

Aspect and Modality in infinitive relatives

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1 Background

2 Basic data

- PIR are relative clauses
- Prepositional complementizer
- Defective left periphery
- Inherent modal reading

3 A proposal

- Modality
- Aspect
- Some consequences

4 Conclusions

Prepositional infinitive relatives (PIR) in Romance

- (1) Giurgea & Soare (2010)
 - a. Les livres *à lire* sont sur la table. French
 - b. I libri *da leggere* sono sul tavolo. Italian
 - c. Cărtile *de citit* sînt pe măsa. Romanian
'The books to be read are on the table'

- (2) Appo fattu tottu sas cosas *de fàkere*. Sardinian (Jones 1996, 298)
'They have done all the things to do.'

See also Napoli (1976), Bianchi (1991), Morales Carmona (1994), Táboas (1995), Duarte et al. (2015), Gutiérrez Rodríguez & Pérez Ocón (2017), Villalba & Planas-Morales (2020).

Main properties

- prepositional complementizer
- defective structure
- modal reading
- prospective aspect

Put into relation:

- the defective left periphery of PIR,
- the inherent modal nature of PIR, and
- the inherent prospective aspect of PIR.

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An important methodological point

We must carefully distinguish PIR from causal or final PP:

- (3) Il giudice è stato sospeso **per aver suo figlio commesso una grave imprudenza** (Rizzi 1982, 86)
'The judge has been suspended for to-have his son made a heavy imprudence (= because his son ...)'
- (4) Van comprar els llibres **per molestar-la**.
'They bough the books to annoy her.'

(5) PIR

- a. En Castilla hay **muchas tierras por sembrar(*las)**. Hernanz (1999)
'In Castille there are many lands to be sown.'
- b. Los paraísos **por descubrir (*tales edenes)** no abundan.
'*The paradises to discover such paradises are scarce.'

(6) adjunct PP

- a. En Castilla se queman las tierras **para mantener*(las) limpias de malas hierbas**.
'In Castille lands are burnt to have them clean of weeds.'
- b. En Castilla se queman las tierras **por tener *(dichas tierras) abandonadas**.
'In Castille lands are burnt because these lands are abandoned.'

(7) PIR

- a. Avergonzada, escondió los/*sus libros **por leer**.
'Ashamed, she hid the/*her books to read.'
- b. Avergonzada, escondió los/*sus libros **que tenía que leer**.
'Ashamed, she hid the/*her books she had to read.'

(8) adjunct PP

- a. Avergonzada, escondió los/sus libros **para leerlos más tarde**.
'Ashamed, she hid the/her books to read them later on.'
- b. Avergonzada, escondió los/sus libros **por no discutir**.
'Ashamed, she hid the/her books to avoid an argument.'

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Prepositions in Finiteness

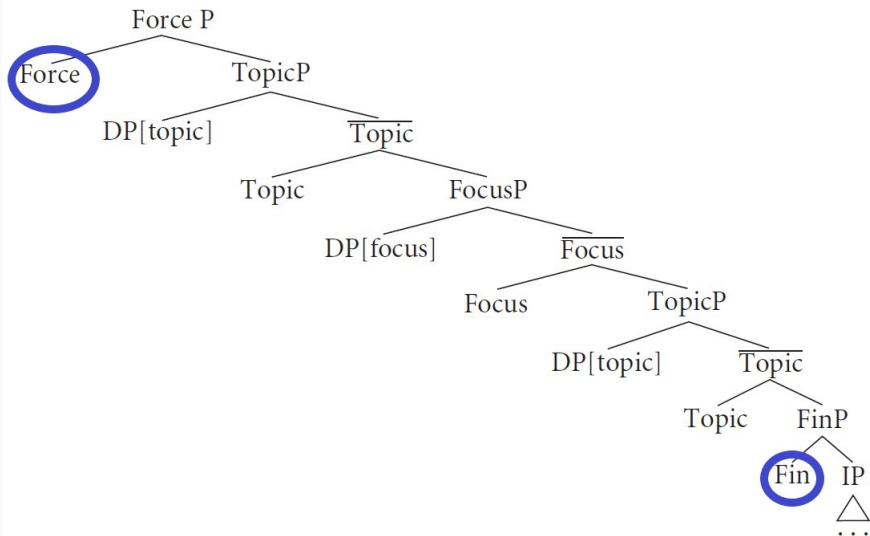
francés: Kayne (1999)

- (9) a. Il est important **de**/***que** chanter.
'Es importante cantar.'
- b. Il est important ***de**/**que** vous chantiez.
'Es importante que cantes.'

italiano: Rizzi (1997)

- (10) a. Ho deciso, la macchina, **di** comprarla quest'anno.
'He decidido comprar el coche este año.'
- b. Ho deciso **che**, la macchina, la comprerò quest'anno.
'He decidido que el coche lo compraré este año.'

The left periphery of sentence according to Rizzi (1997)



Prepositional complementizers

	finite clause	nonfinite clause
realization	que	de/por/para
position	head of ForceP	head of FinP

See Villalba & Planas-Morales (2020) for arguments.

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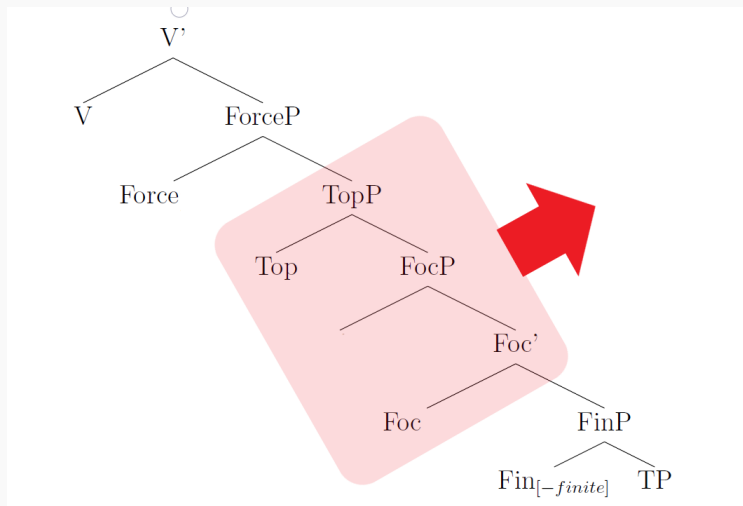
3 A proposal

4 Conclusions

PIR don't admit topics neither foci

- (11) a. *Tengo muchas cosas por/para a Juana decirle.
'I have many things to say to Juana.'
- b. *Muchas tierras por nunca jamás cultivar se concentran en Soria.
'Many lands to be never sown are concentrated in Soria.'
- (12) a. Tengo muchas cosas que a Juana le debo decir.
'I have many things that I must say to Juana.'
- b. Muchas tierras que nunca jamás se cultivan se concentran en Soria.
'Many lands that are never sown are concentrated in Soria.'
- (13) a. *Sto cercando una persona con cui questa proposta discuterla.
(Bianchi 1991, 119)
'I am looking for a person to discuss this proposal with.'
- b. *Busca un amigo a quien/al que sus secretos compartirlos.
'She is looking for a friend to share her secrets with.'

Truncation (Rizzi 1993)



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Las relativas de infinitivo [...] son posibles en los contextos en los que se sobrentiende el verbo modal *poder*, como en *un libro con el que entretenerme* ('con el cual poder entretenerme') o *un pozo del que sacar agua* ('del cual poder sacar agua'). RAE (2010, 25.12m)

Infinitive relatives are possible in contexts where the modal verb *can* is understood, as in *a book to entertain myself with* ('with which I can entertain myself') or *a well from which to draw water* ('from which one can draw water').

- (14) a. Encontrar el dinero para poder hacer frente al pago de estos medicamentos caros puede ser una cuestión vital.
'Finding the money to be able to pay these expensive drugs can be a vital issue.'
- b. El dinero para poder hacer esto no salió de la billetera de Kiyosaki.
'The money to be able to do this didn't come from Kiyosaki's wallet.'

Interim conclusions

- PIR are relative clauses
- PIR are introduced by a prepositional element
- PIR don't admit topics nor focus
- PIR have a modal reading

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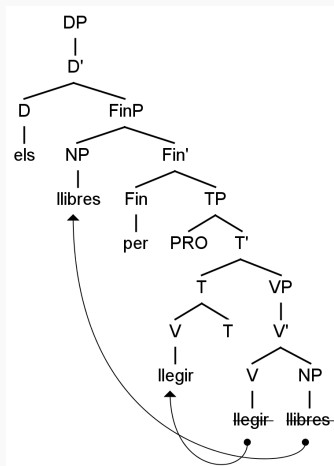
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4 Conclusions

Departure point

- the preposition is a complementizer in the $\text{Fin}_{[-\text{fin}]}$ head,
- we assume the raising analysis of relatives (Kayne 1994, Bianchi 1999, 2000).



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2 Basic data

3 A proposal

- Modality

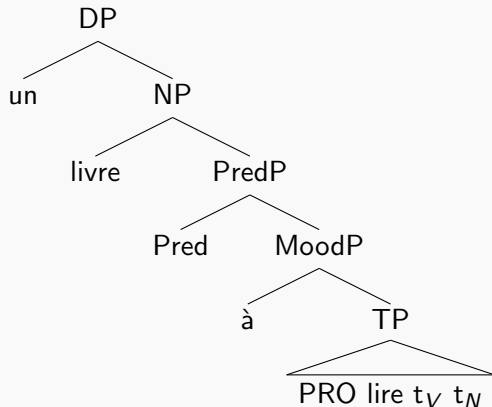
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PIR and modality

PIR encode a modal value, that we can represent syntactically as in Giurgea & Soare (2010)



Yet, this proposal doesn't fit our data.

The modal value of PIR is always root, never epistemic:

- ability: paraísos por descubrir → ‘paradises that can be discovered’
- necessity/obligation:
 - 1 con ejercicios para corregir → ‘with exercises that one must correct’
 - 2 la tasa de descuento por utilizar → ‘the discount tax that one must use’

“Root modals are typically future oriented and are used to talk about propensities and potentials of people, things, and spatio-temporal locations, given their current circumstances. Usually, circumstances permit or prevent events from happening.” Kratzer (2012, 51)

PIR and modality

PIR may express the modal auxiliary *poder* (ability), but they cannot express *tener que/deber* (obligation/necessity)

- (15) a. una colección de 100 libros para **poder** leer en la consola
a collection of 100 books to be able to read on the console
- b. Un problema en el mundo real es la falta de lugares para **poder** vivir.
'A problem in the real world is the lack of places where one can live on.'
- (16) a. *No quedan sitios para/por **tener que/deber** ir. 'There are no places left for having to go to'.
b. *Hubo muchas ocasiones para/por **tener que/deber** mentir.
'There were many occasions for having to lie.'

PIR admit **root**, but not **epistemic**, modal adverbs:

- (17) ejercicios para corregir
*posiblemente/*quizás/obligatoriamente/necesariamente
'exercises to be possibly/maybe/compulsory/necessarily corrected'
- (18) els llibres per llegir
*possiblement/*potser/obligatòriament/necessàriament
Cat. 'the books to be possibly/maybe/compulsory/necessarily read'

PIR, modality and truncation

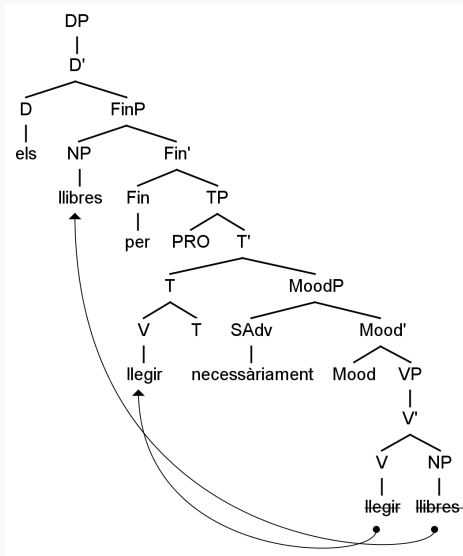
Picallo (1990) showed that **epistemic modals** are always higher than **root modals**:

- (19) En Pere **deu** **poder** tocar el piano.
the Pere must can play the piano
- a. 'It must be the case that Pere is able/allowed to play the piano.'
 - b. *'It must be the case that it is possible that Pere would play the piano.'
- (20) En Jordi **pot** **haver de** venir.
the Jordi may have to come
- a. 'It is possible that Jordi is obliged/compelled to come.'
 - b. *'It is possible that it is necessary that Jordi come.'

Cinque (1999, 4.1) also shows that epistemic modal adverbs appear very high in the sentence, above tense and negation, whereas root modal adverbs surface in lower positions, closer to the VP.

PIR, modality and truncation

The defective structure of PIR allows root modal adverbs, but not epistemic ones:



These low modal adverbs are expected to precede temporal adverbs in the VP area:

- (21) Os potros a alimentar **necessariamente** **amanhã** são de raça lusitana. Port. modified from an example by Duarte et al. (2015, ex. 21)
'The colts to feed necessarily tomorrow are of Lusitan breed.'
- (22) els llibres per llegir **obligatòriament** **demà** Cat.
'the books to obligatorily read tomorrow'

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3 A proposal

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4 Conclusions

PIR are described as involving a prospective aspect (see Bianchi 1991, 117, RAE 2010, 46.1r).

- (23) Els exàmens per corregir demà/*ahir s'esperen damunt la taula.
'The exams to be corrected tomorrow/yesterday are waiting on the table.'

PIR allow imperfective forms:

- (24) Els llibres per anar llegint durant les vacances.
'The books to read during holidays.'

PIR cannot realize perfective infinitival forms:

- (25) *Cerco un libro da aver letto (l'anno scorso). (Bianchi 1991, 117)
'I seek a book to have read (last year).'
- (26) *Els llibres per estar llegits abans de vacances.
'The books to be read before holidays.'

The previous data fit nicely into Cinque's hierarchy (Cinque 1999, 76):

$\text{Mood}_{\text{speech act}} > \text{Mood}_{\text{evaluative}} > \text{Mood}_{\text{evidential}} > \text{Mod}_{\text{epistemic}} > \text{T(Past)} >$
 $\text{T(Future)} > \text{Mood}_{\text{irrealis}} > \text{Asp}_{\text{habitual}} > \text{T(Anterior)} > \text{Asp}_{\text{perfect}} >$
 $\text{Asp}_{\text{retrospective}} > \text{Asp}_{\text{durative}} > \text{Asp}_{\text{progressive}} > \text{Asp}_{\text{prospective}} / \text{Mod}_{\text{root}} > \text{Voice}$
 $\text{Asp}_{\text{celerative}} > \text{Asp}_{\text{completive}} > \text{Asp}_{\text{(semel)repetitive}} > \text{Asp}_{\text{iterative}}$

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4 Conclusions

Bonus track 1: Null subjects

PIR don't admit overt (postverbal) subjects Morales Carmona (1994), Hernanz (1999):

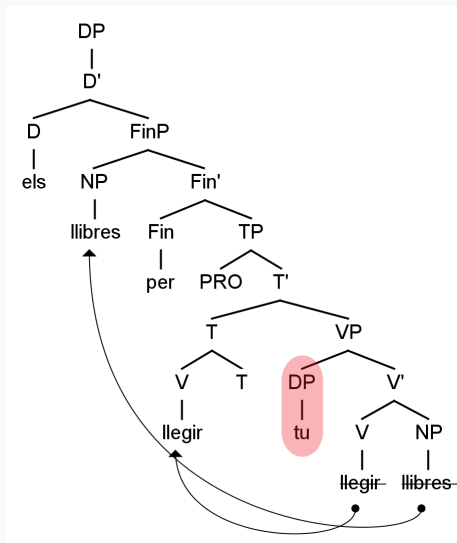
- (27) a. *Los asuntos para tratar **la Comisión** se demoraron.
'The matters to be discussed by the Committee get delayed.'
b. *Los paraísos por descubrir **yo** están en Asia.
'The paradises to be discovered by me are in Asia.'

This makes PIR singular with respect to other prepositional infinitival constructions (examples from CREA corpus):

- (28) a. Esto me sirvió para saber **yo** que ya sabía hablar la lengua.
'This helped to know that I could speak the language.'
b. acaso por ser **yo** el único funcionario casado...
'maybe because I was the only married civil servant'

Bonus track 1: Null subjects

Is this an intervention effect?



Bonus track 2: In situ focus

While PIR don't allow fronting focus, they do admit (contrastive) focus *in situ*:

- (29) Els llibres per llegir **només demà** són a taula. Cat.
'the books to be read only tomorrow are on the table.'
- (30) Els llibres per llegir **opcionalment**, i no pas obligatòriament, són a taula. Cat.
'the books to be read optionally, not obligatorily, are on the table.'

If focus *in situ* is possible, but we lack any left-peripheral FocusP, Rizzi's (1997) claim that *in situ* focus involves LF-movement cannot be sustained.

Main results

- 1 PIR display truncation, and their structure does not project FocusP and TopicP, but just FinP or a syncretic node codifying Force and Finiteness.
- 2 PIR are introduced by a prepositional complementizer in the head of the syncretic Fin.
- 3 The defective structure of PIR limits the availability of certain modal aspectual readings: only root modality and prospective aspect is allowed.

Unsolved gap

Why do PIR show an asymmetry between modal obligation auxiliaries and adverbs?

	obligation	capacity
auxiliary verb	NO	YES
adverb	YES	YES

Pending issues: Differences across Romance

European Portuguese Duarte et al. (2015)

- (31) a. O livro **para eu/ele lhes ler** está na prateleira.
'The book which I/he will read to them is on the shelf.'
- b. Os atletas **para correr(em) na maratona** chegaram ontem.
'The athletes who will run the marathon arrived yesterday.'
- (32) a. O livro **a lerlhes** está na prateleira.
'The book to read to them is on the shelf.'
- b. Os potros **a alimentar(*em) amanhã** são de raça lusitana.
'The colts to feed tomorrow are of Lusitan breed.'

Infinitive relatives with *que* 'that' in Iberian Romance languages:

- (33)
- a. Por fin topé un llibru **que** lleer.
'I finally found a book to read.'
 - b. No tiene nada **que** temer. Spanish
'She has nothing to do.'
 - c. Un sempre ten cousas **que** fer en casa. (Galician)
'You always have things to do at home'
 - d. Minha mãe tem muitas coisas **que** fazer. (European Portuguese)
'My mother has lots of things to do.'

See Villalba & Planas-Morales (2020) for arguments that these are cases of PIR, rather than *wh*-relatives.

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