causative constructions, and furthermore, the analysis in terms of judgment

types provides a means of deriving these effects in a unified manner. In

particular, it will be argued that these effects are the consequence of the aspects of

the different judgment types that are summarized above in (23).

3.1 Causee Position

　　With respect to the position of the causee, it is commonly assumed that overt

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causees must occur after the infinitival verb phrase:

(25) Pedro le hizo pagar los tragos *a un marinero*.   post-infinitival causee

'Pedro made *a sailor* pay for the drinks.'

However, in many dialects of Spanish the causee may also occur pre-infinitivally:

(26) Hicimos *a Marta* leer los libros.   pre-infinitival causee

'We made *Marta* read the books.'

Examples such as (26) appear to be more common in Peninsular dialects, although I find that some speakers of Latin American Spanish allow them as well. This may account for the conflicting judgments found in the literature. For example, Aissen and Perlmutter 1976/1983 provide data from dialects that disallow examples like (26), while Moore 1996 and Treviño 1992 note that both constructions (25) and (26) are accepted by some, but not all, speakers. In this respect the more restricted dialect corresponds more closely to French and Italian causatives, as illustrated by the French contrast in (27):[5]

(27) a.   Elle a fait manger sa soup *à Marie*.

b. * Elle a fait *à Marie* manger sa soup.

'She made *Marie* eat the soup.' (Dorel 1980 (5))

Limiting discussion to Spanish dialects which allow the causee to occur in either position, we can provide an initial characterization of *hacer₁* and *hacer₂* as in (28)

(28)   Possible causee positions (Peninsular Spanish and other dialects)

     hacer₁: post-infinitival causee   *hacer* [V_{infin} ...] NP_{causee}

     hacer₂: pre-infinitival causee   *hacer* NP_{causee} [V_{infin} ...]

Notice that this contrast in word order is similar to the verb-initial and subject-initial orders found in root clauses, and discussed above in 2.2. It is conceivable, therefore, that this word order contrast correlates with a contrast in subject position in a manner consistent with the thetic/categorical distinction. Evidence that this is, indeed, the case comes from a contrast in mono- versus bi-clausal properties that correlates with the different causee positions.

    One of the most studied aspects of Romance causative constructions is the fact that the embedded clause appears to be transparent to a number of clause-bounded phenomena. The best-known such clause-bounded phenomenon is clitic climbing. This obtains when a pronominal clitic associated with the complement of the embedded verb shows up attached to the causative verb, as illustrated in (29):[6]

(29) a. Pili le hizo comprar*lo$_i$ ec$_i$* a Javi.   no clitic climbing

      b. Pili se *lo$_i$* hizo comprar *ec$_i$* a Javi.   clitic climbing

        'Pili made Javi buy *it*.'

Clitic climbing is normally a clause-bounded operation; this can be seen by the

fact that it is disallowed when the complement is clearly bi-clausal, as in (30):

(30) a. Marta dice [que Pablo lo_i leyó ec_i].

b. * Marta lo_i dice [que Pablo leyó ec_i].

'Marta says [that Pablo read *it*].'

Further support for the clause-bounded nature of clitic climbing comes from verbs such as *pensar* 'think', that allow clitic climbing, and also may select infinitival *wh*-questions:[7]

(31) a. Lo_i pienso hacer ec_i.   clitic climbing

'I'm thinking of doing it_i.'

b. No pensé [que_i decirte_j e_i ec_j].   embedded infinitival *wh*-question

'I couldn't think [$what_i$ to say e_i to you_j].'

In (31b) we see that *pensar* may select a full clausal (CP) complement. Significantly, clitic climbing, which is normally allowed (as in 31a), is disallowed just when there is evidence of two clauses:

(32) * No te_j pensé [$_{CP}$ que_i decir e_i ec_j].

'I couldn't think [$_{CP}$ $what_i$ to say e_i to you_j].'

From these data, we can conclude that clitic climbing is impossible over two independent clauses. Furthermore, given the possibility of clitic climbing in (31a), I follow Zagona 1982, among others, in assuming that clitic climbing verbs

are able to select VP-complements, yielding a mono-clausal environment for clitic climbing.[8] Under this approach, the post-infinitival causee argument occupies a VP-internal subject position:

(33) NP_{causer} *hacer$_1$* $[_{VP} [_{V'} V_{INFIN} ...]NP_{causee}]$

Note that the possibility of clitic climbing (e.g. in (29b)) provides evidence for a mono-clausal analysis of causative constructions with post-infinitival causees.

While data such as (29) argues that post-infinitival causee constructions may involve VP-complements, there is evidence that such constructions may marginally involve full clausal complements as well. We see from (34) that embedded sentential negation is marginally allowed in conjunction with a post-infinitival causee. Thus, assuming that sentential negation is indicative of a functional projection beyond VP (e.g. IP), (34) argues for the marginal possibility of an IP-complement in post-infinitival causee constructions.

(34) ? Les hicieron *no* divulgar la noticia a los periodistas.

'They made the journalists *not* divulge the news.'

Examples (29) and (34) indicate that when the causee is post-verbal, the construction may be mono-clausal, with a VP-complement, or marginally bi-clausal, with something like an IP complement:

(35) NP_{causer} *hacer$_1$* $[_{IP} [_{VP} V_{INFIN} ...]NP_{causee}]$ (marginal)

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Turning now to the pre-infinitival causee construction, we see that the situation is more or less reversed. As illustrated in (36a), speakers tend to judge clitic climbing as quite marginal or ungrammatical when the causee is pre-infinitival; this is indicative of a bi-clausal construction. (36b) shows that embedded negation is allowed in these constructions, again suggesting at least an IP projection:

(36) a. ?*   Se *lo$_i$* hicimos *al mecánico* arreglar *ec$_i$* .

'We made the mechanic fix *it$_i$* .'

b.   Les hicieron *a los periodistas no* divulgar la noticia.

'They made the journalists *not* divulge the news.'

A further prediction is that clitic climbing should be disallowed in conjunction with embedded negation. This incompatibility is well-known (cf. Zagona 1982, among others):

(37) * Se *la$_i$* hicieron a los periodista *no* divulgar *ec$_i$* .

'They made the journalists *not* divulge *it$_i$* .'

Thus, the data in (36-37) argue that when the causee is pre-infinitival, the construction is unambiguously bi-clausal:

(38) NP$_{causer}$ *hacer$_2$* [$_{IP}$ NP$_{causee}$ [$_{VP}$ V$_{INFIN}$ ...]]

The relationship between causee position and mono- versus bi-clausality is

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summarized in (39):

(39) *hacer₁*: post-infinitival causee mono-clausal (and marginally bi-clausal)

      hacer₂: pre-infinitival causee   bi-clausal

Notice the similarity between the subject positions entailed by (39) and those in

root clauses. According to (39), the post-infinitival causee will (generally) be VP-

internal, assuming that the mono-clausality of these constructions is accounted for

by positing a VP-complement. Conversely, the pre-infinitival causee will be VP-

external, as bi-clausality suggests a full IP-complement. Thus, the data

summarized in (39) is consistent with the analysis in (24).[9] This contrast in

hierarchical subject position correlates with the first feature of thetic/categorical

judgments in (23), namely, that thetic judgments are VPs at the appropriate level

of representation, while categorical judgments are encoded as IPs. One way to

view the contrast represented by (39) vis a vis the analysis in (24) is that VP is the

canonical realization of a thetic judgment, while IP is the canonical realization of

a categorical judgment (cf. Grimshaw 1979, 1981, and Rosen 1990).

3.2 Singling out the Causee

The basic contrast between the two judgment types relates to the singling

out of the subject of categorical judgments. Thus, if the contrast between *hacer₁*

and *hacer₂* is indeed one of contrasting judgment types, we should expect the

causee to be singled out only when the embedded clause represents a categorical judgment; that is, only in the *hacer₂* constructions, when the causee is VP-external and in the pre-infinitival position. There are number of semantic contrasts between these two constructions which support this proposal.

As illustrated in (40), the post-infinitival causee associated with *hacer₁* constructions do not exhibit selectional restrictions; the causee may be animate or inanimate:

(40) a. Hicieron trabajar *a Marta*.

        'They made Marta work.'

    b. Hicimos funccionar *la lavadora*.

        'We made the washing machine run.'

This situation contrasts with the pre-infinitival causee of *hacer₂*, where the causee is required to be animate, as in (41):

(41) a. Hicieron *a Marta* trabajar.

        'They made Marta work.'

    b. * Hicimos *la lavadora* funccionar.[10]

        'We made the washing machine run.'

Furthermore, *hacer₂* constructions exhibit a lack of synonymy between embedded active and passive clauses:

(42) a. Hicimos *al médico* examinar a Pedro.

'We made the doctor examine Pedro.'

b. Hicimos *a Pedro* ser examinado por el médico.

'We made Pedro be examined by the doctor.'

Finally, there appears to be a semantic contrast between *hacer₁* and *hacer₂*

having to do with INDIRECT versus DIRECT CAUSATION.   This is discussed in

Strozer 1976, Dorel 1980, and Treviño 1992, 1994.   Treviño claims that when the

causee is pre-infinitival, it necessarily denotes direct causation, while no such

entailment obtains with post-infinitival causees:

(43) a. Hizo vender la casa *a su hermano.*   INDIRECT OR DIRECT

b. Hizo *a su hermano* vender la casa.   DIRECT CAUSATION

'S/he made *her/his brother* sell the house.'

(Treviño 1994, ch. 3 (8.1b and a))

Treviño defines DIRECT CAUSATION as lack of agentivity and sentience on the part

of the causee. Similar definitions are given elsewhere in the literature, e.g.,

attenuated agentivity and physical manipulation (Shibatani 1973, 1976), a greater

degree of force applied to the causee (Strozer 1976), and lack of volitionality on

the part of the causee (Ackerman and Moore 1997). All of these definitions

suggest that the causee argument lacks certain agentive properties when it

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undergoes direct causation. Evidence that *hacer₂* constructions entail such direct causation comes from their incompatibility with embedded predicates whose external arguments are non-volitional:

(44) a.   Ese maestro hará odiar las matemáticas *a Pedro*. INDIRECT only

      b. # Ese maestro hará *a Pedro* odiar las matemáticas. DIRECT odd

          'That teacher will make *Pedro* hate mathematics.'

          (Treviño 1994, ch. 3, (8.2b and a)

(45) a.   Hizo aumentar de peso *a Pedro*.   INDIRECT only

      b. # Hizo *a Pedro* aumentar de peso.   DIRECT odd

          'It made *Pedro* gain weight.'

          (Treviño 1994, ch. 3, (8.2b and a)

The (b) examples in (44-45) are odd under the interpretation of direct causation whereby the volitionality of the causee is suspended. In these cases the embedded subjects are non-volitional due to the semantics of the embedded verb. Hence, there is no potential volitionality to suspend. By the same token, the post-verbal causee in the (a) sentences only receives an indirect causation interpretation.

    The direct/indirect causation contrast associated with causee position appears to be related to a contrast in case-marking. The case marking of the causee argument has been a long-standing area of investigation. In retrospect, it

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appears that there are two factors that influence the case of the causee. First, there

appears to be an alternation between direct object and indirect object based on the

transitivity of the embedded clause (Aissen 1979, Aissen and Perlmutter

1976/1983, among many others):

(46) a. *Lo* hicieron trabajar mucho.

'They made *him$_{DO}$* work a lot.'

b. *Le* hicieron leer el libro.

'They made *him/her$_{IO}$* read the book.'

However, in addition to this syntactically determined alternation, there is an

interesting correlation between case marking and direct versus indirect causation.

Strozer 1976 and Dorel 1980 point this out for Spanish and French respectively,

and note that direct object causees often denote direct causation, while indirect

object causees may denote indirect causation. This is illustrated with the

following examples from Strozer 1976:

(47) a. *Le* hice probarlo diciéndole que era riquísimo.   IO → INDIRECT

'I had *her$_{IO}$* try/taste it by telling her it was delicious.'

b. *La* hice probarlo a la fuerza.   DO → DIRECT

'I made *her$_{DO}$* try/taste it by force.'

(Strozer 1976 (6.90b and a))

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Note that in (47b) the direct object causee is unexpected from the point of view of

the transitivity-based strategy. Thus, there are two factors contributing to the case

marking of causee arguments; they can be roughly characterized as syntactic

(based on embedded transitivity) and semantic (based on directness of causation).

The interaction between these factors is discussed in detail in Ackerman and

Moore 1997.

   Given that unexpected direct object causees denote direct causation, we

would expect these to correlate with the pre-infinitival causee position. Evidence

that this is so comes from two sources. First, we find that the pre-infinitival

position is the canonical location for direct object controllers, independent of

causative constructions. For example, *forzar* 'force' is a direct object control

verb; as seen in (48):

   (48)   *Lo /*Le* forzamos a comer las mollejas.

         'We forced him_{DO}/*him_{IO} to eat the sweetbreads.'

(49) demonstrates that the unmarked position for a direct object is pre-infinitival:

   (49)   a.   Forzamos *a Pedro* a comer las mollejas.

         b. ?? Forzamos a comer las mollejas *a Pedro*.

               'We forced *Pedro* to eat the sweetbreads.'

Thus, the direct object case marking associated with direct causation is consistent

with the case marking found with direct object control verbs like *forzar*.

Furthermore, the canonical position of direct object controllers matches the pre-infinitival causee position that we have argued to be a characteristic of *hacer₂* constructions.[11] In addition, Davies 1995 provides diachronic data that shows a correlation between the rise of pre-infinitival causees and unexpected direct object causees, both of which seem to have increased in frequency since the Old Spanish period.

Summarizing the data considered so far, we appear to have the correspondences in (50):

(50) *hacer₁*: Mono-clausal   *hacer₂*: Bi-clausal

Post-infinitival causee   Pre-infinitival causee

no selectional restrictions   selectional restrictions

direct causation not entailed   direct causation

DO ~ IO causee   DO causee

Under the analysis proposed here, the distinction between *hacer₁* and *hacer₂* constructions is based on a contrast in judgment types. We have already seen that the mono- versus bi-clausal contrasts follows under the assumption that VP is the canonical realization of thetic judgments while IP is the canonical realization of categorical judgments. In this section it has been suggested that the selectional

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restrictions, lack of synonymy under embedded passives, direct causation, and

unexpected direct object case marking are consequences of the singling out of the

embedded causee argument, and ultimately, a consequence of an embedded

categorical judgment.

To flesh out this analysis a bit more, let us assume that in the context of a

complement to a causative verb, the effect of singling out the subject is to focus

the force of causation on that subject. In a sense, the essence of direct causation is

an act where an individual is singled out to effect the embedded event; in other

words, the caused event is applied to the causee in a predication, which forms the

basis of a categorical judgment. Accordingly, the subject of the embedded

categorical judgment undergoes direct causation as a consequence being singled

out. (51) illustrates the contrasting effects of embedded thetic and categorical

judgments:

> (51) a. causer *hacer* [THETIC JUDGMENT]   causee is not singled out
>
>   → INDIRECT causation
>
>   b. causer *hacer* [CATEGORICAL JUDGMENT]   causee is singled out
>
>   → DIRECT causation

Following the characterization of direct causation mentioned above, singling out

the embedded subject yields an attenuated agentivity. For concreteness, I will

assume, following Ackerman and Moore 1997, that direct causation only obtains

when there is a paradigmatic contrast in terms of VOLITIONALITY, associated with

an animate causee. They argue that the lack of the proto-agent property

VOLITIONAL yields a proto-patient argument, which is encoded as a direct object.

There can only be an alternation in Volitionality if the causee is animate; if the

causee were inanimate, the possibility of a volitional alternant does not arise.

Hence, the selectional restrictions associated with a pre-infinitival causee are

explained as a consequence of direct causation. Similarly, the lack of synonymy

in embedded actives and passives follows from the fact that the lack of

volitionality is entailed with respect to different arguments. Finally, the

cancellation of volitionality is only possible if volitionality is compatible with the

semantics of the embedded verb; thus, the non-volitional subjects in (44-45) are

unable to undergo direct causation, and consequently unable to participate in an

embedded categorical judgment. Hence, once we attribute the directness of

causation to the singling out of a causee in an embedded categorical judgment, the

remaining characteristics of *hacer₂* constructions follow, as illustrated in (52):

(52)   categorical judgment →   singling out cause → direct causation

→ selectional restrictions, passive anti-synonymy, and direct object case

3.3. Indefinite Interpretation

The final difference between thetic and categorical judgments summarized

in (23) had to do with the interpretation of indefinites. It was noted that indefinite

subjects of thetic judgments are potentially bound by existential closure and

receive weak interpretations, while the existence of the referent of indefinite

subjects of categorical judgments is presupposed, and hence, receive strong

interpretations. We saw in section 2.2 that this contrast is manifested in root

clauses, based on whether the subject is VP-internal or VP-external. The analysis

proposed here claims that *hacer$_1$* and *hacer$_2$* constructions instantiate embedded

thetic and categorical judgments respectively;[12] furthermore, I have proposed that

these judgment types are structurally realized as VP and IP complements

respectively. Hence, we should expect to find similar effects with respect to the

interpretation of indefinite causees.[13]

First consider the case of *hacer$_1$*. We have seen that the post-infinitival

causee may appear either VP-internally or VP-externally. This leads to the

prediction that indefinite causees in *hacer$_1$* constructions should allow for both

weak and strong interpretations. With respect to the existential/generic

weak/strong contrast, Mejías-Bikandi and Moore 1994 show that this prediction is

borne out; in (53) we see that the interpretative ambiguity of *hacer$_1$* constructions

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correlates with the structural ambiguity illustrated in (54):

(53)   Pedro le hace cazar ratones *a un gato*.

'Pedro makes *a cat* (existential, ? partitive) hunt mice.'

(Mejías-Bikandi and Moore (24))

(54) a.   Pedro le hace [$_{VP}$ [$_{V'}$ cazar ratones] *a un gato*].

mono-clausal → existential

b. ?   Pedro le hace [$_{IP}$ [$_{I'}$ cazar ratones] *a un gato*].

bi-clausal → generic

Recall that on the basis of embedded negation, we saw that the bi-clausal *hacer$_1$*

structure was somewhat marginal (cf. (34) in 3.1); this may account for the

difficulty some speakers have in interpreting the causee in (53b) as generic.

Mejías-Bikandi and Moore only discuss indefinites with *un*; however, other

indefinite quantified NPs show a similar ambiguity:

(55) a.   Hicimos cazar ratones *a tres gatos*.

weak cardinal, ? partitive

'We made *three cats* (? *three of the cats*) hunt mice.'

b.   Sonia les hizo hacer los deberes *a algunos niños*.

weak cardinal, ? partitive

'Sonia made *sm kids* (? *some of the kids*) do their homework.'

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The structural ambiguity associated with *hacer₁* causatives can be resolved in favor of the mono-clausal structure by cliticizing an embedded object to the matrix verb (clitic climbing). Given the assumption that clitic placement is clause-bounded, the resulting example would be unambiguously mono-clausal. As pointed out by Mejías-Bikandi and Moore, indefinite causees have an unambiguously weak interpretation in conjunction with clitic climbing:

  (56) Pedro se *los* hace cazar *a un gato*.   weak existential

       Pedro se *los$_i$* hace [$_{VP}$ [$_{V'}$ cazar *ec$_i$*] *a un gato*]

       'Pedro makes *a cat* hunt them.' (Mejías-Bikandi and Moore 1994 (26a))

Based on these data, we see that an analysis of *hacer₁* as selecting either an embedded VP (thetic judgment) or, marginally, an IP (categorical judgment) is consistent with the interpretation of indefinite post-infinitival causees.

Turning now to the *hacer₂* construction, we expect that the bi-clausal structure would result in a strong interpretation of an indefinite causee. This would follow from the assumption that these constructions involve an embedded categorical judgment, which is canonically realized as an IP-complement.   The examples in (57) shows that this prediction is borne out:

(57) a. Pedro hace *a un gato* cazar ratones.   generic only

　　　　Pedro hace [$_{IP}$ *a un gato* [$_{VP}$ cazar ratones]]

　　　　'Pedro makes *a cat (generic)* hunt mice.'

　　b. Hicimos *a tres gatos* cazar ratones.   partitive only

　　　　Hicimos [$_{IP}$ *a tres gatos* [$_{VP}$ cazar ratones]]

　　　　'We made *three of the cats* hunt mice.'

Thus, we find that the interpretation of indefinite causees lends further support to

the proposal that causative predicates may select either embedded thetic or

categorical judgments.

3.4. Summary

To summarize, I propose that the causative predicate *hacer* semantically

selects a complement that is underspecified for judgment type, leaving it free to be

a thetic or categorical judgment. These judgment types are respectively realized

syntactically as VP- and IP-complements:

(58) *hacer* [__ XP] (thetic/categorical judgment → VP/IP)

In the unmarked case, these different options correlate with a post- versus pre-

infinitival causee position, as diagramed in (24), reproduced in (59):

(59) a.

```
         VP
        /  \
       V    VP
     hacer  / \
          V'   NP
          /\  CAUSEE
```

b.

```
         VP
        /  \
       V    IP
     hacer  / \
          NP   I'
        CAUSEE /\
```
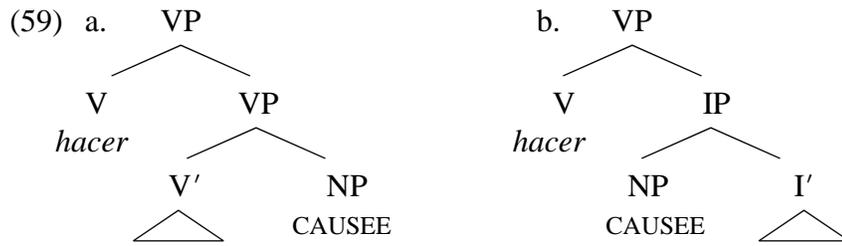
embedded THETIC judgment   embedded CATEGORICAL judgment

In (59a) the causee is part of a thetic judgment. This means that it is not singled out, and therefore, does not undergo direct causation and is free to be animate or inanimate. Being part of a thetic judgment, it is subject to existential closure; thus, if the causee is an indefinite that lacks its own quantificational force, it will receive a weak interpretation. The causee in (59b) is the subject of a categorical judgment. The singling out associate with this judgment type results in direct causation, which yields an animacy requirement. The causee/subject of a categorical judgment is also subject to a strong interpretation of otherwise unquantified indefinites.

Note that there is some correlation between the linear position of the causee and the judgment type; the embedded thetic judgment requires a post-infinitival causee (59a), while the embedded categorical judgment favors the pre-infinitival position in (59b). This difference in causee position may be related to the restriction that the two verbs of mono-clausal constructions tend to require adjacency. Hence, the causee cannot intervene between the main and embedded

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verbs in (59a), and occurs to the right of the V′. When the construction is bi-

clausal, as in (59b), the causee freely occurs in its usual preverbal position.

We also found bi-clausal constructions where the causee is post-infinitival,

as evidenced by the possibility of embedded negation:

(60)

```
              VP
             /   \
            V      IP
          hacer   /  \
                I′    NP
               /\    CAUSEE
```
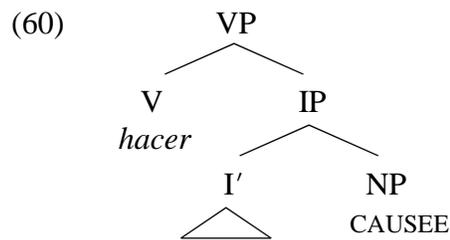
I assume that this represents an embedded categorical judgment; we have seen that

post-infinitival indefinite causees can (marginally) receive a strong interpretation.

Furthermore, the post-infinitival position is associated with either direct or

indirect causation. Both these facts point to the possibility of an embedded

categorical judgment. This construction may be marginal because it is, in most

cases, indistinguishable from the embedded thetic judgment construction in (59a).

4. Against a Control Analysis

While the data considered in the above sections support the analysis based

on contrasting judgment types, there is an alternative account in terms of ECM

versus OBJECT CONTROL. In this section I will briefly discuss this alternative, and

argue that the ECM/control approach faces certain difficulties that argue in favor

of the judgment type analysis.

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Under the ECM/control approach, the differences between *hacer₁* and *hacer₂* constructions would follow from treating *hacer₁* as an ECM verb and *hacer₂* as an object control predicate:

(61) a.

```
          VP
         /  \
        /    \        ECM
       V  —— VP ——┐
    hacer₁   /  \    ↓
           V'    NP
          /\
         /__\  CAUSEE
```

b.

```
          VP
         /|\
        / | \        Object Control
       V NPᵢ  IP
    hacer₂ CAUSEE /\
              /      \
            NPᵢ      V'
            PRO     /\
                   /__\
```
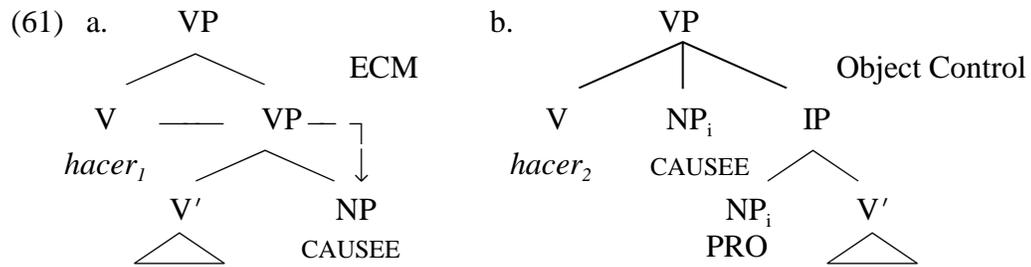
An analysis similar to this was proposed for some dialects of French in Dorel 1980, and applied to Spanish in Moore 1996. The main motivation for the control analysis of *hacer₂* constructions comes from the data that was attributed to the singling out of the causee in the categorical judgment account. In particular, the selectional restrictions and direct causation facts fit well with the status of the causee as a matrix clause controller. Hence, *hacer₂* would assign a θ-role to the causee, yielding direct causation and selectional restrictions. The word order and Case-marking facts are also accounted for if we assume that (61b) represents DIRECT OBJECT CONTROL; the pre-infinitival position and direct object Case are associated with direct object controllers in examples with *forzar* 'force':

(62) a. Forzamos *a los niños* a comer las espinacas.

         'We forced *the kids* to eat the spinach.'

      b. *Los* Forzamos a comer las espinacas.

         'We forced *them*$_{DO}$ to eat the spinach.'

Furthermore, the basic facts that hold of *hacer*$_2$, and might motivate a direct object

control analysis, hold of *forzar* as well. The object of *forzar* exhibits selectional

restrictions (animacy required in 63), and fails the passive synonymy test (64a-b

are non-synonymous):

(63) a.   Forzaron *a Pedro* a trabajar.

             'They forced *Pedro* to work.'

      b. * Forzaron *la lavadora* a funccionar.

             'They forced *the washing* machine to run.'

(64)   a.   Forzaron *al médico* a examinar a Pedro.

             'They forced *the doctor* to examine Pedro.'

          b.   Forzaron *a Pedro* a ser examinado por el médico.

             'They forced *Pedro* to be examined by the doctor.'

Finally, as is the case with *hacer*$_2$ constructions, *forzar* selects a full clausal

complements, as seen by the failure of clitic-climbing in (65):

(65) a.   Forzaron *a Marta* a escribir*les$_j$* una carta *ec$_j$* .

b. * *Les$_j$* forzaron *a Marta* a escribir una carta *ec$_j$*.

'The forced *Marta* to write *them$_j$* a letter.'

Thus, with respect to the data relevant for analyzing *hacer$_2$* as a direct object control verb, we find that *forzar* behaves in a similar manner. Nevertheless, there are a number of arguments against assimilating the analysis of *hacer$_2$* constructions with that of *forzar*. These are based on systematic differences between the two construction types which argue in favor of an object control analysis of *forzar*, but not of *hacer$_2$* constructions.

First, as illustrated in (66), The controller in *forzar* constructions freely passivizes and can be a reflexive.

(66) a. *Los niños$_i$* fueron forzados *e$_i$* a leer el libro.

'The children were forced to read the book.'

b. *Yo$_i$* me$_i$ forzé (*a mí mismo$_i$*) a leer ese libro.

'I forced myself to read that book.'

These facts are consistent with an object control analysis of *forzar* constructions, whereby the matrix object freely passivizes and can be a reflexive. However, as pointed out in Treviño 1992, the causee argument of *hacer$_2$* constructions behave differently, as illustrated in (67); Farrell 1995 makes the same point for Brazilian

Portuguese.

(67) a. ?*   *Los niños$_i$* fueron hechos e_i leer el libro.

'The children were made to read the book.'

b. ?*   *Curro$_i$* se$_i$ hizo (*a si mismo$_i$*) leer ese libro.

'Curro made himself read that book.'

If the causee is a matrix object controller, as proposed for the direct object of

forzar constructions, these data are unexpected. However, if the causee is an

embedded subject, there is a way to distinguish the two construction types.[14]

Secondly, there is evidence from null-complement anaphora that the

controller and clausal arguments of *forzar* are, indeed, separate arguments. The

clausal argument may be omitted under pragmatically determined contexts,

leaving the controller:

(68) a. Lo hice por mi cuenta, nadie *me* forzó.

'I did it on my own, nobody forced me.'

b. Javi la convenció de estudiar, nunca *la* forzó.

'Javi convinced her to study, he never forced her.'

Analogous examples with *hacer* are impossible. As illustrated in (69), the causee

argument cannot be stranded independently of the remainder of the embedded

clause; this is accounted for under the assumption that the causee and the

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embedded clause are part of a single, clausal argument.

(69) a. * Vine por mi cuenta, nadie *me* hizo.

        'I came on my own, nobody made me.'

     b. * Javi la ayudó a estudiar, nunca *la* hizo.

        'Javi helped her study, he never made her.'

   Finally, the Mapping Hypothesis effects found in causatives contrast with the interpretation of indefinites in *forzar* constructions. As (70) and (71) illustrate, an indefinite controller of *forzar* may have either a strong or weak interpretation:

(70) a. Hicimos *a tres gatos* cazar ratones.   partitive only

        'We made *three of the cats* hunt mice.'

     b. Pedro forzó *a dos gatos* a cazar ratones.   partitive or cardinal

        'Pedro made *two (of the) cats* hunt mice.

(71) a. Pedro hace *a un gato* cazar ratones.   generic only

        'Pedro makes *cats (generic)* hunt mice.'

     b. Pedro fuerza *a un gato* a cazar ratones.   generic or existential

        'Pedro forces *a cat* hunt mice.'

These data provide further evidence that pre-infinitival causative constructions need to be distinguished from object control constructions, again casting doubt on

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the appropriateness of an object control analysis for causatives. We have seen in section 3.3 that the categorical analysis provides an account of the interpretation of idefinite causees in *hacer₂* constructions. The variable interpretations allowed with respect to indefinite objects of *forzar* might be attributed to its status as an object controller (and hence, acting both as a VP-internal object and a VP-external subject), or might be assimilated to the interpretation of indefinite objects in general.[15]

Thus, we see that there are systematic differences between *forzar* and *hacer₂* constructions; these differences argue against treating both as direct object control verbs. Given that the object of *forzar* behaves unambiguously as a matrix-clause direct object and given that the null complement anaphora data indicate that the object and clausal arguments of *forzar* are independent arguments, it appears rather uncontroversial that *forzar* should be analyzed as a direct object control predicate:

(72) *forzar* [__ NP$_{DO}$ CP]

Given that the causee in *hacer₂* constructions behaves like a VP-external subject when indefinite, does not behave as a matrix-clause direct object, and is not independent of the embedded clause (as indicated by the lack of null complement anaphora), we can conclude that *hacer₂* selects a single, clausal

argument. This is entirely consistent with the embedded categorical judgment account presented in the last section.

5. Embedded Judgments and Predicate Types

I would like to conclude by discussing further issues that arise when one postulates embedded thetic and categorical judgments in infinitival causative constructions. First, it is not common to discuss this contrast in embedded contexts (although nothing in particular prevents this, and it has been proposed in different contexts in Mejías-Bikandi 1993 and Lenci 1994; cf. Kuroda 1995). A related issue has to do with the relationship between the thetic/categorical distinction and Carlson's 1980 STAGE-/INDIVIDUAL-LEVEL contrast (cf. Ladusaw 1994, Lenci 1994, and Kuroda 1995).

Kuroda 1995 discusses the possibility of judgment types in some embedded contexts; the determining factor seems to be whether the embedded clause is capable of denoting something that can be the intentional object of the judgment. Hence, according to Kuroda, the object of a thetic judgment is an event, while the object of a categorical judgment is the expression of a fact about its subject (or in Ladusaw's 1994 terms, the basis of a thetic judgment is a description while the basis of a categorical judgment is an object and a property).[16] Kuroda notes that embedded clauses that are selected by quotative and indirect speech verbs are able

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to denote objects of both judgment types, while other embedded clauses (e.g. conditional clauses) denote a pure truth value, and are unable to express a judgment of any type. Judgment types in embedded contexts have been discussed explicitly in Mejías-Bikandi 1993 and Lenci 1994. Mejías-Bikandi discusses a thetic/categorical contrast in alternating subjunctive/indicative clauses. Lenci discusses the interpretation of small clause complements of perception verbs versus those of epistemic verbs. He argues that the former are constrained to be objects of thetic judgments, while the latter are categorical judgments.

At this point we should ask how complements of causative predicates fit in, as it is crucial to my account that they be able to denote objects of both thetic and categorical judgments. However, it is generally assumed that the complement of a causative predicate denotes an event (cf. Rosen 1990), and hence, should be limited to thetic judgments. Indeed, Lenci 1994 groups the Italian causative predicate *rendere* 'render' along with perception verbs that require thetic small clause complements.

A related problem arises with the stage-/individual-level distinction. A central point in Kuroda and Ladusaw's discussions of the thetic/categorical distinction has been the relationship between judgment types and predicate classes. Descriptively, we find the correlations in (73):

(73)   Thetic Judgment   *   Individual-Level Predicate

                                   Stage-Level Predicate

       Categorical Judgment   Individual-Level Predicate

                                   Stage-Level Predicate

Essentially, the only restriction is that thetic judgments disallow individual-level

predicates; this can be seen by the unacceptability of a (thetic) *there*-construction

and an individual-level predicate (74a), as well as the impossibility of a weak

construal of the subject of an individual-level predicate (74b):

(74)   a.   *   There were *three students* intelligent.

       b.   *Three students* were intelligent.

                (strong reading only - categorical judgment)

In addition to the categorical judgment with an individual-level predicate in (74b),

we find categorical judgments with stage-level predicates. The possibility of such

a categorical is illustrated by the possibility of a strong reading in (75):

(75)   *Three students* were drunk.

       (strong reading possible - categorical judgment)

In essence, these data comprise the empirical basis of MILSARK'S

GENERALIZATION (Milsark 1974, Carlson 1980), which Ladusaw (1994)

formulates as in (76):

(76) MILSARK'S GENERALIZATION: Individual predicates must have strong

subjects. (Ladusaw 1994)

Ladusaw goes on to derive (76) by assuming:

(77) a. Individual-level predicates denote properties.

b. Stage-level predicates denote descriptions.

c. The basis of a thetic judgment is a description.

d. The basis of a categorical judgment is a property predicated of an

object.

e. Only strong NPs denote objects.

Putting this together, we derive (76); i.e., that individual-level predicates must

have strong subjects. Furthermore, by assuming that properties may not form the

basis of thetic judgments, we derive the incompatibility between individual-level

predicates and thetic judgments. A similar approach is taken in Kuroda 1995.

But what of the possibility of stage-level predicates in categorical judgments

(e.g. 75)? Both Ladusaw and Kuroda assume a type-shifting mechanism whereby

a stage-level predicate, which normally denotes an eventive description, may

represent a property; i.e., "The property of being a participant in an eventuality of

that description" (Ladusaw 1994). Hence, the example in (75) is the result of this

type-shift, and involves the predication of a (derived) property to a strong NP

object in a categorical judgment.

Turning now to the proposed analysis of Spanish causatives, one might expect that the embedded verbs of *hacer₁* constructions should be limited to stage-level predicates, as these are analyzed as selecting embedded thetic judgments, while *hacer₂* constructions should allow embedded stage- and individual-level predicates, consistent with their analysis as selecting embedded categorical judgments. However, these expectations are only partly realized. While both constructions allow embedded stage-level predicates, neither allows an embedded individual-level predicate:

(78) STAGE-LEVEL

a. Paco hizo tocar la guitarra a Pepe.   *hacer₁*

b. Paco hizo a Pepe tocar la guitarra.   *hacer₂*

'Paco made Pepe play the guitar.'

(79) INDIVIDUAL-LEVEL

a. # Paco hizo ser inteligente a Pepe.   *hacer₁*

b. # Paco hizo a Pepe ser inteligente.   *hacer₂*

'Paco made Pepe intelligent.'

(80) AMBIGUOUS

    a.   Ese maestro hizo hablar francés *a los estudiantes*.   *hacer₁*

    b.   Ese maestro hizo *a los estudiantes* hablar francés.   *hacer₂*

           'That teacher made the students talk French.'

    # 'That teacher made the students know French.'

The phrase *hablar francés*, like its English counterpart 'speak French', is ambiguous between 'talk in French' and 'know how to speak French', the former a stage-level predicate and the latter individual-level. As indicated by the translation of (80), the individual-level reading is infelicitous when embedded under a causative predicate, regardless of whether this embedded clause is, by hypothesis, the basis of a thetic or categorical judgment. While this is expected of the embedded thetic judgment in (80a), it is unexpected of the embedded categorical judgment in (80b). The situation is a bit more complex, however, as even the individual-level reading of *hablar francés*, while dispreferred, is possible in both (80a-b) with the sense that the teacher taught the students French. Nevertheless, this appears to be a stage-level usage of an otherwise individual-level predicate, as it emphasizes the fact that the state of knowing French began as a function of the causative event. The possibility of using erstwhile individual-level predicates in a stage-level manner is well-known (cf. Kratzer 1995, McNally

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1997, among others). Hence, it appears that the embedded predicate of a causative construction is restricted to being stage-level, regardless of the judgment type represented by the embedded clause.

The issue, then, reduces to why categorical judgments in causatives disallow individual-level predicates. The answer must lie in the semantics of the causative predicate. The essence of causation is that a causative event brings about a state of affairs that is contingent on the causative event. This effectively requires that the caused state or event have a temporal dimension, which in turn requires that the caused state or event be expressed by a stage-level predicate. Recall, however, that stage-level predicates are able to form part of the basis of a categorical judgment by means of the type-shifting mechanism mentioned above. Thus, while the causative constructions examined here semantically select a clausal complement headed by a stage-level predicate, these may be realized as the basis of either a thetic or categorical judgment (since, in general, clauses may form the basis of either judgment type). If the embedded clause forms the basis of a thetic judgment, then the stage-level predicate forms part of an eventive description, which also includes the causee; if the clause forms the basis of a categorical judgment, then the description type-shifts to become a property that is applied to the causee. The possibility of dissociating the semantic selection, in terms of

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predicate type, from the judgment type shows that these are independent concepts; the semantic selection follows from lexical properties of the causative predicate, while the judgment type depends on how the clause is judged by a cognitive agent (in this case, the speaker). The various syntactic and semantic side-effects of these different judgments have been the primary focus of this work, and follow from this basic cognitive distinction.

Notes

1. This paper compares the implementations of the two- versus three-place predicate accounts in (2). Thus, at issue is whether the causative predicate selects an object controller or not. Arguments presented below do not address the possibility of a three-place account, such as the one proposed in Alsina 1992, where the three-place predicate is realized in the argument structure but not in the phrase structure.   Analyses that are in the spirit of the ECM approach are presented in Aissen 1979, Aissen and Perlmutter 1976/1983, Burzio 1986, and Gibson and Raposo 1986, among many others. Analyses that specifically propose a control account are Bordelois 1974 and 1988, Strozer 1976, and Fauconnier 1983.

2.   The VP-complement proposal for causative and related constructions was first made by Strozer 1976 and Zagona 1982; it was revived in a number of later works (e.g., S. Rosen 1990, Pearce 1990, Picallo 1990, and Moore 1996).

3. In (17a) the VSX order results from an in-situ subject and V-to-I movement. This is the type of analysis proposed in Contreras 1991 and Suñer 1994. Analyses in frameworks that do not admit of such verb movement would, nevertheless, maintain the crucial distinction between two separate subject positions, corresponding to the VP-internal and VP-external contrast adopted here.

4. Mejías-Bikandi gives example (20b) as structurally ambiguous between

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representations with VP-external and VP-internal subjects, and notes the possibility of a weak, existential interpretation of the subject. As Byrne 1997 notes, pre-verbal subjects can, in some circumstances, be part of an all-focus sentence, where the sentence represents a thetic judgment.

5. While French *faire* causatives disallow the preinfitival causee, as in (27b), the preinfinitival position is allowed for the embedded subjects in *laisser* 'let' causatives and perception verb constructions. For discussion, see Kayne 1975 and Achard 1996, among others.

6. The clitic lo_i is co-indexed with an empty category (ec_i) in object position. It is not important for present purposes whether this empty category is considered a trace, *pro*, or even if it exists at all (as it would not under HPSG or LFG approaches). See Suñer 1988, Haverkort 1993, and Franco 1993 for discussion of this issue. With respect to clitic climbing and the analysis of Romance pronominal clitics, see Kayne 1989, Miller and Sag 1993, and Moore 1994. The indirect object clitic *le* in (29a) corresponds to the causee; it is realized as *se* in (29b) due to a morpho-syntactic rule. Note that this clitic is attached to the matrix verb; depending on one's analysis, this is either because the causee is a matrix-clause object controller, or an embedded subject that is exceptionally Case-marked by the matrix verb.

7. As noted by Rizzi (1978/1982) and Aissen and Perlmutter (1976/1983), not all

verbs that select infinitival complements allow clitic climbing.

8. Kayne 1989 argues against the VP-complement analyses of clitic climbing constructions that involve RESTRUCTURING verbs (such as *pensar*); he suggests a VP-complement account of causatives, however. His evidence for clitic climbing over CP comes from the (marginal) grammaticality of examples like (i), where there is clitic climbing in conjunction with embedded *wh*-movement:

   (i) ? No te_i sé [que_i decir e_i ec_i].

       'I don't know [$what_i$ to tell e_i you_i].'

These examples are discussed in Moore 1994, where it is pointed out that this unexpected clitic climbing is limited to only this example, and does not represent a productive pattern (cf. the ungrammatical (32)).

9. A question arises as to why a pre-infinitival causee does not occur as the Spec of VP, as in (i):

   (i) * ... *hacer* [$_{VP}$ NP$_{causee}$ [$_{V'}$ V ...]]

The data gap represented by (i) may be due to the well-known restriction on mono-clausal causative constructions, according to which there is a fairly strict locality between the matrix and embedded verbs.

10. Examples like (41) become grammatical when the inanimate is marked with the PERSONAL-*A*; this imparts a sense of anthopomorphicism.

11. Although the pre-infinitival position is common to both *forzar* and *hacer$_2$*

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constructions, I will argue below that they occupy different structural positions; the object of *forzar* will be treated as a matrix controller, while the causee of *hacer₂* is in the embedded clause. In both cases they are adjacent to the Case-assigning verb, however.

12. To be more accurate, I have proposed that *hacer₁* constructions involve embedded thetic judgments in the unmarked case, and marginally allow embedded categorical judgments. This was seen in 3.1, where post-infinitival causees marginally co-occurred with embedded negation in (34), indicating an IP-complement.

13. The data related to the interpretation of indefinites are analyzed here in terms of judgment type and its relation to Mapping Hypothesis effects. Another possible framework to approach these facts would be in terms of INFORMATION PACKAGING (Vallduví 1992, Lambrecht 1994, among others). These two types of analyses are not, necessarily incompatible, but it is beyond the scope of this paper to contrast them. Under the information packaging approach, the strong interpretation of pre-infinitival causees would be a function of their status as TOPICS, or OLD INFORMATION. With respect to discourse effects associated with pre-infinitival causees in French *laisser* causatives, Hyman and Zimmer 1976 and Achard 1996 discuss the topicality of this position. Kemmer and Verhagen 1994 notes that Dutch accusative-marked causees are more topical than causees with

other encodings; again, these approaches are consistent with the basic analysis of the Spanish facts proposed here.

14. However, exactly how passivization and reflexives are ruled out in the *hacer*$_2$ construction remains somewhat mysterious. If *hacer*$_2$ assigns structural Case, as proposed above, we would expect passivization to be possible and we would further expect the binding domain to extend to the matrix clause, as is the Case with English ECM verbs. However, we might follow Kayne 1980 in proposing that Romance languages lack ECM constructions. This accords well with a suggestion by P. Farrell (P.C.), who suggests that the *hacer*$_2$-type causative constructions may be more akin to *want*-constructions in English. (cf. Bresnan 1979 and Postal 1974 who discuss a class of W-VERBS, which include *want*, *like*, and *prefer*, and which differ from other ECM/Raising to Object verbs in that their embedded subjects bear objective Case, yet fail to passivize). Of course, this move then raises the question of how the causee is assigned direct object Case; I leave this issue unresolved.

15. The Mapping Hypothesis would predict that a VP-internal indefinite object should receive a weak interpretation, unless they are moved out of the VP at some level of representation. However, Byrne 1995 discusses the interpretation of indefinite objects, and concludes that their interpretation as weak or strong is at least partly independent of the Mapping Hypothesis.

16. In contrast to his earlier work, Kuroda 1995 assumes a third judgment type,

QUANTIFICATIONAL JUDGMENT which is subsumed under CATEGORICAL

JUDGMENT, as used here (and as commonly used elsewhere, e.g. Kuroda 1972,

Ladusaw 1994, among others). Thus, Kuroda's 1995 description of an object of a

categorical judgment is "a state of a substance", while an object of

quantificational judgment is "the fact indicated by the quantificational

proposition".

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