

# THE DISTRIBUTION OF THE NOMINATIVE + INFINITIVE AND OF THE ACCUSATIVE + INFINITIVE

## 1. The Nominative + Infinitive

1.1. *A-verbs*. Previously the class of SSR triggers has been illustrated only by the relatively small group of active verbs and adjectives called A-verbs.

- (1) appear, chance, happen, prove, turn out, seem, look like; (un)likely, sure, certain.
- (2) Are they likely to have heard the news?

A closer investigation of the data reveals that the class of SSR triggers is considerably more comprehensive. There are other verbs which have complements presenting all the hallmarks of SSR, except that there is no parallel finite clause, so that the effect of SSR is not immediately observable. Among the verbs that can be given a SSR analysis are included the following:

1.2. *Inchoative verbs* of the type: *come, grow, remain, get* are amenable to a SSR analysis, as shown by diagnostic sentences containing, weather *it*, formal *there*, or idiom chunks in subject position. Moreover these verbs are known to be ergative:

- (3) There came to live twenty families in that valley.  
He grew to like her after a while.

1.3. *Aspectual verbs*, like *begin, start, continue, finish, commence*, are doubly subcategorized as agentive-transitive (already analyzed in the previous chapter) and non-agentive ergative, respectively. Arguments in favour of this view come from a number of empirical facts

a) Idiom chunks, expletive *it* and *there* may appear as main clause subjects selected by the infinitive verb:

- (4) a. Recourse began to be had to illegal methods.  
b. It was beginning to drizzle when he left.  
c. There continued to be riots in London.

b) A second argument for SSR is the synonymy or truth-functional equivalence under passivization in the infinitive complement.

- (5) The noise started to annoy John.  
John started to be annoyed by the noise.

c) While the transitive verbs requires animate Agentive subjects, the ergative allows any type of DP as Theme. Call this the selectional argument. Even when the DP is [+personal], it does not show volition, responsibility and control, being interpreted as if it were a Patient:

- (6) a. Oil began to gush from the oil well.  
b. The Queen began to be slapped by the King.

1.4. *Had better* and *had best* are two verbal phrases that take a bare infinitive construction, which is also interpretable as an instance of SSR.

- (7) There had better be no flaws in your argument.

1.5. *Other cases* The SSR analysis can be extended to cover quite a few other cases of modal phrases, mostly based on the verbs *be*, *have*, *need*, as in *to be to*, *to have to*, *to be going to*, *to be set to*, *to be supposed to*, and *surely ought to*.

- (8) a. There is supposed to be a second chance for your candidate.  
b. There is bound to be riots in London soon.  
c. It is going to rain.  
d. There has to be a way out.  
e. Little headway is apt to be made on that problem.  
f. Tempers are about to flare.  
g. Tabs were supposed to be kept on all visitors.

**Remark.** Many of these have double transitive-control vs. ergative-raising structures, which is not an uncommon situation. Compare:

- (9) a. Bill is going to buy a house. (PRO-TO, intentional)  
b. Bill is going to be killed (SSR, unintentional)

In the next sections, we present the distribution of the SOR construction is given. The problems are more complex, given the large number of verbs that allow the Acc + Inf construction, and the different syntactic and semantic properties the different groups of verbs exhibit.

## 2. Verbs of propositional attitude

Verbs of propositional attitude are the central group of raisers, having acquired this property in the Modern English period. the Longman dictionary indicates the verbs in (10a) as raisers, Poutsma (1929), also includes the verb in (10b)

- (10) a. account, assert, avow, adjudge, assume; acknowledged, attest, believe, consider, conclude, confess, conjecture, construe, declare, deny, find, fancy, guess, grant, guarantee, hold, make out, imagine, know, maintain, presume; proclaim, profess, prove, remember, reckon, understand, think, suspect, suppose, take, trust, warrant;  
b. (Poutsma) betoken, indicate, disclose, rule, specify, recognise, and interpret.

These verbs are epistemic operators (*believe*, *know*, *understand*) or speech act (*assert*, *guarantee*, *hold*) verbs. Their a-structure includes an Experiencer (for epistemic verbs) or an Agent (for speech act verbs) and a complement proposition. All of these verbs are weak intensional predicates, introducing one world in which the complement is extensionally anchored, i.e., assumed to be true. The paraphrase is mostly indicative.

The characteristic property of this class of raisers is the acceptance of both the Acc + Inf, and the Nom + Inf, respectively derived by SOR and SSR. The PRO-TO complement is generally excluded, though not with all these verbs. The exclusion of PRO is due to the properties of the infinitive inflection which lacks anaphoric features and cannot license PRO. If the complement clause subject is coreferential with the main clause subject, a reflexive pronoun shows up, as in (11d).

- (11) a. She believes him to be honest.  
b. His believed to be honest.  
c. \*She believes [PRO to be honest]

d. She believes herself to be honest.

The infinitive subject can be questioned, relativized, topicalized and generally A'-moved on the main clause cycle (cf. 12b-d). Likewise it may undergo HNPS, as in (12e)

- (12) a. They didn't remember him to have been sent to London.  
b. Whom don't they remember [t to have been sent to London]?  
c. The man whom they didn't remember to have been sent to London is their son.  
d. John, they didn't remember to have been sent to London.  
e. I believe t to be my friend the woman I met yesterday.

The infinitive complement cannot be interrogative, for lack of a SpecC position, in all likelihood. Notice the contrast between raising and control complements in this respect:

- (13) a. I don't know [whom [PRO to send t]].  
b. I know him to have been sent to London.  
c. \*I don't know whom to have been sent to London?  
d. Whom don't you know to have been sent to London?

Given the constraints on the use of the present in English, the infinitive proposition does not denote single events, but is mostly generic, denoting habitual, or stative eventualities. Notice the frequent occurrence of predicative *be* constructions, known to be stative, in (14), as well as the occurrence of the stative verbs in (15). Since PRO is not licensed if the main clause and the complement clause have coreferential subjects, the complement clause subject is a reflexive pronoun, as in (16). Single events are licensed by aspectual auxiliaries, the progressive *be*, in (17) or the perfect *have*, indicating anteriority with respect to the main clause Ev-T. (examples in (18)). Finally, all the verbs allow, the Nom + Inf, as shown in (19) below.

- (14) a. He asserted the charge to be incorrect. b. The court adjudged him to be guilty. c. They admitted the task to be difficult. d. I assumed him to be able to read. e. They suspect him to be the murderer. f. I presumed them to be married. g. I know him to be a fool. i. He concluded her to be a witch. j. He denied this to be the case. k. We grant this to be true. l. They proclaimed the man to be a traitor. m. I am not what you represent me to be. n. They reported the enemy to be ten miles away. o. He pointed to the washing-stand, which I had made out to be like Mrs Gunning. p. The lady trusted love to be eternal. r. The man glanced at the parish clerk, whose air of consciousness and importance plainly betokened him to be the person referred to.
- (15) Experience had shown the scheme to *contain* defects. / b. It was only in Ann that she could fancy the mother to *revive* again. c. He would take you to *mean* that he was narrow minded and unentertaining. d. Can you guarantee these to *wear* well?
- (16) I found myself to be in a dark forest. b. He avowed himself to be a supporter of the new group. / He professed himself to be snugly lodged.
- (17) We understand Portia to be hesitating for a word which shall describe herself appropriately. / She suspected him to be playing high.
- (18) She was charged with receiving the mink-coat, knowing it to have been stolen. / Sir William remembered the coat to have been frequently worn by his nephew. / One might guess him to have been a trooper once upon a time. / Give me at least n inkling of the

- infamy you allege me to have committed. / He was exceedingly incensed against Wilson, for the affront, which he construed him to have put upon his soldiers.
- (19) A footman and two servants are believed to have been dismissed. b He was shown to be the real offender. c The stranger was ascertained to be the murderer. d. She had written from the spot where she was stated to have been. e. A man is accounted to be innocent until he is proved to be guilty. f. He and his wife, Titania are fabled to have inhabited India. g. 'Children' is understood to mean those under 16.

### 3. The DOC constraint. *Wager/ Estimate verbs*

Consider the verbs below, labelled the *wager* verbs in Pesetsky, and *estimate* verbs in Boskovič (1997):

- (20) admit, affirm, allege, announce, concede, maintain, scream, shout, wager, whisper, say, rumour, repute, estimate, certify, decree, deduce, discern establish, reveal, state, surmise, claim, intuit, note, verify.

These verbs are subject to a curious restriction, first systematically discussed by Postal (1974). They do not accept the Acc + Inf construction itself, but accept the Nom + Inf, as well as all of the construction based on the further A'-movement of the DO. Generalizing over this distribution, these verbs accept all structures where the DO has been displaced from postverbal position by some operation. Thus in (21a) the DO is passivized, in (21b) it is topicalized, in (21c) it is questioned, in (21d) it is Heavy -NP- Shifted. (21e) shows the impossibility of the Acc + Inf construction.

- (21) a. Bill's dinosaur is estimated to be 175 feet long. (Nom + Inf)  
 b. Bill's dinosaur, I estimate to be 175 feet long.  
 c. Which dinosaur did you estimate to be 175 feet long?  
 d. I estimated t to be over 175 feet long all the dinosaurs which we caught yesterday in Central Park.  
 e. \*They estimated Bill's dinosaur to be 175 feet long.
- (22) a. \*They certified Tom to be insane.  
 b. Tom was certified to be insane  
 c. Tom, they certified to be insane.  
 d. \*He verified this to be the case.  
 e. What has he verified to be the case?  
 f. \*They surmise Bob to be more interested in girls than in chemistry.  
 g. Bob, who they surmised to be more interested in girls than in chemistry.
- (23) a. John was wagered by the press to be crazy.  
 b. Mary was admitted by the committee to have passed the test.  
 c. \*John wagered Peter to be crazy  
 d. \*Mary admitted Peter to have passed the test.

This restriction is all the more curious as these verbs are all accusative-assigners:

- (24) John wagered all his money on the bulls.  
 Mary admitted her mistake.

From a semantic perspective these verbs are also propositional verbs, designating speech acts; they represent a sub-group of the verbs listed in (10). Integrating the Derived Object Constraint in the general analysis adopted here is not an easy task.

3.1. *The Agentive analysis*: Pesetsky (1992), Boskovič (1997) label them the *wager/estimate* verbs. Pesetsky (1992) finds that the defining characteristic of the verbs belonging to this class is that they all assign the Agent  $\theta$ -role to their subject. This sets them apart from the *believe* class with which they share the property of taking a propositional complement. Pesetsky (1992) states the following generalization:

(25) **Pesetsky's Generalization**

Verbs that assign the Agent  $\theta$ -role to their subject cannot assign Case in the ECM construction, i.e., cannot assign structural Accusative.

Pesetsky's Generalization is essentially descriptive. Boskovič (1997) capitalizes on the same property which he formalizes in the system of Hale & Keyser (1993). Agentive verbs, and only Agentive verbs have an extra agentive VP shell, so that an Agent DP is  $\theta$ -marked twice: once in the SpecVP of the transitive verb and a second time in the higher VP agentive structure, as shown below:

(26) John<sub>i</sub> [<sub>VP</sub> t<sub>i</sub> V<sub>ag</sub> [<sub>VP</sub> t<sub>i</sub> laughed]].

*Wager*-class SOR constructions will then have the structure in (27).

(27) \*[\_VP John<sub>i</sub> V<sub>ag</sub> [<sub>VP</sub> t<sub>i</sub> wagered [\_IP Peter<sub>j</sub> to be t<sub>j</sub> crazy]]].

Adopting the clause structure in Chomsky (1993) (in (28a)), Boskovič assumes that Acc case is checked in a VP external AgrOP. The AgrOP will dominate both verb shells: A SOR sentence would look as in (28b):

(28) a. AgrsS > TP > AgrOP > vP.  
 b. \*...[\_AgrOP[\_VP John<sub>i</sub> V<sub>Ag</sub> [<sub>VP</sub> t<sub>i</sub> wagered [\_IP Peter to be crazy]]]].

Given the structure in (28a, b), the embedded subject in Spec *To* cannot reach the matrix SpecAgrOP at LF, to check case without violating Minimize Chain Links. V-to - V<sub>Ag</sub> movement followed by movement of the main verb + V<sub>Ag</sub> complex to AgrO make the higher SpecVP and SpecAgrOP, but not the lower Spec vP and Spec AgrOP, equidistant from the embedded clause subject position. Sentences like (23c, d) are eliminated either because the case feature of the Acc DP remains unchecked or because the Minimize Chain Links Principle is violated. The Agentive VP shell is not projected with *believe* -verbs, and this explain the possibility of case checking.

(29) John<sub>i</sub> believes<sub>j</sub> [\_AgrOP Peter<sub>k</sub> t<sub>j</sub> [<sub>VP</sub> t<sub>j</sub> t<sub>k</sub> to be t<sub>k</sub> crazy]]]

3.3. *A different view*. The analysis proposed suffers from one flaw: the relation between agentivity and the DOC is unilateral. DOC verbs are all Agentive, but there are many Agentive verbs which are not DOC, but allow the Acc + Inf construction, and therefore they allow SOR. Several such verbs easily come to mind: *assert, declare, hold, maintain, profess*.

(30) a. They asserted the charge to be incorrect (cited in Longman's dictionary).  
 b. They declared themselves to be for/ against the plan. (cited in Longman's dictionary)).

The analysis suggested here exploits a different property of these verbs. We start from the remark - made by authors like Postal (1974), Pesetsky (1992), Rooryck (1995), Boskovič (1997) -,

that DOC verbs may accept the Acc + Inf in those contexts where the verb can be interpreted as  $\theta$ -marking the derived object (= infinitive clause subject). Postal (1974) discusses the verb *estimate*, clearly an agentive verb, stating that the Acc + Inf is possible if the agentive verb exceptionally  $\theta$ -marks the derived direct object. Compare:

- (31) a. Sue estimated Bill's weight to be 150 lbs.  
b. \*Sue estimated Bill to weigh 150 lbs.

Apparently the embedded clause subject, exceptionally case-marked by *estimate*, must be some kind of measurement. A similar restriction is found with the real DOs of *estimate*:

- (32) Sue estimated Bill's weight.  
\*Sue estimated Bill.

To handle the data, we will follow Lasnik (1995c) in accepting that a verb adjoined to AgrO<sup>0</sup>/F<sup>0</sup> and a DP in the specifier of AgrOP/FP are in a  $\theta$ -licensing relation. By assumption, the case-checking projection is VP internal. The derivation proceeds as expected. The infinitive subject moves to Spec FP. The main verb adjoins to F<sup>0</sup>. In this configuration, the DP is case-marked just in case the verb (*estimate*, *wager*, etc.) can also  $\theta$ -mark it. If the subject of the infinitive clause is not s-selectionally suitable, the derivation crashes. This is apparent in the difference between (31 a, b) above. The generalization one could propose is the following:

- (33) **Inherent Case Constraint**  
*Wager/Estimate* verbs cannot assign Acc case to a DP which they do not  $\theta$ -license.

These verbs are unable to assign structural case, but always assign inherent Acc, always joining case-checking and  $\theta$ -licensing. Here is an example, from Pesetsky (1992), of an acceptable Acc + Inf, again because the Acc is also  $\theta$ -licensed by the main verb, in addition to being  $\theta$ -licensed by the infinitive verbs:

- (34) Congress declared March to be national Syntax month.

The matrix verb in (34), as noted by Pesetsky, affects the embedded subject, since as a consequence of the declaration, March becomes national Syntax month.

There is one more curious fact, if one takes into account the full range of the English data. Postal (1974) observes that verbs such as *estimate*, *allege*, *acknowledge*, *affirm*, *demonstrate*, *guess*, *think*, *figure* etc. which are standardly subject to the DOC, are exempt from this constraint if and only if the subject of the infinitive is an expletive DP like *it* or *there*. Boskovič (1997: 58) also observes that referential *pronouns* can appear in the Acc + Inf, being structurally case-marked by these verbs. The examples below are taken from Postal (1974: 298) and Ura (1996). Notice the contrast between expletive and referential *it* in (35); only the former is exempt from the DOC.

- (35) a. I estimate *there* to be two million people in the valley.  
b. I estimate *it* to be raining.  
c. \* I estimate *it* to be six inches long.  
d. Bill's dinosaur was estimated to be 175 feet long.
- (36) a. He alleged *there* to be stolen documents in the drawer.  
b. \*He alleged *it* to be stolen documents to be in the drawer.  
c. He acknowledged *it* to be impossible to square circles.

- d. John wagered there to have been a stranger in that haunted house.
- e. \*John wagered a stranger to have been in that haunted house.
- f. Mary alleged him to have kissed Jane.
- g. \*Mary alleged that man to have kissed Jane.
- h. Mary never alleged him to be crazy.
- i. \*Mary never alleged the students to be crazy.

These elements that can receive structural Acc are all non-branching constituents and belong to the class of elements that, as Chomsky (1994) argues, are at the same time  $X^0$  and XPs. They share properties of XPs and  $X^0$ s, in that they can occur in both  $X^0$  and XP positions. In other words, they may undergo both XP and  $X^0$  movement. Given that, *there*, *it*, *him* in (35), (36) can be located not only in an XP, but also in an  $X^0$  position, they do not have to undergo movement to Spec FP in order to be case-licensed. Baker (1988) argues that  $X^0$  nominal elements can "pass" the Case Filter by incorporating into verbs and prepositions. It seems quite plausible that *there*, *it* and *him* all of which are analyzable as  $X^0$ s, satisfy the Case Filter in (35), (36) by incorporating into the higher verb, a possibility that is not available to more complex, unambiguous XP elements such as the students in \**John wagered the students to know French*. An alternative made possible in Chomsky (1998) is to allow the main verb to case-license the infinitive subject by Agree, if the latter is a  $D^0$  head.

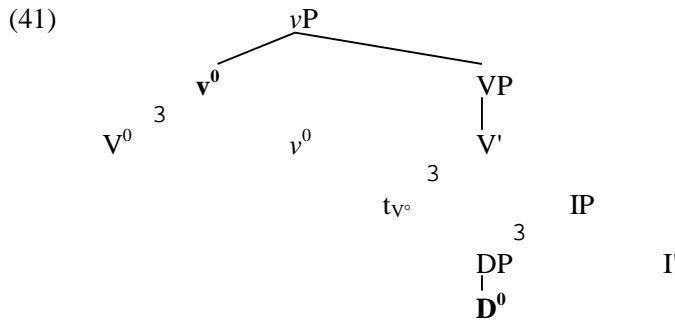
There is evidence suggesting that *there/it/ him/it/her* have  $X^0$  clitic behaviour in this construction. It is known that clitics do not co-ordinate: The French pronominal clitics show evidence for this claim. The personal pronouns in English may normally co-ordinate; yet, they do not do that in the Acc + Inf construction, as apparent in the contrast between (37c) and (38).

- (37) a. \**Je le et la rencontre tous les jours.*  
I him and her meet all the days.
- b. I meet him and her every day.
  
- (38) a. \**Mary alleged him and her to have kissed Jane.*
- b. \**Mary never alleged him and her to be crazy.*

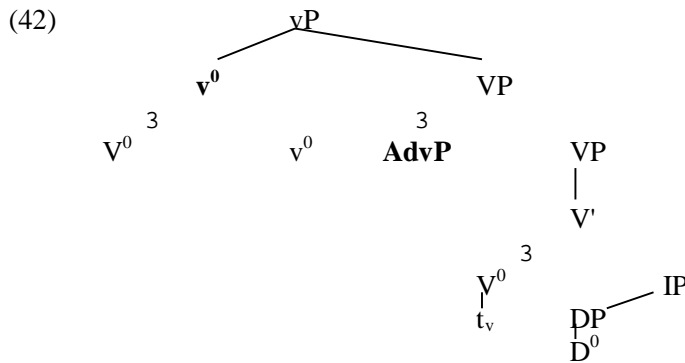
Secondly, the incorporation/Agree analysis, in conjunction with the other assumptions we have adopted may explain the following contrasts, noted in Kayne (1985b: 114).

- (39) a. I've believed John for a long time not to be a liar.
- b. \*I've believed advantage for a long time now to have been taken of me.
- (40) \*I've believed *there* for a long time now to be no solution to this problem.
- b. I've believed *John* for a long time to be a cheat.

While intervening matrix element may separate a lexical Acc from the Inf, this is not possible for the  $X^0$  elements *it/ there/ he/ him*. This falls out as a result of the assumptions we have adopted. Given the intervening adverbial phrase *for a long time*, case cannot be checked in situ in either (40a) or (39). One alternative, allowed to the phrasal DP in (40b), is to project the case phrase FP and check case in its specifier, provided that the DP is also  $\theta$ -marked by the verb, the result being sentences like (39a), (40b). As observed, however the  $X^0$  elements have the only option of incorporating / or being case-marked by Agree, which can also be a relation between heads. There will be no motivation for projecting a case phrase FP, since case could in principle, be assigned to the  $X^0$  element in the following configuration:



But incorporation is blocked if there is an intervening specifier, such as the adverbial phrase, presumably because, the subject *there*, should first adjoin to VP, as an XP, and then undergo incorporation as an  $X^{\circ}$  (=  $D^{\circ}$ ). Agree is also blocked if there is an intervening specifier, precisely because of the dual phrasal nature of the DP/ $D^{\circ}$ .



The contrast between (40a-b) is therefore expected.

3.4. *The other patterns of DOC verbs.* We have so far given an account of the DOC, saying that verbs subject to the DOC cannot case-mark a DP which they do not also  $\theta$ -mark. In this section attention is being paid to the other structures of these verbs, which are not blocked by the DOC.

a) The Nom + Inf construction is not problematic, being altogether like the analysis of *seem, appear, happen*, etc., in that the main verb is not involved in case-marking the infinitive subject. Hence the DOC is inoperant. The passive is an ergative configuration; SSR applies for reasons of case and to check the EPP feature of the matrix Tense, etc.

- (43) a. [<sub>IP</sub>--- was certified [<sub>IP</sub> Tom to be insane]  
 b. [<sub>IP</sub>- Tom was certified [<sub>IP</sub> t to be insane]

b) *Wager/estimate*-Class Infinitivals allow the whole range of constructions based on A'-Movement as shown in (21) above. Thus, although *wager/estimate*-class verbs cannot structurally case-mark lexical DPs, they can exceptionally Case-mark *wh*-traces.

- (44) a. Who did John wager [t to be crazy]?  
 b. \*John wagers Peter to be crazy



In his discussion of constructions such as (44), Kayne (1984) makes the influential proposal that the *wh*-phrase is Case-checked in an A'-position, while undergoing *wh*-movement. This makes intervening A-Specs irrelevant. The insight is that since the DP will be part of an A'-chain anyway, A'-positions rather than A-positions will be involved in Case-checking. A'-positions, unlike A-positions, have nothing to do with  $\theta$ -licensing, and this will pre-empt the effect of the Inherent Case Constraint.

The Minimize Chain Links Condition actually explains why A'-positions may be resorted to. Consider the derivation of an interrogative sentence like (44a) above. Since the matrix  $C^0$  has an uninterpretable *wh*-feature to check, movement of the *wh*-phrase is forced for convergence. According to Ura (1996), while undergoing *wh*-Movement to Spec CP, the *wh*-phrase *adjoins* to the matrix accusative case-projection, FP where it is case-checked in A'-position. In contrast, lexical DPs such as *Peter* cannot be Case-checked in the position of adjunction to FP, since they have no reason to travel through A'-positions. This follows from economy principles, apparent by comparing the *wh*-chains and NP-chains respectively.

- (45) a.  $wh_i \dots [AgrOP\ t_i' [AgrOP\ Agr\ [VP\ V\ t_i]]]$   
 b.  $wh_i [AgrOP\ [AgrOP\ t_i' Agr\ [VP\ V\ t_i]]]$   
 c.  $\dots [AgrOP\ NP_i [AgrOP\ Agr\ [VP\ V\ t_i]]]$   
 d.  $\dots [AgrOP\ NP_i [Agr\ Agr\ [VP\ V\ t_i]]]$

Under ordinary assumptions, the *wh*-chains in (45a, b) are equivalent: the segment  $t_i' - t_i$  is longer in (45a), than in (45b), because of adjunction, but in exchange the link  $wh_i - t_i'$  is shorter in (45a) and longer in (45b). As a result, the total *wh*- $t_i$  chains of (45a), (45b) are equivalent with respect to chain length, so both derivations in (45a-b) are available. On the other hand, the  $NP_i - t_i$  chain in (45c), where the NP is case-checked in the FP-adjoined position, is longer than the  $NP_i - t_i$  chain in (45d), where the NP is case-checked in Spec FP. As a result, the availability of the derivation in (45d) blocks the derivation in (45c) via economy of derivation. The option of undergoing Case-checking in the FP-adjoined position is thus ruled out for lexical NPs such as *Peter* in (44b), but not for *wh*-phrases undergoing *wh*-movement.

Before closing the section, we mention that at least three DOC verbs are very frequent; they are: *say*, *rumour*, *be supposed to*. Here are a few examples illustrating DOC verbs in the relevant infinitive constructions:

- (46) a. He had too clear a notion of which category he might be *said* to belong himself. b. They were supposed to be coming round tonight. c. There's supposed to be a riot and the police have struck (IM). d. The notion of old Peter being married is presumed to be killing. e. He is rumored to be rich.

#### 4. Verbs of liking and disliking. *Want vs. believe verbs*:

4.1 These verbs, also known as *want*-verbs, after the prototypical member of the class, represent a highly idiosyncratic group, including the following items:

- (47) want, wish, desire, like love, hate, dislike, mean, intend, prefer, choose.

All of a these verbs are [+emotive], a feature that has its own syntactic correlates, moreover, some of them have factive uses: *love*, *hate*, *like*, *dislike*, while others are always non-factive: *want*, *desire*. The factive ones allow object extraposition and the indicative mood alongside of the subjunctive / infinitive, as in (48b, c). This is not possible for the always non-factive ones: *want*, *intend*, *desire*, etc.

- (48) I hate it that my watch was stolen.  
I would hate for my dog to be stolen.  
I would hate it that the dog should be killed.

Pesetsky (1992:7) notices an important correlation between the mood/tense of the main verb and the type of complement which is selected, and gives the following list of what he calls *want*-verbs:

- (49) need, %can't stand, %couldn't stand, always loathes, %always hates, always likes, always loves, always prefers, %would loathe, would hate, would like, would love, would prefer.

The relevance of the list will appear below. These verbs have a very complex grammar. Essentially they are characterised by the following:

a) They accept control complements, *PRO-to* and *For-to*.

- (50) I want [PRO to get the job].  
I want [for you to have what's best].

b) They appear to accept the Acc + Inf:

- (51) I want him to get the job.

c) They do not accept the Nom + Inf construction.

- (52) a. I want him to have the job.  
b. \*He is wanted to have the job.

Taking into account these properties Postal (1974) and Pesetsky (1992) assume that these verbs take both raising and control complements. In this analysis, it is not quite clear why the Nom + Inf is not acceptable, if the Acc + Inf is possible. In the following, we examine the properties of these verbs in more detail, suggesting, in the wake of Bresnan (1972), Chomsky (1981), Boskovič (1997) that the Acc + Inf that they exhibit is *not* a raising structure. This explains why there is no Nom + Inf. Let us review the properties of *want* verbs in more detail

a) *Want* verbs are typical desiderative verbs of subject control. It is clear that they accept the *PRO-to* construction.

- (53) He would like [PRO-to leave]  
I want [PRO-to leave].

b) *Want* verbs are strong intensional verbs, presupposing a non-realistic setting and a non-null ordering basis. Their complements are among the clearest examples of irrealis tense.

- (54) Yesterday, I still wanted [PRO-to go there tomorrow].  
Last year I would have liked [PRO-to understand this problem].

*Want* verbs have irrealis tense in the Acc + Inf construction as well. A finite paraphrase, if available, is always in the subjunctive:

- (55) a. I want [PRO-to leave tomorrow].  
b. I want [you to leave tomorrow].  
c. They wanted the prisoners to be shot before dawn.  
d. They wanted that the prisoners should be shot before dawn.

c) *Want* verbs select *for-to* complements, a property which naturally follows from their [+emotive] meaning.

- (56) I would like for him to succeed.  
I wish for him to be happy.

As remarked by Pesetsky, given its potential, projective meaning, the *for-to* complement is excluded when the matrix verb has an *eventive* interpretation, for instance, when it is in the Past Tense of the Indicative Mood, as in (57b). In contrast, the *PRO-to* complement is not so restricted.

*For-to* is available either when the main verb is in an unrealized mood (the subjunctive) or when the main verb is generic or stative. If the main verb is itself irrealis, the *for-to* complement also gets an irrealis interpretation (57c). If the main clause is generic, the *for-to* complement has a different reading, it may even have a factive/implicative reading, as in (57d). Phrases like *always hate*, *can't stand* (see the list in (49)) indicate generic, habitual, therefore, generally stative uses of the main verb.

- (57) a. OK non generic matrix factive/implicative complement  
Bill hated PRO to hear about his misfortune.  
b. # FOR, non-generic matrix factive/implicative complement.  
#Bill hated (it) for Mary to know French  
#Bill hated someone to know a language.  
c. OK FOR, non-generic matrix irrealis complement  
Bill would hate (it) for Mary to learn about her misfortune  
d. OK generic matrix factive/implicative complement.  
Bill hates (it) for people to learn about their misfortunes.

d) *Want* verbs may not appear in the Nom + Inf construction. The data are very clear-cut, but it is not obvious why the Nom + Inf is not available if these verbs are raisers.

- (58) a. \*He would be liked to leave.  
b. They would like him to leave  
c. \*He would be preferred to leave.  
d. They would prefer him to leave.  
e. Mary wanted Bill to commit the crime.  
f. \*Bill was wanted [t to commit the crime]

4.2. *Want verbs appear with an Acc + Inf complement.* The problem is whether this complement is or is not an instance of SOR. The data are quite complex; some of the tests suggest that the Acc + Inf is a SOR complement, while others, very persuasive, too, suggest that the Acc cannot raise into the main clause. Let us review this complex pattern of data.

Constituency tests, discussed by Postal (1974), show a contrast between the *for-to* complement and the Acc + Inf complement, a difference which might indicate that the Acc + Inf is a sequence of constituents, as a result of SOR. Thus the Acc + Inf cannot be displaced by Right Node Raising (example (59b)), and cannot be left beyond by Gapping (example (60b)):

- (59) a. I didn't expect to prefer that to happen, but I did prefer that to happen.  
b. \*I didn't expect to prefer, but I did prefer, that to happen.  
c. I didn't expect to prefer for that to happen, but I did prefer for that to happen.  
d. I didn't expect to prefer, but I did prefer for that to happen.  
(60) a. Bob means / wishes Tom to win and Ed means / wishes Tom to lose.

- b. \*Bob means / wishes Tom to win and Ed - Tom to lose.
- c. Bob wishes for Tom to win, and Ed- for Bill to lose
- d. Bob wishes for Tom to win, and Ed- for Bill to lose

The contrasts are quite sharp. Unfortunately, the value of the constituency tests is undermined by the fact that there is another reason, in addition to constituency, which might explain the ungrammaticality of the starred sentences. Namely, in all of the examples, the Acc DP shows up at a distance from the main verb, in a configuration where covert Acc case checking would be impossible. (cf. Boscovič (1997: 114)). The ungrammaticality of the starred sentences is not, therefore, a decisive argument for a SOR analysis of the Acc + Inf.

A similar type of evidence for raising is that the Acc needs to be adjacent to the main verb. This would suggest that it is in object position.

- (61) a. Bob wishes / wants very much for Bill to win.
- b. \*Bob wishes / wants very much Bill to win.

However, there are also facts which support the view that SOR does not occur with *want* verbs. Scope phenomena tend to indicate that the Acc always remains in the embedded clause with *want* verbs. In contrast, with *believe* verbs, there was evidence suggesting that the Acc may be in the main clause, interacting with operators of the main clause. Consider the licensing of polarity items in a main clause adjunct. Only *believe*-verbs have this property, that is, only with *believe* verbs the raised subject may overtly c-command, and thus license, a polarity item in a main clause adjunct:

- (62) a. \*I wanted [none of the applicants to be hired] after reading any of the reports.
- b. ??I believed none of the applicants to be qualified] after reading any of the reports.

In the same way an infinitive subject raised into the main clause may c-command and thus bind a reciprocal anaphor. This is possible for *believe*- verbs, but not for *want*- verbs:

- (63) a. ?I believed [those men<sub>i</sub> to be unreliable] because of each other<sub>i</sub>'s statements.
- b. ??\* I wanted [those men<sub>i</sub> to be fired] because of each other<sub>i</sub>'s statements.

The following facts involving Condition C effects further support the contrast between the two verb classes, suggesting that with *want*-verbs there is no raising. Remember that Condition C requires that referential phrases should not have antecedents.

- (64) a. ?Joan wants [him<sub>i</sub> to be successful ]even more fervently than Bob's<sub>i</sub> mother does.
- b. ?\*Joan believes him<sub>i</sub> [t to be a genius] even more fervently than Bob's mother does.

Given that the embedded subject in (64b) has raised into the object position for case checking, it c-commands the matrix adverbial, so that the pronoun *him* both c-commands and precedes its antecedent *Bob*, thus causing a Condition C violation. The grammaticality of (64a) shows that, with the verb *want*, the pronoun is still in the embedded clause and does not c-command the antecedent *Bob* in the matrix adjunct. Therefore, in the *want* sentence, there has not been any A-Movement of the infinitive subject to the matrix Acc position. It follows that Case was checked inside the infinitive clause.

It appears that, from the point of view of its interpretative properties, the Acc in the Acc + Inf construction of *want* verbs shows the same behaviour as the *for*-Acc in the *For-to*

construction, i.e., the Acc does not have any object properties. Thus the *for-Acc* does not have scope over the matrix adjuncts and cannot bind a reciprocal anaphor, or license a polarity item in the matrix adjunct:

- (65) a. ?\*I wanted very much [for those men to be fired] because of each other's statements.  
b. \* I wanted very much [for none of the applicants to be hired] after reading any of the reports.

In sum, scope phenomena provide evidence against the raising analysis, even if the contrasts are less than sharp and clear-cut. Let us explore the hypothesis that SOR is never involved in deriving the Acc + Inf of *want* verbs.

4.3. **The analysis.** A question now arises about how the embedded subject is case-checked in constructions with *want*-verbs. In Bresnan (1972), Chomsky (1982), Boskovič (1997) among others, it is argued that the infinitival complement of *want* constructions is headed by a null complementizer, a phonologically null counterpart of the complementizer *for*, which is also selected by these verbs. The embedded-clause subject in (66a) can then be case-checked in essentially the same way as in (66b):

- (66) a. I want him to leave.  
b. I want (very much) for him to leave.

Alternatively *for* could be actually present at the point in the derivation where NP Raising would take place, and could be deleted later, as suggested in Chomsky (1981). An important clue as to the structure of the Acc + Inf complement of *want* verbs is provided by the possibility of VP ellipsis as in the examples below:

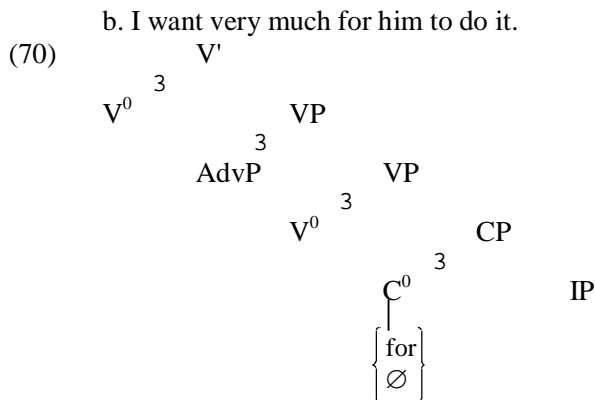
- (67) a. ?You want for Mary to cook, but Peter wanted *for* John [i' to e].  
b. Mary didn't ask Peter to leave, but really wanted C<sup>0</sup> him [I' to e].  
(68) John was not sure that he could leave, but he tried PRO [I' to e].

These data are highly significant. Recall Lobeck's (1990) generalization that only complements of agreeing functional heads can undergo ellipsis. The data above show that the infinitive Inflection in the Acc + Inf construction of *want*-verbs possesses (anaphoric) agreement features, just as in the case of the PRO-*to* and *for-to* complements. The possibility of VP ellipsis for *all* the complements of *want* verbs, including the Acc + Inf, strongly suggest that *want* verbs everywhere select the same type of CP complement headed by an overt or null complementizer.

What is now necessary is to capture the standard assumption that the null C, like *for*, is also crucially involved in case-checking the infinitival subject. One could assume that null complementizers, and empty heads generally, must incorporate into the closest head. The null complementizer thus incorporates into the V at LF and the complex head which is formed case-checks the infinitive subject by Agree.

As usual, Agree is sensitive to minimality effects, being blocked by a closer spec XP. This explains the important adjacency effects in (69) below. And this also explains the impossibility of the Gapped, and Right-Node-Raised constructions in (59b), (60b) above, where at LF the configuration required for case checking has been destroyed. CPs headed by a null complementizer must stay close to the verb which identifies the empty complementizer. In contrast, CPs headed by *for* may appear at a distance from the main verb.

- (69) a. \*I want very much him to do it.



The proposed analysis easily accounts for the lack of passive with these constructions. Again they behave like *for-to* complements. The infinitive subject cannot raise across a CP barrier. The DP should move to SpecCP (to observe Minimize Chain Links) and then back to the SpecT of the main clause to check Nom Case, an impossible move (from an A'- back to an A-position).

The hypothesis of a null C incorporating and forming a complex predicate also explains why reflexives are licensed in the Acc + Inf of some *want* verbs. The minimal binding domain for these anaphors is the main clause.

(71) They want themselves to be rich.

The most significant gain of the analysis is that *want*-verbs appear to select for only one type of complement, a CP; this is in line with their always having the same strong intensional meaning and the same irrealis tense. The *for-to* and the Acc + Inf complements are partly specialized for slightly different "brands" of subjunctive meaning, stressing the 'ought to do' component (the Acc + Inf) or the 'ought to be' component (the *for-to* complement.). Thus, it has sometimes been remarked that the two complements, *for-to* and Acc + Inf, of the same verb may be associated with slightly different semantic implications. The *for-to* complement in (72a),(73a) is more like an optative sentence, while the Acc + Inf in (72b), (73b) is more like an imperative sentence.

- (72) a. I wish for him to be happy.  
 b. I wish him to sweep the floor.  
 c.?? I wish for him to sweep the floor.
- (73) a. I'd like very much for you to win the prize.  
 b. I would like you to close the window.

Here are a few more examples of Acc + Inf constructions with these verbs

- (74) a. I don't like women to smoke. b. I don't want there to be any mistakes. c. Of course, I would have preferred you to enjoy yourself.

4.4. While for true *want* verbs, it is plausible to assume that they uniformly select CPs, there are a few two argument verbs which have dual c-selection properties, behaving like raising, as well as like control verbs: They are either IP selectors (raising verbs) or CP selectors (control) verbs. Typical examples are: *expect*, *mean*, *intend*, *desire*. They have the complete paradigm of raising and control:

- (75) a. I expect [PRO to finish this course]  
 b. I would have expected for him to succeed.
- (76) a. I expect him to succeed.

- b. He is expected to succeed.
- c. I expect myself to win.

## 5. Exercitive verbs of permission and command

This class includes the following exercitive verbs of permission and command:

- (77) allow, bid, beg, ask, command, dictate, direct, forbid, instruct, enjoin, order, permit, prescribe, endure, bear.

Most of these verbs allow control constructions, actually qualifying as verbs of obligatory indirect / direct object control. While the meaning is roughly the same, there is an important difference between the raising and the control complement of these verbs: The control complement is a *three-place argument structure*, while the Acc + Inf structure is *binary*. In the three-place construction, the IO/DO which is the recipient of the illocutionary act is the controller of PRO and is interpreted as [+Person], as an Agent responsible for fulfilling the content of the complement clause. The object is s-selected. Notice the lack of synonymy under passivization of the embedded clause:

- (78) a. They ordered to the soldiers [PRO to blow up the bridge].  
 b. I beg you [PRO to stay].
- (79) a. I forbid you [PRO to visit John].  
 b. I forbid you [PRO to be visited by John].  
 c. I allowed John [PRO to interrogate the witness].  
 d. I allowed the witness [PRO to be interrogated by John].

The two-argument Acc-Inf situation corresponds to a different communicative situation, where the exercitives are not issued as if addressed to any particular recipient, any Agent who should be responsible for carrying them out. The Acc-Inf construction is characterised by the following:

a) There are no selectional restrictions between the main verb and the Acc DP; the AccDP may be (in) animate, and the infinitive is characteristically passive.

- (80) a. My lord, we ask that lawful heritage to be restored to us. B. I beg it to be noticed that I confine this observation neither to young people, nor to little people. c. Doctors frequently prescribe / permit it to be used in this way. d. He commanded the bridge to be lowered. e. I won't suffer this barrow to be moved another step. f. Mr. Blobber had ordered the horse to be ready at half past three. g. He permitted the door to be open.

b) The preposition *to* of the IO is not possible any more, since the postverbal DP is in the Acc case.

- (81) a. Hastings ordered the fallen minister to be set free.  
 b. \*Hastings ordered to the fallen minister to be set free

c) For some exercitive verbs (*order, command, allow, etc.*), there is an alternative subjunctive complement:

- (82) a. The general directed that the prisoner should be set free  
 b. The general directed the prisoner to be set free.

In deciding on the correct analysis for these verbs, it is important to note that the Nom + Inf is not attested with these verbs:

- (83) a.\* That lawful heritage is asked to be restored to us.  
b. \*It is begged to be noticed that I confine this observation neither to young people, nor to little people.  
c. \*The bridge was commanded to be lowered.

These verbs differ from the *want* class in disallowing the *for-to* construction, since they are verbs of obligatory object control. They resemble *want* verbs in not permitting the Nom + Inf. Such being the case, it is more plausible to analyse them on the model of *want* verbs. The lack of SSR, i.e. of Nom + Inf, suggests a CP barrier, forcing the infinitive subject to stay inside the clause.

We will assume therefore that these verbs uniquely select CP complements, the Acc being checked by the null  $C^0$ , as explained for *want* verbs. This analysis is in line with the fact that these verbs do not change their semantic interpretation, being exercitive verbs in both control and Acc + Inf structures.

## 6. Verbs of causation

This presentation ends with the oldest groups of verbs that allowed the construction in OE: verbs of perception (*seon*, *hyeran*) and causative verbs (*latan*, *hatan*). The verbs of causation must further be subdivided into those which take the bare infinitive, namely, *make*, *have*, *let*, and those which take the full infinitive clause: *get*, *cause*, *occasion*, *necessitate*, *enable*.

*The Analysis.* The position we adopt, in agreement with a majority of researchers (Lightfoot (1991), Iveland (1993), Gueron & Hoekstra (1995), a.o. is that bare infinitives (BI) clauses are best treated as VPs devoid of all functional projections. The complement is a verbal small clause denoting an event. Categorially, BIs are thus best described as VPs, since there is no evidence of a syntactic T position. This view accounts straightforwardly for the virtual absence of those elements which always overtly indicate the T position even, in non-finite clauses: auxiliary verbs and negation. Consider auxiliaries first (examples from Iveland (1993)):

- (84) a. They had Sam do his homework.  
b. \*They had Sam have done his homework.  
c. \*Rex made his son have gone to the neighbours by the time his mother got back.

The statement that auxiliaries are completely missing from complements of causative verbs is not entirely accurate. Iveland (1993: 7) notices that the progressive *be* is noticeably better than the perfect *have*:

- (85) We made Ruth be writhing in pain to give Sharon a good scare.  
Amy had Ellen be leaving as I pulled up to the house.

When necessary, the complements of these verbs may project an Aspectual shell. Further evidence that there is no Tense position is that not even the verbs *be/have*, used as lexical verbs,



may raise in BI clauses (cf. Belletti, 1990), as shown by their position with respect to floating quantifiers like *both, all*:

- (86) a. I made my parents both be happy.  
b. \*I made my parents be both happy.  
c. My parents are both happy,  
d. My parents both are happy.

6.1. The three causative BI verbs *make, let, have* present many curiosities. *Have* in this construction has two meanings: 'cause' as in (87a), and 'experience', as in (87b). Moreover, *Have* does not passivize.

- (87) a. I'll have him do it.  
b. I had never had such a thing happen to me before.

*Have* and *make* are similar in meaning, yet a stronger sense of control is perceived to be exerted by the subject of *make* "The *make* causative implies that the causee is acting against his or her will. The *have* causative does not imply that (Wierzbicka 1988: 241). This explains the lack of synonymy in the following active/ passive pair:

- (88) We made the doctor examine Mary.  
We made Mary be examined by the doctor.

However, this does not mean that *make* is always a control verb, but rather that it has *control uses*, alongside raising uses. Both *make* and *have* allow objective expletives, and this clearly shows that they are raising verbs:

- (89) a. We'll have it appear that nothing is wrong.  
b. The army had there be an explosion outside the capital precisely when the president arrived.  
c. John had it be said that no one could leave the building once they had entered.
- (90) a. John made it appear that everything was out of control.  
b. The colour of the sky made it seem that the sun had just set.  
c. She made there be no doubt in my mind about the finality of her decision.  
d. I'll make it rain on your birthday, I promise.  
e. It might be pleasant to them to remember upon Christmas day who made lame beggars walk and blind men see.

Other tests also indicate that *make* has control properties verb. Lobeck (1990) notes that many control verbs undergo VP ellipsis, while raisers do not. Using this test *make* comes out as an object control verb, unlike *have* which consistently behaves like a raising verb:

- (91) a. Mary will make John leave, but I don't think she'll make Max--.  
b. \*?Mary will have Max stay, but I don't think she'll have Sue--.

These considerations show that that *make* is both a control and a raising verb. Mittwoch (1990) speaks of two verbs 'make' One has the meaning of 'cause' or 'force', with the implication of overcoming resistance (92a, b), the other meaning is that of an Agentive verb meaning 'force'. The second is the control meaning as in (92c):

- (92) a. The rain made the mushrooms come out.

- b. The famine made people sell their dearest possessions to buy food.
- c. She made me clean the floor.

Only the second meaning allows ellipsis. This confirms the double behaviour of *make*:

- (93) a. Why did she sell her jewellery? \*Because the famine made her. (cause)  
 b. Why did she sell her jewellery? Because he made her.

Unlike *have*, *make* is used in the Nom + Inf construction. In this case the Inflection *to* of the infinitive is present. As to the reason of this disparity between the active and passive structures, it will be viewed as the consequence of the different morphology of the passive participle, in contrast with the bare infinitive stem. (See the analysis of perception verbs below)

- (94) a. He was made to do it.  
 b. I can remember being made to paint the same thing again and again.

*Let*. Through its semantics *let* is again both a raising and a control verb, patterning like *allow* or *permit* in this respect. Here is an example where *let* is a control verb, as shown by the possibility of ellipsis:

- (95) Mary let her daughter run for president, but I am sure she won't let her son ---.

On the other hand, in (96) there are examples that exhibit all the hallmarks of the raising behaviour, expletives in object position, Nom + Inf (with or without *to*), impossibility of VP ellipsis:

- (96) a. Let there be an end to this misunderstanding.  
 b. Let there be no mistake about it.  
 c. She let herself be made love to.  
 d. \*The political climate in 1984 let Reagan win, but I don't think that the climate in 1988 would let Bush---.

The other causative verbs mentioned above *get*, *cause*, *occasion*, *necessitate*, *enable* take the full infinitive complement.

- (97) a. I couldn't *get* him to pay the least attention. b. This almost *caused* her to faint with terror. c. I could do it, but I don't know whether you could *get* anybody else to do it. [SEU] d. It would have to be an editorial job and I would have to *get* lots of people to do it. [SEU] e. You might as well buy a new car. f. This engine can't be *got* to work again. g. Think what might happen if people could *get* it to rain at will. h. Cooking a small joint in a large tin will *cause* fat to over-heat and then splutter and splash. [SEU] h. Turning the gas down full-on *enables* such food as pork or veal to be cooked right through.

## 7. Verbs of physical perception

Consider first the central verbs of perception: *see*, *hear*, *feel*, *watch*, *overhear*. They are peculiar in that their Acc + Inf lacks *to*, while their Nom + Inf requires *to*.

- (98) a. They saw John cross.  
 b. John was seen to cross  
 c. \*John<sub>i</sub> was seen t<sub>i</sub> come.

- d. They overheard him insult her.
- e. He was overheard to insult her.
- f. \*He<sub>i</sub> was overheard t<sub>i</sub> come.

We will consider the Acc + Inf a BI complement, since, as with causative verbs, there is no evidence of a syntactic T position. Therefore, the complements are VPs (cf. also Iveland (1993)). This interpretation is corroborated by several properties of the Acc + BInf, revised below:

a) The temporal interpretation of the infinitive clause is one of simultaneity with the main clause. Any reference time adverbial licensed in either clause refers to *both verbs* or is impossible. Thus *yesterday* is the time of both the seeing and the coming. The perfect marker *have*, which shows anteriority, therefore, non- simultaneity with the main clause is impossible.

- (99)
- a. I saw him come yesterday.
  - b. \*I saw him have come yesterday
  - c. I believe him to have come yesterday
  - d. \*I heard Mary have played a song.

b) The infinitive clause cannot be negated, in contrast with infinitive complement of *believe*-verbs. This is evidence that there is no Tense position in the infinitive clause.

- (100)
- a. \*I heard him not enter.
  - b. \*I saw him not come to the party.
  - c. I believe him not to have come to the party.

c) The infinitival complement of perception verbs cannot contain any other sentence-level adverb, such as speaker-oriented or modal adverbs. (cf. Bennis & Hoekstra (1989).

d) The ontological class of the complement is *event* (cf. Barwise&Perry (1983), Parsons (1990)), an event perceived by the main clause subject. The several characteristic features of this construction result from the semantics of physical perception. Physical perception entails simultaneity of perceiving act and object of perception. It is the condition of physical observation which imposes the simultaneity between the main clause event and the event in the subordinate clause.

The co-presence of perceiver and perceived is also the source of a type of reduction of the complement clause, which differentiates between *believe* verbs and *see* verbs (cf. Akmajian (1977)). *See* verbs appear to pattern like control verbs, in allowing the reduction of the complement to its subject: Compare:

- (101)
- a. I saw you try to hit the little girl and Mary saw you, too.
  - b. I tried to persuade Jane to make a last attempt and Mary tried to persuade him, too.
  - c. \* I believe Mary to have lied and John believes her too.

It is plausible therefore to analyse Acc + BInf constructions as VPs, that is, lexical projections, or small clauses. Since the complements of perception verbs lack Tense, they will have to be in the same Tense chain with the main verb, since, as known, every verb must be identified by Tense. As proposed in Gueron &Hoekstra (1988), Bennis & Hoekstra (1989), with respect to the functioning of their complements, verbs of perception are like Tense-auxiliaries, because, like auxiliaries, they assign a T role to their complements. Hence the simultaneity requirement, and the event interpretation.

This view of the infinitive complements may also explain the asymmetry between the active and passive construction of these verbs, namely the need for the independent infinitive Tense position in the passive constructions.

- (102) a. \*John was heard [t sing].  
b. John was heard [t to sing].  
b'. John was considered [t foolish].  
c. \*John was seen t leave the building.  
c'. John was seen t to leave the building.  
d. She was declared [t insane].  
e. He was found [t killed].

Researchers (cf. Bennis & Hockstra (1989), Lightfoot (1991)) agree that the difference in grammaticality between, (102a, b) has to do with the difference between the active and passive morphology of the main verb. Specifically, Bennis & Hoeckstra (1989) related the contrast between (102a, b) to the need of the infinitive verb to be Tense identified. Unlike other parts of speech, such as the adjective, the verb needs to be identified by Tense at LF, if not earlier. Since the Acc + BI complement lacks Tense, the embedded verb will have to be T-marked by the main verb, by some available mechanism. In English, T-linking is established by Percolation (Agree), while in other languages (e.g., Dutch), it is achieved by the lower verb raising and adjoining to the higher verb overtly. Because of its nominal features, the passive participle cannot be a link in a T-chain. For instance, in Dutch, there is evidence that the passive participle cannot be adjoined to. (cf. Bennis & Hoeckstra (1989)). If the passive participle does not function as a link in the T-chain, percolation cannot reach into the infinitive clause. The consequence is that the Verb in the embedded clause remains unidentified by Tense. This is why the infinitive in the small clause needs its own T-marker for identification, as long as the main verb is in the past participle. The presence of *to* is thus required if the verb is in the passive.

**Remark.** When *see* is a mental perception verb, it takes the regular *to*-infinitive constructions:

- (103) (i) Yes, I see [it to be so].  
(ii) She always does what she sees to be right.

The passive Nom + Inf complement is thus a different syntactic structure, more like a verb of propositional attitude. This syntactic difference has semantic effects; the Nom + Inf has specific notes of meaning: a. the perception is accidental; b. the event was not intended by its Agent to be witnessed; c. the event is non-durative. Here are a few examples, illustrating these properties:

- (104) a. They saw Nureyev dance last night.  
b. Nureyev was seen to dance last night.

The passives are better when the event is taken to be performed unconsciously or furtively.

- (105) a. ?President Roosevelt was heard to declare war on Japan.  
b. President Roosevelt was heard to curse under his breath.

This correlates with the fact that the explicitly agentive physical perception verbs *look*, *listen* do not appear in the Nom + Inf.

7.2. Finally, there is also a group of less central, neological verbs of physical perception, which take the regular Acc + Inf construction, with *to: notice, perceive, observe*.

(106) Our guest at last perceived himself to be known.

## 8. The interpretative effect of raising rules

Several researchers (Borkin (1973), Postal (1974), Steever (1977)) notice a subtle difference of meaning between *that* complements and Acc + Inf complements of the same verb.

(107) a. I believe that Julius Caesar was honest.  
b. I believe Julius Caesar to have been honest.

The first sentence can be naturally used in a discussion of Rome and famous Romans. The second sentence suggests that the judgement expressed is a function of the speaker's personal experience. The infinitive construction carries a supplementary inference, of "direct access".

(108) The implication attached to raised subjects is direct access; while that attaching to unraised Subjects is not direct access. (from Steever, 1977: 594).

The infinitive construction suggests a more direct relation between the main clause subject and the derived direct object. One might relate the difference between the two constructions in (107) to Russell's two ways of getting knowledge: indirect knowledge or *knowledge by description* and direct, perceptual knowledge, also called *knowledge by acquaintance*. The *that* complement typically conveys knowledge by description, the Acc+Inf may also convey knowledge by acquaintance. Good evidence for this difference comes from a consideration of the semantic specialisation of verbs like, *see, hear, notice*. They may have a physical perception reading, corresponding to a direct perceptual relation between subject and direct object, as in (109).

(109) a. I saw him. b. I heard him. c. I noticed him.

But they also have abstract, mental perception reassignments: *see*, 'realise', *hear*, 'find out', 'learn', *notice* 'find out', 'discover'.

(110) I saw that he was tight.  
I heard that he got married

It is significant that (with minor exceptions) the SOR construction goes only with the physical perception sense:

(111) a. I saw him enter.  
b. \*I saw him right.  
c. I heard him enter.  
d. \*I heard him get married.

Significantly, verbs like *watch, listen*, which always imply direct physical perception of the referent of the object do not take *that* complements.

With other verbs, the direct access inference means the possibility to express a subjective personal evaluation, an inductive judgement, as opposed to a more objective evaluation:  
Compare:

- (112) a. ??Mary thinks 7 to be a prime number.  
b. Mary thinks 7 to be a lucky number.  
c. Jane knows that her teacher is intelligent.  
d. Jane knows her teacher to be intelligent.