

On Finiteness as Logophoric Anchoring

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Cet article se propose d'examiner la corrélation entre deux propriétés typiques des verbes à mode personnel: la légitimation d'un sujet explicite et doué d'indépendance référentielle, et l'interprétation temporelle absolue. La première propriété est reliée à la présence du trait de personne dans la flexion verbale; la corrélation découle du fait que soit le temps absolu, soit le trait de personne doivent être interprétés par rapport à la situation d'élocution. On propose donc que chaque structure phrasale codifie un *centre logophorique*, c'est à dire, un événement communicatif ou mental situé dans le temps, qui comporte un contenu propositionnel. Les phrases finies codifient typiquement l'événement d'élocution, qui constitue le centre logophorique externe auquel le temps absolu et le trait de personne sont ancrés. On considère ensuite les propositions infinitives à sujet implicite qui comportent un trait de personne anaphorique (Borer 1989 et Landau 2002): on propose que celles-ci sont ancrés à un centre logophorique interne, qui correspond à l'événement communicatif ou mental exprimé par le verbe principal (contrôle obligatoire) ou qui est saisissable sur la base du contexte discursif (contrôle non obligatoire). On examine aussi la sous-catégorie du contrôle exhaustif (Landau 2000), et on conclue que celui-ci n'implique aucun centre logophorique. Finalement, on discute la différente nature temporelle des trois types de phrases infinitive à contrôle.

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1. Introduction

In this paper, I wish to discuss two syntactic properties that oppose finite verb forms to non-finite ones. The first property is the ability of finite forms to license a referentially independent subject (in the sense of Higginbotham 1983), i.e. a fully specified lexical DP. In the tradition of Government and Binding/Minimalist syntax, this property has been reduced to the ability of licensing Nominative Case on the subject DP, e.g. in (1):

(1) John_{NOM} is a liar.

Licensing of Nominative Case in turn has been related to the presence of a full Tense specification on the finite verb form, to the specification of Agreement features, or to a combination thereof (cf. in particular Chomsky 1998; Iatridou 1993; Roberts 1993); in any event, this licensing ability is related to the presence of finite inflection. The hypothesis can be expressed in the most general terms as in (2):

(2) Nominative Case is licensed by [+finite] Tense/Infl (Chomsky 1981, 50 ... 1998, 39).

This hypothesis captures an important cross-linguistic generalization (although it has some well-known exceptions in both directions);¹ however, the question of *why* Nominative Case should be sensitive to finiteness has seldom been raised, and (2) is commonly assumed without discussion.²

The second property that opposes finite to non-finite verb forms is the fact that the former have a full/independent tense specification: namely, they can receive an absolute interpretation directly anchored to the Speech time (in the sense of Comrie 1985).³ This is certainly the case at least in main clauses.⁴ On the contrary, non-finite verb forms cannot usually head an independent main clause, and even when they can, they cannot have an independent tense interpretation, but they can only receive a modal interpretation (e.g. in matrix infinitival questions; I will have nothing to say on the modal interpretation.)

Let me state these two properties in the following terms:

(a) Finite verb forms can license a referentially independent subject.

¹ On the one hand, certain finite verb forms inflected at least for Agreement seem to be unable to license a referentially independent DP and require instead a non-overt subject interpreted via control: an example is provided by a subset of Modern Greek subjunctive clauses, discussed by Iatridou (1993) and Terzi (1997). On the other hand, certain non-finite verb forms have the exceptional property of licensing a referentially independent Nominative subject without the help of an “exceptional Case marker”, not only when the non-finite verb is exceptionally inflected for person, as in European Portuguese (Raposo 1987), but also when the verb is uninflected for tense and agreement: this is the case in West Flemish adverbial clauses (Haegeman 1985), in Québec French conditional clauses (Martineau & Motapanyane 199X), in Italian “Aux to Comp” clauses (Rizzi 1982) and in Spanish infinitival clauses (Pérez Vázquez 2002; Mensching 2000); an analysis compatible with the present proposal can be found in Pérez Vázquez (2002). For reasons of space, I cannot discuss subjunctive clauses here; the reader is referred to Bianchi (2001).

² Two notable exceptions are Holmberg & Platzack (1995) and Zagana (1998).

³ Starting from Picallo (1985), it is often argued that subjunctive clauses have a defective or anaphoric tense specification. The issue is addressed in Bianchi (2001, § 6); in the present discussion I put aside subjunctive clauses.

⁴ Finite tenses in complement clauses are assumed to be anchored to the matrix clause event time in most analyses of Sequence of Tense. See section 2.2. below.

(b) Finite verb forms can have an absolute tense interpretation directly anchored to the Speech time.

I will try to address the following questions: first, is it possible to account for properties (a) and (b) on principled grounds? And second, can the two properties be reduced to a common source?

My answer to these questions will lead me to propose a new conception of finiteness:

(3) The syntactic property of finiteness encodes the logophoric anchoring of the clause.

The property of logophoric anchoring will be in turn based on the notion of Logophoric Centre, which can be informally characterized as follows:

(4) Every clause is anchored to a Logophoric Centre: a speech or mental event, with its own participants and temporal coordinates, which constitutes the centre of deixis.

The major claim of this paper is that finite verb forms displaying absolute tense and full-fledged person agreement are anchored to the external Logophoric Centre, corresponding to the speech event. On the contrary, I will argue that a subset of non-finite clauses, namely control clauses, are anchored to an internal Logophoric Centre: a contextually introduced speech or mental event distinct from the speech event (the utterance). The different properties of tense and person agreement in finite clauses versus control clauses depends on their being anchored, respectively, to the external or internal logophoric centre.

The paper is organised as follows. In section 2, I argue that the subject-related property (a) that is sensitive to finiteness is not Nominative Case *per se*, but rather, person agreement. The correlation between person agreement and finite tense can be expressed by saying that both these features must be interpreted relative to the speech event: person agreement is interpreted with respect to the *participants* in the speech event, and (absolute) tense is interpreted with respect to the time coordinates of the speech event (cf. Jakobson 1971; Banfield 1982). Properties (a) and (b) are thus reduced to a common source: the encoding of the speech event in the syntactic structure of finite clauses. A syntactic implementation is proposed in terms of Rizzi's (1997) split CP system.

In section 3, I show that the speech event is not the only possible centre of deixis; in certain languages deixis can be relativized to an internal centre of deixis, which is identified as a speech, mental or perception event linguistically represented in the superordinate structure. A prominent example is the phenomenon of logophoric pronouns and logophoric person agreement. In order to unify externally and internally anchored deixis, I elaborate the novel notion of Logophoric Centre and I briefly compare my proposal to other approaches to logophoricity.

In section 4, I turn to control clauses. I propose that these are anchored to an internal logophoric centre, and this is what gives rise to the "anaphoric" nature of their tense and person agreement (in the sense of Borer 1989). Specifically, I adopt the three-way classification of control proposed by Landau (2000), who draws a partly novel distinction between non-obligatory and obligatory control, and further divides the latter between partial and exhaustive control. Building on Landau's insights, I will argue that non-obligatory and obligatory partial control are mediated by an internal logophoric centre, whereas exhaustive control is not, and constitutes a separate phenomenon. In section 5 I will compare the different temporal properties of the three types of control structure, which lends further support to my proposal. Finally, in section 6 I draw an outline of my proposal.

For limitations of space and of linguistic competence, the analysis is applied to Nominative/Accusative (Indo-European) languages; the notion of “finiteness” is assumed in the sense in which it is usually defined for this language type.⁵

2. Finite clauses

2.1. Person agreement

Among the phi-features involved in subject agreement, the person feature has a special status. Normally, person and number agreement are triggered by the same Nominative DP. However, in certain contexts the two agreement features are dissociated: in these contexts, it can be shown that it is specifically the person feature that is responsible for Nominative Case licensing.

Rigau (1991, 1994) reports that in Northwestern Catalan dialects, inverted subjects in impersonal sentences trigger no agreement at all, whereas in Central Catalan dialects, they trigger number agreement on the verb (5a). However, even in Central dialects the inverted subject cannot be an unambiguously Nominative form, despite the presence of number agreement (5b):

- | | | | | | |
|-----|----|-----|-----------------|-------------------------|-------------------|
| (5) | a. | Es | premiarán | els millors escriptors. | |
| | | SE | will-reward-3PL | the best writers | |
| (5) | b. | *Es | premiarán | ells. | (Rigau 1991, 249) |
| | | SE | will-reward-3PL | they-NOM | |

This suggests that number agreement *per se* cannot license Nominative Case; instead, person agreement is the crucial licensing factor.⁶

An immediate counterexample to this hypothesis comes from Icelandic. As is well-known, Icelandic has two types of Nominative arguments: Nominative subjects, and Nominative objects in quirky subject sentences (see Boeckx 2000, Sigurdsson 1991, 1996, 2000, Taraldsen 1995, among others). Nominative subjects trigger both person and number agreement, as shown in (6). Nominative objects trigger number agreement (7a), but they are restricted to third person (7b):⁷ this is unanimously taken to indicate that they cannot control person agreement. Then, Nominative Case can be licensed on these objects despite the lack of person agreement.

- | | | | | | |
|-----|--------|----------|---------------------|----------|--------------------|
| (6) | ViD | lášum | bók | hans. | (Taraldsen’s (11)) |
| | we-NOM | read-1PL | book-ACC | his | |
| (7) | a. | Henni | leiddust | peir. | (Taraldsen’s (1)) |
| | | she-DAT | was-bored-by-3PL-ST | they-NOM | |
| | b. | *Henni | leiDumst | viD. | (Taraldsen’s (4)) |
| | | she-DAT | was-bored-by-1PL-ST | us-NOM | |

On closer inspection, this apparent counterexample provides an interesting clue. Nominative subjects that control person agreement are, as usual, restricted to finite contexts (8). But strikingly, Nominative objects that do not control person agreement are insensitive to finiteness and can in fact be licensed in infinitival clauses, as shown in (9).

⁵ I am well aware that this is a very narrow conception of finiteness. For a general discussion of this notion, see Bisang (1995).

⁶ See also Giorgi & Pianesi (1999, appendix 1 to chapter 2) for more evidence based on Italian data.

⁷ The data are actually more complex than those presented here: see Sigurdsson (1996).

- b.* J'ayant résolu le problème, tout va bien.
1SG-cl having solved the problem all goes well

This may be accounted for by assuming that (a) subject clitics require Nominative Case, being morphologically Nominative forms, and (b) Nominative is unavailable in non-finite gerund clauses. As for (12a), we can stipulate that the lexical DP subject receives a structural case that is not Nominative (Kayne, fn. 22). However, French gerund clauses show a person asymmetry which strikingly recalls the situation of Icelandic Nominative objects: a third person strong pronoun is allowed (if contrastively stressed), whereas first and second person pronouns are completely excluded:

- (13) a. LUI ayant résolu le problème, ...
HIM having solved the problem
b. * MOI ayant résolu le problème, ...
ME having solved the problem

Kayne links the ungrammaticality of (13b) to that of (12b), by assuming that first and second person pronouns require clitic doubling, as opposed to third person pronouns. An alternative possibility is to assume that French gerunds lack person agreement, and first and second person pronouns require person agreement with the verb.⁹¹⁰

Summarizing, I have argued that only those instances of Nominative Case that correlate with person agreement are restricted to finite contexts. The underlying fundamental property is that person agreement is sensitive to finiteness.

2.2. Finite Tense

Let us now turn to the second property (b) opposition finite to non-finite verb forms. An interesting proposal has been advanced by Holmberg & Platzack (1995), which is synthesized in the following quotation (from Platzack 1995, 201-202):

"Finiteness is a category related to tense and mood; the function of the finite form of the verb seems to be to indicate the existence of a predication *at the time of the utterance*. [...] Thus, in a way, finiteness is a prerequisite for tense and mood: unless a predication is related to the time of the utterance via the concept finiteness, we have no basis for expressing the relative position in time of the situation expressed by the predication vis-à-vis the utterance, and we cannot relate the attitude of the speaker to this situation."

On this view, finite forms have tense and mood independence because they are anchored to the time of utterance (corresponding to the reichenbachian S point).

⁹ This view coincides with Kayne's if we assume, with Kato (1999), that French subject clitics are equivalent to person agreement of *pro*-drop languages in that both are instances of incorporated pronouns. On the other hand, the view proposed here cannot subsume Kayne's analysis of obligatory cliticization of direct object pronouns.

¹⁰ The person asymmetry observed for Icelandic Nominative objects and in French gerund clauses can be reduced to Benveniste's (1966) insight that third person is actually non-person, i.e. absence of any person specification (cf. Kayne 2000a, Rigau 1991, among others). The person asymmetry also emerges in various other contexts, e.g. in the Hebrew and Romance pronominal systems (Ritter 1995 and Kayne 2000b respectively) and in Hebrew and Finnish partial *pro*-drop (Borer 1989; Gutman 1999; Ritter 1995; Shlonsky 1997; Vainikka & Levy 1999, among others). See Bianchi (2001) for some discussion.

A similar insight is expressed by Hornstein (1990, 115-117; 146-154) in his neo-reichenbachian analysis of the English tense system. Hornstein argues that English gerund and infinitival forms differ from finite tenses in that their temporal structure lacks the Speech Point S. Since all temporal structures must be ultimately anchored to S, it follows that a non-finite tense cannot constitute an independent main clause, but it must always be connected to a superordinate temporal structure (via the R point). This accounts for the intrinsic dependence of non-finite tenses.

On these grounds, I adopt the following assumption:

- (14) a. A finite verb form can encode the relation of E/R to S, *at least in main clauses*.
 b. A non-finite form does not encode any relation to S.

The qualification in (14a) is very important. In many approaches to the phenomenon of Sequence of Tense, it is held that finite verb forms are not uniformly anchored to the S point. As a matter of fact, in these approaches, S is just a default value for the Local Evaluation Time of a finite tense that is not embedded in a complement clause. When instead a finite tense is embedded in a complement clause, its Local Evaluation Time is not S, but rather, the matrix Event time (cf. among others Abusch 1997, Comrie 1985, 107-117, Higginbotham 2001, Hornstein 1990, chapter 4, Giorgi & Pianesi 2000, 2001, Stowell 1997). From this perspective, finite forms in complement clauses express a relative tense (in the sense of Comrie 1985; in languages like Hebrew or Russian, relative tense is morphologically transparent). This problem is directly relevant to the general approach to finiteness that I will propose, but I cannot offer a full discussion here; see Bianchi (2001) for some initial remarks.

There are various possible ways to syntactically implement hypothesis (14). Most of the syntactic approaches to temporal structure quoted above assume that the reichenbachian time points and their relations are encoded in designated functional projections of the clausal structure.¹¹ In line with these approaches, I propose the following hypothesis:

- (15) The Speech time S is syntactically represented in [+finite] Fin⁰, the lowest head of the Complementizer system interfacing with the inflectional structure (Rizzi 1997).

- (16) [Force [(Topic*) [(Focus) [Fin [... Tense VP]]]]
 1
 S

This hypothesis immediately yields a welcome consequence: the head Finiteness - the only one in Rizzi's (1997) Comp system which seems to encode a purely grammatical feature - actually contains [+interpretable] information, in line with Chomsky's (1995, 378) minimalist demands: "The only functional categories are those that survive through the derivation and appear at the interfaces, where they are interpreted".

2.3. Licensing the Person feature

At this point, we can restate (11) as follows:

- (17) Only a [+finite] structure encoding S licenses person agreement (Person --> S).¹²

¹¹ See for instance, among many others: Ambar (1996); Cinque (1999); Cowper (1998); Giorgi & Pianesi (1999, 2000); Stowell (1997); Zagona (1995).

¹² On inflected infinitives, see Bianchi (2000).

The next question is, why should person agreement depend on the specification of S?

A possible answer emerges if we conceive of S as a speech *event* rather than simply a time point.¹³ As Jakobson (1971, 134) synthetically puts it: "Person characterizes the participants of the narrated event with reference to the participants of the speech event". In other terms, the referential feature of Person can only be interpreted in relation to the speech event S_e : first person denotes the 'addresser in S_e ', second person denotes the 'addressee in S_e ', and third person denotes the complement set, i.e. anyone and anything else.¹⁴ From this perspective, we can conceive of the speech event as the *centre of deixis*, which specifies (at least):

- the addresser/speaker (= first person)
- the addressee (= second person)
- the spatial/temporal coordinates (subsuming the reichenbachian Speech time).¹⁵

I propose that the interpretive dependence between the person feature and the centre of deixis is reflected in the syntax by the following licensing condition:

(18) The Person feature is selected by [+finite] Fin^0 encoding the speech event.

(19) $\begin{matrix} \text{[Force} & \text{[Fin} & \text{[I ...]]] \\ 1 & 1 & \\ S_e \rightarrow & & \text{[person]} \end{matrix}$ (I= Pers^o, or AgrS, or T^o...)

For our present purposes, it is immaterial whether the Person feature is syntactically realised on T, AgrS, or as an independent head; the analysis only implies that it is realised in the inflectional head that is directly selected by Fin^0 .

Summarizing, I have offered the following answers to our initial questions:

- The crucial property that distinguishes [+finite] from [-finite] tense is the presence vs. absence of the speech event. I assume that this information is syntactically encoded in the Fin^0 head.
- Nominative Case is sensitive to finiteness insofar as it is a manifestation of person agreement. The person feature is licensed in a local selectional relation with the speech event, which constitutes the centre of deixis w.r.t. which the person feature is interpreted.

3. Interlude I: logophoric centres

The speech event as a centre of deixis seems to be a universal property of human languages (cf. Anderson & Keenan 1985). However, in some languages deixis can also be relativized to other *internal*

¹³ Cf. Higginbotham (2001, 70).

¹⁴ I leave aside politeness uses of third person. Plural first and second person denote (apart from politeness uses) groups including at least the addresser and addressee, respectively, with further possible sub-specifications, like inclusive and exclusive plural first person (cf. Harley & Ritter 1998). For further refinement of the notions of addresser and addressee, see McCawley (1998).

¹⁵ The spatial and temporal coordinates may be dissociated for the addresser and addressee; in this case, S is usually the speaker's temporal coordinate, as discussed by McCawley (1998). For the sake of simplicity, I will leave aside this complication here.

centres of deixis. A particularly clear example is the phenomenon of logophoric pronouns, exemplified in (20) (see Huang 2000, 173-204 for a recent overview):

(20) Donno SO (Culy 1994a, 1056)
 Oumar Anta inyemeñ waa be gi.
 Oumar Anta LOG-ACC seen AUX said
 'Oumar_i said that Anta had seen him_i'

The logophoric pronoun here takes as an antecedent the 'internal speaker' of the speech event referred to in the matrix clause (i.e., the subject of the matrix declarative verb). Some languages also have addressee logophoric pronouns, referring to an internal addressee. Even more significantly, in a number of languages like Amharic (Kuno 1972; 1987, 145, Schlenker 2000), Kannada, Navajo (Speas 2000), Persian (Anderson & Keenan 1985), Donno SO (Culy 1994, 1070), and Tamil (Woolford 1999), person agreement too is relativized: a logophoric subject in an embedded clause referring to an internal speaker triggers first person agreement.¹⁶

(21) a. Donno SO (Culy 1994a, 1070)
 wo inyeme yogo bojem giaa be.
 3sg log tomorrow go-prog-1sg said aux
 'S/he_i said that s/he_i is leaving tomorrow'

b. Persian (Anderson & Keenan 1985, 304)
 Be soma xābār dad-∅ ke be koja xab-ām rāft
 to you know gave-3sg that to where will-1sg go
 'He_i informed you where he_i would go.'

c. Amharic (Kuno 1987, 145)
 yohannīs rasum habtam n'ñ al'
 John himself rich am said
 'John_i said he_i was rich'

These data show that a narrated speech event may constitute an internal centre of deixis for a subordinate clause (cf. Kuno's (1987) Direct Discourse Perspective.) As is well known, mental and perception predicates too can license a logophoric clause/an internal point of view (cf. Banfield 1982, Maling 1984, Sells 1987, Chierchia 1989, Sigurdsson 1990, von Stechow 1992, Culy 1994b, Huang 2000, Cole *et al.* 2001).¹⁷

¹⁶ See in particular Culy (1994b), Speas (2000) and Schlenker (2000) for explicit arguments that the logophoric clause is really subordinated to the matrix verb, and does not constitute direct discourse.

A related phenomenon is "logophoric agreement", in which a morpheme on the verb marks one of the verb's arguments as logophoric. It is unclear to me whether this logophoric marking can be considered a special instance of person agreement.

¹⁷ Culy (1994b) proposes the following cross-linguistic hierarchy of logophoric-licensing predicates:

(i) Hierarchy of logophoric predicates (Culy 1994b:1062)
 speech >> thought >> knowledge >> direct perception

Despite the definition of SOURCE as an intentional agent of communication, Sells groups epistemic verbs with declarative verbs as involving an internal SOURCE (under the label "logophoric verbs"). From the present perspective, only the subject of a verb of communicative behaviour is an internal speaker; the subject of both epistemic and psychological verbs is the internal participant of different types of logophoric centre, which

(22) Donno SO (Culy 1994b, 119)

Oumar	irɛnO	yogo	inyemɛñ	wowaa	marazɛ.
Oumar	blacksmith.DF	tomorrow	LOG.OBJ.	will-see	think

'Oumar_i thinks that the blacksmith will see him_i tomorrow.'

The ability of mental and perception predicates to license a logophoric role has led to the postulation of a number of distinct *logophoric roles*, assigned to the subject of the relevant predicates. Various theories of logophoricity adopt the proposal by Sells (1987) and distinguish the following roles:

SOURCE = the one who makes the report

SELF = the one whose "mind" is being reported

PIVOT = the one from whose physical point of view the report is made.

The SOURCE may be external or internal: this corresponds to my informal notion of external and internal speaker.¹⁸ The PIVOT role recalls the spatial and temporal coordinates proposed above: however, in Sells's approach these coordinates are thought of as properties of an individual referent, rather than properties of an event. In fact, the spatial/temporal coordinates can also be associated with the subject of a mental state: in this case the spatial coordinates are properties of the protagonist, but not of the mental state itself. Note however that mental eventualities do have *temporal* coordinates – so at least this dimension can be considered an inherent property of eventualities.

A reinterpretation of the SOURCE and SELF roles in formal semantic terms has been proposed by Chierchia (1989) (whose analysis is mainly concerned with the Italian long-distance anaphor *proprio*). Chierchia reduces these roles to a general theory of *de se* attitudes. A *de se* attitude is a self-ascriptive relation between a referent *x* and a property *Q*, whereby (informally) *x* believes himself to have property *Q*. A *de se* attitude as defined by Chierchia always implies an at least potential SOURCE, since by definition, "x is disposed to describe the relevant belief by referring to x by means of the first person pronoun" (Chierchia 1989, 8). This proposal has been accepted and elaborated by various authors, including Cole et al. (2001) and Huang & Liu (2001).¹⁹

From the present perspective, if we wish to unify the external and internal centres of deixis, it is necessary to understand what exactly mental events have in common with speech events. I will sketch out a proposal inspired by Pérez Vázquez (2002).²⁰

One possible path to explore is to rethink of the notion of SELF in terms of a *cognitive state* associated with a communicative event. In a "Stalnakerian" perspective, the participants in a speech event share a

consist in mental eventualities. Direct perception verbs (Culy 1994, Speas 2001) express yet another type of mental eventuality.

Here I will not try to account for this hierarchy; see Speas (2001) for a proposal based on Cinque's (1999) universal functional structure.

¹⁸ On the other hand, there is no role for the addressee in Sells's theory, contrary to Kuno's (1987, chapter 3) "direct discourse perspective". Sells (fn. 19) mentions that the notion of addressee may be made parasitic on the notion of speaker.

¹⁹ Another approach attributes to SOURCE and SELF a "validating" function: cf. Huang (2000, 200) quoting a proposal by Stirling (1993), and Sigurdsson's (1990) truthfulness-responsibility. Koopman & Sportiche (1989) instead propose a completely syntactic approach to logophoricity in Abe; Manzini & Roussou (1999) propose a syntactic analysis of the logophoric interpretation of *self*-anaphors in terms of feature attraction.

²⁰ The importance of the Common Ground and of the opposition between objective vs. subjective point of view is highlighted and discussed in detail in Pérez Vázquez (2002, chapters 6 and 7).

Common Ground of accepted information, i.e. a set of background assumptions that both of them take to be true at a specific point of the conversation. In the unmarked case, an assertion like (23a) has the effect of updating the Common Ground: namely, the proposition expressed is accepted as true by the addressee and is integrated in the Common Ground of shared information (filtering out the possible worlds that are not compatible with it). This is informally represented in (23b):

(23)a. Alfieri è il più grande drammaturgo italiano.

Alfieri is the best Italian playwright

b. $CG \cup [\text{Alfieri is the best Italian playwright}]$

But the process is very different when the assertion is introduced by an explicit expression of a SELF, e.g. by means of an adjunct PP as in (24a). In this case, the asserted proposition is not integrated directly in the Common Ground, but rather, it is inserted in the representation of a “cognitive state” of the SELF (which we can take to be the set of propositions he believes at that point of the conversation). The result is then integrated in the Common Ground, as represented (informally!) in (24b):

(24)a. Per me, Alfieri è il più grande drammaturgo italiano.

To me, Alfieri is the best Italian playwright

b. $CG \cup [CS(\text{Speaker}) \cup [\text{Alfieri is the best Italian playwright}]]$

Similarly, when a complement clause is subordinated to a propositional attitude verb, the proposition that it expresses must be integrated in the representation of a “cognitive state” of the matrix subject:

(25)a. Valentina Bianchi pensa che [Alfieri sia il più grande drammaturgo italiano].

V. B. believes that Alfieri is the best Italian playwright

b. $CG \cup [CS(\text{V.B.}) \cup [\text{Alfieri è il più grande drammaturgo italiano.}]]$

Thus, the SELF role (expressed by the clause-initial adjunct PP) signals the fact that the propositional content of the assertion must not be embedded directly in the Common Ground, but in a “private” cognitive state.²¹ The important point is that, as shown in (25), a cognitive state may be associated not only to speech events, but also to other mental events or states that can be linguistically reported, for instances beliefs, hopes, etc. I wish to suggest that this is why these non-communicative events can constitute internal logophoric centres, qualifying the complement clause of a psychological or epistemic predicate as a logophoric clause.

In order to unify these cases, I define the notion of Logophoric Centre (LC):

(26) A Logophoric Centre is a speech or mental event which comprises

(i) an obligatory animate participant (Speaker/Source)

(ii) an optional Addressee (for speech events)

(iii) a temporal coordinate

(iv) possibly spatial coordinates (for physical events)

and is associated with a Cognitive State of the participant(s) in which the proposition expressed by the clause must be integrated.

(27) The external Logophoric Centre (eLC) is the external speech event.

Finite clauses encode the eLC in [+finite] Fin^0 , which is an anchor for

²¹ Here, contrary to Sells's (1987) analysis, the speaker's cognitive state is not the default; the default is rather the Common Ground.

- i) person agreement
- ii) absolute and absolute/relative tense (in the sense of Comrie 1985).

The notion of “cognitive state” as informally defined here bears some resemblance to the formal notions of individually anchored models (discussed by Quer 1998, 2001) and with the conversational background in Kratzer’s (1991) theory of modality (cf. also Giorgi & Pianesi 1999, cap. 5). At present I am unable to tell whether my informal notion can be reduced to either of these; I leave the question open for future research.

Before closing this section, let me point out one important difference between my proposal and the other approaches to logophoricity briefly discussed above. Clearly, the notion of logophoric centre that I have proposed - a generalization of the notion of centre of deixis - is very different from Sells's and Chierchia's approaches to logophoricity. The basic difference is that logophoric roles and *de se* attitudes are properties attributed to human/animate referents, whereas the logophoric centre is *primarily an event* (or state), which involves human/animate participants. Thus, the present proposal is centered on an *event*, constituting the centre for logophoric anchoring, rather than on an individual constituting the “centre of consciousness or communication”. The advantage of this perspective is that it has allowed us to correlate the anchoring of absolute tense and the anchoring of the person feature. This correlation will be explored further in the following section, where we will turn to non-finite clauses. More specifically, I will concentrate here on a proper subset of these, namely, control clauses.

4. *Control clauses*

Despite the considerable attention devoted to the topic of control in recent minimalist research,²² the question of why certain positions and not others must be controlled has not received a satisfactory answer yet. In this section I will show that my approach to person agreement can be fruitfully extended to control structures so as to provide a possible answer.

4.1. *Person agreement and referential independence*

At first sight, it appears that control clauses lack subject agreement altogether, not only morphologically but also syntactically. However, Borer (1989) and Landau (2000) have proposed that the phenomenon of control is the manifestation of a morphologically abstract anaphoric Agr projected in the functional structure of control clauses.²³

Anaphoric Agr differs from finite clause Agr in two respects: First, it requires an antecedent; and second, it cannot license Nominative Case on lexical DPs.

This latter qualification is very important. Various approaches to control explain this phenomenon in terms of the unavailability of Nominative Case.²⁴ However, Sigurdsson (1991) has convincingly

²² Cf. at least: Boskovic (1997), Hornstein (1999), Landau (2000), Manzini & Roussou (1998), Martin (2000), O’Neil (1997), Ormazabal (1994), Petter (1998), Wurmbrand (1998). For a convincing criticism of Hornstein’s proposal, see Culicover & Jackendoff (2001).

²³ Borer (1989) argues that anaphoric Agr also occurs in certain finite clauses, e.g. in Hebrew past and future tense clauses with third person controlled *pro*. The issue of controlled *pro*-drop, although directly relevant, exceeds the limits of the present paper (see Gutman 1999, Vainikka & Levy 1999).

²⁴ In GB Control Theory, non-finite Tense fails to govern its subject position; PRO is ungoverned and a fortiori lacks Case. In the Null Case approach, the subject position of control clauses receives Null Case, a “weak” counterpart of Nominative which can only be borne by the minimal category PRO, lacking both lexical content

argued that PRO in Icelandic does bear Nominative Case, although this fails to be phonologically spelled out. Petter (1998, 96-101) generalizes this conclusion, arguing that controlled PRO generally bears Nominative Case.

On the other hand, Borer (1989) points out that Nominative Case may be overtly realised on a pronominal DP in certain control clauses, as in the Italian example (28a). Crucially, the overt Nominative pronoun exhibits the typical properties of a controlled subject, requiring an antecedent; a referentially independent DP, whether pronominal or lexical, cannot be licensed in the same context.

- (28) a. Ho deciso [di andarci io].
 have-1SG decided to go-there I-NOM
 'I decided to go there myself.'
 b. * Ho deciso [di andarci tu / Maria].
 have-1SG decided to go-there you-NOM / Maria

A lexical DP - i.e., an R-expression - is intrinsically referentially independent (cf. Higginbotham 1983); the strong pronoun in (28a) is not, whatever analysis one adopts for it.²⁵ Once again, the crucial property is not licensing of Nominative Case *per se*, but rather, the possibility for person agreement to license a referentially independent DP.

Let us label this type of person agreement [+R]. I now propose that the licensing principle (18) specifically concerns [+R] person agreement:

- (18') A [+R] person feature is selected by a +Fin⁰ head encoding the external Logophoric Centre.

Since I have assumed that non-finite clauses do not encode the external logophoric centre in their Fin⁰ head, it follows that they cannot have [+R] person agreement. What is then the nature of the Fin⁰ head in non-finite control clauses? I propose the following hypotheses:

- (29) A [-finite] Fin⁰ head encodes an *internal* Logophoric Centre (iLC).

Furthermore, I propose that an internal Logophoric Centre universally licenses [-R] person agreement, with the following properties:

- (30) i. An iLC locally licenses a [-R] person feature.
 ii. A [-R] person feature takes as its only possible values the participants of the iLC of the clause.

[-R] person agreement corresponds to Borer's and Landau's "anaphoric Agr".

The analysis is illustrated in (31): Here the speech event denoted by the matrix clause constitutes the internal Logophoric Centre for the embedded infinitival clause. The participants of the matrix clause event thus become the participants of the iLC, and constitute the only possible values for the locally licensed [-R] person feature:

- (31) Gianni_i chiese₁ a Maria_j [iLC₁ di Pers_j preparare la cena].
 G. asked M. 1 to cook the dinner
 SPEAKER: i
 ADDR: j

and intrinsic referential properties. In Hornstein's (1999) movement approach, the subject position of control clauses actually contains a trace of the moved "antecedent"; by the Last Resort principle, Case cannot be checked in this position.

²⁵ Here I will not discuss the nature of such "emphatic" pronouns; see Belletti (1999) and Cardinaletti (1999).

Thus, control is mediated by an internal Logophoric Centre syntactically represented in the $-\text{Fin}^0$ head. Note that this hypothesis, together with the assumption that a LC is encoded in the Comp area, implies that control clauses must have at least one complementizer-type head in their functional structure (L. Rizzi, personal communication; cf. Chomsky 1999).

4.2. *Non-obligatory vs. obligatory control*

The general hypothesis (29)-(30) must be refined, so as to distinguish different types of control. Since Williams's (1980) seminal work, two different varieties of control have been identified: obligatory and non-obligatory control. Most analyses agree on the idea that obligatory control has an "anaphoric" nature, whereas non-obligatory control has a pronominal nature. Setting aside the different theoretical approaches, even on the empirical side there is no consensus in the literature on the classification of certain instances of control as either obligatory or non-obligatory. Landau's (2001, chapter 3) excellent study provides a detailed overview of the problem. In this study I will adopt without discussion Landau's classification, which is innovative in various important respects.²⁶

Specifically, Landau argues that obligatory control is found in syntactically transparent infinitival clauses which occupy a VP-internal position at LF; the controller is a DP in the immediately superordinate clause. This is because anaphoric Agr must be licensed by an AGREE relation with a higher functional head (T or v) endowed with phi-features, and the AGREE relation is constrained by the Phase Impenetrability Condition.

Non-obligatory control²⁷ is found instead in all infinitival clauses that constitute islands, including adjunct, extraposed, and certain subject infinitival clauses. The island boundary blocks the AGREE relation: hence anaphoric Agr and PRO cannot be syntactically licensed. Here Landau adopts and generalises a proposal by Reinhart & Reuland (1993): anaphoric elements that fail to be syntactically licensed receive a logophoric interpretation, which is not syntactically constrained, but is only subject to discourse factors.²⁸ Like English *self*-anaphors, anaphoric Agr and PRO that fail to be syntactically licensed are interpreted logophorically.

In the following subsections, I propose a reinterpretation of the Borer/Landau approach, integrating it into a theory of logophoric centres.

4.3. *Non-obligatory control*

²⁶ Most notably, Landau rejects some standardly assumed properties of obligatory control: (a) the necessity of a syntactically explicit antecedent, (b) the requirement for the controller to c-command the controlled position, and (c) the impossibility of split antecedents. Although it is impossible here to summarize Landau's analysis, two clarifications are in order. First, Landau carefully distinguishes arbitrary control from "partial control", in which the controlled position denotes a group of referents including the controller (see § 4.5). Second, since on his analysis obligatory control allows for implicit controllers, some apparent instances of long-distance control are reanalysed as instances of local control involving an implicit antecedent.

²⁷ This corresponds to Culicover & Jackendoff's (2001) H-nonobligatory control.

²⁸ Landau does not address the question of why the emerging interpretation is the logophoric one. See Reuland (2001) for an explicit proposal on this point.

Let us begin with non-obligatory control. Various arguments in support of its logophoric nature have been provided by Kuno (1987, 134-135), Landau (2000), and Williams (1992, 1994); I will briefly report them here.

First of all, the controller is necessarily animate, as shown by the contrast between (32) and (33):

- (32) Having just arrived in town, the new hotel seemed like a good place for a stop.
(33) * This open window_i proves that [before breaking]_j, it was raining. (Williams 1992, 299)

This constraint follows from the hypothesis that non-obligatory control is logophorically oriented, since only an animate referent can bear a logophoric role.

This hypothesis is further supported by the following contrast, pointed out by Landau (2000, 120):

- (34) a. Having been away for so long, nothing really matters to John.
b. * Having been away for so long, nothing really bears on John.

In both sentences the controller (*John*) is animate; however, control is only possible in (34a), where it constitutes the "centre of consciousness", and impossible in (34b), where it does not. This shows that the animacy constraint cannot be reduced to a (stipulated) [+animate] feature intrinsic to the empty category involved in non-obligatory control.²⁹

Second, the controller need not be an explicit or implicit argument of the immediately superordinate clause; it may even be introduced in a preceding sentence, as shown in (35).

- (35) a. John even shaved for the interview. [Making himself presentable] was essential to the success of the project. (from Hornstein 1999)
b. [Having travelled all day], the hotel was a vision indeed. (from Williams 1992, 300)

A somewhat different type of logophoric effect is observed by Kuno (1987, 134-135) (see also Landau 2000, 119-120):

- (36) a. John said to Mary that it would be easy [to prepare herself for the exam].
b. * John said about Mary that it would be easy [to prepare herself for the exam].

In (36a) the argument *Mary* denotes a participant in the speech event described by the matrix clause, hence it bears a logophoric (ADDRESSEE) role. In (36b), instead, *Mary* does not denote a participant in a speech event and is not a possible controller.

These evidence justifies the claim that non-obligatory control is mediated by an internal Logophoric centre, along the lines illustrated in (29)-(31) above. But here the iLC is contextually licensed on a semantic/pragmatic basis;³⁰ it does not necessarily correspond to the Event of the immediately superordinate clause. In (35a), for instance, the iLC corresponds to a contextually relevant mental state of John's; in (35b), to the mental state of an unspecified referent.³¹

²⁹ The [+animate] feature is also intrinsic to the so-called arbitrary interpretation, which Landau considers an instance of non-obligatory control. The arbitrary interpretation also emerges with null direct objects (*pro* according to Rizzi 1986) and null subjects of impersonal sentences (Cinque 1988). The relation between logophoricity and arbitrary interpretation is not entirely clear (see Dahl 2000 and Landau 2000, 82 ff., quoting unpublished work by A. Kratzer). I leave this problem for future research.

³⁰ The same holds in matrix infinitival questions.

³¹ In this paper I will not discuss adjunct control. I assume, following Williams (1992), that it can be divided in two subtypes: "high" adjuncts (IP-modifiers) are cases of non-obligatory control, whereas "low" adjuncts (VP-modifiers) are pseudo-controlled via predication.

4.4. Obligatory control

According to Borer (1989) and Landau (2000), obligatory control is an instance of anaphoric Agr. I wish to propose here a different though related approach:

(37) In obligatory control clauses the internal LC is *anaphoric* to the matrix clause Event:

[IP	V^0	[FinP	$Fin^0_{[-fin]}$	[... I ...]]
1	1	1		
	E_k	iLC_k	[-R] person	

From this perspective, obligatory control is a manifestation of an *anaphoric* logophoric centre: The [-finite] Fin^0 head of the infinitival complement clause takes as an antecedent the matrix clause Event, which I tentatively assume to be syntactically realised in the V^0 head. This means that the matrix clause Event establishes an internal logophoric centre to which the complement clause is anchored, exactly as is the case in logophoric complement clauses of "strongly logophoric" languages (cf. the discussion around (20)-(21)). This hypothesis immediately entails three consequences:

- a) Since the [-finite] Fin^0 head of obligatory control clauses is anaphoric, obligatory control will only be possible when the matrix clause denotes an event that may constitute an internal logophoric centre: that is, either a speech event or a "mental eventuality". Apparent cases of obligatory control that do not fulfill this requirement must be reanalysed as a distinct phenomenon (cf. § 4.5).
- b) The obligatory controller is an internal participant of the iLC encoded in Fin , and hence necessarily has logophoric status.
- c) Given the anaphoric nature of the Fin^0 head, the obligatory controller corresponds to a participant in the matrix clause Event. This accounts for the strict LOCALITY of obligatory control.

In the following subsections I will provide two types of arguments in support of the logophoric nature of obligatory control. On the one hand, I will show that obligatory control is subject to animacy and logophoricity constraints. On the other hand, I will show that some special properties of obligatory controlled PRO, discussed by Landau (2000), are also shared by logophoric pronouns and/or logophoric long-distance anaphors.

4.4.1. Williams (1992, 308) notes that in most obligatory control contexts the controller is a "thinker or perceiver", hence it has logophoric status. One exception is the verb *serve*, whose infinitival complement is controlled by an inanimate subject (38a). Note however that as soon as we introduce a potential animate controller in the matrix clause, as a benefactive Dative, control by the inanimate subject becomes impossible (38b), and the Dative argument becomes the obligatory controller (38c):

- (38) a. Questa scatola_i serve [_{?per/a} e_i contenere oggetti fragili].
this box serves for/to contain fragile items
- b. * Questa scatola_i *mi* serve [_{per/a} e_i contenere oggetti fragili].
this box to-me serves for/to contain fragile items
- c. Questa scatola *mi*_i serve [_{per/?a} e_i metterci oggetti fragili].
This box to-me serves for/to put-in-it fragile items

The matrix verb in (38a) does not denote a speech or mental event that may establish an internal logophoric centre; therefore, (38a) cannot be an instance of obligatory control as defined here. (I will return to its status in sections 4.5-4.6.1 below).

In (38b), instead, the projection of the benefactive Dative qualifies the matrix event as a potential internal logophoric centre, because the matrix event can be associated with a cognitive state of the referent of the benefactive Dative. This provides an antecedent LC for the [-finite] Fin⁰ head, yielding obligatory control (38c).

4.4.2. Pérez Vázquez (2002) points out that in certain modal contexts the explicit realization of an ethical Dative necessarily creates a context of obligatory control (39c), disallowing a finite complement clause (39d):

- (39) a. E' difficile/impossibile [andare a Madrid domani].
 (it) is difficult/impossible to-go to Madrid tomorrow
 b. E' difficile/impossibile [che tu vada a Madrid domani]
 (it) is difficult/impossible that you go-SUBJ to Madrid tomorrow
 c. *Mi* è difficile/impossibile [andare a Madrid domani]
 to-me (it) is difficult/impossible to-go to Madrid tomorrow
 d. * *Mi* è difficile/impossibile [che tu vada a Madrid domani]
 to-me (it) is difficult/impossible that you go-SUBJ to Madrid tomorrow

Landau argues that the modal predicates in (39c,d) are dyadic, and since the infinitival clause occurs in VP-internal position at LF, it is subject to obligatory control. Note now that, crucially, the Dative controller is necessarily animate: (40a) cannot have the same meaning as (40b):³²

- (40) a. *! (Quanto a questa macchina_i), le_i è impossibile [funzionare].
 (as for this machine), to-it (it) is impossible to work
 b. Questa macchina non è in grado di funzionare.
 lit. this machine is not able to work
 'This machine cannot work.'

Once again, the explicit realisation of the Dative argument qualifies the matrix Event as an antecedent for the anaphoric Fin⁰ head of the complement clause (39c). Note that here what is obligatory is not only the controller, but the control relation itself: cf. the ungrammaticality of (39d). This may be related to the projection of the Dative Goal: this involves a more complex conceptual structure, and such a complex structure is projected only when necessary to license a control complement clause.³³

4.4.3. Obligatory control obeys a logophoric constraint similar to that observed in (36) for non-obligatory control. The verbs *volere* 'want', *aspettarsi* 'expect', *pretendere* 'require' and *ottenere* 'obtain' normally have subject control (41):

- (41) a. Gianni_i pretende [di e_i vincere sempre].
 Gianni requires to win-INF always
 b. Gianni_i si aspetta [di e_i vincere sempre]
 Gianni expects to win-INF always

³² (40a) is only acceptable if we somehow "personificate" the machine in question; cf. Williams (1992).

³³ I take (39a) to involve obligatory control by an implicit ethical Dative. (Recall that I adopt Landau's proposal that implicit arguments are visible for obligatory control.) Here too, the implicit controller is necessarily animate.

These verbs may also take an *of*-phrase which necessarily corefers with the subject of a following subjunctive complement (42).³⁴ However, the same *of*-phrase cannot control into an infinitival complement (43). Crucially, the *of*-phrase bears no logophoric role; in fact, it does not denote a participant in the matrix clause event/state (cf. Kuno 1987, 116-117).

- (42) a. Gianni pretende da Maria_i [che *e*_i vinca sempre].
 Gianni requires of Mary that (she) win-SUBJ always
 b. Gianni si aspetta da Maria_i [che *e*_i vinca sempre].
 Gianni expects of Mary that (she) win-SUBJ always
 (43) a. * Gianni pretende da Maria_i [di *e*_i vincere sempre].
 Gianni requires of Mary to win-INF always
 b. * Gianni si aspetta da Maria_i [di *e*_i vincere sempre].
 Gianni expects of Mary to win-INF always

If obligatory control were not mediated by an internal LC, the contrast between (42) and (43) would be unexpected.³⁵

4.4.4. Further evidence comes from a well-known exception to the standard c-command requirement on obligatory control.³⁶

- (44) a. It would help [Bill₁'s development] [PRO₁ to behave himself₁ in public].
 b. * It would help [Bill₁'s friends] [PRO₁ to behave himself₁ in public].

In (44a), the controller is embedded in the possessor position of a larger DP c-commanding the infinitival clause.³⁷ In (44b), the same syntactic configuration does not allow for control. The obvious conclusion is that the difference relies in the semantics of the possessed DPs.

Landau (2000, 110) points out that the nouns that project a DP transparent for control belong in a small and coherent class: they "denote abstract notions that reflect the individuality of the controller, via actions, character traits or social attributes". Landau dubs such a DP a *logophoric extension* of the controller.

Landau suggests that logophoric extensions fail to introduce a new individual referent in the discourse, but somehow 'stand for' the individual denoted by the possessor DP. He further suggests that logophoric extensions may be assimilated to inalienably possessed nouns, which also manifest transparency for control purposes:

- (45) It would ruin [Steve₁'s figure] [PRO₁ to eat so much ice-cream].

³⁴ With the verb *ottenere* 'obtain' coreference is optional.

³⁵ It may be objected that the DP embedded in the *of*-phrase fails to c-command outside the PP, and hence cannot control for lack of c-command. I follow Landau in rejecting the c-command requirement; anyway, the principle C effect in (i) suggests that the DP does c-command the complement clause:

(i) ?* Gianni si aspetta da lei_i [che Maria_j vinca sempre].

Gianni requires of her that Mary win-SUBJ always

See also Farkas (1988) for discussion of these verbs.

³⁶ Landau (2000, 111) classifies this example as an instance of obligatory control because the infinitival subject clause is transparent for extraction.

³⁷ Kayne (1994, 25-27) proposes that a possessor may c-command out of the containing DP, but only if it is quantificational. See Johnson (1998, 33-35) for critical discussion.

In both cases, the possessed DP "... is referentially dependent on its possessor, hence "inherits" (or does not block) its index". This is consistent with Vergnaud & Zubizarreta's (1992) hypothesis that inalienably possessed DPs contain an expletive Determiner.³⁸ Put differently, there is a metonymic relation between the inalienably possessed DP and the possessor, such that the possessor is necessarily involved/affected in any event in which the possessed DP is. Thus, the possessor also counts as a participant in such an event.³⁹

Whatever the correct analysis may be, it is important to note that the same behaviour is found with logophoric pronouns and with long distance reflexives, as shown in (46) and (47):

(46) Tuburi (Huang 2000, 183):

<i>bil</i>	<i>be</i>	<i>go</i>	<i>fɛh</i>	<i>wɛr</i>	<i>màngá</i>	<i>sɛ</i>	<i>ko</i>	<i>Jan</i>	<i>mònò</i>
stomach	his ₁		ACCOM	happy	because	LOG ₁	see	John	

'He was happy because he saw John.'

(47) Mandarin Chinese (Huang & Liu 2001, 170-172)

Zhangsan-de	jiaobao	hai-le	ziji.
Z.'s	arrogance	hurt-PERF	self

'Z's arrogance harmed him.'

This strongly supports the proposed parallelism between obligatory control and logophoric pronouns.

4.4.5. Another property shared by obligatory control and long-distance (logophoric) reflexives is the so called *de se* interpretation. Chierchia (1989) defines a *de se* attitude as a self-ascribing relation between an individual and a property. According to Hornstein (1999) and Landau (2000), obligatory and non-obligatory control differ systematically in intensional contexts: obligatory control only allows for the *de se* interpretation, whereas in non-obligatory control, the *de re* interpretation is possible as well. The contrast is exemplified in (48) and (49):

- (48) Context: a war hero who suffers from amnesia watches a TV program describing his deeds, without realising that the program is about himself.
- The unfortunate expects that he will get a medal.
 - The unfortunate believes that [getting a medal] would be boring.

³⁸ The problem with this solution is that the referential dependence of the possessed DP seems to be only relevant to control, but not to other coreference relations. For instance, the possessor cannot bind an anaphor c-commanded by the possessed DP; this, however, may be accounted for by assuming Reinhart & Reuland's (1993) view of anaphors as reflexive markers (Barbiers 1995). More significantly, the possessed DP is not referentially transparent for the purposes of Principle C:

(i) ? [Il suo₁ lavoro] costringe Gilberto₁ a passare molte notti in bianco.
his job forces G. to spend many nights awake

In this case too, it is possible to invoke Reinhart & Reuland's (1993) reanalysis of Principle C in terms of the Chain Condition, which is sensitive to strict syntactic c-command; alternatively, it may be assumed that the percolation of the possessor's index is only optional. But the point is that there is no clear independent evidence that the referential dependence of these DPs is syntactically relevant (apart from Vergnaud & Zubizarreta 1992, whose analysis is concerned with the implicit possessor in *Jean a levé la main* 'John_j raised (his_j) hand').

³⁹ Note that an example like (45) does not involve a cognitive state of the possessor as an internal logophoric centre; nevertheless, it is intuitively clear that the speaker "empathizes" with him (in the sense of Kuno 1987, chapter 5). It is unclear at present how to integrate this type of logophoric effect in a theory of logophoric centres. Huang & Liu (2000, 171) explicitly deny any logophoric status for the possessor in example (47).

c. The unfortunate expects [to get a medal].

- (49) a. Il poveretto si aspetta che *e* riceverà una medaglia al merito.
b. Il poveretto pensa che [ricevere una medaglia] sarebbe scoccante.
c. Il poveretto si aspetta [di ricevere una medaglia].

(48c) and (49c), with obligatory control into an infinitival complement clause, necessarily express a *de se* attitude: the unfortunate self-ascribes the property of being about to get a medal. Therefore, the sentences are false in the described context (since the unfortunate has a belief about the TV hero without knowing that it is in fact himself). On the contrary, in non-obligatory control clauses (48b) - (49b) a *de re* interpretation is possible: the unfortunate simply has the belief that the TV hero will get a medal; thus, these sentences are true in the described context.

Interestingly, the obligatory *de se* interpretation is also characteristic of logophoric long distance reflexives like Italian *proprio* (Chierchia 1989) and Mandarin *ziji* (Huang & Liu 2001 and references therein). Thus, the *de se* interpretation constitutes a further parallelism between obligatory control and logophoric reflexives.

But if - by hypothesis - non-obligatory control is logophoric as well, then why does it allow for a *de re* interpretation? I have no satisfactory answer to this problem, but my guess is that (48b) and (49b) actually involve a covert *de se* attitude: the matrix predicate (*boring*) has an implicit Experiencer argument, corresponding to the TV hero who the unfortunate fails to recognise as himself; it is some “cognitive state” of this referent that constitutes the internal Logophoric Centre of the non-finite clause. Under this analysis, (48b) reduces to a *de se* interpretation after all:

(50) The unfortunate_i believes that [PRO_j getting a medal] would be boring (for the TV hero_j).

This idea leads to the prediction that if the predicate immediately superordinate to the infinitival clause does not introduce an internal Logophoric Centre involving the TV hero, then the infinitival clause must be anchored to the LC expressed by the main clause predicate (*believe*), resulting in a *de se* attitude on the part of the unfortunate.

This prediction seems to be correct. In (51a), the predicate “be fortuitous” does not select for an implicit Experiencer; as a result, the infinitival clause must receive a *de se* interpretation relative to the unfortunate. In (51b), the *de se* interpretation can be suspended by means of an implicit arbitrary Experiencer of the adjective *dangerous*, which controls the infinitival clause in the place of the main clause subject.

- (51) a. Il poveretto pensa che [aver ricevuto la medaglia] sia un puro caso.
the unfortunate believes that having got the medal be by mere chance
b. Pavarotti pensa che [avere i pantaloni in fiamme] sia pericoloso.
P. believes that having the pants on fire be dangerous.
“P. believes that it is dangerous for anyone to have his own pants on fire.”

These data suggest that my guess could be on the right track. However, the status of the *de se* interpretation is controversial,⁴⁰ and requires further investigation.

4.4.6. The data reviewed in §§ 4.4.1-4.4.5 are far from exhaustive; nevertheless, they seem sufficient to support a logophoric approach to obligatory control. This can be summarised as follows:

⁴⁰ See Higginbotham (1992) for critical discussion of Chierchia's proposal.

- (52) i. In obligatory control clauses, the [-finite] Fin⁰ head encodes an internal logophoric centre which is anaphoric to the matrix clause event (V⁰).
- ii. Consequently, the participants in the matrix clause event are internal participants of the internal LC.
- iii. The internal participants are the only potential values of the [-R] person feature that is locally licensed by Fin⁰.

Note that from this perspective, control is essentially equivalent to the instantiation of a universally available implicit logophoric pronoun. For the present purposes, it is immaterial whether such a "logophoric pronoun" is syntactically realised as an independent pronominal category (PRO) or consists in the set of Agr features itself, constituting an incorporated pronoun (cf. Alexiadou & Anagnostopoulou 1998, Kato 1999, Vainikka & Levy 1999 on *pro-drop*).⁴¹

As noted above, my proposal cannot account for apparent cases of obligatory control in which the embedding predicate does not denote a speech or mental event, and/or the controller is inanimate and "non-personal". In the next section I reconsider these cases in the light of Landau's (2001) findings, and I argue that they constitute a separate phenomenon.

4.5. *Exhaustive vs. partial control*

Landau (2000, chapter 2) distinguishes two subtypes of obligatory control: exhaustive and partial control.

In *partial control*, the referent of PRO includes (properly or improperly) the referent of the controller, and it is not necessarily identical to it.⁴² The partial control effect emerges clearly in examples like (53), where the controller is singular but the controlled infinitival clause contains a collective predicate, requiring a semantically plural subject.⁴³

- (53) The chair₁ was afraid [PRO₁₊ to gather during the strike].

Note that partial control is unidirectional: it is impossible for a plural antecedent denoting a group to control a PRO referring to an individual included in that group.

In case of *exhaustive control* the referent of PRO must be identical to the referent of the controller:

- (54)* The chair₁ dared [PRO₁₊ to gather during the strike].

I propose the following hypothesis:

- (55) Logophoric obligatory control (as characterized in (52)) corresponds to Landau's partial control.

⁴¹ In the following discussion I will adopt Landau's representations, involving a PRO, when I directly quote from his work.

⁴² Landau shows that partial control can be empirically distinguished from arbitrary control: since partially controlled PRO refers to a group that includes the referent of the controller, it gives rise to disjoint reference effects if the infinitival clause contains a pronominal DP coreferent with the controller (cf. Reinhart & Reuland 1993 on principle B effects):

(i) * John₁ wondered [who PRO₁₊ to introduce him₁ to].

⁴³ Landau (2000, 29) points out that the phenomenon of partial control is unaccountable for in the predication approaches to obligatory control, where PRO is equivalent to a lambda-abstracted variable, and also in movement approaches like Hornstein (1999) and Manzini & Roussou (2000).

I have two arguments in support of this view. The first one comes from Landau's detailed classification of the embedding predicate types that license the two types of control. The following predicate types license partial control:

- a) FACTIVES: glad, sad, regret, like, sorry...
- b) PROPOSITIONAL (attitude) predicates: believe, think, suppose, say, claim, imagine...
- c) DESIDERATIVE predicates: want, prefer, hope, afraid, refuse, agree, decide, demand, promise, offer, choose, eager, ready...
- d) INTERROGATIVE predicates: wonder, ask, guess, know...

The following predicate types instead have exhaustive control complements:

- e) IMPLICATIVE predicates: dare, manage, make sure, bother, remember, get, avoid, forget, fail, refrain, force, compel...
- f) ASPECTUAL verbs: begin, start, continue, finish, stop, resume...
- g) MODAL predicates: have, need, may, should, able...

By comparing these predicate types, we can find an interesting generalization.⁴⁴ All the predicates in (a)-(d), which license partial control, introduce a speech or mental event that qualifies as a possible iLC for the infinitival clause. On the contrary, the predicate types in (e)-(g), which license exhaustive control, do not introduce a speech/mental event that may constitute an internal logophoric centre for the non-finite complement; as a matter of fact, these predicate types do not select for logophoric clauses in "strongly logophoric" languages.⁴⁵ This suggests that only partial control is mediated by an internal LC. The second argument is provided by the observation that the unidirectional partial control pattern is shared by plural logophoric pronouns (cf. Hyman & Comrie 1981, 32; Huang 2000, 179-80; Sells 1987, 449), as exemplified in (56) (cf. also (22b) above):

(56) Donno SO (from Huang 2000, 179)

Anta inyemembe	yogo	bojen	gi.
Anta LOG-PL	tomorrow	go-1PL	said

'Anta₁ said that they₁₊ are going tomorrow'

It is possible to stipulate that exhaustive control is logophoric as well, and differs from partial control in that the controlled argument cannot be semantically plural. However, this would merely amount to a restatement of the facts. Therefore, I wish to pursue the hypothesis that exhaustive control is not mediated by an internal Logophoric Centre, but constitutes a genuinely distinct phenomenon.

The most radical possibility is to assume that exhaustive control complements lack an internal LC because their functional structure is radically impoverished: i.e., it does not include any Complementizer-type head, in particular, the Fin^o head.

This radical hypothesis has been proposed at times in the literature at least for the infinitival complements to modal and aspectual verbs, which cross-linguistically tend to show a "restructuring"

⁴⁴ Landau's own generalization is in terms of the temporal properties of the control clauses, which will be discussed in section 4.6 below.

⁴⁵ I claim that this also holds for verbs like *forget*, *remember*, *bother* on their implicative sense. The latter obviously involves some "cognitive state" of the (animate) subject; however, the core of the implicative meaning does not consist in embedding the proposition expressed by the infinitival clause in the representation of the subject's cognitive state; rather, the implicative meaning expresses a *causal* relation between a cognitive state of the subject and the action/event expressed by the infinitival clause. (Thanks to Idan Landau for raising this question.)

behaviour. For instance, Rizzi (1982) and Wurmbrandt (1998) argue that in the restructuring variant the complement lacks any functional projection. Picallo (1990) argues that in Catalan modal verbs are semi-auxiliaries attached to the VP; more recently, Cinque (2001) has advanced the radical hypothesis that irrespective of their restructuring vs. non-restructuring behaviour, these predicates are always the realization of a modal or aspectual functional head in the rich inflectional structure of Cinque (1999).

Another alternative is to take the infinitival complements to project the inflectional structure but not the Comp layers, as is usually assumed for raising complements. Higginbotham (1989, 494-5), following Zubizarreta (1982), adopts an analysis along these lines, whereby modals are raising predicates that assign an adjunct theta-role to the raised subject.

However, this reductionist approach faces some serious problems, some of them already discussed by Landau (2000, 77-79) in his criticism of Wurmbrandt's proposal.

First of all, Landau points out that exhaustive control cannot be completely reduced to a restructuring structure (in which the infinitival complement would be a bare VP), because some implicative verbs that consistently select for exhaustive control infinitives (i.e. "weak implicatives" like *compel* and *induce*) cross-linguistically fail to display a restructuring behaviour.

Secondly, many exhaustive control infinitives are introduced by prepositional complementizers, which would have to be reanalysed as relatively low functional heads (cf. Wurmbrandt 1998; Cinque 2001, 113).⁴⁶

A related problem arises w.r.t. the exhaustive control structures of Syrian Arabic (Nora Boneh, p.c.). Here the control clauses has a dependent (imperfective) form of the verb inflected for agreement, and is introduced by the declarative complementizer *?inno* (see Al-Zahre & Boneh 2001 for relevant discussion).⁴⁷

Therefore, it is safer to assume a less radical hypothesis:

- (57) i. Partial control infinitives encode in [-finite]⁰ an internal LC anaphoric to the matrix clause event.
- ii. Exhaustive control infinitives instead do not encode any Logophoric Centre, whatever the internal composition of their functional structure.

In the following section I will examine the temporal properties of exhaustive vs. partial control infinitives, and I will argue that their temporal/aspectual properties independently support (57).

4.6. Temporal properties of control clauses: exhaustive vs. partial control

Let me start once again from an important empirical generalization discovered by Landau (2000):

- (58) LANDAU'S GENERALIZATION: partial control infinitives allow for a temporal specification of the Event time independent from the matrix clause Event time; exhaustive control infinitives do not.

- (59) a. Today, John regretted having kissed his aunt last week. (factive)
- b. Today, John claimed to have lost his car keys last week. (propositional)

⁴⁶ This assumption runs against Kayne's (1984) previous argument that these particles cannot be inflectional. For one thing, the prepositional particles are disallowed in infinitival relatives and questions featuring an overt *wh*-pronoun, apparently giving rise to a Doubly Filled Comp effect.

⁴⁷ Consider the following example:

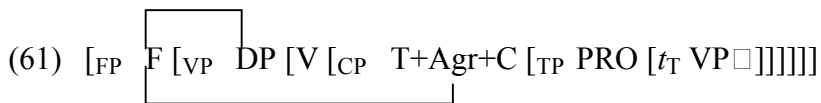
Haawal	Sami	(?inno)	y?n~sor	l-ktaab
try-3s.m.PF	Sami	(COMP)	publish-3s.m.IMPF	the book
'Sami tried to publish the book.'				

- c. Yesterday, John hoped to solve the problem tomorrow. (desiderative)
 d. Yesterday, John wondered how to solve the problem tomorrow. (interrogative)
- (60) a. * Yesterday John remembered to lock his door tomorrow. (implicative)
 b. * Yesterday, John began to solve the problem tomorrow. (aspectual)
 c. * Yesterday, John had to solve the problem tomorrow. (modal)

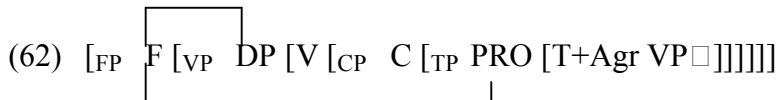
This leads to the hypothesis that partial control infinitives are tensed,⁴⁸ whereas exhaustive control infinitives are not.

On Landau's analysis, Tense plays a crucial role in licensing partial control. Summarising very briefly, Landau argues that partial control PRO in a sentence like (53) is semantically but not syntactically plural, like a collective name. This is formalized by assuming that both the controller DP and PRO are inherently specified for the feature [semantic plurality]: the DP is [-SP], PRO is [+SP].

In tensed infinitives, the Tense head moves to C (Pesetsky & Torrego 2000), so that the Agr features on T are accessible to higher functional heads. The matrix functional head F that agrees with the controller DP establishes an AGREE relation with infinitival Agr in C, rather than directly with the PRO category. The feature [-SP] need not be transmitted from F to the infinitival Agr head;⁴⁹ this allows for a mismatch between PRO and the controller w.r.t. their intrinsic specification for [semantic plurality].



In the case of exhaustive control, instead, the infinitive is untensed; thus, T cannot move to C, and the uninterpretable Agr features on infinitival T are not accessible from outside CP. PRO is by hypothesis accessible, because it is interpretable; thus, the matrix functional head F agreeing with the controller DP establishes an AGREE relation directly with PRO. The [-SP] feature of the controller DP is inherited by F and does not match the [+SP] feature of PRO under AGREE. Thus, there can be no mismatch between PRO and its controller w.r.t. the feature of semantic plurality.



In my analysis, I have reduced the possibility of partial control to the mediation of an internal Logophoric Centre. It is then desirable to correlate the possibility or impossibility of an independent temporal specification to the presence vs. absence of an iLC in the infinitival clause.

In order to do so, it is necessary to make some assumption concerning the temporal structure of infinitives. The temporal properties of infinitival clauses constitute a very intricate empirical domain (cf. Bertinetto 2001). Although various scholars have identified various aspectual (Bertinetto 2001) or

⁴⁸ Factive and propositional complements involve a realis tense, whereas desiderative and interrogative complements involve an unrealized tense. Landau analyses both types as tensed infinitives, contrary to Stowell (1982), Boskovic (1997) and Martin (2000), who analyse realis complements as not inherently tensed (see note 4).

⁴⁹ This is because, by assumption, [-semantic plurality] is non-distinct from underspecification for semantic plurality on functional heads. On the contrary, [+semantic plurality] is always visible for the AGREE relation. This asymmetry is meant to account for the fact that the inclusion relation is unidirectional: as discussed above, PRO cannot refer to a single individual that is properly included in the group denoted by the controller.

modal (Pesetsky 1991) properties of infinitives, there is no consensus on their temporal structure proper. Some authors conceive of all infinitives as intrinsically lacking a temporal structure. A less radical position is expressed by Hornstein (1990), according to whom non-finite clauses have a reduced temporal structure consisting only of the reichenbachian R and E points, but not involving the S point.

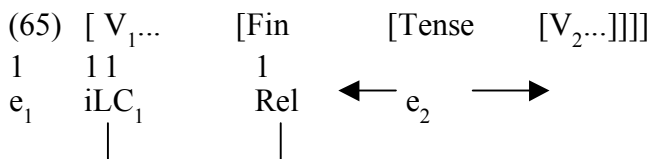
In this respect, I wish to make as few assumptions as possible. Infinitives seem to be able to express *some* relation between the event lexically specified in the V head and another anchoring event, whatever the nature of the relation expressed (temporal, aspectual or modal). For instance, in a prospective infinitive like "John wants to leave tomorrow", there is a "prospective" relation between the still unrealized event of John's leaving tomorrow and the present state of John's wanting such and such. I assume that whatever the nature of the expressed relation, it is syntactically encoded in some inflectional head of the infinitival clause, and it satisfies the following conditions:

- (63) i. It is dyadic (cf. Stowell 1996, Zagana 1995);
- ii. it relates two event arguments (cf. Giorgi & Pianesi 1997, Higginbotham 2001). The external argument of the relation will be called the "anchoring event".
- iii. It must be saturated locally within the clause.

(63iii) implies that the external argument of the relation expressed by a partial control infinitive cannot be the Event encoded in the superordinate V head. Suppose now that we adopt the following hypothesis:

- (64) An internal LC constitutes an anchoring event.

It follows that in partial control infinitives, the internal LC (anaphoric to the matrix event) constitutes an anchoring point that saturates the relation expressed by the infinitival morphology. If the relevant relation does not require temporal coincidence of the two *relata*, then the event of the infinitive (e_2) can be temporally disjoint from the iLC, which in turn is anaphoric to the matrix clause event (e_1):



Consider then exhaustive control infinitives selected by implicative, aspectual and modal verbs. I have assumed that these lack an internal LC (57b). If so, then there is no potential anchoring event within them that could comply with (63iii), and consequently, a temporal/aspectual relation encoded in the inflectional structure could not be saturated.

But if this is the case, what happens to the event position of the infinitive? How is it interpreted with respect to the matrix clause verb? The problem is particularly hard in the case of implicative verbs,⁵⁰ in which the matrix predicate and the infinitival verb denote distinct events: for instance, in *John forced Mary to leave* the forcing event and the leaving event have different participants, and thus constitute distinct events. At present I have no convincing solution to offer.

As a final remark, let us reconsider the problem of inanimate controllers, pointed out above in connection with (38), repeated here:

- (38) a. Questa scatola_i serve [?per/a e_i contenere oggetti fragili].
this box serves for/to contain fragile items

⁵⁰ Aspectual verbs can be analysed as semi-auxiliaries; modal predicates as modal operators over propositions.

- b. * Questa scatola_i mi serve [per/a e_i contenere oggetti fragili].
 this box to-me serves for/to contain fragile items
- c. Questa scatola mi_i serve [per/?a e_i metterci oggetti fragili].
 This box to-me serves for/to put-in-it fragile items

As noted above, an example like (38a) cannot be analysed in terms of an internal Logophoric Centre, since the controller is inanimate and has no logophoric status. This now leads us to conclude that it must be an instance of exhaustive control. This conclusion is supported by its temporal properties: as shown in (66a), the inanimate "controller" co-occurs with an untensed infinitival clause, whose event cannot have an independent temporal location.⁵¹ On the contrary, the Dative controller of (38c) has logophoric status, and the infinitival clause has an internal Logophoric Centre; here the infinitival clause allows for an independent temporal specification of its event, as shown in (66b):

- (66) a. Questa scatola_i serve a e_i contenere oggetti fragili (?* durante il trasloco di domani).
 this box serves to contain fragile objects (during tomorrow's removal)
- b. Questa scatola mi_i serve per e_i metterci oggetti fragili domani durante il trasloco.
 this box to-me serves to put-in-it fragile items tomorrow during the removal

These data support the proposed correlation between "tensedness" (in Landau's sense) and the logophoric status of the infinitival clause.

4.7. Summary

In this paper I have argued that the syntactic feature of finiteness encodes the logophoric anchoring of the clause. As a paradigmatic opposition, I have considered clauses with a finite (indicative) verb form vs. infinitival control clauses. I have argued that the former are anchored directly to the Speech event, which constitutes the external "centre of deixis", whereas the latter are anchored to another speech or mental event, either linguistically reported or pragmatically recoverable from the context. All these types of anchoring have been subsumed under the notion of "Logophoric Centre".

I have argued that both person agreement and tense are anchored to the local Logophoric Centre of the clause, encoded in Fin^o. The external LC licenses full-fledged person agreement, which in turn can syntactically license a referentially independent subject. An internal Logophoric Centre instead licenses a [-R] person feature, which takes as its only possible values the participants of the internal LC. This is what happens in non obligatory control, and also in obligatory partial control, where the iLC is anaphoric to the matrix clause event. Exhaustive control, instead, is not mediated by a Logophoric Centre.

Tense too is ultimately anchored to Fin^o: absolute tense (in the sense of Comrie 1985) is anchored to the external Logophoric Centre, which subsumes the reichenbachian Speech Time. Control clauses lack the external Logophoric Centre, hence they cannot receive an absolute tense interpretation. The "anaphoric" interpretation of Tense in obligatory control clauses is probably mediated by the internal Logophoric Centre; however, the status of the reichenbachian Reference Time w.r.t. the logophoric structure of the clause is still unclear.

A final remark on the theoretical side. I think that from the above discussion we can draw the conclusion that the syntactic licensing condition (2) cannot be accounted for within the boundaries of

⁵¹ In (38a), both the matrix verb and the infinitive have a quasi-generic tense interpretation. This may be related to Rooryck's hypothesis that the infinitival C^o of exhaustive control clauses is temporally [-realized] and can only be coindexed with a [-realized] matrix (sub)event.

narrow syntax: a real explanation can be attempted only by examining the interrelation between the syntactic component and the semantic/pragmatic one. Perhaps the real explanatory level always lies, minimalistically speaking, "at the interface".

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