



Predicative gerunds in Spanish and Catalan¹

Jan Casalicchio

(Università degli Studi di Trento)

1. Introduction

In this article I discuss an instance of microvariation in Catalan, which regards the distribution of predicative gerunds. Although gerundial clauses are quite frequent in Romance languages, where they are subject to a considerable variation, the number of studies on this topic is rather limited.² As this article will show, there are various points which deserve a deeper study of this clause type, first of all the investigation of its relationship with other predicative constructions.

While in Spanish there is no documented variation of the use of gerunds, because all of its varieties share the same distributional pattern, in Catalan there is a remarkable difference among the dialects I have considered. The following examples illustrate this state of affairs:

- (1) a. María está en la iglesia hablando con el cura (Spanish)
b. La Maria és a l'església parlant amb el capellà (Catalan - Sabadell)
c. Na Maria és a l'església parlant amb so capellà (Catalan - Mallorca)
d. Maria és a l'iglésia parlant amb el capellà (Catalan - Alghero)
(The) Maria is at the church speaking with the priest
'Maria is in the church and speaks with the priest'

¹ In this article I present a part of my dissertation, where I analysed the structural correspondences between pseudorelatives, predicative gerunds and prepositional infinitives (Casalicchio 2013). The data I present were collected mainly by questionnaires filled out by native speakers. I want to thank Cecilia Poletto and Paola Benincà for their help during my work on the dissertation, Neus Castellà Rubio, Andrea Padovan, Silvia Perpiñan and Maria del Mar Vanrell for their advice in some questions, the audiences of the XIX Giornata di Dialettologia at the University of Padova and of the *Workshop on the Syntactic Variation of Catalan and Spanish Dialects* held in Barcelona in 2013 for useful comments. Finally, I wish to thank also Gianluca Lorenzin for editing the English version of this paper.

² In the last 20 years, the main studies on predicative gerunds were Campos (1994), Borgonovo (1996), Di Tullio (1998), Rafel (2000) and Fernández Lagunilla (in various works, see e.g. Fernández Lagunilla 1999 and 2013). In Casalicchio (to appear/a) I discuss the different uses of gerunds in three Romance varieties: Spanish, Italian and Ladin (a minority language spoken in the Dolomites).

- (2) a. Tengo a un amigo pintándome la casa (Spanish)
(I) have to a friend painting-me the house
- b. Tinc un amic estudiant anglès (Catalan – Sabadell)
- c. *Tenc un amic estudiant anglès (Catalan – Mallorca)
- d. *Tenc un amic estudiant anglès (Catalan – Alghero)
(I) have a friend studying English
- 'There's a friend of mine who is painting my house/studying English.'

The Catalan variety of Sabadell (a town close to Barcelona) patterns with Spanish (examples a and b); in Mallorcan and Algherese (a variety of Catalan spoken in the Sardinian town of Alghero) the use of gerunds is more restricted (examples c and d).

In this article I face the question of the causes for this variation. I will first consider the syntactic properties of the gerundial clauses, showing that the microvariation cannot be ascribed to structural differences of the different dialects. The scrupulous analysis of the main contexts that can host a gerundial clause will lead me to suggest that the Catalan situation depends on a restriction on verb movement which can be explained with Cinque's (1999) hierarchy of adverbs and functional heads: if there are restrictions in the movement of the verb to the various projections of TP, the gerund will carry less aspectual values. This in turn implies that the gerund will have a greater distribution if its movement is less restricted.

In the last part of the article, I consider the interrelation between gerunds and prepositional infinitives, a clause type that is used in other Romance languages instead of gerundial clauses. I will show that, even in this case, the only difference consists in restrictions on verb movement. This will lead me to put forward a new account of these predicative constructions: in my proposal they share the same syntactic structure, and it is the preposition *a* that carries the aspectual value when the infinitive is used.

This paper is organized as follows: in section 2 I provide an overview of the various types of sentential predicative constructions existing in Romance languages, and illustrate the distribution of predicative gerundial clauses in Spanish. The most important previous analyses are recapitulated in section 3, where I briefly discuss also the analysis proposed in Casalicchio (2013). Section 4 deals with the distribution of gerunds in Catalan: I first describe the observed microvariation and then account for it by referring to Cinque's (1999) hierarchy of adverbs and functional heads and to restrictions on verb movement. The blocking process of verb movement can be hypothesized also for the existence of prepositional infinitives with predicative value; section 5 is dedicated to this topic. Lastly, in section 6 I draw the

conclusions of this article. An appendix recapitulates the main aspectual readings of the different predicative contexts.

2. Sentential predicative constructions in Romance

In the Romance area, there are different types of predicative complements.³ Three of them express a sentential predication: pseudo-relatives, prepositional infinitives and gerunds.⁴ Pseudo-relatives have an almost pan-Romance distribution, since they are used in all varieties but Romanian:

- (3) a. Ho visto Maria che ballava (Italian)
b. J'ai vu Marie qui dansait (French)
(I) have seen Maria that danced
'I saw Maria dancing.'

The two remaining constructions have a more limited distribution: the infinitive headed by the preposition *a* is used in European Portuguese, Romansh and many Northern Italian varieties:⁵

- (4) a. Vi o Jorge a comer a maçã. (Europ. Portuguese)
(I) saw the Jorge to eat the apple
b. E l'æ višt Giórz a mangé 'r mæ (Piedmontese of Viola, CN)
I.cl have seen Giorgio to eat the apple
'I saw George eating the apple.'

Finally, gerunds are used in all Ibero-romance varieties except European Portuguese; moreover, we find them also in Romanian and in some very conservative varieties spoken in Italy, like Northern Ladin and Sardinian:⁶

³ I use the term "sentential" to refer to those predicative constructions which consist of a VP and (at least a reduced) TP. In this way I distinguish prepositional infinitives, gerunds and pseudo-relatives from other types of Small Clauses, like APs and PPs. Rafel (2000) refers to sentential predicative complements as 'Complex Small Clauses' (CSCs), because they have a more complex structure.

⁴ Since Stowell (1981), predicative complements are usually analysed as Small Clauses in the generative framework.

⁵ See Raposo (1989) and Casalicchio (2013: ch. 4) for an analysis of this construction respectively in Portuguese and in Romance in general.

- (5) a. 'L-am văzut pe George mâncând un măr (Romanian)
Him (I) have seen to George eating an apple
- (6) b. É udù Giorgio maian n mëil (Ladin of Gardena, BZ)
(I) have seen Giuani eating an apple
 'I saw Giorgio eat/eating an apple'

2.1 *Predicative gerunds in Spanish*

As we have already seen, predicative gerunds are particularly widespread in the Ibero-romance area. In Spanish, gerunds can be used in the predicative contexts which take a stage-level predicate (7), while they are ungrammatical in Small Clauses that have a stative value, e.g. with the verb *considerar* ('to consider', (8)); furthermore, there are some limitations regarding the aspectual value of the gerund, which cannot be used with achievement verbs like *encontrar* ('to find', (9)):⁷

- (7) Veo a Ana bailando el tango (Stage-level Small Clause)
(I) see to Ana dancing the tango
 'I see Ana dancing the tango.'
- (8) *Considero bailando/siendo inteligente a Juan (Stative Small Clause)
(I) consider dancing/being intelligent to Juan
- (9) *Lo vi encontrando las llaves (Achievement verb)
Him (I) saw finding the keys

Except for these restrictions, Spanish gerunds are compatible with all types of predicative constructions. Differently from languages like Italian, for example, in Spanish the subject of a predicative gerund does not have to be coreferent with the subject of the matrix clause. Here I list the main contexts which can select a gerundial clause:⁸

⁶ Gerunds and prepositional infinitives usually exclude each other in predicative contexts. Anyway, this does not amount to saying that they are in complementary distribution throughout Romance; in various languages they are excluded even for some independent syntactic reasons. In Italian, for example, the prepositional infinitive is grammatical mostly when there is a two-constituent structure (see the analyses given in (15)), cf. Casalicchio (2013: 249 ff.).

⁷ Cf. Vendler (1967) for the classification of verbs in four *Aktionsart*-classes and Fernández Lagunilla (1999: 3486) for the restrictions in Spanish. As stated by Fernández Lagunilla, the verbs that can be used as predicative gerunds are the same that are compatible with the progressive '*estar + gerund*' periphrasis.

⁸ Cfr. Fernández Lagunilla (1999), Casalicchio (2013).

a. The 'antecedent'⁹ of the gerund is the object of the matrix transitive verb:¹⁰

- (10) a. Oí a Felipe *cantando*
(I) heard to Felipe singing
'I heard Felipe singing.'
- b. Policía lo sorprendió *entrando por el techo*
Police him surprised entering by the roof
'The police caught him while he was entering through the roof.'
- c. La mujer había dejado al niño *durmiendo en la cama* (Emonds 1986: 199)
the woman had left to-the child sleeping in the room
'The woman had left the child while he was sleeping in the room.'
- d. No soporto a ese cretino *hablando de política*
not I stand to this idiot speaking of politics
'I can't stand this idiot when he speaks of politics.'

(Fernández Lagunilla 1999: 3490)

b. The antecedent is the subject of the matrix verb; in this case the gerundial clause may be an adjunct (11), a DP-modifier (11); the antecedent can also be the predicate of a copular sentence (11):

- (11) a. Mario volvió a casa *oliendo a vino*
Mario came-back to home smelling to wine
'Mario came back home smelling of wine.'
- b. Los niños *durmiendo* son adorables (Fernández Lagunilla 1999: 3487)
The children sleeping are lovely
'The children are lovely when they sleep.'
- c. [Será] mi *propia* conciencia *buscando un espejo*. (Lajmanovich 1967: 58)¹¹
[(it) will.be] my own conscience looking-for a mirror
'It's probably my own conscience, looking for a mirror.'

⁹ For sake of simplicity, I will use the term 'antecedent' to refer in general to the DP or pronoun which is the semantic subject of the gerund; as we will see, in some cases this DP is also structurally the subject of the gerund, while in others the DP is part of the matrix clause and is coindexed with the null subject of the gerund.

¹⁰ Notice that the gerundial clause can have different functions in these contexts: it can be an adjunct (10), an argument (10), and it can be part of the direct object together with its antecedent (10).

¹¹ This quotation is taken from Urueta, Margarita, *Ángel de justicia, o el señor perro*.

c. The antecedent is the complement of a PP. Most instances involve the prepositions *con* (so called 'absolute construction'¹²) and *de* (nominal construction), even though this construction is possible with any preposition:

- (12) a. *Con María llorando*, no puedo salir
With Maria crying, not (I) can go.out
 'Since/As long as Maria is crying, I can't go out.'
- b. La foto de María *haciendo las galletas* no la he visto nunca
The picture of Maria making the biscuits not it (I) have seen never
 'I have never seen the picture of Maria making biscuits.'
- c. *Entre esas cotorras charlando* continuamente, tu tía Julia no desentona.
Among those gossipers chattering continuously, your aunt Julia not will.play-out-of-tune
 'Among those gossipers chattering without a break, your aunt Julia won't clash.'
- (Lajmanovich 1967: 7313)

d. Finally, the gerund is used in so called 'root' constructions, e.g. exclamations or titles:

- (13) a. ¡Qué emocionante! ¡Un hombre *diciendo la verdad*...!
How exciting! A man telling the truth...!
 'How exciting! A man telling the truth...!' (Lajmanovich 1967: 75)¹⁴
- b. E. Delacroix, *La Libertad guiando al pueblo*
The Liberty leading the people
 'E. Delacroix, *Liberty leading the people*'

3. Previous analyses on Spanish gerunds

As shown in Di Tullio (1998), the various gerundial clauses have a different syntactic behaviour, depending on the context in which they are embedded.¹⁵ Consider the sentences in (10) and (10): when a perception verb is used, as in (10), it is possible to cliticize the DP

¹² In Casalicchio (to appear/b) I propose to distinguish between an 'absolute *con*' and a 'dependent *con*': in the former, the PP is on the left of the matrix clause, in the latter on the right. Moreover, the two types of PP are associated with two different semantics and select two different predicative structures (see (14) for a discussion of the three structures that are possible with gerunds).

¹³ Quotation taken from Wolff, *Los invasores*.

¹⁴ Quotation taken from Urueta, Margarita, *La mujer transpartente*

¹⁵ It is important to note that the syntactic differences are independent from the role of the antecedent in the matrix clauses, as listed in (10) - (13): the constructions where the antecedent is the object of the matrix clause (examples in (10)) do not form a syntactically homogeneous group, and neither do the groups exemplified in (11) or in (12). In my analysis I do not consider the 'root' construction (13), since it is difficult to determine their internal structure.

object of the matrix verb. On the contrary, when the verb belongs to the *soportar* ('to stand') class (10), the cliticization yields ungrammatical results:

- (14) a. Lo oí *cantando*
Him (I) heard singing
 'I heard him singing.'
 b. *No lo soporto *hablando de política*
not him (I) stand speaking of politics

In order to explain the divergent syntactic behaviour, Di Tullio (1998) proposes an detailed threefold analysis, which is inspired by Cinque's (1992) similar account of the (Italian) pseudo-relative construction: depending on the syntactic context, the gerund may enter three different structures (Di Tullio 1998):¹⁶

- (15) a. Two separate constituents: Vi [_{NP} a Mario_i] [PRO_i bailando]
 b. One single clausal constituent:¹⁷ Vi [_{AspP} a Mario bailando]
 c. One single constituent (complex NP): Vi [_{NP} a Mario_i [PRO_i bailando]]

The following pieces of evidence corroborate this threefold analysis:

- The construction where the gerund and its (semantic) subject form two separate constituents (15) is the only one explaining the possibility of cliticization (16) and of Long-DP-movement in passives (16): since it forms its own constituent, the noun or pronoun can move, leaving the gerundial clause *in situ*:

- (16) a. Lo vi [comiéndose una manzana] (cliticization)
him I.saw eating-self an apple
 'I saw him eating an apple.'
 b. María fue vista [leyendo una novela] (Long DP-movement)
Maria was seen reading a novel
 'Maria was seen reading a novel.'

¹⁶ I simplify here Di Tullio's analysis for expository reasons; note that in this work there are no DPs, but only NPs. It is important to stress that the same context can even host two or three different gerundial structures: with perception verbs (15), for example, all of the three constructions are possible.

¹⁷ Note that Di Tullio proposes that this constituent is not a CP, but an AspP; (for my analysis as CP, cf. *infra*).

- The structure with a single AspP constituent (15) is possible when the whole construction can be clefted (17) or resumed by a neuter proform, like the pronoun *lo que* (17), which can be translated in English with 'what':

- (17) a. Fue [el barco atracando en el puerto] lo que vi (cleft)
(it) was the boat docking in the port what that (I) saw
 'It was the boat docking in the port that I saw.'
- b. Vi [el barco atracando en el puerto]_i, lo_i que me resultó sorprendente (neuter)
(I) saw [the boat docking in the port], it that me resulted surprising
 'I saw the boat docking in the port, which resulted surprising for me.'

- Finally, according to Di Tullio the gerundial clause has an NP-status (15) when it is possible to use a [+animate] pronoun (in the example (18), the interrogative pronoun *quién*, 'who') or when there is agreement between the (semantic) subject of the gerund and the matrix verb (18):

- (18) a. ¿A quién_i has visto? [A María leyendo una novela]_i (personal pronoun)
to who you.have seen? To Maria reading a novel
 'Who have you seen? Maria reading a novel.'
- b. [_{NP} Unos niños *cruzando la calle*] fueron vistos por Juan (agreement)
Some children crossing the street were seen by Juan
 'Some children crossing the street were seen by Juan.'

Rafel (2000) is the first to propose a unified structure for all instances of what he calls the "Complex Small Clause Structure": pseudo-relative clauses, gerunds and prepositional infinitives. He notices that there are clear correspondences in the syntactic behaviour of these three constructions. In order to explain the differences listed in (16) - (18) he does not posit a threefold analysis as in Di Tullio (1998), but instead he proposes a unique structure for English and Spanish predicative gerunds:¹⁸

- (19) [_{FPv} John_i/PRO_i -ing [_{CPv} Ø_C [_{IPv} PRO_{expl. i} [_{VP} PRO_i run(n)-]]]]
 (Rafel 2000: 210)

¹⁸ The structure in (19) holds also for pseudo-relatives and prepositional infinitives. The main difference among these three constructions is that pseudo-relatives are CPs, prepositional infinitives PPs and gerunds FPvs.

In this structure, there is a PRO in Spec,VP and an expletive PRO in Spec,IP, which checks the EPP-feature of the internal predication. The semantic subject of the gerund (*John* or PRO) is base generated in Spec, FP, a functional projection immediately above CP which is associated with the verb. The subject, the expletive PRO in IP and the PRO in VP are coindexed and form an A-chain. Finally, the verb moves directly from V° to Fv° in order to check features at LF.

The alternation *John*/PRO is due to the argumental vs. adjunct status of the gerundial clause: when the gerund is an argument of the matrix verb, *John* is in Spec, FP and forms a constituent together with the gerundial clause. On the contrary, when the gerundial clause is an adjunct, the semantic subject of the gerund is merged directly in the VP of the matrix verb, and the gerundial clause is headed by a coindexed PRO. According to Rafel, this second structure permits to explain the possibility of cliticization and long-DP-movement exemplified in (16).

The advantages of this analysis consist in reducing the divergent results in the syntactic tests to a simple argument/adjunct opposition. Furthermore, his account is more accurate and permits to better understand the relationship between the antecedent and the gerundial clause. However, there are at least two problematic points: first of all, the presence of two or even three different PROs seems to be purely stipulative, and it is not clear why there is no movement of nominal elements: the author does not explain, for example, why *John* cannot be merged in VP and then move to FP. A second important counterargument regards the data in (16): while the author explains them all as cases of gerundial adjunction, there are some clear cases where the gerund is an argument but the cliticization or passivization is grammatical:¹⁹

- (20) a. Pablo la_i dejó PRO_i llorando (Spanish)
Pablo her left PRO crying

¹⁹ The same is true for the Italian pseudorelative, since there are verbs like *cogliere* which may take a predicative complement as argument. In this case they change not only their meaning, but also their subcategorization frame: usually *cogliere* means 'to pick [some fruit from the tree]' and requires a fruit or something similar as object. However, when it is used with a predicative construction it means 'to catch someone doing something' and requires a [+animate] object. Still, cliticization and passivization are possible:

- (i) L'ho colto che rubava dal tuo portafoglio
Him (I) have caught that (he) stole from your wallet
 'I caught him while he was stealing money from your wallet.'
- (ii) Paolo è stato colto che rubava dal tuo portafoglio
Paolo is been caught that (he) stole from your wallet
 'Paolo was caught while he was stealing money from your wallet'

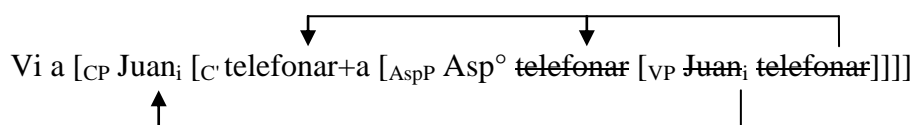
'Pablo left her while she was crying.'

- b. No me lo veo cantando karaoke
Not me him (I) see singing karaoke
'I can't imagine him singing the karaoke'

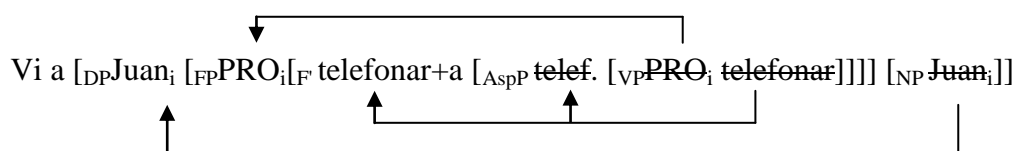
In Casalicchio (2013) I maintain a threefold structure, as in Di Tullio's (1998) analysis. Indeed, this is the only way to account for all the syntactic differences listed in (16) - (18), if we consider not only the perceptive construction, but each predicative context permitting the use of a gerund. This broader analysis leads to exclude a more simplified structure *à la* Rafel, in order to account for all the properties of predicative gerunds.

One main focus of my study is the verb and its movement: I proposed that it moves out from VP, targeting first the aspectual projection it is associated with²⁰ and then reaching C° or F°, where it incorporates a null preposition:²¹

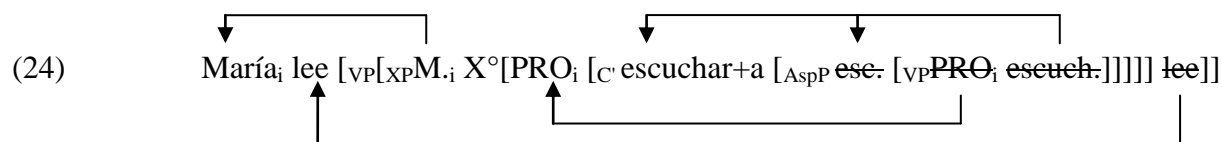
- (21) Vi a Juan telefonando (single CP constituent):



- (22) Vi a Juan telefonando (single DP constituent):



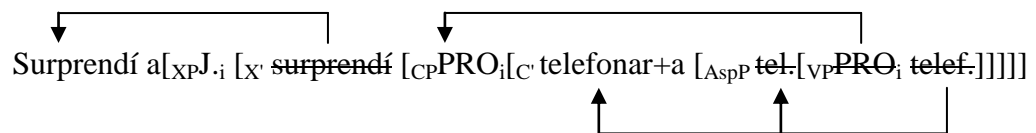
- (23) María lee escuchando música (two constituents; adjunct gerundial clause):



- (25) Sorprendí a Juan telefonando

²⁰ I will show which aspectual projections are involved in the predicative gerundial clauses in § 4.

²¹ In this article, as in Casalicchio (2013), I do not avoid the use of PRO, because I am convinced of the necessity of keeping the different empty categories (PRO, pro, traces) distinct, to give a clear account of the phenomenon I describe, cf. also Landau (2003 and successive work).



As we will see in the following sections, this movement mechanism of the verb is fundamental to explain both the microvariation in Catalan and the instances of prepositional infinitives that we find in other Romance languages.

4. Gerunds in Catalan

Among the Catalan varieties, I will analyse those of Sabadell (Central Catalan), Mallorca (Balearic Catalan) and Alghero (Sardinia). All of them are part of Eastern Catalan, which includes the oriental half of Catalunya, the islands in the Mediterranean and the town of Alghero in Sardinia.²²

In these varieties we can observe an interesting microvariation in the use of predicative gerunds: while Central Catalan shows a very similar distribution to Spanish, in Mallorcan and Algherese the use of gerundial clauses is more restricted. Consider the following examples (26) - (28): if the matrix verb is *mirar* ('to watch'), the gerund is grammatical everywhere:

- (26) a. El Marc mira la Maria cuinant el pollastre (Sabadell)
 b. En Marco mira na Maria cuinant es pollastre (Mallorca)
 c. Marco mira a Maria cuinant lo pollastre (Alghero)
(the) Marco watches the/to Maria cooking the chicken
 'Marco watches Maria cooking the chicken.'

However, if the perception verb *veure* ('to see') is used instead of *mirar*, the sentence becomes ungrammatical in Mallorcan, while it is still accepted in the other varieties:

- (27) a. He vist en Jordi menjant-se la poma (Sabadell)
 b. *He vist en Jordi menjant-se sa poma (Mallorca)
 c. He vist a Jordi menjant-se la poma (Alghero)
(I) have seen the/to Jordi eating(self) the apple
 'I have seen Jordi eating the apple.'

²² For a detailed map of the dialectal classification of Catalan see <http://aldc.espais.iec.cat/files/2013/06/3.-Classificaci%C3%B3-dialectal.pdf> [23/10/2014].

In still other cases, the gerund is grammatical only in Sabadell, while it is ungrammatical both in Mallorcan and in Algherese. This happens, for instance, when the matrix verb is *soportar* ('to stand').

- (28) a. No suportó gens el Joan i el Pau fumant a casa (Sabadell)
 b. *No suport gens en Joan i en Pau fumant a casa (Mallorca)
 c. *No suport més a Joan i Pau fumant en casa (Alghero)
Not (I) stand absolutely to Joan and Pau smoking at home
 'I can't really stand Joan and Pau smoking at home.'

In table 1 I give an overview of the different grammatical status of the main predicative contexts in the three varieties. The examples are quoted in the Sabadell variety:

Context	Sabadell	Mallorca	Alghero
Locative expressions: (29) La Gina és a l'església parlant amb el capellà <i>the Gina is at the church speaking with the priest</i> 'Gina is in the church, speaking with the priest.'	ok	ok	ok
Dependent PPs with <i>amb</i> : (30) Hem vist París amb el Pau fent de guia <i>(we) have seen Paris with the Pau making of guide</i> 'We have visited Paris with Pau as guide.'	ok	ok	ok
Perception constructions with <i>to watch</i> : (31) El Marc mira la Maria cuinant el pollastre <i>the Marco watches the Maria cooking the chicken</i> 'Marco watches Maria cooking the chicken.'	ok	ok	ok
Presentational <i>there is</i> : (32) Hi ha na Maria plorant com una desesperada (Mallorca) <i>there has the Maria crying like a desperate</i> 'Maria is crying as if she were desperate.'	ok	ok	ok
PP in a DP: (33) La foto de la Maria cuinant les galetes no l'havia vit mai! <i>the picture of the Maria cooking the biscuits not it (I) had seen never</i>	ok	ok	ok

	'I had never seen the picture of Maria cooking the biscuits.'			
	Perception constructions with <i>to see</i> :			
(34)	He vist en Jordi menjant la poma (I) have seen the Jordi eating the apple 'I have seen Jordi eating the apple.'	ok	*	ok
	Absolute PPs with <i>amb</i> :			
(35)	Amb la Maria plorant del mal, no podem marxar with the Maria crying of pain, not (we) can leave 'Since Maria is crying with pain, we can't leave.'	ok	ok	*
	Presentational <i>to have</i> :			
(36)	Tinc un amic estudiant anglès (I) have a friend studying English There's a friend of mine who is studying English.'	ok	*	*
	As object of the verb <i>to stand</i> :			
(37)	No suportó gens el Joan i el Pau fumant a casa Not (I)stand absolutely the Joan and the Pau smoking at home 'I can't really stand Joan and Pau smoking at home.'	ok	*	*
	As subject modifier:			
(38)	Els nens fent de vells del poble fan morir de riure the children making the elderly of-the village make die of to.laugh 'Children imitating the elderly people of the village are funny.'	ok	*	*
Table 1a: The use of predicative gerunds in three Catalan varieties				

In the first five contexts (29) - (32) the gerund is grammatical in all the three varieties. These include the locative expressions (29), ordinary PPs (with the prepositions *amb* (30)²³ and *de* (33)), and perceptive constructions with verbs like *mirar* (31). Finally, there are 'free' presentational sentences (32), which have a different form in each variety.²⁴

²³ Notice that Algerese distinguishes between the 'dependent' *amb* construction (where the gerund is grammatical) and the 'absolute' *amb* construction (which recalls the differences between these two constructions described in fn 12).

²⁴ I call this type of presentational sentences 'free' to distinguish it from other presentational construction (e.g., with the verb *tenir* like in (36)), because it is used in unmarked out-of-the-blue contexts and does not need a connection with the matrix subject (cf. fn. 25 for *tenir*). In order to form free presentational sentences, the variety of Sabadell uses the verb *ser* ('to be') alone, while Mallorcan and Algerese use the locative clitic *hi* ('there') followed respectively by *haver* ('to have') and *ser* ('to be'):

(i) És la Maria plorant com una desesperada

In the following two contexts (34) - (35) Mallorcan and Algherese do not agree: in the former dialect gerunds are excluded from perceptive construction headed by verbs like *veure* (34), while Algherese does not use them in the 'absolute' *amb* construction (35).

Finally, there are three contexts in which the gerund is used only in Sabadell: the presentational construction with the verb *tenir* ('to have', (36)),²⁵ the verbs of the *soportar*-class (37) and the cases where the gerund is embedded as a DP-modifier (38).

These considerations lead us to draw a first conclusion: the microvariation is not related to an implicational scale, since there is no clear relationship between the uses of gerunds in Alghero and Mallorca. A second important observation regards the syntactic structure: the ungrammaticality of gerunds is not related to structural restrictions (i.e., it does not depend on one of the three syntactic structures proposed in (15)). The clearest evidence for this statement comes from perceptive verbs of the *veure*-type: since they can take each of the three structures as complement, we would expect the gerund to be always possible in this context.²⁶

5. Interpretation of the Catalan data

We have seen that the Catalan microvariation cannot be related to syntactic restrictions. But there is another factor that permits to explain the data we are discussing, regarding the aspectual value of the gerund.

is the Maria crying like a desperate

(ii) Hi ha na Maria plorant com una desesperada
there has the Maria crying like a desperate

(iii) Hi és Maria plorant com una desesperada
there is Maria crying like a desperate

'[What is happening?] Maria is crying as if she were desperate.'

²⁵ This type of presentational sentences differs from those listed in (31) and discussed in fn. 24, because it is always formed with the verb *tenir* ('to have'), which establishes a relationship between the subject and the direct object of the matrix verb. Typically, the verb *tenir* is used with relatives (like in the example (36)) and with body parts.

²⁶ For further confirmation consider the sentences in (36) and (37): while the presentational *to have* usually has a two constituent structure (at least in Italian), verbs of the *soportar*-type are compatible only with a single constituent structure (both of CP and DP type). If the restrictions in Mallorcan and Algherese were due to the syntactic structure, we would expect gerunds to be grammatical in at least one of these two contexts.

The Romance gerund is usually described as carrying a progressive value, but, if we consider all the contexts listed in table 1, we notice that they show slight aspectual differences. Consider the following examples (reported in Sabadell Catalan):

- | | | | |
|------|----|--|-----------------------------|
| (39) | a. | El Marc mira la Maria cuinant el pollastre.
<i>the Marc watches the Maria cooking the chicken</i>
'Marc watches Maria cooking the chicken.' | Asp _{completive} |
| | b. | La foto de la Maria cuinant les galetes no l'havia vit mai!
<i>the picture of the Maria cooking the biscuits not it (I) had seen never</i>
'I had never seen the picture of Maria cooking the biscuits.' | Asp _{continuative} |
| | c. | La policia ha escoviat lo lladre entrant de la finestra (Alghero)
<i>the police has caught the thief entering by the window</i>
'The police caught the thief entering through the window.' | Asp _{terminative} |
| | d. | No suportó gens el Joan i el Pau fumant a casa
<i>Not (I) stand absolutely the Joan and the Pau smoking at home</i>
'I can't really stand Joan and Pau smoking at home.' | Asp _{repetitive} |

In these four examples, the aspectual value of the gerund is not completely identical: in (39) the duration of the two events (*to watch* and *to cook*) is overlapping (in unmarked cases), since the main event finishes when the action of *cooking* is completed, as well. Thus, the aspect that seems to best fit this state of affairs is the completive one. The gerund in (39) has a clearly different aspectual value: the picture captures just one single moment out of the event of the cooking, which does not end when the picture is taken. In this case, I suggest to interpret the aspect as continuative or progressive.²⁷ The sentence in (39) does not fit in the previously proposed readings, because here a verb like *to catch* implies that when the police notices the thief, he stops his action: the thief does not complete the action of entering through the window, because he will either flee or be arrested by the police. Thus, the correspondent aspectual value is terminative. Finally, in (39) the unmarked aspectual reading is repetitive, since the matrix event (*not to stand*) occurs every time the smoking happens.

In table 2 I propose an analysis along these lines for each context listed in table 1, with the indication of the aspectual value (with unmarked reading):

²⁷ The choice between *continuative* and *progressive* is often difficult, because it depends also on the *Aktionsart* of the verb. In both cases, the event described by the gerund goes on even after the event of the matrix verb is concluded.

Context	Sabadell	Mallorca	Alghero	Aspectual value
Locative expressions (29)	ok	ok	ok	Asp _{completive}
Dependent PPs with <i>amb</i> (30)	ok	ok	ok	
Perception constructions with <i>to watch</i> (31)	ok	ok	ok	
Presentational <i>there is</i> (32)	ok	ok	ok	Asp _{continuative}
PP in a DP (33)	ok	ok	ok	
Perception constructions with <i>to see</i> (34)	ok	*	ok	
Absolute PPs with <i>amb</i> (35)	ok	ok	*	
Presentational <i>to have</i> (36)	ok	*	*	Asp _{prep}
As object of the verb <i>to stand</i> (37)	ok	*	*	
As subject modifier (38)	ok	*	*	
Table 2: The use of predicative gerunds in three Catalan varieties, and their aspectual value				

If we compare the information given in the right columns, we see that the predicative gerund is grammatical in all Catalan varieties when it expresses Asp_{completive}: in locative expressions, in dependent PPs headed by the preposition *amb*, with the verb *to watch* and with the presentational *there is*. At the bottom of the table, gerunds with Asp_{repetitive} are grammatical only in Sabadell. Finally, when the gerunds carry a continuative or progressive aspect, the situation is apparently incoherent.

However, I claim that Cinque's (1999 and 2006) hierarchy may help us to shed light on this unclear situation. In his works, Cinque establishes a universal hierarchy of adverbs and functional heads, considering the ordering of adverbs and functional verbs in different languages. To give just one example, in Italian the terminative adverb (non) *più* ('(no) longer') precedes the adverb *sempre* ('always'), associated with perfective aspect:

- (40) a. Da allora, non ha più sempre vinto. (Cinque 1999: 6)
b. *Da allora, non ha sempre più vinto.
'Since then, he has no longer always won.'

The full comparison of the different adverbial position lead Cinque to propose the following hierarchy of aspectual heads:²⁸

- (41) ... **Asp**habitual > **Asp**repetitive(I) > **Asp**frequentative (I) > **Asp**celerative (I) > **T**(anterior) > **Asp**terminative > **Asp**continuative > **Asp**perfect(?) > **Asp**retrospective > **Asp**proximative > **Asp**durative > **Asp**progressive > **Asp**prospective > **Asp**completive (I) (> Voice) > **Asp**celerative (II) > **Asp**completive (II) > **Asp**repetitive (II) > **Asp**frequentative (II) ...

Cinque (1999: 106)

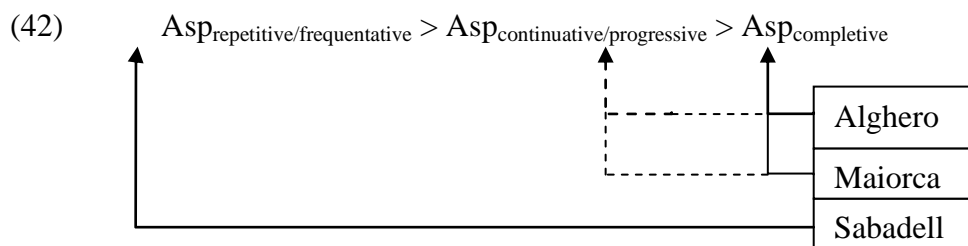
If we look at the aspectual readings involved in the predicative gerundial constructions (in bold), we can notice: on the top the repetitive aspect, while the completive aspect is the lowest one. By comparing this hierarchy with the results shown in table 2, we see that Sabadell gerunds are the only ones which are able to reach the higher projections. The gerunds of Mallorcan and Algherese are always compatible with **Asp**completive, the lowest projection, and are sometimes grammatical with the aspectual projections in the middle.

Thus, the crucial factor for the use of gerunds in Catalan seems to be verb movement: while it is unconstrained in Sabadell (i.e., at least up to **Asp**repetitive), in the other two varieties it is subject to restrictions. There seems to be a blocking process ongoing, which is responsible for the ungrammaticality of gerunds any time the verb has to reach a projection above **Asp**completive. At this stage, there are some residual contexts where the verb can still move to the intermediate projections: it is an oscillating trend, and the movement to **Asp**continuative seems to become more and more marginal.²⁹ This situation can be schematized in this way:³⁰

²⁸ I report here only the lower part of the hierarchy which is pertinent to our topic.

²⁹ Among the gerunds with continuative aspect, there are two special cases (see table 2): the gerunds embedded in a DP (33) show cross-linguistically some idiosyncratic properties which resemble the adverbial gerunds (Casalicchio 2013: 170). Moreover, their aspectual interpretation strongly depends on the semantic value of the DP and on the context. For this reason, their grammatical status could be also due to some independent factors. For the perception verbs of the *to see* type (34), a datum in Rafel (2000) offers a possible explication for the grammaticality of the gerundial clause in Algherese; according to him, in Spanish and Catalan these contexts permit also a completive reading of the gerund:

(i) Jo mateix l'he vist arreglant el cotxe fins que ha acabat (Rafel 2000: 270)
I self him (I) have seen repairing the car until that (he) has finished
 'I myself saw him repairing the car until he finished.'



6. Verb movement blocked – a sketch of analysis

In some Romance varieties, a prepositional infinitive is used instead of the gerund. In European Portuguese, for example, the distribution of prepositional infinitives and its syntactic behaviour pattern exactly like gerunds in Spanish. For this reason, in Casalicchio (2013) I propose to analyse this construction like the gerundial one, with the only difference that the infinitival verb does not move so high, while the aspectual value is carried by the preposition *a*.

An important statement is that gerunds and prepositional infinitives usually exclude each other. There seems to be diachronic and cross-linguistic evidence for a tight relationship between these two verb forms. As the evolution from Vulgar Latin to Romance shows, there was a general passage from synthetic to analytic forms, which included the Latin *gerundium*:

- (43)
- | | | | |
|----|-------|---|---------------|
| a. | CAMPI | > | DE CAMPU(M) |
| b. | CAMPO | > | A(D) CAMPU(M) |

So, the grammaticality of this context in Algerese is not necessarily an exception to the movement blocking process, since it may be connected with Asp_{completive}.

³⁰ For Mallorcan, I have also collected evidence from the ordering position of the gerund with respect to adverbs: when the gerund is used, it moves higher than *bé* ('well'), while it remains lower than *quasi* ('almost'), *i.e.* in a projection between VoiceP ('well') and Asp_{prospective}:

- (i) En Marco mira na Maria (*bé) cuinant bé es pollastre
The Marco looks-at the Maria cooking well the chicken
 'Marco looks at Maria while she is cooking the chicken well'
- (ii) En Marco mira na Maria quasi plorant (*quasi) de mal
The Marco looks-at the Maria almost crying of pain
 'Marco looks at Maria while she is almost crying with pain.'

These data are compatible with the interpretation of Mallorcan gerunds as carrying Asp_{completive}, because this projection is exactly between Asp_{prospective}P and VoiceP. More research is needed in order to establish the position of gerunds in Sabadell and Alghero.

- (44) a. PORTANDI > DE PORTARE
 b. PORTANDO > A(D) PORTARE (Tekavčić 1972: 251)

Furthermore, the comparison between Italian and Spanish shows that in various aspectual periphrases a Spanish gerund corresponds to an Italian prepositional infinitive:

- (45) a. *María sigue **trabajando** / *a **trabajar*** (Spanish)
*María keeps working / *to work*
 b. *Maria continua ***lavorando** / a **lavorare*** (Italian)
*María keeps *working / to work*
 'Maria keeps working.'

The aspectual verb *seguir/continuare* (to keep) takes a gerundial complement in Spanish, a prepositional infinitive in Italian. There are even cases in which the alternation between gerunds and prepositional infinitives crosses Italy. An example of this case is the progressive periphrasis, formed with the verb *stare*:³¹

- (46) a. *Estoy comiendo una manzana* (Spanish)
 b. *Sto mangiando una mela* (Italian)
(I) stay eating an apple
 c. *Stenghə a mmagna' na melə* (Arielli, CH)
(I) stay to eat an apple
 'I am eating an apple'

While Spanish and Standard Italian both use a gerund in this case, there are dialects like the one spoken in Arielli (part of the Southern Italian group) which use a prepositional infinitive even here.

These data show that throughout Romance there are different patterns in the use of gerunds; the important fact is that in many cases where this verb form cannot be used, a prepositional infinitive is used, which is always headed by the preposition *a*; on the contrary, other infinitival constructions as the *di* + infinitive are always excluded.³²

³¹ I thank Roberta D'Alessandro (p.c.) for the example (46).

³² Since in some Catalan varieties the gerund covers only part of the aspectual values it has in Spanish and Sabadell Catalan, we would in principle expect the prepositional infinitive to be grammatical in at least some contexts (except for syntactic restrictions as in Italian, see fn. 6). Although the Catalan microvariation deserves a deeper study in order to clear the exact distribution of prepositional infinitives, we can notice that the grammar

Starting from these considerations, the analysis I proposed in Casalicchio (2013) reduces the variation of gerunds and prepositional infinitives to the faculty of the verb to move in the TP field. The Sabadell gerunds, as in Spanish, show no syntactic restrictions, and they can be associated with any aspectual reading attributable to gerunds (47).³³ In Mallorcan and Algerese, the movement is blocked at some point, and the gerund is incapable of reaching the relevant aspectual projection. In Mallorcan and Algerese, the block is located somewhere between Asp_{repetitive} and Asp_{completive}.

Therefore, the analysis of gerunds can be sketched along the following lines:³⁴

- (47) Sabadell: [CP/FP[C°/F° venir+a [TP[AspP venir [AspP venir [AspP venir [VP venir]]]]]]]
- (48) Mallorcan/Algerese: [CP[C° a [TP [AspP [AspP [AspP venir [VP venir]]]]]]]
-

The structure in (48) describes also European Portuguese: in this language the verb apparently does not move to TP at all, and the aspectual value is carried not by the infinitive (which is usually neuter with respect to the aspect), but by the preposition *a*.

of Badia Margarit indicates the prepositional infinitive as a "genuine" form of perceptive complements in Catalan, quoting examples like:

- (i) Avui l'hem sentit a cantar (Catalan; Badia Margarit 1962: 453)
 today him (we) have heard to sing
 'Today we heard him sing/singing.'

I have consulted some Catalan speakers, who accept these kind of sentences, but only in specific contexts (mainly with the verb *sentir*, 'to hear') and with various restrictions. On the other hand, in the grammar of Pompeu Fabra (1956), the prepositional infinitive with perception verbs is not mentioned.

³³ In (47) and (48) I report only a simplified version of the syntactic structure, highlighting the possible targets of verb movement.

³⁴ Notice that in theory, the structure in (48) predicts that the outcome of predicative constructions will be a prepositional infinitive whenever verb movement is blocked; however, as I previously stressed, there may be other restrictions on this construction (see fn. 6).

7. Conclusions

The analysis of the Catalan data has shown that we can explain the microvariation found in the varieties of Sabadell, Mallorca and Alghero if we consider the aspectual reading of each gerund. Once this factor has been stated, the hierarchy of functional heads of Cinque allows us to observe that the contexts where gerunds are ungrammatical in Mallorcan and Algherese correspond to the aspectual values that are located higher in the TP. Thus, the observed restrictions in the use of gerundial clauses are in fact restrictions on verb movement.

The fact that there are differences in verb movement within the Romance language group has already been observed in much previous work (cf. among others Cinque 1999 and Ledgeway-Lombardi 2005).³⁵ The new approach of my article consists in extending the effects of the more or less restricted movement even to cases that have not been considered until now. As a matter of fact, these differences do not affect only the relative order of verbs and other elements in the clause (like adverbs); verb movement is also decisive for the range of aspectual values the gerund may carry.

In the last section I have given a brief overview of the interrelated distribution of gerunds and prepositional infinitives. As the diachronic data show, there is a relationship between these two forms; since the prepositional infinitive is an evolution of the gerund, and they often occur in complementary distribution. Again, verb movement seems to be the crucial factor for the variation between these two constructions.

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³⁵ See also Schifano (in progress), who is working on a pan-romance investigation of verb movement, both in contexts where the verb is flexed or inflected. In her analysis she does not examine predicative gerunds, but she shows that in Valencian Catalan the infinitive of subject infinitival clauses does not reach the high aspectual space, but it obligatorily targets a high position in the low aspectual space, (at least) above 'already'.

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Appendix

Table of the most frequent contexts where a predicative gerund is used, with indication of the principal aspectual value (examples in Spanish):

Context	Example	Principal aspectual value
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Predicative complement of an object DP

<i>To hear</i>	Oigo a María cantando <i>(I) hear to María singing</i>	continuative/progressive
<i>To listen to</i>	Escuché a mi familia cantando <i>(I) listened to my family singing</i>	completive
<i>(Not) to stand</i>	No soporto a ese cretino hablando de política <i>not (I) stand to this idiot speaking of politics</i>	repetitive
<i>To catch</i>	Policía lo sorprendió entrando por el techo <i>Police him caught entering by the roof</i>	terminative

In PPs

'Absolute' <i>with</i>	Con María llorando, no puedo salir <i>with María crying, not (I) can go.out</i>	continuative (?)
'Dependent' <i>with</i>	Vimos París con Pablo mostrándonos los monumentos <i>(we) saw Paris with Pablo showing-us the monuments</i>	completive
Gerund in nominal expressions	La foto de Ana haciendo galletas <i>The picture of Ana making biscuits</i>	continuative

Other contexts

Predicative complement,	Mario volvió a casa olviendo a vino <i>Mario came.back to home smoking of wine</i>	continuative
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referring to the subject		
Subject modifier	Los niños durmiendo son adorables <i>The children sleeping are lovely</i>	repetitive (completive?)
Presentational sentences with <i>tener</i>	Tengo a un amigo pintándome la casa <i>(I) have to a friend painting-me the home</i>	completive
Presentational sentences with <i>hi ha / hi es / es</i>	Hi ha na Maria plorant com una desesperada (Mallorca) <i>There is the Maria crying like a desperate</i>	completive (?)
Locative expressions	Julio está en el jardín regando las plantas <i>Julio is in the garden watering the plants</i>	completive
Table 3: Aspectual value of the gerund		