

# On Temporal and Causal Infinitive Constructions in Catalan Dialects\*

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## Abstract

The paper offers a descriptive account of the syntactic properties of some temporal and causal adjuncts belonging to different Catalan dialects. These constructions are headed by a temporal or causal preposition that selects an infinitive clause as a complement. The nature of the adjunct is, thus, prepositional. It is a complex prepositional phrase.

The prepositions analyzed —*a* ‘at/in’, *en* ‘in’, and *amb* ‘with’— are coincidence prepositions. They are prepositions that express a relation of coincidence, or contiguity, in a place or time. The paper deals with the conditions under which the coincidence preposition can act as a causal operator. Such conditions vary in their application depending on the dialect.

**Key words:** syntax, temporal adjuncts, causal adjuncts, prepositions of coincidence.

**Resum.** *Sobre les construccions d’infinitiu temporals i causals en els dialectes del català*

Aquest article descriu el funcionament sintàctic de diversos adjunts temporals i causals pertanyents a diferents dialectes del català. Es tracta de construccions encapçalades per una preposició temporal o causal que selecciona com a complement una oració d’infinitiu. L’adjunt és, doncs, un sintagma preposicional complex.

Les preposicions analitzades —*a*, *en* i *amb*— són preposicions de coincidència, és a dir, preposicions que expressen una relació de coincidència o contigüïtat en un lloc o temps determinat. L’article estudia les condicions que fan possible que una preposició de coincidència pugui actuar com a operador causal. Aquestes condicions varien segons el dialecte.

**Paraules clau:** sintaxi, adjunts temporals, adjunts causals, preposicions de coincidència.

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### 1. Introduction

It is well known that causal adjunct constructions, in the traditional sense of the term, are semantically related to temporal adjunct constructions. In fact, italicized Catalan constructions in (1) are ambiguous. Each can be interpreted as a temporal adjunct or a causal adjunct.

- (1) a. *En rebre la teva nota, vaig sortir de la reunió.*  
 in to-receive the your message, left.1SG from the meeting  
 ‘When I received your message I left the meeting.’  
 ‘Because I received your message, I left the meeting.’
- b. *Al veure ‘m, es va desmaiar.*<sup>1</sup>  
 at the to-see me REFL fainted.3SG  
 ‘When (s)he saw me, (s)he fainted.’  
 ‘Because (s)he saw me, (s)he fainted.’

The events expressed by the adjunct and by the main clause in (1) are temporally contiguous. That is to say, the situation expressed by the adjunct is immediately previous to the temporality/realization of the main situation. Sentence (1a) can mean that I left the meeting immediately after the reception of your note, whereas sentence (1b) can mean that (s)he fainted immediately after seeing me. Because of the contiguous temporal connexion of the two events expressed in sentences in (1), the relation between the adjunct and the main sentence may be interpreted as a causal relation. The adjunct is interpreted as the cause of the situation expressed by the main clause, which is understood as the effect.

The aim of this paper is to offer a descriptive account of the syntactic properties of some temporal and causal adjuncts belonging to different Catalan dialects.

1. The adjunct can appear at the beginning of the sentence, as in (1), at the end of the sentence, as in (ia), and in a parenthetical position, as in (ib).
- (i) a. *En Pere es va desmaiar al veure’ m.*  
 the Pere REFL fainted.3SG at the to-see me  
 ‘Pere fainted when he saw me.’  
 ‘Pere fainted, because he saw me.’
- b. *En Pere, al veure ‘m, es va desmaiar.*  
 the Pere, at the to-see me REFL fainted.3SG  
 ‘Pere fainted when he saw me.’  
 ‘Because he saw me, Peter fainted.’

As for the causal expressions is concerned, the preferred position of the adjunct is the initial or the parenthetical position, where it is interpreted as a non-remathic causal adjunct.

All of them are constructions headed by a temporal or causal preposition —*a/en/amb*—, which selects an infinitive clause as a complement. The nature of the adjunct is, thus, prepositional. It is a complex prepositional phrase (PP).

The prepositions analyzed in this paper, the prepositions *a* ‘at/in’, *en* ‘in’ and *amb* ‘with’, are coincidence prepositions. They are prepositions that express a relation of coincidence, or contiguity, in a place or time; for instance, between a place and a thing or substance, or between two events (see Hale 1986, Hale and Keyser 1993).<sup>2</sup> Note that temporal coincidence between two events does not necessarily imply temporal simultaneity. Actually, temporal coincidence has to be understood as temporal contiguity. Two events can be contiguous because they are simultaneous or because one just precedes the other. The situation is similar to location in space. A locative relation between two objects will be coincident if either they are in a central coincidence relation (i.e., *un llibre dins la capsa* ‘a book within the box’; *una capsa amb un llibre* ‘a box with a book’) or they are one beside the other, in front of the other, etc. (i.e., *un llibre a prop de la capsa* ‘a book near to the box’). Many cognitive scientists agree with Pinker’s (1997: 353) claim that «some deductions that apply to motion and space also apply nicely to possession, circumstances, and time.»

The coincidence or contiguity expressed by the prepositions we are interested in can be interpreted as a temporal coincidence or a causal relation based on the contiguity. In fact, the concept of causality is seen to be linked with the concept of time and space by several philosophers. According to Hume in *A Treatise on Human Nature*, cited by Lucas (1984: 40f), the cause and the effect must be contiguous. He considers the relation of contiguity as essential to that of causation. Lucas (1984) argues that Hume’s contiguity should really be construed as a requirement of continuity, or rather continuous connexion.<sup>3</sup> Therefore, it can be concluded that the ambiguous reading of a temporal or causal adjunct is possible only in the case that the adjunct and the main clause are temporally contiguous. In Lyons’s (1977:493) words: «whether or not our conception of causality is innate or is based (wholly or partly) upon inductive inference from our experience of pairs of temporally ordered situations, the assertion that the two situations succeeded one another in time will frequently be intended, and understood, to imply that they are causally connected».<sup>4</sup> In (1a) the event of receiving your message can be understood as the cause of the event expressed by the main clause.

Nevertheless, it will be shown in section 2 and 3 that the causal or temporal reading is not always free. It depends on the properties of the subordinate clause, but

2. These are the pure coincidence prepositions in Catalan. Other coincidence prepositions are *dins* ‘within’, *sota* ‘under’, etc. In opposition to coincidence prepositions, we can distinguish two kinds of non-coincidence or terminal prepositions: allative prepositions (a ‘to’, *cap a* ‘towards’, etc.) and elative prepositions (*de*, *des de* ‘from/since’, etc.).

On the semantic properties of the prepositions, see A. Herskovits (1986).

3. For the relationship between causality and time, see also van Inwagen (1980) and Swinburne (1983).

4. The same idea is expressed by a Latin proverb quoted by Solà (1994: 124f): *Post hoc, ergo propter hoc* ‘After this, therefore because of this’.

it mainly depends on the preposition heading the adjunct PP. Note that some Catalan prepositions that relate temporally ordered situations, like *després (de)* ‘after’, do not act as causal operators. Likewise, other prepositions that express temporal relations of inclusion or identity with an interval do not propitiate the causal reading, as shown in (2) and (3).

- (2) a. La Maria va estornudar mentre tu parlaves.  
 the Maria sneezed while you spoke  
 ‘Maria sneezed while you were speaking.’
- b. Quan era petit, va caure al pou.  
 when was.3SG small, fell.3SG into the well  
 ‘When (s)he was a child, (s)he fell into the well.’
- (3) a. Quan tu parlaves, es mossegava les ungles.  
 when you spoke REFL bit.3SG the fingernails  
 ‘When you were speaking, (s)he was biting his fingernails.’
- b. La Maria badava mentre tu parlaves.  
 the Maria was-distracted while you spoke  
 ‘Maria’s attention wandered while you were speaking.’

The phrases whose head is *mentre* ‘while’ or *quan* ‘when’ in (2) denote an interval that includes the time of the event expressed by the main clause. The time of ‘sneezing’ and the time of ‘falling into the well’ are included in the time denoted by the adjunct. On the other hand, the time denoted by the adjunct introduced by the preposition *quan* ‘when’ and *mentre* ‘while’ in (3) is identified with the time denoted by the main clause. The interval denoted by the adjunct phrase is identified with the time of ‘biting one’s fingernails’ in (3a), whereas in (3b) the interval denoted by the adjunct headed by *mentre* ‘while’ is the same as the interval of Mary’s distraction. Therefore, the sentences in (2) and (3) do not allow the causal reading.

In the next section, we will analyze the behavior of the temporal and causal prepositions *a* and *en* selecting an infinitive construction in some subdialects of Central and Western Catalan. Both prepositions alternate in these dialects. The preposition *a* followed by the determiner *el* (*a+el= al/a l’*) is used in colloquial Catalan, whereas the preposition *en* is characteristic of the formal use of language (see Moll 1968: 204; Badia 1994: 212; and also Solà 1994: 179-187).<sup>5</sup> The behavior of these prepositions in Balearic Catalan will be shown in section 3.

5. In colloquial Valencian two temporal constructions used to co-exist: *al* + infinitive, and *en* + gerund. At present, the second one is totally archaic, unless the verb is *acabar* ‘to finish’. The examples in (i) are from Colomina (1991: 69 and 50).
- (i) a. La diferència *en passant l’ Ebre* és brusca.  
 the difference in passing the Ebre is marked  
 ‘Once you cross the Ebre River, the difference is marked.’

## 2. Prepositions *a/en* as temporal or causal operator in Central and Western Catalan

Despite the ambiguous character of the constructions in (1), the appearance of one of these prepositions heading an infinitive construction does not ensure the temporal or causative meaning of the complex PP. Its semantic properties largely depend on (i) the aspectual nature of the predicates involved; (ii) the presence of aspectual or modal verbs in the adjunct construction; and (iii) the presence of negation.

Before proceeding to show the conditions that govern the causal and temporal reading of the adjuncts constituted by an infinitive verb preceded by a preposition (and sometimes also by a determiner), we will consider the main properties that they share.

### 2.1. Temporal and causal adjuncts constituted by a preposition and an infinitive sentence

As shown in Rigau (1993, 1995), the infinitive construction dominated by a temporal or causal PP has the properties of a sentence.<sup>6</sup> Consequently, the arguments

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- b. En arribant a ca Vicenta..., feia la seua paradeta.  
 in arriving at house Vicenta... did.3SG the his/her exposition  
 'when he arrived at Vicenta's house, (s)he prepared his/her exposition.'
- c. Ja aniré en acabant de sopar.  
 Already will go.1SG in finishing of to-dinner  
 'I will already go after dinning.'

On the construction *en* + infinitive clause in Valencian, see Solà (1994: 186) and references quoted herein)

In some Valencian dialects, i. e. in the dialect spoken in Plana Baixa (González i Felip (1991: 49), a complex temporal PP headed by *després/después* 'after' can be introduced by the preposition *en* 'in', as shown in (ii).

- (ii) En después de sopar, eixirem a pegar una volteta.  
 in after of dinner, will go out.1PL to make a little walk  
 'After dinning, we will go for a walk.'
6. The infinitive verbal form that we are studying in this paper has the properties of a verbal predicate. Nevertheless, in Catalan an infinitive form preceded by *al* (*a+el*) can show a nominal behaviour. This is the case of italicized constructions in (i), belonging to Central and Western Catalan, where *entrar* 'to enter' can be replaced by the locative noun *entrada* 'entrance'.
- (i) Ho trobaràs a l' *entrar*, a mà *esquerra*.  
 it will-find.2SG at the to-enter at hand left  
 'You will find it at the entrance, on your left.'

More interesting are the examples from the Valencian dialect spoken in Marina Baixa shown by Colomina (1991: 68f). The infinitive form in (ii) is nominal as shown by the presence of the preposition *de* 'of' heading its argument. The meaning of the italic construction in (iia) is locative, but its meaning in (iib) is temporal. The latter construction is archaic.

- (ii) a. *Al pujar de l' escala* n' hi ha dos.  
 at-the to-go-up of the stairs of-them there has two  
 'At the foot of the stairs, there are two of them.'

of the predicate need to be present in it. This can be observed in (4a), where the lexical subject of the infinitive verb appears in the postverbal position. In (4b), however, the subject is silent. It is represented by an empty pronominal element: *pro*, because it can be replaced by a strong pronoun, as shown in (4c).<sup>7</sup>

- (4) a. En/a l' arribar la Maria, va començar la reunió.  
 in/at the to-arrive the Maria began the meeting  
 'When Mary arrived, the meeting began.'  
 'Because Mary arrived, the meeting began.'
- b. En/a l' arribar, va començar la reunió.  
 in/at the to-arrive began the meeting  
 'When she arrived, the meeting began.'  
 'Because she arrived, the meeting began.'
- c. En/a l' arribar ella, va començar la reunió.  
 in/at the to-arrive she began the meeting  
 'When she arrived, the meeting began.'  
 'Because she arrived, the meeting began.'

Examples in (4) allow us to conclude that the node T(ense) in such adjunct constructions checks nominative case, although it is not morphologically inflected with person and number.<sup>8</sup> It is assumed in Rigau (1993, 1995) that the functional property T in these constructions is a 'weak' tense, a tense able to express temporality only under certain specific conditions that allow it to be related with a temporal operator on which T (more exactly, V+T) incorporates. In (4), this temporal operator is the coincidence preposition *en/a*. The verbal raising by head to head movement to incorporation on the preposition accounts for the postverbal position of the subject in these constructions.

2.1.1. The sentences in (5) show that the aspectual properties of the predicates have to be considered in order to examine the meaning of the adjuncts under consid-

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- b. A l' esclatar de l' alba,... vegeren aparèixer una vela.  
 at the to-arise of the dawn. saw.3PL to-appear a sail  
 'As dawn broke, they saw a sail appear.'

7. On the properties of the subject of the clause embedded in the adjunct, and its postverbal position, see Rigau (1995). On the conditions that govern the coreferential/disjoined relationship between the subject of the main clause and the (empty or postverbal) subject of the infinitive clause, see Rigau (1993, section 7).
8. Actually, in Portuguese the constructions we are studying here do contain an infinitive form that is inflected in person and number, as shown in (i). In contrast, in Catalan the verbal morphology is not transparent in this case. The infinitive morphological form acts as an unmarked or default form. It does not show the syntactic properties of person and number.
- (i) Ao entrares tu, a Manuela saiu.  
 in-the to enter.2SG you Manuela left  
 'When you went in, Manuela left.'

ration.<sup>9</sup> In (5a) the temporal reading of the adjunct is preferred, whereas in (5b) the temporal interpretation is difficult to accept. The adjunct in (5b) licenses a causal reading.

- (5) a. En/al començar a córrer, en Pere va caure.  
 in/at the to-begin to run the Pere fell-down  
 ‘When he began to run, Pere fell down.’
- b. En/al córrer, en Pere va caure.  
 in/at the to-run the Pere fell-down  
 ‘Because he ran, Pere fell down.’

The subordinated predicate in (5b) expresses an undelimited or atelic process. According to Vendler’s (1967) classification, *córrer* ‘run’ is an activity. The preposition *en/a*, as a temporal operator, denotes a moment, a temporal point, not an interval. Its semantic properties do not license a sentential complement with a predicate expressing an atelic and processive situation. In contrast, the subordinate clause in (5a) with the complex predicate *començar a córrer* ‘to begin to run’ is licensed by the temporal preposition because of its telicity and not processive aspect.<sup>10</sup> A similar contrast is shown in the sentences in (6).

- (6) a. En/al néixer, no va plorar.  
 in/at the to-be-born not cried.3SG  
 ‘When (s)he was born, (s)he didn’t cry.’
- b. En/a l’ arribar a casa, no sabia la notícia.  
 in/at the to-arrive at home not knew.3SG the news  
 ‘When (s)he arrived at home, (s)he didn’t know the news.’

The reading of the adjuncts in (6) is temporal. The predicates *néixer* ‘to be born’ and *arribar a casa* ‘to arrive at home’ are achievements (Vendler 1967), a kind of predicate compatible with the punctual denotation of the temporal operator *en/a*.. However, the presence of a manner adverbial, like *prematurament* ‘prematurely’, or a measure or grade complement or modifier, like *massa* ‘too much’, *molt* ‘a lot’, *tant* ‘so much’, etc., changes the meaning of the adjunct. The causal reading of the adjuncts in (7) is the preferred reading.

- (7) a. En/al néixer prematurament, no va plorar.  
 in/at the to-be-born prematurely not cried.3SG  
 ‘Because (s)he was born prematurely, (s)he didn’t cry.’
- b. En/al parlar tant, es va quedar sense veu.  
 in/at the to-talk so much REFL remained.3SG without voice  
 ‘Because (s)he talked so much, (s)he lost his voice.’

9. On the aspectual properties of the predicates, see Vendler (1967).

10. Some speakers consider (5b) ungrammatical.

Consequently, the presence of aspectual modifiers that quantify the event will be incompatible with a punctual aspectual meaning of the predicate. They will block the temporal reading of the adjunct. This is the case with the universal or habitual aspectual modifiers (*sempre* ‘always’, *constantment* ‘constantly’, *cada cop* ‘every time’, *normalment* ‘normally’), and the iterative modifiers (*altre cop*, *novament* ‘again’) in (8a) and (8b). As shown in (8c), a proximative aspectual modifier (*tard* ‘late’, *immediatament* ‘immediately’) also blocks the temporal reading of the adjunct.

- (8) a. En/a l’ arribar sempre a les deu, el van amonestar.  
in/at the to-arrive always at the ten him admonished.3PL  
‘Because (s)he always arrived at ten, they admonished him.’
- b. En/a l’ arribar altre cop a les deu, el van amonestar.  
in/at the to-arrive other time at the ten him admonished.3PL  
‘Because (s)he arrived at ten again, they admonished him.’
- c. En/a l’ arribar tard a casa, no sabia la notícia.  
in/at the to-arrive late at home not knew.3SG the news  
‘Because he arrived at home late, (s)he didn’t know the news.’

When the aspectual properties of the predicate are processive and telic, as in (9a) or processive and atelic, as in (9b) and (9c), the temporal meaning of the adjunct is possible only if the event expressed by the predicate selected by the preposition can mean just the beginning of the event or if the adjunct loses its processive character. Otherwise, they receive a causal reading.

- (9) a. En/al vendre’s els mobles, en Pere es va enristir.  
in/at the to-sell REFL the furniture the Pere REFL became-sad  
‘When (s)he was selling his furniture, Pere became sad.’  
‘Because of selling his furniture, Pere became sad.’
- b. En/al recitar poemes de Lorca, en Pere es va fer famós.  
in/at the to-recite poems of Lorca, the Pere REFL made popular  
‘When he began to recite some poems by Lorca, Pere became popular.’  
‘By reciting some poems by Lorca, Pere became popular.’
- c. En/al fumar, en Pere es va posar malalt.  
in/at the to-smoke the Pere REFL put ill  
‘As he began to smoke, Pere fell ill.’  
‘Because of smoking, Pere fell ill.’
- d. En/al cartejar -se, van fer -se bons amics.  
in/at the to-correspond-by-letter REFL made.3PL REFL good friends  
‘Because they corresponded, they became good friends.’

The adjunct in (9a) can receive temporal reading if it can be understood in the sense of ‘just as he was selling his furniture’, in the initiation of the selling. Otherwise, the adjunct has a causal reading. The adjunct in (9b)-(9d) will receive



a causal interpretation, unless the event is interpreted as a punctual event. However, such an interpretation is not easily given to (9b) and (9c), and it is quite impossible in (9d), where the predicate *cartejar-se* 'to correspond by letter' has an iterative meaning.

A complex PP with a stative or individual-level predicate does not license the temporal meaning. The adjunct in (10) is understood as a causal adjunct.

- (10) a. En/al ser intel·ligent, va estudiar per físic.  
 in/at the to-be intelligent studied.3SG for physicist  
 'Because he was intelligent, he studied to be a physicist.'
- b. En/al conèixer Itàlia, ens va fer de guia.  
 in/at the to-know Italy us did.3SG of guide  
 'Because (s)he knew Italy, (s)he acted as our guide.'

As shown in Rigau (1995: 292, fn.14), an adjunct can receive a temporal reading in spite of the presence of the copular verb *ser* 'to be'.

- (11) En/al ser deu, vam decidir de canviar de taula.  
 in/at the to-be ten decided.1PL of to-change of table  
 'Because there were ten of us, we decided to change tables.'  
 'When there were ten of us, we decided to change tables.'

Actually, the predicate *ser deu* 'to be ten', like the predicate *sumar deu* 'to add up to ten', is a stage-level predicate, a predicate with an event argument in its thematic grid (Kratzer 1988). Because of this property, the adjunct accepts either a causal reading or a temporal reading.

Up to now we have analyzed the semantic nature of the predicate in the clause contained in the adjunct PP. However, the aspectual properties of the main predicate are also decisive for the interpretation of the adjunct. The meaning of the adjunct in (12a) is temporal, whereas the adjunct in (12b) is causal. The predicate *adonar-se* 'to realize', a non-processive perception verb, licenses a temporal adjunct in (12a), whereas a predicate like *acabar (fent) de llevadora* 'to become a midwife' only licenses a causal adjunct.

- (12) a. En/al parlar amb el metge del poble, es va adonar  
 in/at the to-talk with the doctor of the village, REFL realized.3SG  
 que duia el vestit estripat.  
 that wore.3SG the clothes torn  
 'When she was talking with the doctor of the village, she realized that his clothes were broken.'
- b. En/al parlar amb el metge del poble, va acabar de llevadora.  
 in/at the to-talk with the doctor of the village became.3SG of midwife  
 'Because of her talk with the doctor of the village, she became a midwife.'

2.1.2. The presence of a modal or aspectual verb in the subordinate clause can be decisive for the causal reading of the adjunct headed by *en/a*. The adjunct in (13)

may be interpreted as a temporal or a causal adjunct. However, the adjuncts in (13b) and (13c) only receive a causal reading. The presence of the modal verb *poder* ‘can/may’ and the aspectual verb *haver* ‘have’ does not license the temporal reading.<sup>11</sup>

- (13) a. En/al sortir de la cova, em vaig tranquil·litzar.  
in/at the to-leave from the cave REFL became-calm.1SG  
‘When I left the cave, I became calm.’  
‘Because I left the cave, I became calm.’
- b. En/al poder sortir de la cova, em vaig tranquil·litzar.  
in/at the can to-leave from the cave, REFL became-calm.1SG  
‘Because I managed to leave the cave, I became calm.’
- c. En/a l’ haver sortit de la cova, em vaig tranquil·litzar.  
‘in/at the to-have left from the cave REFL became-calm.1SG  
‘Because I had left the cave, I became calm.’

Other modal verbs, like *haver de* ‘have to’, and restructuring verbs, like *voler* ‘want’, cause the same effect. The preferred reading of the adjuncts in (14) is the causal reading.

- (14) a. En/a l’ haver de sortir de la cova, es va entrebancar.  
in/at the to-have of to-leave from the cave, himself tripped.3SG  
‘Becaus(s)he had to leave the cave, (s)he tripped.’
- b. En/al voler sortir ràpidament de la cova, es va entrebancar.  
in/at the to-want to-leave quickly from the cave, REFL tripped.3SG  
‘Because (s)he wanted to leave the cave quickly, he tripped.’

As expected, the presence of the auxiliary or modal verbs, and the future or conditional tense in the main clause usually do not affect the meaning of the adjunct, as shown in (15), where the adjunct constructions can receive either a temporal or a causal reading.<sup>12</sup>

11. This claim cannot be applied to the language of some (elderly) speakers living in rural areas. Similarly to Balearic dialects (see section 3), sentences like (i) have a temporal meaning for such speakers.

(i) En haver sortit d’ escola, anàvem a plaça.  
in to-have left of school went.1PL to square  
‘After leaving the school, we went to the square.’

12. If the adjunct is temporal and the main clause is in present, it cannot be deictic present, because the main tense is anchored to the time expressed by the adjunct (see Rigau 1995). In (i) the present tense is interpreted as habitual or generic, but not as a deictic present.

(i) En anar a escola, et veuen.  
in to-go to school you see.3PL  
‘When you go to school, they see you.’

- (15) a. En/a l' anar a escola, podrien veure' t.  
 in/at the to-go to school would-be-able.3PL to-see you  
 'When you were going to school, they would be able to see you.'  
 'Because you go to school, they would be able to see you.'
- b. En/a l' anar a escola, et veuran / t' han vist.  
 in/at the to-go to school you will-see.3PL / you have seen  
 'When you were going to school, they will see you / they have seen you.'  
 'Because you go to school, they will see you / they have seen you.'

Nevertheless, the presence of a modal verb in the main clause can determine the causal reading of the adjunct, as shown in (16).

- (16) a. En/al fer l' examen, va poder matricular-se de  
 in/at the to-do the exam could.3SG to-enroll REFL of  
 segon curs.  
 second course  
 'Because (s)he did the exam, (s)he was able to enroll for the second course.'
- b. En/al suspendre l' examen, va haver de repetir curs.  
 in/at the to fail the exam had.3SG of to-repeat course  
 'Because (s)he failed in the exam, (s)he had to repeat the course.'

2.1.3. The appearance of negation in such adjunct constructions blocks the temporal reading. Only a causal reading is available in the adjunct constructions in (17).

- (17) a. En/al no telefonar- nos, ens vam intranquil·litzar.  
 in/at the not to-phone us REFL got worried.1PL  
 'Because (s)he didn't phone us, we got worried.'
- b. En/al no fer l' examen, no vas aprovar.  
 in/at the not do the exam not passed.2SG  
 'Because you didn't do the exam, you didn't pass it.'

Negation, as a propositional operator that modifies the event of V+T, prevents V+T and the preposition from acting as a single tense operator in the syntax. The incorporation of V+T to a temporal coincidence preposition is blocked by Negation. Nevertheless, the causal meaning is licensed because in this case the preposition may not to be the minimum operator on which the 'weak' T incorporates. Consequently, similarly to a modal or an aspectual auxiliary, negation may be the minimum operator on which V+T incorporates, if the adjunct is causal. For a syntactic and semantic account of the impossibility of negation in adjuncts meaning temporal coincidence, see Rigau (1993, 1995).<sup>13</sup>

13. The negative element *ni* 'not even' is possible in such constructions, because it is an external negative element in an emphatic position, which adds a concessive meaning to the adjunct:
- (i) Ni a l' arribar a casa (no) es treu l' abric.  
 not even at the to-arrive at home (not) REFL take-off.3SG the coat  
 'He never takes off his coat, not even when he arrives at home.'

## 2.2. *The quantifier mateix in temporal adjuncts*

In some zones of Central Catalan, mainly the countries belonging to the Diocese of Girona<sup>14</sup>, it is possible to emphasize the event expressed by the temporal adjunct construction in (18), through the emphatic quantifier *mateix* ‘same’ necessarily preceded by the determiner *el* ‘the’, as shown in (19).

- (18) a. *En anar a correus*, passaré per la farmàcia.  
 in to-go to post office will pass.1SG by the pharmacy  
 ‘When I go to the post office, I will pass by the pharmacy.’
- b. Comença a preparar el sopar *en fer el dinar*.  
 begins.3SG to to-prepare the dinner in to-do the lunch  
 ‘(S)he begins to prepare dinner when (s)he’s preparing lunch.’
- (19) a. *En el mateix anar a correus*, passaré per la farmàcia  
 in the same to-go to post office, will pass.1SG to the pharmacy  
 ‘When I go to the post office, at the same time, I will pass by the pharmacy.’
- b. Comença a preparar el sopar *en el mateix fer el dinar*.  
 begins.3SG to to-prepare the dinner in the same to-do the  
*dinar*.  
 lunch  
 ‘(S)he begins to prepare dinner at the same time (s)he is preparing lunch.’

The italic constructions in (19), like those in (18), are PPs headed by a coincidence preposition.<sup>15</sup> They are temporal constructions because the event expressed by the main clause is viewed as coincident with the event expressed by the PP. However, a causal reading can be implied. For instance, (18a) can be paraphrased as follows: «Because I have to go to the post office, I will go to the pharmacy». Nevertheless, its basic meaning is the meaning of temporal coincidence.

The quantifier *mateix* ‘same’ emphasizes the temporal coincidence of the two events of the sentence, the event of the main clause and the event expressed by the subordinate predicate. Because of the temporal character of the adjunct, there is no place for Negation. As we have pointed out in 2.1, Negation blocks the temporal meaning of the adjunct. Consequently, it is not compatible with *mateix*, this element being a quantifier of the temporality of the adjunct.

- (20) \**En el mateix no anar a correus*, passaré per la farmàcia  
 in the same not to-go to post office will pass.1SG by the pharmacy

Some restrictions on the aspectual nature of the subordinate predicate need to be commented on. As with the standard temporal adjuncts studied in the prece-

14. The author has heard this usage in Alt Maresme, Garrotxa, Gironès and Pla de l’Estany.

15. Some speakers use the preposition *a* ‘at’: *al mateix...* ‘at the same...’

ding section, a stative predicate is not licensed in such constructions, because they are unable to express an event.

- (21) a. \*En el mateix ser intel·ligent, era bona persona  
 in the same to-be intelligent was.3SG good person  
 b. \*En el mateix conèixer Itàlia, parlava l' italià  
 in the same to-know Italy spoke.3SG the Italian

In contrast to the the standard temporal adjuncts studied in the preceding section, the achievements are not licensed to coappear with the quantifier *mateix* 'same'. Compare the sentences in (22).

- (22) a. \*En el mateix arribar a casa, crida' m.  
 in the same to-arrive at home call.2SG me  
 b. En arribar a casa, crida' m.  
 in to-arrive at home, call.2SG me  
 'When you arrive at home, call me.'  
 c. \*Va morir en el mateix néixer.  
 died.3SG in the same to-be born  
 d. Va morir al néixer.  
 died.3SG at the to-be born  
 '(S)he died when (s)he was born.'

Processive predicates are allowed to coappear with the quantifier *mateix* 'same', as shown in (23). The processive atelic predicates are possible, although they are less usual.

- (23) a. En el mateix ordenar les lleixes, les vaig netejar  
 in the same to-put-in-order the shelves them cleaned.1SG  
 'I cleaned the shelves while tidying them.'  
 b. En el mateix coure fesols, pots coure cigrons  
 in the same to-cook beans can.2SG cook cheakpeas  
 'You can cook cheakpeas while cooking beans.'

The predicate modified by *mateix* 'same' can be represented by the 'generic' predicate *fer* 'to do'. In fact, a non-processive predicate like *sortir* 'to leave' may be represented by *fer* in such constructions when it means 'to go to the street/outside the house'.

- (24) Surts? Per què no treus les escombraries en el mateix fer?  
 leave.2SG Why not take-out.2SG the garbage in the same to-do  
 'Are you going out? Why don't you take out the garbage while you're at it?'

A consequence of the presence of the quantifier *mateix* ‘same’ in this adjunct construction is the obligatory coreference between the subject of the main clause and the subject of the infinitive clause, as the ungrammaticality of (25) shows.

- (25) \*En el mateix fer el sopar la Maria, en Pere va preparar la  
 in the same to-make the dinner the Maria the Pere prepared the  
 cafeteria.  
 coffee-pot

Both actions have to share the same agent. The aim of *mateix* ‘same’ is to emphasize that the agent is doing or can do two actions at the same time. Because of this, the subject of the infinitive clause is usually silent, an empty pronoun sharing referentiality with the main subject.

Another syntactic strategy in this kind of temporal construction is the use of the noun *fet* ‘fact’, where the infinitive clause appears in an appositive position, as shown in (26). In these cases, *mateix* ‘same’, as an adjective, modifies the noun. Moreover, causality, can be inferred from the gloss in (26).

- (26) En el/ al mateix fet d’ anar a mercat, vés a la farmàcia.  
 in the/ at the same fact of to-go to market go.2SG to the pharmacy  
 ‘When you go to the market, pass by the pharmacy.’

The same restrictions presented in section 2.1 apply to this construction. The infinitive clause cannot be negated, and the predicate cannot be stative or an achievement, as shown in (27).

- (27) a. \*En el mateix fet de no anar al mercat, vés a la  
 in the same fact of not to-go to-the market go.2SG to the  
 farmàcia.  
 pharmacy
- b. \*En el mateix fet de ser alt, és fort.  
 in the same fact of to-be tall is.3SG strong
- c. \*En el mateix fet d’ arribar, vam visitar el museu.  
 in the same fact of to-arrive visited.1PL the museum

### 2.3. The *en ser que...* temporal construction

This interesting temporal construction belonging to several dialects is shown in (28).

- (28) a. *En ser que plou* ixen de casa.  
 in to-be that rains.3SG leave.3PL from house  
 ‘Just when it rains, they leave the house.’
- b. Pagarà *en ser que arribarà*.  
 will pay.3SG in to-be that will arrive.3SG  
 ‘(S)he will pay the moment (s)he arrives.’

This construction is alive in Southwestern Catalan (in Tortosan and Valencian) and in Balearic Catalan (in Eivissa and Majorca). However, there are several ways to write *en ser que* ‘in to-be that’, and to pronounce it: *ensé que* (see Colomina 1991:71f), *en se que* (Alcover-Moll 1975-77), *en ser que* (Alcover 1912, Coromines 1980-85, Briz 1991:75). The reason is that at present the construction is totally grammaticalized. Alcover (1912:105), in a short note reproduced in Colomina (1991:71), argues that this construction has to be analyzed as a preposition, plus the infinitive form of the verb *ser* ‘to be’, plus the conjunction *que* ‘that’. Nevertheless, other authors, like Moll (in Alcover-Moll 1975-77), Colomina (1991) or Briz (1991) argue that this construction has to be considered a temporal conjunctive locution, whose meaning is closer to other temporal locutions like *tan bon punt / de seguida que* ‘just at the moment’ than to the temporal preposition *quan* ‘when’ (see Colomina 1991: 72).

The meaning of the construction can be accounted for if we accept the explanation of Coromines (1980-85), who considers that *ser* ‘to be’ is originally an infinitive verbal form, but the construction was lexicalized and became an adverbial element. In fact, what we have is a construction similar to an impersonal cleft construction with the copulative verb *ser* ‘to be’, an expletive null subject (*pro*), and the conjunction *que* ‘that’, as in (29).

- (29) És que demà no vindré.  
 is that tomorrow not will-come.1SG  
 ‘I do not plan to come tomorrow.’

Impersonal cleft structure gives an emphatic character to the sentence, the same emphatic meaning that the construction *en ser que* ‘in to-be that’ shows.<sup>16</sup> The syntactic analysis we propose for this lexicalized item is shown in (30). The subject of the infinitive verb *ser* ‘to be’ is an expletive null subject (*pro*), the same expletive pronoun that we postulate in (29). Similarly to the infinitive sentences in adjunct constructions studied in this section, we assume that, despite the morphological form of the verb *ser* ‘to be’, its clause has number, person and weak tense properties, which allow it to check nominative case.

- (30) [<sub>pp</sub> en....[<sub>CP</sub>...[<sub>IP</sub> ser...[<sub>CP</sub> que [<sub>IP</sub>...]

16. Compare *demà no vindré* with *és que demà no vindré*, two possible answers in the following dialogue:

- (i) A: Ho decidirem demà.  
 it will-decide.1PL tomorrow  
 ‘We will decide tomorrow.’  
 B: Demà no vindré.  
 tomorrow not will-come.1SG  
 ‘I’m not coming tomorrow.’  
 B: És que demà no vindré. Ho sento.  
 is that tomorrow not will-come.1SG it regret.1SG  
 ‘I’m sorry. I don’t plan to come tomorrow.’

The verb *ser* ‘be’ will incorporate on the preposition *en* ‘in’ in order to act as a single tense operator in the syntax. No element, i. e., negation, can appear between the preposition and the verb *ser* ‘to be’. Interestingly, if the finite subordinate clause is negated, the adjunct construction becomes causal. Negation blocks the temporal reading, as shown in the example from Coromines (1980-85, s.v. *en*).

- (31) Ense que no tenim lo que volem nos ham de  
 in-to-be that not have.1PL the what want.1PL ourselves have.1PL of  
 contentar en lo que nos donen.  
 be-happy in what that us give.3PL  
 ‘Since we don’t have what we want, we have to be happy with what they  
 give us.’

### 3. Prepositions *en* /*amb* as temporal/causal operators in Balearic

This section is devoted to the infinitive constructions headed by *en* ‘in’ and *amb* ‘with’ in a Balearic dialect, Minorcan.<sup>17</sup>

#### 3.1 The preposition *en* heading a temporal adjunct

In Minorcan, the preposition *en* ‘in’ acts as a temporal operator, whereas the preposition *amb* ‘with’ acts as a causal operator, as shown in (32). Consequently, there is no possibility of ambiguity.<sup>18</sup>

- (32) a. *En* ‘*ver* [=haver] *sortit d’ escola*, vam anar a ca seva.  
 in to-have left from school went.1PL to house his/her  
 ‘When we left school, we went to his/her house.’
- b. Ell, *amb es sortir a dinar fora*, té sa nevera  
 he with the to-go to have-lunch outside has.3SG his refrigerator  
 buida.  
 empty  
 ‘Because he eats out for lunch, his refrigerator is empty.’

In contrast to other dialects, where the presence of the aspectual auxiliary *haver* ‘to have’ blocks the temporal reading of the adjunct, in Minorcan the presence of this auxiliary is selected by the preposition *en* in order to indicate the immediate anteriority of the event expressed by the adjunct. The preposition *en* ‘in’ is a preposition of coincidence which relates two events by expressing that they are contiguous. As claimed in section 1, temporal coincidence does not necessarily mean

17. On the construction *en* + infinitive in Majorcan, see Solà (1994: 185 and 187). In (i), an example adapted from Solà (1994: 187), the adjunct PP is a temporal construction. It expresses future tense.

(i) En venir el dimoni, li dius això.  
 in to-come the devil to-him say.2SG this  
 ‘When the devil will come, you will say this to him’

18. The construction *a + el* + infinitive sentence does not belong to this dialect.



simultaneity, but can also mean contiguity. Indeed, this is the meaning of the preposition/operator *en* 'in' in Minorcan<sup>19</sup>. However, no causal inference arises from the assertion that the two situations succeeded one another in time when the preposition heading the PP is *en* 'in'. This preposition does not act as a causal operator in this dialect.

As in other dialects, the infinitive sentence has a postverbal subject, which can be an empty pronominal *pro*, as shown in (33). As in (4) in section 2, we may conclude that the node T(ense) in such adjunct constructions checks nominative case, although it is not morphologically inflected with person and number.

- (33) a. En 'ver [=haver] passat s' hivern, anirem a Ferreries.  
 in to-have passed the winter will-go.1PL to Ferreries  
 'Once the winter is over, we will go to Ferreries.'
- b. En 'ver dinat na Maria, vam escurar.  
 in to-have had lunch the Maria washed.1PL  
 'When Maria finished lunch, we washed the dishes.'
- c. En 'ver dinat *pro*, escuren.  
 in to-have had-lunch wash.3PL  
 'As soon as they finish lunch, they wash the dishes.'

As in the constructions studied above Negation blocks the temporal reading of the adjunct. Consequently, the sentence becomes ungrammatical, since a causal reading is not available.

- (34) \*En no 'ver passat s' hivern, anirem a Ferreries  
 in not to-have passed the winter will-go.1SG to Ferreries

### 3.2. The preposition *amb* heading a causal adjunct

The preposition *amb*, a preposition of coincidence, acts as a causal operator in Minorcan when it selects an infinitive clause headed by the definite determiner *es* 'the'.<sup>20</sup> As expected in causal constructions, aspectual auxiliaries, modal verbs, and negation are licensed, as shown in (35).

19. The Minorcan equivalent to (i), a sentence that expresses temporal simultaneity between the main clause and the adjunct in Central and Western Catalan, is (ii), a construction which is also possible in these dialects.

- (i) A l' arribar, et cridaré.  
 at the to-arrive you will-call.1SG  
 'When I arrive, I will call you.'
- (ii) Quan arribi et cridaré.  
 when arrive.1SGsubjunctive you will-call.1SG  
 'When I arrive, I will call you.'

20. In the subdialect spoken in Alaior (Minorca), the definite determiner is *su* when it appears after the preposition *amb* 'with'. Therefore, the determiner in these constructions is *su*:

- (35) a. *Amb es 'ver sortit a dinar fora cada dia, té*  
 with the to-have gone to have-lunch outside every day has.3SG  
*sa nevera buida.*<sup>21</sup>  
 his/her refrigerator empty  
 'Because (s)he eats out for lunch every day, his/her refrigerator is empty.'
- b. *Amb es 'ver de dur s' al-lot a escola cada matí, no*  
 with the to-have of to-lead the boy to school every morning not  
*té.*3SG temps per res.  
 has time for nothing  
 'Because (s)he has to take his/her son to school every morning,  
 (s)he doesn't have any free time.'
- c. *Amb es no ser- hi, no vaig anar a fer feina.*  
 with the not to-be there not went.1SG to to-do work  
 'Because I wasn't here, I didn't go to work.'

A lexical subject is possible in these constructions, as shown in (36). Therefore, we assume an empty pronominal subject in the subordinate clauses in (35).

- (36) a. *Amb es 'ver de venir na Maria, jo no vaig anar a fer*  
 with the to-have of to-come the Maria I not went to to-do  
*feina.*  
 work  
 'Because Maria was due to arrive, I didn't go to work.'
- b. *Amb es no ser- hi jo, na Maria no va anar a fer feina.*  
 with the not to-be there I the Maria not went to to-do work  
 'Because I was not here, Maria didn't go to work.'

The position of the subject is not necessarily postverbal. It seems to mean that the incorporation of the verb on the preposition is not obligatory.<sup>22</sup> However, when the subject is in the preverbal position the determiner is not present, as shown in (37).<sup>23</sup>

- (i) *Amb su 'ver de venir, no aniré a fer feina.*  
 with the to-have of to-come not will-go.1SG to to-do work  
 'Because I have to come, I won't go to work.'

The same construction appears in *Rondaies Mallorquianes*, vol. XIX, Majorca, by Jordi des Racó (1975: 45), where *so* is the form of the Majorcan determiner when it appears after the preposition *amb* 'with':

- (ii) *Amb so fer ses sopes hem cremada tota sa [llenya].*  
 with the to-make the soups have burned.1PL all the firewood  
 'Because we cooked the soup, we have burned up all the firewood.'

21. *Amb es 'ver sortit* (P + det + have + pp) is the colloquial construction equivalent to *amb s'haver sortit*. The second form is not common.  
 22. More exactly, the V incorporates on Det, and Det+V incorporates on P.  
 23. The sentences in (37) with a preverbal subject are less frequent than those with a null subject or a postverbal subject, as in (35) and (36).

- (37) a. Amb na Maria haver d' anar a Ferreries, noltros vam haver de  
with the Maria to-have of to-go to Ferreries we had of  
quedar amb ets al·lots.  
stay with the boys  
'Because Maria had to go to Ferreries, we had to stay with the boys.'
- b. Amb noltros haver d' anar a Ferreries, tot va de  
with we to-have of go to Ferreries everything goes of  
qualsevol manera.  
whichever way  
'With our having to go to Ferreries, things have to take care of themselves.'

Nevertheless, if the preverbal subject of the subordinate clause is the pronoun *jo* 'I', it is possible to maintain the determiner:

- (38) Amb es jo no ser- hi, tot va de qualsevol manera.  
with the I not to-be there everything goes of whichever way  
'Because I am not here, things have to take care of themselves.'

#### 4. Conclusion

In this paper we have shown several infinitive adjunct constructions headed by a coincidence preposition. We have analyzed the conditions under which the coincidence preposition, which in its simplest meaning expresses temporal (or locative) contiguity, can act as a causal operator. Such conditions, which vary in their application from one dialect to another, show us the possibilities and limits of linguistic diversity, diversity that —according to K. Hale (1995: 1)— is necessary «in the sense that it is inevitable, a natural consequence of the very nature of linguistic structure.»

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