

Catalan intransitive verbs and argument realization

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Goal

To describe and analyze the behavior of the single core argument of intransitive verbs in Catalan:

- The mapping between arguments and grammatical functions;
- Verbal agreement;
- Case assignment;
- Expression by means of clitics.

Main claim

- The single core argument of a clause can be a nominative object.

Subsidiary claims

- In general, the core argument of an intransitive verb (whether unaccusative or unergative) alternates between subject and object;
- The grammatical function that the core argument maps onto is always nominative, which implies that objects can be either nominative or accusative (leaving aside dative objects);
- The verb agrees with a nominative argument, whether subject or object;
- Clauses may lack a subject (in violation of the Subject Condition).

Structure of the paper

- Facts to be analyzed
- Argument-to-GF mapping theory
- Restrictions on the SUBJ-OBJ alternation
- Verbal agreement

Facts to be analyzed

Object properties

- *En* cliticization
- Possible past participle agreement
- Bare NP

Subject properties

- Pro-drop with a definite interpretation
- The controlee in a control construction

Agreement

- What does the verb agree with?

Object properties

En cliticization

With transitive verbs

The internal argument in Catalan transitive verbs can be partially or totally replaced by the clitic *en*¹:

(1) a. Si vols carpetes, en tinc tres de noves.

if want.2p.sg folder.f. pl en.cl have.1p.sg three of new.f.pl

‘If you need folders, I have three new ones.’

b. Si vols carpetes de plàstic noves, compra’n.

if want.2p.sg folder.f.pl of plastic new.f.pl buy.2p.sg.imp-en.cl

‘If you need new plastic folders, buy them.’

(from Alsina 1986:97-98)

¹ We are only concerned with what we might call ‘partitive’ *en*, as opposed to ‘genitive’ *en*: the two uses of this clitic are different.

Object properties

En cliticization

With intransitive verbs

Both unaccusative and unergative verbs allow their sole argument to be replaced by the *en* clitic:

(2) a. Cada dia surten molts trens, però avui només n'ha sortit un.
every day leave.pl many train.pl but today only en.cl-have.sg leave.part one

‘Everyday many trains leave, but today only one has left.’

b. En ploraran sis quan sàpiguen la veritat.
en-cl cry.pl.fut six when know.pl.sbjv the.f.sg truth.f.sg

‘Six of them will cry when they find out the truth.’

(from Cortés and Gavarró 1997:41)

Object properties

En cliticization

- It has sometimes been claimed that only unaccusative verbs allow *en* cliticization. We are describing the facts of speakers who accept *en* cliticization with unergatives as well as with unaccusatives, like Cortés and Gavarró (1997) (see Saccon (1995) for Italian).
- The possibility of *en* cliticization with unergative verbs in Catalan shows that it is not the ‘deep object’, i.e., the internal argument, that triggers *en* cliticization.
- We assume that the *en* clitic in Catalan corresponds to the OBJ (the ‘surface object’ in theories like Burzio (1986) and Cortés and Gavarró (1997), i.a.).

Corollary: the single core argument of an intransitive verb can be expressed by means of the clitic *en*, which requires assuming that the argument in question is an object.

Object properties

Past participle agreement

The past participle in Catalan optionally agrees in gender and number with a third person object clitic, when cooccurring with the perfective auxiliary *haver* 'have'. PP agreement does not happen with a full NP object:

(3) a. La directora ha defensat/*defensada la proposta.
*the.f.sg director.f.sg have.sg defend.pp.m/*f.sg the.f.sg proposal.f.sg*

'The director has defended the proposal.'

b. La directora l'ha defensada.
the.f.sg director.f.sg la.cl.f.sg-have.sg defend.pp.f.sg

'The director has defended it.'

(from Alsina 1996:95)

Object properties

Past participle agreement

PP agreement is not only possible with transitive verbs, like the one in (3b), but also with intransitives:

(4) a. Perquè aleshores hi haurà una gran tribulació,

because then hi.cl be.fut.sg one.f.sg great distress

com no n'hi ha haguda cap des de la creació del món...

like not en.cl-hi.cl be.pp none from the creation of-the world

‘For then there will be great distress, as there has not been one since the creation of the world...’

(Bible [Mt 24:21])

(<http://www.biblija.net/biblija.cgi?m=Mt+24%2C1-31&l=ca>. Visit time: 18:19, 08/07/2018)

Object properties

Past participle agreement

(4) b. N'han arribats molts.

en.cl-have.pl arrive.part.pl many

'Many have arrived'

(from Fabra 1912:160)

Corollary: the fact that the single core argument of an intransitive verb can trigger past participle agreement further confirms that the argument is an object.

Object properties

Bare NP

- Bare indefinite NPs in Catalan have a non-specific interpretation. They cannot be the subject of the verb, and usually cannot appear in the preverbal position, unless focused. Examples in (5) illustrate the situation with transitive verbs:

(5) a. *Mecànics arreglen el teu cotxe.

mecanics.pl fix.pl the your car

b. *Arreglen mecànics el teu cotxe.

fix.pl mecanics.pl the your car

c. *Arreglen el teu cotxe mecànics.

fix.pl the your car mecanics.pl

‘Mechanics fix your car.’

(from Alsina 1996:104)

Object properties

Bare NP

- By contrast, bare NPs have no problem appearing in immediately postverbal positions in an intransitive clause:

(6) a. *Aigua cau de la teulada.

water.sg fall.sg from the roof

‘Water is falling from the roof.’

b. Cau aigua de la teulada.

fall.sg water.sg from the roof

‘Water is falling from the roof.’

(From Alsina 1995:13)

(7) a. *Nens treballen en aquesta fàbrica.

child.pl work.pl in that factory

‘Children work in that factory.’

b. Treballen nens en aquesta fàbrica.

work.pl child.pl in that factory

‘Children work in that factory.’

(From Cortés 1995:64)

Corollary: the contrast between examples (6a)/(6b) and (7a)/(7b) indicates that both ‘aigua’ (water) in (6b) and ‘nens’ (children) (7b) are objects and not subjects.

Subject properties

Subject pro-drop

- Catalan is known to be a subject pro-drop language: a subject in Catalan can be null and be interpreted as having a definite referent:

(8) a. Els estudiants solen sortir puntualment, però avui surten \emptyset tard.

the.pl student.pl are-used-to.pl leave.inf punctually but today leave.pl late

‘Students usually leave on time, but today they are leaving late.’

b. Els estudiants no volen estudiar habitualment, però avui estudien \emptyset molt.

the.pl student.pl not want.pl study.inf usually but today study.pl a-lot

‘Students usually do not want to study, but today they are studying a lot.’

The possibility of omitting the argument of *sortir* in (8a) or of *estudiar* in (8b) with a definite interpretation is evidence that this argument is the subject of the verb.

Subject properties

Object omission

- An object in Catalan **cannot** be null with a definite referent:

(9) a. Joan ha llegit els llibres.

John have.3p.sg read.pp.m.sg the.m.pl book.m.pl

‘John has read the books.’

b. Joan ha llegit.

John have.3p.sg read.pp.m.sg

‘John has read something.’

NOT: ‘John has read the book(s).’

Corollary: only the subject in Catalan can be null and have a definite reading. Therefore the single core argument of an intransitive verb in Catalan can be a subject.

Subject properties

Controlee in the control construction

- (10) a. *N'he obligat molts a quedar-se'n.
en.cl-have.1p.sg obligate.pp many to stay.inf-se.cl-en.cl
'I have obligated many to stay.'
- b. N'he obligat molts a quedar-se.
en.cl-have.1p.sg obligate.pp many to stay.inf-se.cl
'I have obligated many to stay.'
- (11) a. *N'he obligat molts a estudiar-ne.
en.cl-have.1p.sg obligate.pp many to study.inf-en.cl
'I have obligated many to study.'
- b. N'he obligat molts a estudiar.
en.cl-have.1p.sg obligate.inf many to study.inf
'I have obligated many to study.'

Subject properties

Controlee in the control construction

- Only the subject of the embedded clause can be controlled by the subject or object of the matrix clause.
- The presence of *en* in the embedded clause in (10a) and (11a) indicates that the single core argument is an object, and therefore cannot be controlled.
- The absence of *en* in the embedded clause in (10b) and (11b) indicates that the single core argument is a subject, and therefore can be controlled.

Corollary: the fact that the single core argument of an intransitive verb in the embedded clause can be controlled indicates that it is the subject.

Evidence: Agreement

Verbal agreement

Verbs usually agree with the subject:

(12) Joan ha/*han llegit els llibres.

John have.3.sg/pl read.pp.m.sg the.m.pl book.m.pl

‘John has read the books.’

What happens with intransitive verbs?

(13) a. Avui en surten molts. b. *Avui en surt molts.

today en.cl leave.pl many

today en.cl leave.sg many

‘Today many are leaving.’

‘Today many are leaving’

- The grammatical function the verb agrees with in (13) is object, given the presence of the *en* clitic.

Evidence: Agreement

Verbal agreement

- The verbal agreement facts of languages like Icelandic or Hindi indicate that in such languages the verb can agree with a GF other than the subject, provided that it is in nominative case.
- The same assumption will allow us to account for the verbal agreement facts in Catalan: the verb agrees with a nominative argument (regardless of its status as a subject or an object).

Evidence: Case and agreement

Verbal agreement with a nominative argument

- Independent evidence for the claim that the argument that the verb agrees with is nominative comes from the pronominal form of this argument:

Transitive verbs: nominative subject and accusative object

(14) a. Jo/*a mi veig els nens.

*I.nom/*to me.acc see.1p.sg the children*

‘I have see the children .’

b. Els nens em veuen a mi/*jo.

*the children me see.3p.pl to me.acc/*I.nom*

‘The children have seen me.’

Intransitive verbs: nominative subject/object

(15) a. Jo/*a mi surto.

*I.nom/*to me.acc leave.1p.sg*

‘I leave.’

b. Surto jo/*a mi.

*leave.1p.sg I.nom/*to me.acc*

‘I leave.’

The core argument of an intransitive verb in Catalan is always nominative.

What the facts tell us

Object properties

- *En* cliticization
- Optional past participle agreement
- Bare NP

Subject properties

- Pro-drop with a definite interpretation
- The controlee in a control construction

Agreement and case

Conclusion: The facts presented can be explained by assuming that the single core argument of an intransitive verb alternates between subject and object and is always nominative.

Argument-to-function mapping theory

- Argument structure
- Case assignment
- Mapping to GF
- Constraints on f-structure

Argument structure

- Argument classification relevant at argument structure
 - Core arguments
 - External (E)
 - Internal (I)
 - Non-core arguments
- The external argument E, if there is one, is the most prominent argument in a-structure.
- Arguments are ordered by prominence at a-structure, according to a thematic hierarchy.

Case assignment to core arguments

- All core arguments must have a value for the feature 'case'.
- Three case values for core arguments: dative, accusative, nominative.

Case assignment principles, ordered by priority:

- i) Assign dative case to the more prominent of two internal arguments.
- ii) Assign accusative case to the less prominent of two core arguments that lack case.
- iii) Elsewhere, assign nominative case to a core argument.

A-to-f mapping theory

Mapping arguments to GFs

Rules licensing the correspondence between arguments and GFs:

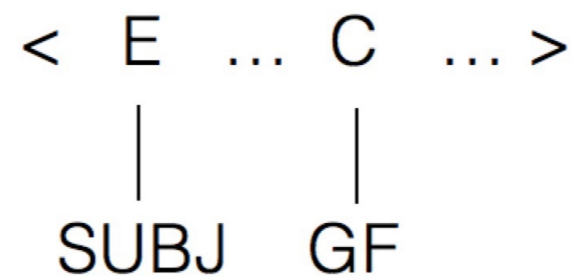
(16) **Core argument rule:** a core argument (C) maps onto a direct grammatical function (DGF), the class of GFs that consists of SUBJ and OBJ:



This allows the external argument to be either SUBJ or OBJ, which is prohibited by the LMT accounts (like Bresnan and Kanerva (1989) and Kibort (2001), i.a.) by assuming that external argument is intrinsically classified as [-o] and can never map onto an OBJ.

Mapping arguments to GFs

(17) **External argument rule:** an external argument is required to be the subject if there is another core argument:

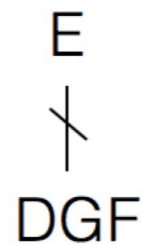


This ensures that with transitive verbs, the external argument is the subject: if there is no second core argument expressed, the external argument is free to map either onto OBJ or onto SUBJ.

A-to-f mapping theory

Mapping arguments to GFs

(18) **Passivization rule:** passivization blocks the linkage of the external argument to DGF:



(19) **Elsewhere mapping rule:** link an argument to oblique (optionally).



The **optionality** of this mapping principle may be overridden lexically by having a lexical entry specify that an argument is obligatorily mapped onto an oblique. Since this rule is an elsewhere rule, it applies after the other mapping principles: it applies to non-core arguments as well as to arguments that have their linkage to DGF blocked by passive, antipassive, or possibly other morpholexical operations.

Constraints on f-structure

(20) Nominative subject constraint (specific to Catalan):

* SUBJ [CASE \neg NOM]

- This does not mean that all nominatives are subjects:
 - The [CASE NOM] is possible for SUBJ and OBJ. On the other hand, [CASE ACC] or [CASE DAT] are only possible for OBJ.
 - OBJ can either be nominative, accusative, or dative, whereas SUBJ can only be nominative.

Constraints on f-structure

- **We are assuming that a clause:**
 - i) May contain at most one SUBJ;
 - ii) Need not contain a SUBJ; and
 - iii) May contain more than one OBJ.
- The Subject Condition (SC), which requires every clause to have a subject, appears to have no effect in Catalan. That is because in OT terms (*cf.* Kuhn (2003)), it is ranked below other constraints in Catalan, as we shall see.
- Given the proposal about case assignment, a structure with two objects will always include at least one dative and probably an object that is either nominative or accusative.

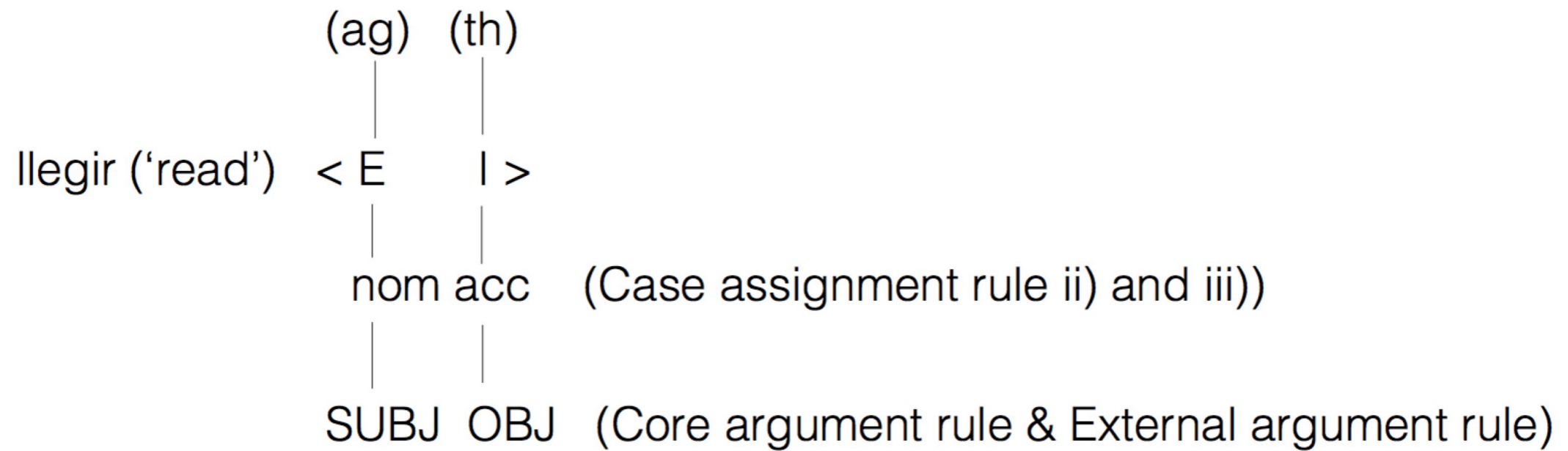
Constraints on f-structure

The **uniqueness of the subject** and the **multiplicity of objects** can be handled in a variety of ways (see e.g. Alsina 1996 and Patejuk and Przepiórkowski 2016). This proposal can be implemented within the standard LFG formalism by assuming the SUBJ is single-valued and OBJ is set-valued.

A-to-f mapping theory

Examples

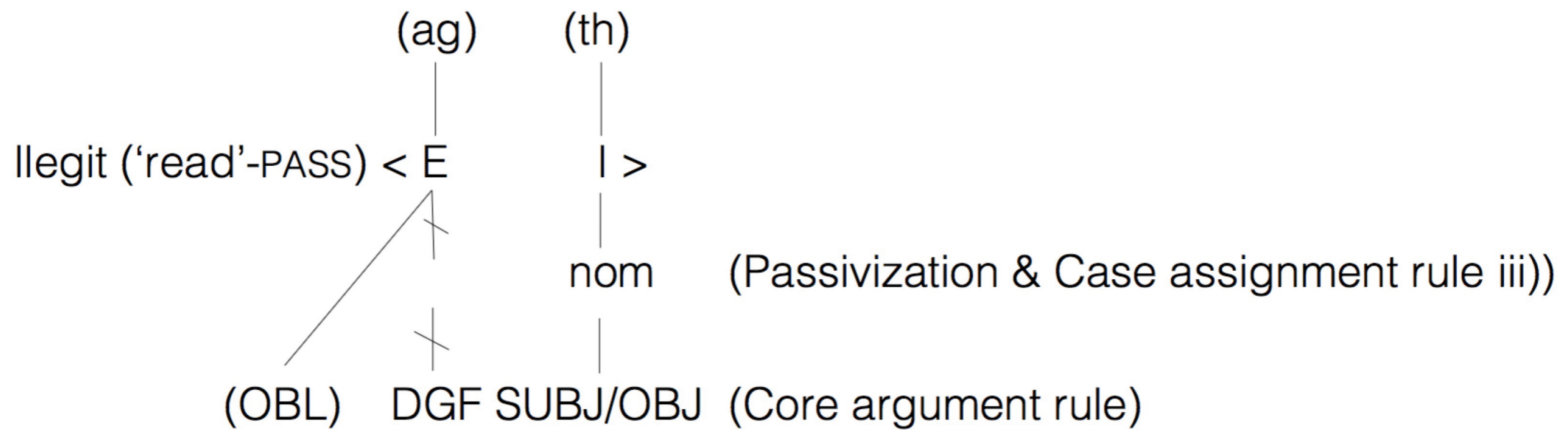
(21) Transitive verbs



A-to-f mapping theory

Examples

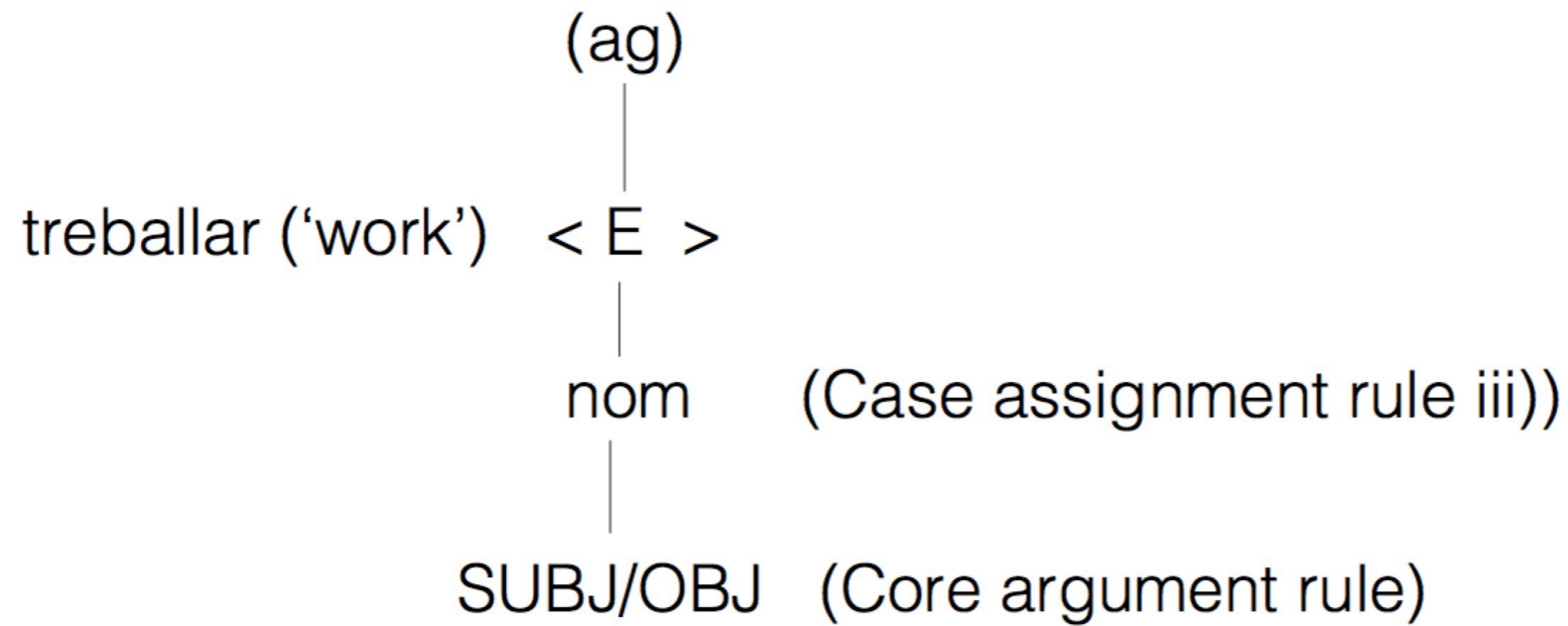
(22) Transitives in passive



A-to-f mapping theory

Examples

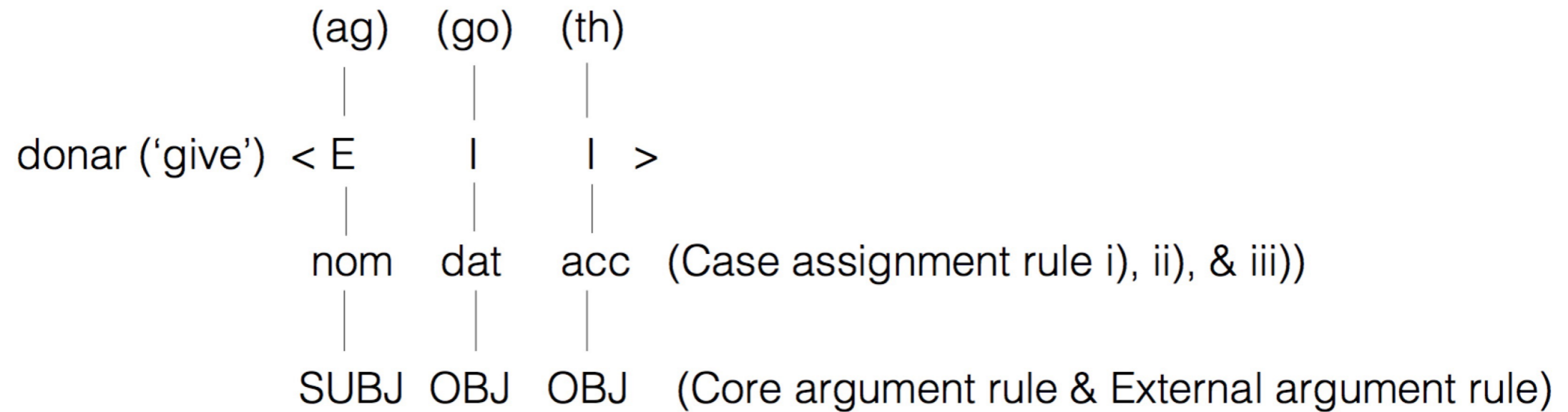
(23) Intransitives



A-to-f mapping theory

Examples

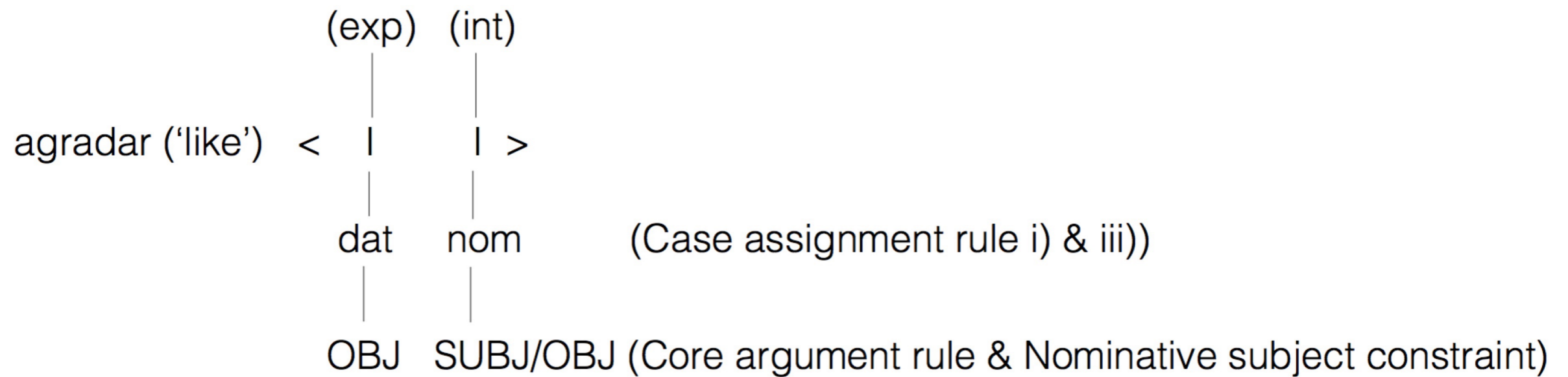
(24) Ditransitives



A-to-f mapping theory

Examples

(25) *Like-type* verbs



Restrictions on the SUBJ-OBJ alternation

- From the previous part we have already seen that the single argument of an intransitive verb can alternate between a subject and an object.

If the subject-object alternation were a free option, nothing would require the presence of the clitic *en* in (26a), but in fact, (26b) is ungrammatical:

(26) a. Avui en surten molts.

today en.cl leave.pl many

‘Today many are leaving.’

b. *Avui surten molts.

today leave.pl many

‘Today many are leaving.’

Restrictions on the SUBJ-OBJ alternation

(27) F-structure information of the clitic *en*

The *en* clitic corresponds to an GF that is:

- i) Object
- ii) Pronominal
- iii) Indefinite
- iv) Non-dative (either nominative or accusative)

$$En: \left[\text{OBJ} \left[\begin{array}{ll} \text{PRED} & \text{'PRO'} \\ \text{DEF} & - \\ \text{CASE} & \neg\text{DAT} \end{array} \right] \right]$$

Restrictions on the SUBJ-OBJ alternation

We assume an additional constraint that disfavors an indefinite subject:

(28) Indefinite subject ban

*SUBJ [DEF -]

Though the single core argument of an intransitive verb can be either SUBJ or OBJ, the constraint in (28) penalizes the subject realization and favors the object realization if the argument is indefinite. This explains the obligatoriness of *en* in (26).

The constraint (28) has no effect on transitive verbs, within an OT conception: since the subject of a transitive verb cannot alternate with an object, the subject realization is the only candidate and the optimal one.

Restrictions on the SUBJ-OBJ alternation

- The *en* clitic cannot be licensed by a preverbal NP (even if indefinite)

(29) a. Ja n'han sortit quatre de l'ou.
already en.cl-have.pl leave.part four from the-egg

b. Quatre ja (*n') han sortit de l'ou.
Four already en.cl have.pl leave.part of the-egg
'Four of them have already come out of the egg.'

(based on GLC 2016:699)

Reasoning:

- The preverbal position is a topic position in Catalan (see Vallduví 2002).
- A topic is the antecedent of an anaphoric pronoun (possibly null, as with null subjects) and anaphoric pronouns must be definite.
- The *en* clitic as an indefinite pronoun (see (27)) cannot be used as an anaphoric pronoun.

Restrictions on the SUBJ-OBJ alternation

- Possibly a definite object clitic?
- **No!** The definite object clitic (*e/s* in (30)) is incompatible with intransitive verbs:

(30) *Avui **els** surt/surten a les sis.
today them leave.sg/leave.pl at the six
'Today they are leaving at six.'

Given that clitics like *el*, *la*, *e/s*, and *les* are (definite) object pronouns, they cannot correspond to the SUBJ.

Restrictions on the SUBJ-OBJ alternation

(31) Avui surten els estudiants a les sis.

today leave.pl the.m.pl student.m.pl at the six

‘The students, today they are leaving at six.’

- The NP *els estudiants* in (31) is the subject.

- Why?

- We assume that the Subject Condition is a low ranking OT constraint; in particular, it is lower than the **Indefinite Subject Ban (28)**. When the sole argument of an intransitive verb is definite and can be either SUBJ or OBJ, the SC will penalize the candidate that lacks a subject, and select the one with a subject.

Corollary: the subject-object alternation is not free but mediated by the definiteness of the single core argument of the intransitive verb.

Agreement

(32) **AGRSHARE**: the AGR features of the clause unify with those of a dependent DGF.

$$\text{AGRSHARE: } \left[\begin{array}{l} \text{AGR } \boxed{1} \\ \text{DGF } [\text{AGR } \boxed{1}] \end{array} \right] f$$

For f-structure f that maps to a constituent of category V.

(33) ***AGRCASE**: do not unify the AGR of the verb with the AGR of a dependent DGF that is not nominative.

$$*\text{AGRCASE: } * \left[\begin{array}{l} \text{AGR } \boxed{1} \\ \text{DGF } \left[\begin{array}{l} \text{AGR } \boxed{1} \\ \text{CASE } \neg\text{NOM} \end{array} \right] \end{array} \right] f$$

For f-structure f that maps to a constituent of category V

Agreement

Subject agreement

(34) a. Avui surten els estudiants tard.
today leave.pl the student.pl late
 'Today the students are leaving late.'

PRED	‘leave <Arg ₁ >’
AGR	[1] [PERS 3 NUM PL]
SUBJ	[PRED ‘student’ DEF + AGR [1] CASE NOM] ₁

Object agreement

b. Avui en surten molts.
today en.cl leave.pl many
 'Today many are leaving.'

PRED	‘leave <Arg ₁ >’
AGR	[1] [PERS 3 NUM PL]
OBJ	[PRED ‘PRO’ DEF - AGR [1] QUANT ‘many’ CASE NOM] ₁

Long-distance agreement

- In Catalan, a raising verb like *semblar* ‘seem’ agrees with the nominative object of the embedded clause:

(35) Semblen arribar-ne molts.

seem.3p.pl arrive.inf-en.cl many

‘Many seem to be arriving.’

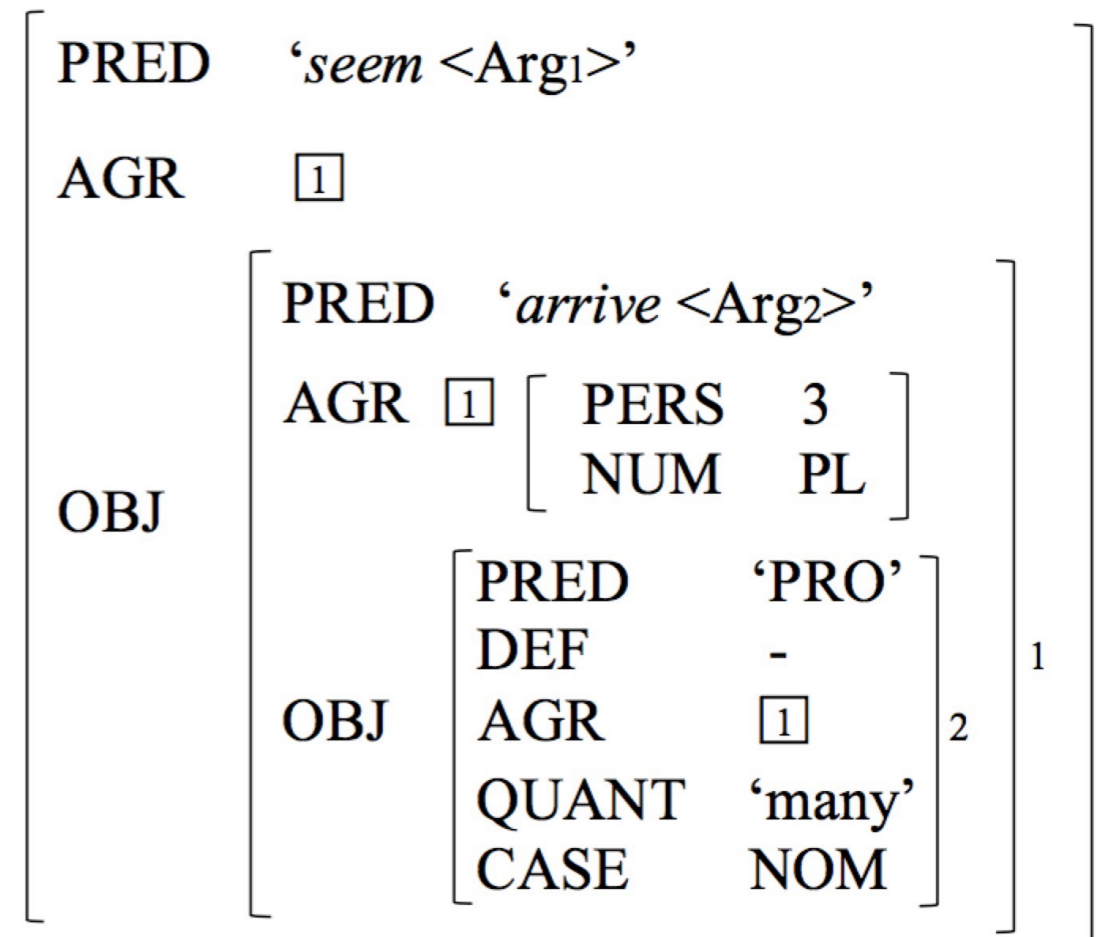
- The apparent long distance agreement is a combination of two local agreement relations: the sharing of the AGR of the raising clause with the AGR of its infinitival complement and the sharing of this AGR with that of the object of the infinitive.
- The agreement of the raising verb with the nominative object of the embedded clause is possible because the raising verb shares its AGR with that of the embedded clause (see Alsina and Vigo (2017)).

Long-distance agreement

- AGR sharing across clauses is blocked except if the lower of the clauses involved is the complement of a raising verb.
- We assume a constraint, Clausal Opacity, which blocks the sharing of either AGR or GF in a given clause with either the AGR or GF of its embedded clause.
- Raising verbs include a lexical specification overriding clausal opacity.
- This lexical specification ranks higher than Clausal Opacity in the OT ranking, so raising verbs systematically violate Clausal Opacity.

Long-distance agreement

(36) Semblen arribar-ne molts.
seem.3p.pl arrive.inf-en.cl many
 ‘Many seem to be arriving.’
 (Repeating (35))



(37) Semblen [tendir [a arribar-ne molts]]
seem.3p.pl tend.inf to arrive.inf-en.cl many
 ‘Many seem to tend to arrive.’

Conclusions

- The single core argument of intransitive verbs maps onto either SUBJ or OBJ, regardless of its status as an external or internal argument.
- The Subject Condition is a low ranking constraint in Catalan, which does not require the presence of a subject in all clauses.
- Case assignment plays an important role in the mapping between argument and GFs.
- The verb agrees with a nominative GF, whether SUBJ or OBJ. Agreement is represented by the sharing of the AGR feature of the clause with the AGR feature of one of its dependent GFs.
- AGR sharing across clauses is possible provided that there is a chain of local sharing relations.

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