THE DISTRIBUTION OF CONTROL CONSTRUCTIONS: *FOR-TO* AND PRO-*TO*

Preliminaries. In the following we describe the various types of infinitive patterns in terms of their syntactic function, taking into account the rules discussed above. Given the scope of the problem the presentation cannot be exhaustive. Both *for-to* and PRO-*to* structures are discussed since the distribution of *for-to* is a subset of the extensive distribution of PRO-*to*. The selection of the complementizer *for* is a lexical- semantic property of a limited number of heads in English, most of which characterized as [+Emotive] or [+Evaluative]. The specificity of the surface *for-to* construction also comes from the semantic features conferred by the C^0 *for*, which partly retains the meaning of the preposition *for* ('cause', 'reason').

1. Control constructions as subject clauses

1.1. The simplest type of structures involves one place predicates, adjectives, nouns and a few verbs whose subject position may be filled by an infinitive clause:

(1) a. possible, impossible, probable, (un)necessary, common, customary, normal, essential, indispensable, odd, typical, usual, right, wrong, moral, immoral, (un)pleasant, (un)safe, good, bad, natural, vital, etc.
b. a pleasure, an advantage, a tragedy, it is (high) time, etc.
c. will do, suffice.

All of these predicates are propositional operators. The nouns and the adjectives are evaluative, strong intensional predicates. The finite paraphrase contains a subjunctive proposition.

If the PRO-*to* is used, PRO is given the arbitrary reading, equivalent with the indefinite generic *one*, as suggested by the agreement phenomena with reflexives or possessives (4). As always with subject clauses, the standard construction involves Extraposition, as in (3), (5).

(2) a. For me to interfere either way would be at once idle and perilous. b. For seamen to fire upon their own people in support of an arbitrary power was quite unthinkable.

(3) a. After all, it was no common thing for an earl's daughter to marry a commoner. b. Isn't it the custom for young people to give up their seats to old people in crowded buses? c. It is impossible for there to be a war between your country and mine. d. It is not unusual for the wine to be well and truly shaken before it ever comes near the table.

(4) a. To restore and even to extend this practice would be a real advantage.
b. To dress oneself up is fun.

(5) a. It is necessary to observe that no touch of this quality ever reached the magnificent Mr. Dombey. b. It's silly to feel so guilty about one's luck, isn't it? c. It's inspiring to listen to you. d. It will not do to reply that great poets are a happy accident. e. It remains to choose a leader and to raise additional funds. e. I suppose it's better to paralyze people temporarily than to blow them to pieces.

1.2. A second pattern contains infinitive clauses as subjects of predicates that also subcategorize and indirect object introduced by the prepositions *for*, *to*, *of*. The IO serves as

controller in the PRO-*to* constructions and control is obligatory. As before, the subject clause is normally extraposed, but may be preverbal as well:

(6) a. PRO to do a thing like this was unusual for him. b. To leave early was very wise of him.

(7) a. It's necessary for you to make an effort and perhaps a very great and painful effort. b. It's a great pleasure to me to see you here. c. It must have been a great comfort to them to be able to pray for the dead.

Infrequently, the IO is different from the subject of the infinitive clause, which is a *for-to* construction. Again, the subject clause may be preverbal or extraposed.

(8) a. For Mary to go there would be lucky for us. b. For the government to get the money would be beneficial to the commonwealth. c. For you to win the competition would be essential to your club.

(9) a. Do you think it was good for the bench for me to be on it? b. It's vital for your career for you to attend this course .c. It was wise of John for him to leave so early.

The three prepositions that may introduce the IOs are not interchangeable, being associated with slightly different roles. The *for / to* IO is known as a "sentence Dative", defined as "a Dative which modifies not the verb alone but the sentence as a whole." (cf. Curme 1933: 106) The *to* IO is closer to being an Experiencer, defined by Curme (1933:107) as the person to whom the statement seems true, in our case, the person who qualifies fulfillment of the infinitive proposition as important, vital, pleasant, easy, etc, as suggested by the paraphrase below:

(10) a. It's a great pleasure to me to see you here
a'. I consider it a great pleasure to see you here.

The *for* IO is interpreted as a Benefactive, or "Dative of interest", denoting the person for whom realization of the infinitive proposition is important, essential, etc., as suggested by the paraphrase:

(11) a. It is important *for* him to be there.
a'. It is considered to his advantage that he should be there.
b. It is important *to* him to be there.
b'. He thinks it important to be there.

Adjectives which require the Benefactive interpretation of the IO exclude the preposition *to*, selecting only *for*.

(12) a. It is essential/ vital / unimportant for him /to him to get the job.
b. It is good / right/ easy for him/* to him [PRO to marry her].

Sentence Datives introduced by *to/for* and controlling the subject of an infinitive clause may be co-referential with higher DPs (as in (13) below); when this happens the Dative may remain unexpressed, this giving rise to long-distance control (as in (14) below).

(13) a. *Jones* said that it was necessary *for him* [PRO to see himself in the mirror].
b. Jones said that it was annoying *to him* [PRO to shave himself every morning].

(14) a. *Jones* said that it was necessary --[PRO to see himself in the mirror].
b. *Jones* said that it was annoying -- [PRO to shave himself every morning].

With *for* IOs and extraposed subject clauses, there is an ambiguity in the interpretation of the *for* DP, which is interpretable either as the matrix IO, controlling the PRO subject, or as the subordinate clause subject. In the first case *for* is a preposition, in the second, it is a complementizer.

(15) It would be unpleasant (for us)[for Martians to land in Las Vegas.]
b. It would be unpleasant for Martians [PRO to land in Las Vegas].

1.3. **The *of* IO construction. Mental property adjectives.** Consider the following examples, containing "mental property" (MP) adjectives, i.e., adjectives that are equally applicable to persons and events.

(16) a. It's very *weak* and *silly* of me to be so trembly and shaky from head to foot.
b. I will never forget how *kind* it was of you to do it!
c. It was *nice* of them to accept!

The relevant group of adjectives includes the following (cf. Stowell (1991), Bolinger (1977c)):

(17) stupid, cunning, clever, mean, nice, kind, farsighted, skilful, generous, imprudent, absurd, bold, brave, civil, inconsiderate, courageous, cruel, decent, unkind, naughty, impolite, rash, rude, saucy, silly, spiteful, thoughtful, thoughtless, weak, wicked, unwise, wrong

Adjectives that cannot be descriptive of persons (*mistaken*, *unnecessary*) will not appear in this construction. Adjectives that refer to people, but cannot characterize events (*strong*) are equally bad.

(18) a. It was wrong /*mistaken of John to have said that.
b. It was gratuitous of Mary /*unnecessary of Mary to say that.
c. You are strong to have convinced them.
d.*It is strong of you to have convinced them!

At first glance, MP adjectives seem to attribute the same property to two very different kinds of things: to a sentient individual, from now on the *MP DP* (= the mental property DP), or to an action performed by such an individual. Moreover, both the Mental Property role and the event-role may appear as either subject (19a), (20a) or complement (19b), (20b)).

(19) a. John was clever / mean [PRO to do this].
b. It was clever / mean of John [PRO do to do this].
c. To do this was clever of John.
(20) a. Men are stupid to mistreat their children.
b. It is stupid of men to mistreat their children.

For MP adjectives, the MP (human) role is semantically obligatory, being implicit even when it is not overt, as in (21). There is an obligatory control relation between the MP argument of the adjective and the Agent subject position of the event denoting clause (see (22)):

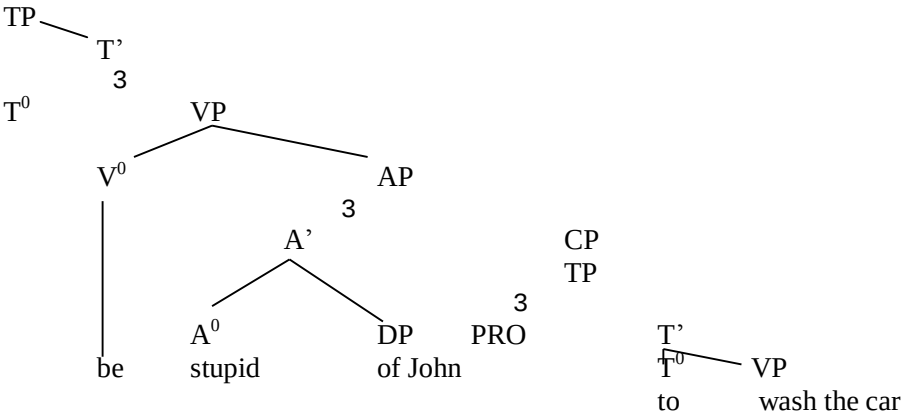
(21) a. Punishing the dog was clever / mean (of Bill).
b. Entering the race was farsighted (of Bill).
(22) a. John was clever [PRO to sell his junk bonds.
b. It was clever of John [PRO to sell his junk bonds.
c. [PRO to sell his junk bonds] was clever of John.

Consider now the full syntactic paradigm of MP adjectives:

(23) a. To wash the car was stupid of John.
b. It was stupid of John to wash the car.
c. John was stupid to wash the car.
d.*It was stupid to wash the car of John.

Stowell (1991) proposes (24) as the structure of an MP adjective: both arguments are inside the AP. The MP role is the internal argument inside A', as suggested by the preposition *of*, which is typical of adjectival objects, *afraid of him, fond of him*. The clause is an argument external to the first projection. Insertion of the expletive *it* in SpecT produces sentence (23b), which hints at the underlying order of the arguments. The ungrammaticality of (23d) shows that the order of the arguments is as proposed in (24), with the MP nominal, rather than the clause as an internal object. Either argument may be promoted as subject. When the clause raises to check the EPP feature of tense, sentence (23a) is obtained. Alternatively, the MP argument may become the subject producing sentence (23c).

(24)



There is good evidence that the clause is not an internal argument. Infinitival clauses which are internal arguments may move with the adjectival head, as illustrated in (25b, d). In contrast, the infinitive clause does not move with the adjectival head with MP adjectives, as shown in (26):

(25) a. Sam is proud of his son.
b. How *proud of his son* Sam is!
c. Bill is anxious to leave town.
d. *How anxious to leave town* do you think Bill is?

(26) a. *How *stupid to leave town* was it of John?
b. *How kind to give away her house it was of Mary!

If the event argument remains inside the AP/VP, the MP argument, which is an internal argument is free to move with the adjectival head, as in (27), which confirms the constituency in (24) above:

(27) a. How *stupid of John* it was to leave town!
b. How stupid of John was it to leave her?

The pragmatic function of the *of* construction is apparent by comparing pairs like those below:

(28) a. It was unkind of you to do it.
b. You were unkind to do it.
c. It was rash of you to move in so quickly.
d. You were rash to move in so quickly.

The *of* construction is "less harsh" (cf. Bolinger (1977)) than the other construction. This is related to the fact that the Agent is backgrounded as a prepositional indirect object, not foregrounded as a subject.

Extraposed infinitival complements in the *of* IO construction, may serve as a basis for exclamative sentences, where the adjective is modified by the degree adverb *how*!

(29) a. It was hard for Tom to do it.
b. How hard it was for Tom to do it.
c. It was unwise of you to accept it!
d. How unwise (it was) of you to accept it.

1.4. ***Infinitive complements may function as subjects of several classes of transitive verbs listed below***:

1.4.1. One class is that of transitive *psychological verbs*:

(30) alarm, amaze, anger, annoy, astonish, astound, attract, baffle, bedevil, boast, bother, bore, charm, cheer, calm, comfort, compliment, concern, confuse, delight, discourage, disgust, displease, dismay, distress, elate, embarrass, enchant, enrage, frighten, floor, gladden, gratify, nonplus, humble, hurt, horrify, insult, interest, imitate, madden, rattle, pain, please, relieve, sadden, satisfy, scare, sicken, soothe, surprise, sustain, tempt, torment, trouble.

The grammar of these verbs is quite complex. The DO is an Experiencer. First given their [+Emotive] nature, these verbs may select the *for-to* construction. The subject clause may be extraposed and the main verb may be passivized, this resulting in the following paradigm:

(31) a. For Fred to have hallucinations bothers me.
b. It bothers me for Fred to have hallucinations.
c. I would be bothered for him to have hallucinations.

The DO is an available controller, and actually an obligatory controller in sentences containing no constituents other than the main verb and the infinitive clause:

(32) a. [PRO to see her naked] embarrasses you.
b. It embarrasses you [PRO to see her naked].
c. You would be embarrassed [PRO to see her naked].

(33) a. It grieved me to leave you like that.
b. It disturbed him to have been reminded that she had stayed at home.
c. It pleased him to see them look uncomfortable.

1.4.2. Causative psychological verbs also allow long distance control, by mechanisms that have been explained in the chapter dealing with Control Theory above. Here we simply offer some more examples.

(34) a. *John*$_i$ said [that [PRO$_{i/j}$ to make a fool of *himself/ herself* in public] would disturb *Sue*$_j$].
b. *Mary*$_i$ thought [that [PRO$_{i/j}$ to speak her/his$_j$ mind] would please *John*$_j$].

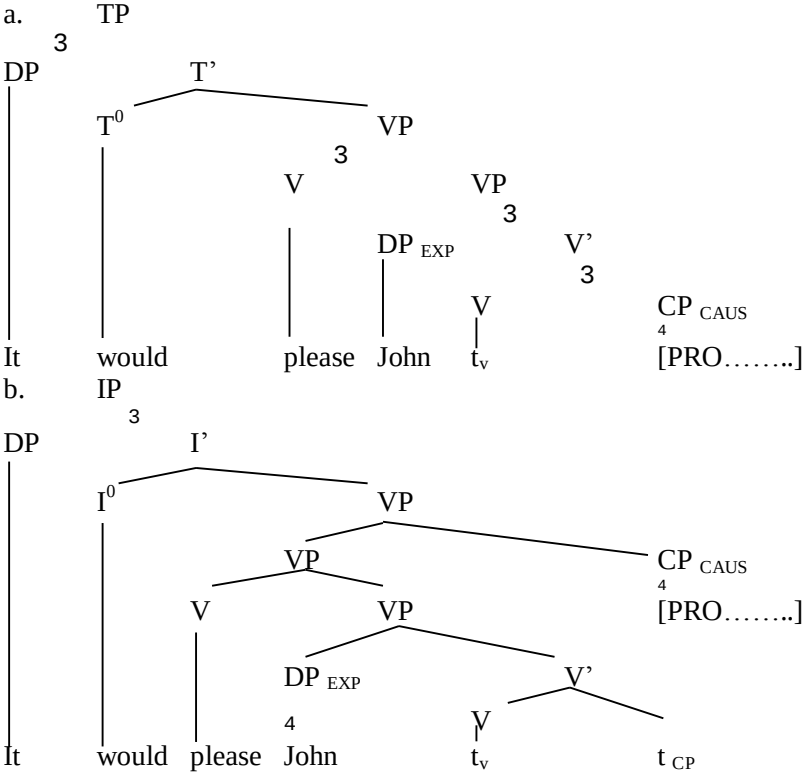
(35) a. *$John_i$ said it would disturb Sue [PRO_i to make a fool of himself in public].
b. *$Mary_i$ thought that it pleased John [PRO_i to speak *her* mind].
c. Mary thought that it pleased $John_j$ [PRO_j to speak *his* mind].

In both (34a) and (34b) the controller is, or may be, in a clause higher than the next one. Since psychological predicates are at stake, Extraposition blocks long distance control by a more remote DP, in favour of the closer co-argument controller (examples (35a, b)).

This follows from the assumptions regarding the projection of psychological predicates, as ergatives with the Experiencer projected higher than the Causer clause, as in (36). As known, Extraposition is motivated only if the clause is not projected as VP peripheral. But for psych verbs, the Causer clause already is VP peripheral, as in (36). Extraposition is unmotivated, and therefore impossible in (36), since the clause is not VP internal.

Interpretation of the clause in situ yields a position of obligatory control, since the controller Experiencer and the Causer clause are co-arguments inside VP. This yields the obligatory control readings of (34a, b); the controller is *Sue* in (34a), and *John* in (34b).

(36) a.



b.

The intraposition construction, where the clause appears in SpecT, clearly creates a configuration of non-obligatory control, since one argument, the Experiencer is inside the VP, while the other argument, the clause is outside the VP, in SpecT. This results in the long-distance readings, of (34a, b), where the remote controllers are *John* and *Mary*, respectively.

1.4.3. Another class of verbs that accept infinitive subject clauses is that of public verbs, mostly causative ones, which frequently take infinitive subject clauses. Some of these constructions are highly idiomatic:

(37) need, help, require, make, cause, damage, take (smb) X much time to, necessitate, etc.

(38) a. It required a greater psychologist than he was to describe a certain disharmony which a little marred her beauty. b. It only needs a certain degree of detachment to perceive under the lightness of his act a discipline as that of the most intellectual painters. c. It takes one a long time to learn even the simplest tasks without fingers and toes. d. To obtain this requires careful study.

Such verbs provide the most permissive environments for long distance control. Given that the subject clause is projected in SpecVP, Extraposition will be licit, as well as movement to SpecT, so that both intraposition and extraposition create configurations of NOC:

(39) a. Tricia claimed that [PRO to hold her breath until she turned blue] would cause Ed a heart attack.
b. Herbert realizes that it is probably a pack of lies that [PRO brewing his own beer will make him live to be a hundred.

(40) a. Mary knew that it damaged John [PRO to perjure himself / herself].
b. Mary knew that [PRO to perjure himself/ herself would damage John.

(41) a. Mary thought that it helped John [PRO to speak his/her mind].
b. Mary thought that [PRO to speak his/ her mind would help John].

1.4.4. Bisentential verbs also allow infinitive clauses in subject position. The infinitive is restricted to subject position, the object position being held by *that* clauses or by simple DPs.

(42) a. For John to eat peas shows that he must be hungry.
b. *That John eats peas shows for him to be hungry.
c. And indeed it seemed to me later that [PRO to ask such questions of Hugo] showed a peculiar insensitivity to his unique intellectual and moral quality.
d. For him to steal money proves that he was hungry.

2. Infinitive clauses as Direct Objects

The picture of DO infinitive clauses is considerably different from that of subject infinitives.

a) In subject position, given the [+emotive] evaluative feature of the respective predicates, there was practically free variation between PRO-to and *for-to* clauses. Secondly, the infinitive proposition was systematically paraphrasable by a subjunctive finite clause, suiting the normative component of the evaluative predicate. In contrast, in object position few verbs c-select a *for-to* complement in addition to the PRO-*to* one. As remarked by Pesetsky (1995), which verbs appear with *for-to* complements is a matter of l-selection. Most of the verbs that take infinitive objects c-select PRO-to complements.

b) From a semantic point of view, there are differences between the *for-to* and the PRO-*to* complement. When a full *for-to* clause is chosen, it appears that the verb s-selects a *proposition*. When only a PRO-TO complement is selected, depending on the interpretation of PRO as a variable or as a referential term, one may regard the infinitive complement as either expressing a property (predicate) or a proposition.

Several authors (Menzel (1975), Chierchia (1984) among others) expressed the view that PRO is a lambda variable, forming some kind of unsaturated expression: a property, an action etc. Menzel (1975) claims that subjectless complements (infinitives, gerunds, verbal nouns) are associated with specific ontologic types: properties, actions (acts), processes, which are linguistically expressed as VPs rather than CP/IPs. Thus the expressions *kick the ball* and PRO *kick the ball* (i.e.,λx (x kicks the ball)) have the same denotation, 'the class of acts of kicking the ball', which can be attributed to some Agent., as in *Peter kicked the ball*. That actions or

properties are associated with subjectless sentences (VPs) is apparent from the following type of nominal constructions, quoted by Menzel (1975): *the action of playing the piano, the act of kicking the ball*, rather than **the action of Peter's playing the piano, the act of John's kicking the ball*. In the same way, one speaks of *the property of being tall*, not of *the property of John's being tall*. As expressed by VPs, properties, actions, acts are predicates which select particular thematic subjects. The semantic subject is the controller. Thus acts / actions / activities s-select Agents. States characterize Themes or Experiencers, processes and changes of state are characteristic for Themes, etc.

In sum, to the extent that PRO is interpreted as a λ-variable, the denotation of a PRO-*to* complement is not a proposition but, generally speaking an unsaturated, predicative category, generically called *a property*. This property is ultimately attributed to the controller, this combination determining a proposition. In this view, PRO-*to* complements not only represent syntactic predicates (constituents that need to be c-commanded by controller-subjects), but they also represent semantic predicates (λ-abstractors).

Against this view, we have already provided evidence that at least in cases of *partial control*, PRO must be projected as a syntactic and semantic entity distinct from the controller. At least in those cases, the PRO-*to* complement is semantically a proposition.

(43) John told Peter [PRO-to go to the party together].

We conclude that the PRO-to complement in object position is either a property (an unsaturated entity, in need of a subject) or a proposition.

2.1. ***Infinitive clauses often function as DOs with a vast number of simple transitive verbs***. Since these are binary predicates, the obligatory PRO controller is the main clause subject. There are a few semantic constraints on the nature of the controller, or on the aspectual type of the infinitive complement, though individual verb-groups may impose specific aspectual or thematic constraints, as in (45b), where the complement of *decide* cannot be a state

(44) a. He $_{\text{Agent}}$ started [PRO $_{\text{Agent}}$ to run]. (activity complement)
b. John $_{\text{Exp}}$ can't bear [PRO Theme to live in London]. (activity complement)
c. John $_{\text{Exp}}$ would have like [PRO Theme to be taller]. (state complement)

(45) a. John would have liked [PRO-to be taller].
b. * John decided [PRO-to be taller].

Many verbs that subcategorize infinitive direct objects have no alternative *that*-complement. Here are the main infinitive-taking transitive verbs:

2.2. ***Aspectual verbs***: *begin, continue, start, commence, finish, resume*. These verbs have several important properties: a) they have intransitive doublets, which appear in SSR structures. The transitive analysis is justified by the intentional meaning of the verb, as well as by its occurrence in simple transitive sentences.

(46) He willingly started the divorce procedures.
He willingly started [PRO-to sell those shares].

The infinitive complement of these verbs is untensed; no conflicting frame time adverbials may be licensed; hence, the infinitive clause may be analyzed as an IP, rather than a CP. This corresponds to the intuition that only one event is denoted in sentences with aspectual verbs, the event denoted in the subordinate clause, while the aspectual verb focuses on one part of the internal temporal structure of the event.

(47) a. *Yesterday he started to read tomorrow.
b. He began to write the essay on a wintry day.

The controller must be interpreted as an Agent. It is the Agentive interpretation which distinguishes between the intransitive and the transitive use of the aspectual verbs:

(48) a. The King began to slap the Queen. (PRO-to)
b. The Queen began to be slapped by the King. (SSR)

2.3. Next is the group of ***implicative verbs***. The name implies that if it is true that V*(p)* then it follows either that *p* or that *not-p* is also true: Typical examples are: *manage, contrive* ('manage'), *fail, condescend, deign, not bother, presume* ('be bold enough'), *pretend, affect* ('pretend'), *venture, try, seek, dare, make sure, see fit, refrain, abstain, omit,* etc Thus *I failed to meet him* entails *I didn't meet him,* while *I saw fit to greet him* implies *I greeted him.*

These verbs also denote the same event as the complement clause; the complement clause is untensed, being integrated in the Tense chain of the matrix. Implicative verbs have to do with success or failure of events / actions. The complement clause must be non-stative. (**He failed* [PRO *to be tall*]. Implicative verbs allow only exhaustive control (*The chair tried [PRO to gather in the assembly room])

(49) a. Would she attempt to carry it further? b. By what amounted to a miracle, this offspring of his had contrived [PRO to lure] a millionaire's daughter into marrying him? c. She no longer deigns to visit her friends. (Lg) d. He declined to make any comment. I won't pretend (= dare) to tell you how this machine works, because you understand it far better than I do. e. They sought to punish him. f. He wouldn't scruple to charge you far more than its worth in wool. g. He affected [= pretended] not to hear her. h. She would never forgive me if I should presume to go to Liverpool to meet her. i. He ventured to tough the dog. k. She tried to get arrested.

2.4. There is a restricted group of ***verbs of obligatory subject control***, which have modal meaning and impose little or no semantic restriction on their complement and on their controller: *need, deserve, afford*:

(50) a. She needed to be questioned and corrected. b. He deserves to be happy. c. Can you afford to lend me some money?

Remark. While the verbs discussed so far do not take *that* complements in the meaning under discussion, some of them may have alternative *that* complements in other meanings:

(51) (i). I learned how to do it.
(ii). I learned that he had done it.
(iii). I won't presume to disturb you.
(iv). Let us presume that he is innocent.

2.5. The next group to consider is that of ***[+ Emotive] verbs***. They are desiderative, non - factive verbs like: *want, wish, prefer, arrange, demand, ask, hope, aspire, plan, decide, mean, intend, resolve, strive, choose, expect, propose* [= intend], *desire*, strive, endeavour, etc), as well as other emotive verbs, with factive uses sometimes*: hate, can't bear, can/t stand, scorn, loathe, like, dislike.*

These verbs have a particularly complex grammar. First, since they are emotive, they allow not only the PRO-to, but also the *for-to* complement. b) Some of them allow *that*

complements, mostly in the subjunctive mood. c) Given their factive uses, these verbs may allow Extraposition from DO position.

The fact that a *for-to* complement, as well as *that*-paraphrase, is available strengthens the view that these verbs allow partial control and have tensed complements:

(52) Yesterday, John wanted to solve the problem tomorrow.
(53) Mary realized that John planned/ wanted [PRO-to work on the project together].
Mary thought that John planned/ intended [PRO-to go to the ball together].
(54) I would hate it for them to be defeated.
(55) I love it that you should call me by my nickname.
(56) a. I mean to do it tomorrow. b. He preferred to see his friend relaxed in a pub. c. I would love to know him better. D. If Morgan shows any signs of wanting to go back to her husband, we should give her every help and support. There were even things about Tom which he wished to admire.
(57) a. I am sure he does not wish for another member of other states to embark upon such experiments. b. I would very much love for you to come with me. c. I would prefer for you to call me Rocky. c. I expect for you to get the grant. e. He only asked for some chance to happen by which he might show his fidelity to her

2.6. The next group involves ***propositional verbs***: verbs of propositional attitude (*remember, claim, declare, deny*), factive verbs (*regret, forge*t), verbs of communication: (*say, conclude, profess, threaten*):

These verbs have tensed complements and allow partial control. Some of them, the emotive-factive allow alternative *for-to* complements, while all of them allow alternative *that*-complements, which are usually non-equivalent with their infinitive complements. The infinitive is sometimes more constrained, selecting eventive complements.

(58) a. Mary explained that John had *threatened* [PRO-not to dance together any more].
b. I would deeply regret for you not to be able to pursue your career.
c. I would resent it very much [PRO-to do some silly thing.
(59) a. He concluded to go.
(He concluded that he should go).
b. He concluded that he was wrong.
*He concluded to be wrong.
(60) a. John claims to own a car. (John claims that he owns a car). b. The killer threatened to murder me, if I didn't obey him. c. Did you remember to send this month's money to Oxfam? Axel had never professed to believe that their relationship would last.

3. Infinitive complements as Prepositional Objects

Infinitive complements are also c-selected by prepositional verbs and adjectives, belonging to the same semantic domains as the predicates mentioned so far. The infinitive clause should be analyzed as a Prepositional Object only if there is an alternative simple PP construction.

3.1. There are a few verbs that occur in this pattern mostly implicative, and desiderative:

(61) apply for, consent to, persist in, insist on, plead for, pray for, strive for, bother about, hesitate about, proceed with, fail in, proceed with; b) ache over, long for, rejoice at, shudder at, care for;

All of these allow the *for-to* as well as the PRO-*to* complement:

(62) a. Don't bother to see us to the station.
b. Don't bother about it.
c. And Freddie, after cautious glance over his shoulder, immediately proceeded [PRO-to fold this female in a warm embrace].
He proceeded with it…

(63) a. I don't care for him to see any of my usual work. b) Your father has begged for her to come. c. He stood listening for the summons to be repeated. d. Pen longed for the three years to be over. e. They were waiting for the door to open and for the servants to come in, holding the big dishes covered with their heavy metal covers. f. He could apply for the child to be made a Ward at Court.

3.2. The infinitive can also be the object of an important number of ***psychological, emotive adjectives***. Expectedly they take both *for-to* and PRO-*to* complements. To the extent that factive uses are possible, Extraposition and It Insertion become possible.

(64) anxious, able, afraid, eager, careful, concerned, proud, solicitous, glad, sorry, relieved, unable, fit, inclined, disinclined, prone, disposed, angry, important, prepared, welcome, ready, willing, pleased, content, certain, wont.

(65) I am anxious for you and may sister to get acquainted. b.

(66) a. They were *anxious* not to seem [PRO-to patronize her]. b We must be careful [PRO-to see that the stone is tilted from the inside of the car outwards. c. He was glad [PRO-hear it]. d. Sorry to be such a bore, darling. e. Hilary was constitutionally unable to refuse his aid to anything that held out a hand for it. f. I was but the more inclined [PRO-to attribute a spiritual worth to Hugo in proportion as it would never have crossed his mind to think of himself in such a light]. g. I'm curious [PRO-to see how Julia will carry it off]. h. Lord Emesworth, though he would have preferred solitude, was relieved [PRO-to find that the intruder was at least one of his own sex]. h. It is a name, sir, that a man is proud [PRO-to recognize]. i. He never for a moment took it into account that they might be *solicitous* to divide the responsibility.

The syntax of the adjectival constructions interestingly depends on its semantics. Most of these adjectives can be understood in the duality psych(ological), as well as in a non-psychological, material property meaning. An early remark was made by Faraci (1974) in connection with the *for-to* complement of these adjectives: she observes that there are different ellipsis possibilities for the two interpretations; only in the material reading of the adjective is it possible to omit the *object*.

(67) a. The patient is ready / anxious / eager for the doctor to operate on him.
b. * The patient is ready / anxious / eager for the doctor to operate on ---.
c. The tumor is ready for the doctor to operate on it.
d. The tumor is ready for the doctor to operate on---.

Landau (1997) notices that the same difference in the gapping pattern obtains in the PRO-*to* construction. Consider the psych reading first: an object gap is again impossible, as in (68c), (69c). Only the subject position of the infinitive clause may be empty (PRO), controlled by the main clause subject, the Experiencer in the main clause:

(68) a. John is ready [PRO-to serve his country].
b. John is ready [PRO-to be served].
c. *John$_1$ is ready [PRO$_{arb}$to serve e$_1$].

(69) a. Mary$_1$ was happy [PRO$_1$-to assist anyone].
b. Mary$_1$ was happy [PRO-to be assisted].
c. *Mary$_1$ was happy [PRO$_{arb}$to assist e$_1$].

Consider now the material property reading. In this case, the matrix subject may, actually *must*, be associated with either a subject or an object gap.

(70) a. The soup will be ready [PRO-to be served in 5 minutes].
b. * The soup$_1$ will be ready [PRO-to serve it$_1$ in 5 minutes].
c. The soup$_1$ will be ready [PRO-to serve e$_1$ in 5 minutes].

(71) a. The book$_1$ is available [PRO1-to be read].
b. *The book$_1$ is available [PRO$_{arb}$-to read it].
c. The book$_1$ is available [PRO-to read e$_1$].

The contrast is nicely illustrated by the famous ambiguity of (72a):

(72) a. The chicken is ready to eat.
b. The chicken$_1$ is ready$_P$ [e$_1$ to eat].
c. *The chicken$_1$ is ready$_M$ [e$_1$ to eat].
d. *The chicken$_1$ is ready$_P$ [e $_{arb}$ to eat e$_1$].
e. The chicken$_1$ is ready$_M$ [e $_{arb}$ to eat e$_1$].
f. The chicken$_1$ is ready$_M$ [e$_1$ to be eaten].

In these examples, when the bound gap is in subject position (72 b, c, f), both readings emerge. When there is an object gap (72 d, e), *ready* cannot be interpreted psychologically. Thus (72e) is a possible reading of (72a), but (72d) is not. Given the examples discussed so far, one may state the following empirical generalization:

(73) *Generalization of Infinitival Complementation*.
Given a predicate P that takes an infinitival complement C,
a. If P is psychological, C contains at most one bound gap - in subject position, but may be complete as well.
b. If P is non-psychological, C must contain one bound gap (subject or object).

3.3. Apparently, this curious gapping pattern springs from the different a-structure of the types of predicates considered. Psych predicates are dyadic relations, while material property predicates are monadic.

The a-structure of psych adjectives is (at least) dyadic, since the emotion of the *Experiencer* must be directed to some *Target/Subject matter* (object clause). The syntactic result of this semantic structure is that the infinitive clause, which expresses the Target/Subject Matter, must be an *argument* of the psych predicate. Moreover, the content of the psychological state must be a c*omplete* proposition. As a result either the adjectives selects a full *for-to* construction, as in (67a), or if the subject of the infinitive is PRO, it is controlled by (coreferential with) the main clause subject (68a, 69a), so that a complete thought will be expressed by the infinitive complement. Arbitrary readings of PRO are excluded (see the ungrammaticality of (68c), (69c)).

If the adjective is non-psychological, as in (70), (71), its subject is a Theme, and the Theme argument does not need to be related to anything. So the material property adjective is monadic. The infinitive clause will be interpreted, as a *property* (an incomplete entity), a

predicate which combines with the predicate expressed by the main adjective forming one complex predicate / property attributed to the Theme. Since the clause is not conceptually required, syntactically the clause is a modifier, not an argument. The two classes of adjectives thus have different semantic selection properties, summarized in (33).

(74) ***Semantic selection***
a. A psych adjective denotes a two-place relation between an individual (Experiencer) and an eventuality, the Target / Subject-matter (the infinitive clause). The latter is semantically a proposition.
b. A 'material' adjective denotes a one-place property of an individual, Theme. That property, in turn, can be modified by another property, expressed by a predicative modifier (the infinitive clause).

Property formation may be expressed as binding by a null operator. The gaps in the infinitive clause may imply two types of readings: on the one hand, the subject gap may be a constant, coreferential with the main clause subject, and then, the infinitive clauses expresses a proposition (the psych reading); alternatively, the subject or object gap is interpreted as a variable bound by an operator, the infinitive clause expresses a property, part a of a complex property attributed to the Theme subject (the material, non-psych reading). Since the property taking adjectives rely on subject or object gaps, there are three syntactic types of infinitival complements that map onto two semantic types:

(75) a. $[_{CP}Op_1\ [_{IP}DP/PRO_{arb}\ldots[_{VP}..t_1\ldots]]$ → CP denotes a property (predicate) based on an object gap
b. $[_{CP}Op_1[_{IP}\ t_1\ldots[_{VP}\ldots.]]]$ → (CP denotes a property (predicate) based on a subject gap
c. $[_{CP}\ [_{IP}DP/\ PRO\ldots[_{VP}..\ldots]]$ → CP denotes a proposition.

Case (75a) is illustrated in (76), case (75b) in (77) and case (75c) in (78):

(76) a. The $book_1$ is available $[_{CP}Op_1$ for [us to read t_1].
b. The $book_1$ is available $[_{CP}Op_1$ [PRO_{arb} to read t_1].
(77) a. The $book_1$ is available $[_{CP}Op_1$ [t_1 to be read].
b. The volcano is ready $[_{CP}Op$ [t_1 to erupt]].
(78) a. The patient is eager [for the doctor to operate on him].
b. $Mary_1$ is reluctant $[_{CP}PRO_1$ to be assisted].

Given these claims about the different argument structure of psych and non-psych adjectives, we expect a split between cases like (79a), involving psych adjectives, and cases like (79b, c) involving material readings:

(79) a. John is ready $_P$ [PRO-to eat the soup].
b. The soup is ready $_M$ [OP_1 [t_1 to be eaten].
c. The soup is ready $_M$ [Op_1 [for us/PRO-to eat [e_1]]].

To the extent that one can find linguistic tests that are sensitive to the semantic type of the infinitive (argument versus modifier), (79b) should pattern with (79c), rather than (79a), since both involve properties and modification, while (79a) involves an infinitival proposition with argument status.

Some argument-modifier asymmetries. There are several tests which distinguish between these two constructions, and which identify the infinitive as either an argument or a modifier. In the first place, a psych adjective does not allow the ellipsis of its complement, which is an

argument, unless the latter was mentioned in the context. In contrast, the modifier of a material adjective is freely omissible:

(80) A: The laundry is really dirty, you know.
B1: Well, I'm willing *(to do the laundry).
B2: Well, the washing machine is available (to do the laundry).

Extraction provides a persuasive test. Extraction is possible out of the complement of the P(sych) adjective, but not out of the modifier of the M(aterial) adjective. This follows from the general fact that adjuncts are islands for extraction (Ross (1967) a.o.), while objects are governed, and therefore transparent for extraction. Notice, that even though (82b) exhibits a subject gap, like (81a), extraction out of it is impossible since the infinitive is in (82b) is an adjunct.

(81) a. When$_1$ is John ready $_P$ to test the car t_1? (answer: Tomorrow)
b. How is John ready $_P$ to eat the dish? (answer: With chopsticks)
(82) a. *When$_1$ is the car ready $_M$ to test t_1? (answer: Tomorrow)
b. *When$_1$ is the car ready $_M$ to be tested t_1? (answer: Tomorrow)

One more context that distinguishes arguments from modifiers (or adjuncts) is preposition stranding. Both psychological and non-psychological adjectives freely take the preposition *for*, introducing one of their arguments.

(83) a. John is ready $_P$ for the exam.
b. The soup is ready $_M$ for dinner.
(84) a. Few journalists are eager for this kind of job.
b. Few journalists are available for this kind of job.

However a *what* question can be answered with an infinitive only in the psych variant. Because only an argumental infinitive may replace the *for* PO of the adjective (example (85b)). A modifier infinitive is not an appropriate answer (example (86b)):

(85) a. John is ready to take the exam.
b. What is John ready for? To take the exam.
(86) a. The rock is ready to fall?
b. *What is the rock ready for? To fall.

Conclusion

Psych adjectives have properties that differentiate them from the material property adjectives. Thematically they are dyadic and select an Experiencer - Proposition (Target /Subject matter) frame. The proposition is semantically complete, even though it may include a controlled subject gap. The infinitive clause is an argument.

Material adjectives select Themes as subjects and attribute to them complex properties. The infinitive clause itself expresses a property. Its incompleteness is apparent in that the infinitive *must* contain a gap, a variable bound by an operator. Syntactically the infinitive is external to the first projection of the head, that is, it is a modifier, not an argument.

4. *Tough* Movement

Tough Movement (=TM) is the name given to the rule that relates pairs of the type illustrated in (87a,b) below. TM is thus responsible for generating the very frequent structure (87b, d, f).

(87) a. It is hard to park cars in Manhattan.
b. Cars are tough to park in Manhattan.
c. It is easy to get fond of her.
d. She is easy to get fond of —
e. It is difficult to give a kiss to Mary.
f. Mary is difficult to give a kiss to —

4.1. ***The classical analysis*.** TM was initially described as a raising rule which moves a non-subject DP from an infinitive (subject) clause into the subject position of the main clause. Sentence (87b) was derived from (87a). In (87b) the DO has raised into the main clause, in (87d) the PO has raised, while in (87f) the main clause subject is the IO of the infinitive clause. The following adjectives and nouns are often cited as occurring in the TM construction (cf. Lasnik & Fiengo (1974:587).

(88) a. tough, difficult, easy, hard, simple, dangerous, unhealthy, stimulating, boring, interesting, entertaining, uninteresting, amusing, gratifying.
b. a bitch, a breeze, a pleasure, a delight, a joy, a gas, a snap, a pain in the ass/neck.
(89) a. ------ is fun for Bill [PRO to tease Monica]
b. Mary is fun for Bill [PRO to tease t].

The movement analysis, as sketched in (89), makes the following claims:

a) The subject position of TM predicates is non-θ, therefore, initially empty. This allows movement into this position. Since they a have a non-θ, subject position, TM predicates are *ergative*.

b) Independent evidence that the subject position of TM predicates is non-θ is the very fact that the derived subject of the TM construction may be replaced by an expletive *it*, just as with SSR:

(90) a. It is a cinch [PRO to pas the exam].
b. This exam is a cinch [PRO to pass t].
c. It seems that this exam is difficult.
b. This exam seems [t to be difficult].

c) A third claim, supported by the paraphrase relations in (87), was that the infinitive complement is an *argument* (internal argument, under GB assumptions).

There were strong arguments in favour of the movement analysis, quite apart from the paraphrase invoked so far.

A central argument came from nominalizations (cf. Chomsky (1971)). DPs do not have the same functional structure as VPs; consequently, operations typical of VPs and clauses such as, in particular, raising rules, do not take place in DPs. Structures produced by raising rules cannot be nominalized. The ill-formedness of the nominalized TM structure is of the same types with the ill-formedness of the nominalized SSR and SOR structures in (91). Expectedly, *eager* sentences, which are not derived, have nominal counterparts.

(91) a. They believe John to be honest.
b. *their belief of John to be honest.
c. John is easy to please.

c'. *John's easiness to please.
d. John is eager to please.
d'. John's eagerness to please.

4. 2**. *A property of the TM construction*.** The *easy to please* construction may take an optional IO introduced by *for*, as in (92), but it can never have a subject introduced by *for* in the infinitive clause. The proof is that DPs which are not animate, and do not qualify as Experiencer IOs cannot appear in the TM construction, as shown in (93). Moreover, if two *for* DPs are present, i.e., the *for* IO and the lexical subject, TM blocks, as illustrated in (94b, d).

(92) a. She is easy for him [PRO_j-to kiss t_i].
b. He is difficult for her [PRO_j-to talk to t_j].
(93) a. It is unpleasant for it to be hot and stuffy in the room.
b. *The room is unpleasant for it to be hot and stuffy.
c. It could be exciting for there to be Koala bears in the yard.
d. *Koala bears would be exciting for there to be in the yard.
(94) a. It is exciting for Frank, for his children to talk about the old country.
b. *The old country is exciting for Frank for his children to talk about.
c. It is unpleasant for Frank, for Martha to borrow money from him.
d.*Money is unpleasant for Frank for Martha to borrow from him.

It may be concluded that TM infinitives are subjectless, TM cannot apply if the embedded clause has a lexical subject; moreover, an IO, interpreted as *an Experiencer, is always implicit, and sometimes overtly present*.

4.3. ***TM adjectives are thematic*.** The claim that *tough* adjectives are non-thematic was based on the paraphrases in (87) above, and the possibility to replace the TM-ed DP by the expletive *it.* There is however a body of data which undermine the paraphrase relation in (87) and can be understood only if it is accepted that the subject position of the *Tough* adjective is thematic. Let us review some of these data:

a) *The progressive aspect.* The impersonal subject clause construction does not allow the progressive. It is stative, expressing an opinion; the TM construction is not aspectually constrained, as seen in (95a).

(95) a. John is being easy to please.
b. *It is being easy to please John.

The uses of the progressive suggests that the property named by the adjectival phrase must be under the control of the subject. But if this is true, it is difficult to maintain that the main clause subject position is non-θ.

b) Consider now an agent-oriented adverb like *intentionally*. It is felicitous in the TM sentence (96a), but unacceptable in the impersonal subject clause construction (96b). A similar point can be made using the imperative test. The TM sentence may appear in the imperative, presumably because its subject may be a responsible Agent. The impersonal subject clause construction expectedly cannot appear in the imperative, as shown in (97):.

(96) a. John is *intentionally* easy to please.
b. *It is intentionally easy to please John.
(97) a. Be easy to please!
b.*Be easy to please John!

c) *Modals*. Further evidence is supplied by modal verbs. In the *easy to please* construction, the modals are ambiguous between a root and an epistemic reading. In the impersonal structure, the modals are only epistemic, as seen in (98):

(98) a. John must be easy to please (to the guests).
a'. John is required to be easy to please.
a''. One can conclude that John is easy to please.
b. It must be easy to please John. (only a'')

The contrast evinced by *must* in (98) is systematic, in that all modals exhibit this different behaviour. Thus, in all the impersonal examples in (99) the only acceptable reading of the modal is the epistemic one, while in the TM sentences (99d-f), the root reading is systematically present.

(99) a. It may not be easy to please John. (epistemic)
b. It should be hard to convince John.
c. It could be hard to beat John.
d. John may not be easy to please.
e. John should be hard to convince.
f. John could be hard to beat.

The plausibility of the raising analysis is also decreased by the observation that SSR does not normally change the interpretation of the modals, from epistemic to root:

(100) a. It may not be certain that John will win. (epistemic)
b. John may not be certain to win. (epistemic)

d) *Idiom Chunks*. The possibility of using idiom chunks in main clause subject position was a clear indication of raising into a non-θ position. The fact is, however, that few, if any, idiomatic nouns are allowed in the TM construction:

(101) a. ?Headway is easy to make on problems like these.
b. *Tabs are easy to keep on Mary.
c. *Heed is important to pay to such warnings.
d. *Attention is difficult to pay to boring lectures.
e. *The baby would be easy to throw out with the bath water.

In conclusion, all these arguments strongly suggest that the subject of the *easy to please* TM construction is a θ-position and that the personal subject is base-generated and correlated with an empty category in the infinitive clause (a gap). Since movement into a θ-position is prohibited, the object -to-subject raising analysis must be abandoned.

4.4. ***Tough Movement Adjectives, psych or "material"?*** The syntactic evidence discussed above is also consistent with the semantic analysis of the TM construction. As will be seen, appearances notwithstanding, TM adjectives are monadic adjectives, attributing a complex property (composed of the adjective + infinitive clause) to a Theme subject. TM adjectives are thus similar to the adjectives expressing material properties discussed above.

At first sight, TM adjectives appear to be similar to psych adjectives, at least regarding their a -structure. Thus, like psych-adjectives, TM predicates may take a *propositional argument*, expressed by a *for-to* complement or by a controlled PRO-*to* complement in an impersonal interpretation:

(102) a. It is easy for the rich [for the poor to do the hard work].
b. It is easy for the rich [PRO to do no work at all].

Secondly, TM predicates always take an Experiencer argument, expressed as an overt IO with *for*, or as an implicit IO.

It would seem that TM adjectives have the same θ-structure as psych predicates except that the Experiencer is an internal argument for TM predicates (an IO), instead of being an external argument (subject), as it is for psych adjectives. Compare:

(103) a. Bill is easy *for me* to persuade.
b. *I* am eager to persuade Bill.

In fact these similarities mean very little. The syntax of TM predicates aligns them with material property adjectives, and, closer examination shows that their a-structure is also different from that of psych-adjectives. The following properties of TM predicates are relevant.

a) It is true that TM adjectives may take propositional arguments. However, in this case, they are interpreted as modal operators, expressing opinions, propositional attitudes (examples (102, 104a)). In contrast, in the TM construction (104b), the infinitive *must be incomplete*, containing an object gap. This property is shared with non-psych-material adjectives (104c) and sharply distinguishes TM predicates from psych-adjectives.

(104) a. It is tough for anyone to park cars in Manhattan.
b. Cars are tough for anyone to park t in Manhattan.
c. The tumour is ready to operate on t.

Since syntactically, TM infinitive clauses *require an object gap*, like material property adjectives, their infinitival clause expresses a predicate or *property*, not a proposition. TM adjectives contrast with real psych adjectives like *eager*.

(105) a. $John_1$ is eager [PRO_1-to please Mary].
b. *John is eager [PRO_{arb}-to please e_1].
(106) a.* John is easy (for us_1) [PRO_1-to please him].
b. John is easy (for us_1) [PRO_1-to please e].
c. *$John_1$ is easy for us [PRO_{arb}-to please e_1].

b) Secondly, there are arguments to claim that the infinitive clause is a *modifier* in the TM construction, rather than an argument, as it is with *eager*-adjectives. Strong evidence for that is the impossibility of extraction from the infinitive clause, noticed for material property adjectives as well (examples from Canac-Marquis (1998: 42)):

(107) a. It is easy to find a present for Tom in Paris.
b. Where is it difficult to find a present for Tom?
c. John is difficult to find to buy a present for anywhere.
d. *Where is John difficult to buy a present for?

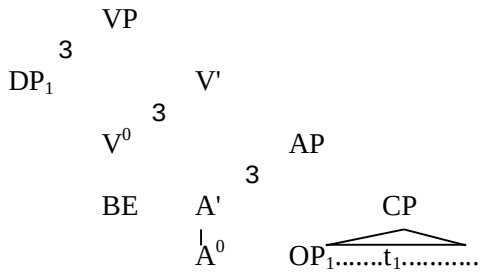
Adjunct clauses, as is well known, are islands for extraction, while argument clauses are transparent domains. This explains the contrast under extraction between the impersonal construction (107b) and the TM construction (107d).

The data discussed so far conclusively show that *easy* adjectives are double subcategorisers. They may subcategorise a clause [---CP], in their modal operator, impersonal reading, or simply a DP subject in the TM construction, where the infinitive is a modifier.

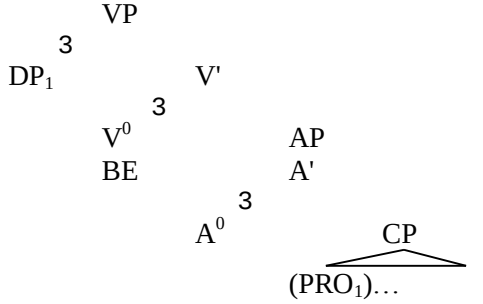
One problem for the view that the infinitive is a modifier in the TM construction may be that, while with the material property adjectives discussed above, the infinitive could easily be left out, in the TM construction, the infinitive seems to be required. A possible solution to this

problem comes from the semantics of the TM adjectives. Unlike *afraid, eager*, etc., the TM predicates, *easy, difficult, tough, nice* etc. are mostly syncategorematic adjectives, they express an evaluation, but not a semantic dimension which could restrict the meaning of the adjective linearizing it. In other words, in the absence of the restrictor, the adjective is *vague*, and the required interpretation cannot emerge. This is why the modifier is conceptually required.

(108)



(109)



The syntactic structure of a TM construction is as in (108), to be contrasted with the structure of an *eager* adjective in (109).

In fact, in spite of the initial thematic resemblance, closer scrutiny reveals that the different c-selection and s-selection properties of the two adjectives classes also correspond to different thematic structures, as will be seen below. Remember that in the *eager* class, the infinitive clause is a Target or Subject Matter argument, expressing the intentional content of the psychological state expressed by the adjective, a state attributed to the Experiencer subject.

Several analysts, among whom Pesetsky (1987) and Kim (1995) insist that *tough*-constructions involve a causative interpretation of the infinitive complement. This is quite clear in examples like (110 a, b):

(110) a. [$_{CAUSE}$PRO$_1$-to listen to operas] is annoying for [$_{EXP}$John$_1$].
b. It is annoying for [$_{EXP}$John$_1$] [$_{CAUSE}$PRO$_1$-to listen to operas].
c. [Operas] are annoying for [$_{EXP}$John$_1$] [?PRO-to listen t_i].

The infinitive clause in (110a, b) is interpreted as a CAUSE which is responsible for bringing about a certain mental state in the Experiencer argument. Matters are less clear about (110c), the TM construction itself. Pesetsky (1987) takes the infinitive to still be the CAUSE argument and claims that the matrix subject is thematically unrelated to the matrix adjective; in his analysis, *annoying* is a two-place relation in all the three cases in (110). Kim (1995) takes the matrix subject, *operas* in (110c) in the TM to be the real CAUSE argument, while the infinitive clause is a *situation argument,* restricting the matrix predicate. The causative interpretation of the TM construction amounts to saying that the subject argument is possessed of a complex property having a particular good/bad effect on the implicit /explicit Experiencer.

We will adopt Kim's proposal that the thematic subject of the TM predicate is the CAUSE argument producing an effect on the Experiencer; the infinitive modifier is a *semantic*

restriction on the otherwise vague property attributed to the subject, and being a syntactic modifier need not be assigned any independent θ-role itself. Notice that the Experiencer is an obligatory argument conceptually even when it is not expressed overtly.

The hypothesis that *easy* types adjectives are causative, while *eager* type adjectives are psych is in line with other properties. For instance, Pesetsky (1995) insightfully observes that only Target/ Subject matter arguments may appear in nominalizations. This is a more general property, as can be seen in (111), and provides an alternative account to Chomsky's early analysis mentioned above. Notice, in particular, the different behaviour of the two interpretations of the adjective *ready*; as expected, only the psych reading (111c) yields a nominalization:

(111) a. Bill's eagerness/reluctance/readiness to please
b. ??The problem's easiness/difficulty to solve.
c. The soldiers' readiness/preparedness to fight
d. ?*The chicken's readiness to be eaten.

We conclude that the different complementation properties of *eager* and *easy* are related to the different semantic roles they assign to their complements, in line with the different syntax of the infinitive construction. While *eager* selects a Target /Subject matter argument, *easy* selects a Cause/ Restrictor argument. Conceivably, only propositions (CP/DP) can function as Target /Subject matter arguments. Consequently, *eager* type adjectives can take nominal or propositional complements, but not predicative ones. Causes and restrictors enjoy a greater freedom- therefore *easy*-type adjectives may take nominal / propositional, as well as property complements.

4.5. ***On the Syntax of the Tough Movement construction***

In this section we sketch an analysis of the TM construction on the basis of structure (108) above. The problem is as follows: If the object does no raise into subject position, what is the mechanism that relates the gap and its antecedent?

More on the gap. *The null operator analysis*. The most striking property of the gap, in addition to its being a non-subject gap, is that it may appear at a quite variable distance from the antecedent. This is a property typical of *wh/A'*-constructions.

(112) a. John is easy [PRO to go out with t]].
b. John is easy [PRO to start [PRO to go out with t]].
c. John is easy [PRO to try [PRO to start [PRO to go out with t]].

There are restrictions on the form of the path relating the matrix subject and the gap. Island constraints are operative, and this is again evidence in favour of an A'-Movement. As always with A'-Movement, the gap cannot be an island; for instance, it cannot be in a noun complement clause (examples due to Browning (1987)), as in (113). It is equally impossible to extract constituents out of subjects, as in (114), or out of subject clauses.

(113) Complex NP-island
a. John is easy to describe [PRO-to Bill t].
b. *John$_i$ is easy to describe to Bill *a plan [to assassinate Op$_i$]*.

(114) The Subject Island
a. John would be difficult [PRO-to convince Betty to marry t]
b.*John would be difficult to convince Betty that *pictures of t* should appear on the front page].

Such evidence leads to the conclusion that, at least, in English, TM involves A'-movement. The proposal, due to Chomsky (1981), is to assume that the gap is represented by an *empty DP operator*, Op, which merges in the gap and cyclically moves to the SpecCP position of the infinitive clause, attracted by strong features in C^0.The derivation looks like in (115 a, b)

(115) a. John is easy [$_{CP}$PRO-to go out with [*Op*]].
b. John is easy [$_{CP}$*Op* C^0 [PRO-to go out with t $_{Op}$]].

The null Op movement analysis is probably the most popular analysis of the TM construction currently. It allows the subject position to be thematic, and it captures the idea that the sequence adjective + infinitive clause expresses a property.

Reanalysis. A second proposed analysis involves reanalysis. The starting point, in this view, is the restriction that the infinitive clause may not have its own lexical subject in the TM construction (as seen above). How can one make sure that the infinitive does not have a lexical subject of its own? Chomsky (1981) proposes a reanalysis solution. He claims that in some instances, the sequence "easy + to + VP" becomes a complex predicate, in fact, a complex adjectival head, as shown in (116b). Reanalysis is possible *only under string adjacency* between the adjective and the infinitive VP. Hence, there should be no lexical subject between adjectival head and the *to*+VP. The object of the infinitive VP is re analyzed as an object of the whole AP, as shown below:

(116) a. John is easy [Op$_i$ [PRO-to please t$_i$]].
b. John is [$_{AP}$ [$_A{}^0$ easy to please] t$_i$].
c. Melissa is [$_{AP}$ [$_A{}^0$ easy to seduce] t$_i$] for John.

One important asset of this analysis is that it accounts for the tendency TM construction have to produce compound adjectives: *an easy-to-defeat opponent*, an *impossible to live with colleague*, etc. The absence of the subject is likely to be a consequence of the a-structure of these adjectives: Cause + Experiencer. The Experiencer must be the controller of the infinitive subject. Given this, the Experiencer can be reinterpreted as an argument of the complex property produced by the reanalysis of the adjective + infinitive clause.

4.6. ***Conclusions***

1. TM predicates are dual subcategorizers, accepting either a propositional complement, in their impersonal reading, or a simple thematic subject in the TM construction itself.

2. *Easy* adjectives have thematic subjects in the *easy to please* construction. The infinitive clause is a modifier and expresses a complex property attributed to the subject.

3. The obligatory object gap in the infinitive clauses relates to the main clause subject by some other mechanism than raising, e.g., by means of a null operator chain.

5. Control constructions with three-place predicates. Control Shift

In this section we discuss infinitive complements as argument of three-place predicates. These predicates, which have been much discussed in the literature, since Rosenbaum's seminal work on English predicate complement constructions, raise several problems, some of them still poorly understood.

a) Most of these verbs allow only the PRO-TO, never the FOR-TO complement. Compare, for instance, the verbs *shout* and *force*. *Shout* admits both types of complements, *force* admits only the control construction.

(117) a. I shouted to him [PRO to leave at once].

b. I shouted to him [for [the intruder to leave at once]].

(118) a. I forced him [PRO to leave at once].
b. *I forced him [for the intruder to leave at once]

The verb *force* was described as a *verb of obligatory control*, in the sense that the only complement that the verb accepts is the control construction. In contrast, the verb *shout* was described as a verb of optional control. Following Landau (1999) we have used the term obligatory control, in a different acceptation, to characterize a particular configuration, that when an infinitive clause and a DP are co-arguments of a predicate, in which case, PRO is controlled by the co-argument of the infinitive clause. The two terms, *obligatory control configuration* and *verb of obligatory control* are distinct, but not contradictory terms. Verbs of obligatory control project a subset of the configurations of obligatory control. The verbs *shout* in the examples above is a verb of optional control (it allows a lexical subject, not only PRO, as in (1117b), but it may appears in a configuration of obligatory control, as in (117a).

b) A second much discussed problem was the selection of the controller. Verbs of obligatory control were supposed to accept only one main clause argument as controller, always the same. According to the matrix term acting as controller (and to the syntactic function of the infinitive clause), three types of verbs were discussed.

(119) a. Verbs of *obligatory subject control*: I promised him [PRO-to go]. The clause is a DO.
b. Verbs of *obligatory direct object control*: I persuaded him [PRO-to go]. The clause is a PO.
c. Verbs of *obligatory indirect object control*: I ordered him [PRO-to go]. The clause is a DO.

The first well-known answer to the determination of the controller problem was Rosenbaum's Minimal Distance Principle (MDP), which proposed that the controller is the "closest" matrix argument to the infinitive clause. The distance between the controller and PRO was computed in terns of the number of nodes separating them. The MDP correctly predicts that the subject is the controller in (120a), but not in (120 b, c), where the objects are closer to PRO:

(120) a. I managed [PRO-to buy the cottage].
b. I wrote to him [PRO-to buy the cottage].
c. I convinced him [PRO-to buy the cottage].

An important class of counterexamples to the MDP is offered by verbs like *promise*, which exhibit subject control, even when an IO is present and closer to PRO than the subject:

(121) I promised to the children [PRO-to take them to the zoo].

The MDP is partially rescued when one notices that for verbs like *promise* the IO is not an obligatory argument, while for all the other types of verbs, the IO/DO is an obligatory argument. One might then say, that the controller is the *obligatory* argument closest to PRO. This description covers the data in all of (120) and (121).

In fact the problem of controller identification has lost some of its interest, since the discovery of *control shift*. Specifically, it appears that even with verbs of obligatory control, the selection of the controller may change, depending on other syntactic and semantic properties of the infinitive clause. One factor that influences controller choice is the active or passive form of the infinitive complement. Consider the examples below:

(122) a. John_i promised Bill_j [PRO_i to shave himself_i every morning].
b. John_i promised Bill_j [PRO_j-to be allowed t_j to shave himself_j every morning].

c. John$_i$ asked Bill$_j$ [PRO $_j$-to shave himself$_j$ every morning].
d. John$_i$ asked Bill$_j$ [PRO$_i$-to be allowed to shave himself$_i$ every morning].

Thus, in (122a) and (122c) the controller are the expected ones, the subject of *promise* and the object of *ask*. In examples (122b) and (122d), there is control shift, the IO of *promise* controls the PRO subject of the passive infinitive complement, while the subject of *ask* controls PRO in (122d):

The obligatory controller simply appears to be a DP which is a co-argument of the non-finite clause and which meets certain semantic conditions. (see below).

c) The question that remained unanswered is the lack of *for-to* constructions with these verbs. The most likely answer is that, with these verbs, *for-to* complements are excluded for semantic reasons.

In the following we present the types of verbs of obligatory control, and of optional control.

5.1. Let us once more review the arguments for discriminating between ***verbs of obligatory control and raising Acc + Inf triggers.*** First, as repeatedly stated, the basic argument is that in control constructions, the Acc preceding the Inf is s-selected and θ-marked by the main verb. Consequently, formal DPs like *it*, *there*, idiom chunks are not possible controllers (see (123b, d), (124b).

(123) a. I expect little heed to be paid to that proposal by all of the legislators.
b.* I forced / promised / ordered more heed to be paid to that proposal by all of the legislators.
c. I expected there to be a man behind the counter.
d. * I forced / promised / ordered there to be a man behind the counter.

(124) a. I expected it to rain on my birthday.
b. *I forced it to rain on my birthday.

Remark. *Force* allows referential *it* as DO: *I don't know what it was, but I forced it to retreat*.

Seconly, the control verbs under discussion are three place predicates, while the SOR triggers are binary predicates. Finite paraphrases bring this difference to light at once.

(125) a. I persuaded her to go to the opera every week.
b. I persuaded her that she should go to the opera every week.
c. I believe her to go to the opera every week.
d. I believe that she goes to the opera every week.

The different argument structure explains another contrast, first noted by Rosenbaum (1967). This is the synonymy (with SOR verbs, as in (126a, b)) versus the lack of synonymy with control verbs, as in (126c, d) under passivization of the infinitive clause.

(126) a. I expected the doctor to examine the prisoner.
b. I expected the prisoner to be examined by the doctor.
c. I forced the doctor to examine the prisoner.
d. I forced the prisoner to be examined by the doctor.

Sentences (126a, b) have the same meaning, as predicted from their argument structure. Sentences (126c, d) have a different meaning, as predicted from their different a structure. (specifically the DO is different in (126c,d).

5.2. In this section we present the subclasses of ***verbs of obligatory DO control.***

5.2.1. The first subgroup is that of verbs that c-select [– DP ^ PP] in alternation with[DP ^ CP]. Naturally the DO may be passivised.

(127) adjure (= ask), authorize, advise, assist, bind, condemn, convince, compel, challenge, condition, defy, direct, hire, engage, excite, encourage, force, incite, instigate, inform, induce, inspire, leave, lead, lure, move, oblige, obligate, persuade, provoke, prompt, predispose, reduce, send seduce, summon, trouble, tempt, trust, urge, work, will, etc

(128) a. She forced her foot into the shoe. The soldiers forced their prisoner to give up their arms. The prisoners were forced to give up their arms.
b. His words incited the soldiers to anger. His words incited the soldiers to rise up against the officer.
c. You inspire me to greater efforts. / I was inspired to work harder.
d. She instigated the men to disobedience. She instigated the men to disobey orders.
e. May I trouble you for the salt? Can I trouble you to shut the door?
f. The warm weather seduced me away from my studies. /The warm weather seduced me to talk a walk. The warm weather seduced me to take a walk.
g. She kept nagging her husband for a new car. / She kept nagging her husband to go home.
h. She pressed him into service. She pressed her agent to stay a little longer.
i. She assisted him in his work. Good glasses will assist you to read.
j. I hired him for the job. I hired him to do the job.
k. Her careless spending led her into debt. What led you to believe this?

(129) a The court condemned her to spend the rest of her days in prison. b. The rain compelled us to stay in doors. c. The King commissioned an artist to paint a picture of the Queen. D. The conditioned the dog to jump each time it heard the bell. e. I authorized the man to act for me. f. She adjured him to tell the truth. g. The policemen directed the crowd to move. h. They excited the people to rise against the king. i. They challenged the stranger to say who she was. j. Hunger prompted him to steal. k. The doctrine was an invention to enable man to act like dogs with clear conscience. l. He can be persuaded to go back in October. m. We were invited to go back where we came from. n. He would not have provoked you [PRO to wish yourself almost blindly in his place. o. He could trust her to make deception right. p. She advised Miss Denny, as a friend, to prepare herself for the worst. q. What influenced you to do it? r. We willed him to stop.

Remark 1. Some of these verbs usually occur in the passive (participle):

(130) a. I felt moved to help. b. He felt obligated to visit his parents. c. I felt obliged to say 'No'. d. I felt constrained to do what he told me.

Remark 2. The following three verbs: *prepare, engage, bound* work according to the regular pattern, the DO acts as controller. If moreover, the direct object and the subject are coreferential, the direct object is reflexive and may optionally be deleted.

(131) a. I prepared him to do it. / I prepare (myself) to do it.
b. I engaged him to do it. / I engaged (myself) to do it.
c. I bound him to do it. / I bound (myself) to do it.

The many verbs listed in (127) form a coherent semantic class. They are mostly implicative verbs. Most of them are causative verbs (of linguistic or non linguistic causation), guaranteeing the truth of the complement clause; a couple of them are merely exercitive verbs (*summon, provoke*), which do not therefore guarantee the truth of their complement clause.

Exercitive verbs impose a constraint of non-stativity on the infinitive clause. Implicative verbs too select non-stative complements, though some of them allow the complement clause to designate the resulting state (as in (132c, d). To the extent that the infinitive complement is eventive, the controller is interpreted as an Agent or an Affected Agent, at least partly responsible for the truth of the complement clause.

(132) a. *I persuaded him [PRO-to like music]. (causative implicative
b.* I challenged him [to like music. (exercitive)
c. They conditioned him [PRO-to like music]. (causative)
d. This predisposes me to like music. (causative)

5.2.2 A second group of verbs of obligatory DO control includes operative illocutionary verbs: *appoint, elect, choose, nominate, name, vote*. They subcategorize [---DP ^ NP/DP] or [---DP ^ PP] where the P is *as*, or [–DP^CP], where the CP is an infinitive. The (second) DP/PP/ CP in these structures is not an object but a predicative constituent (object complement).

(133) We appointed / chose /elected voted him to be our leader.
We chose him as our leader.
We nominated him man of the year.
(134) We chose him to remain our president.
We appointed him to rule this country.

5.2.3. A limited number of verbs subcategorize for [--PP ^ CP], with the prepositional object controlling PRO in the CP. It is not clear whether the PRO-TO clause is an argument or a modifier: *rely on, count on, prevail on, depend on, look to*.

(135) a. You may rely on me [PRO to do it]. b. He can be depended on [PRO to do it]. You may depend on me to do my very best. d. I look to you [PRO to carry out the aims in which I myself have failed].

5.3. The class of ***verbs of obligatory indirect object control*** is much more restricted; it includes exercitive verbs (command & permission): *order, give orders, command, bid, permit, allow, grant, forbid, recommend, propose,* as well as verbs of linguistic communication used as exercitive verbs: *tell, communicate, report, answer, repeat, insinuate, suggest, mention.* The IO may be prepositional (136) or the verb may be used in the double object construction, with the infinitive clause as the second object. (137). The Infinitive clause may be extraposed, as in (138):

(136) Who suggested it to him? // I suggested to him [PRO-to leave by the back door]. B. She told to the servants not to announce her. (J.G) c. Hilary had written to this girl to come and see her.
(137) We recommend this book to all the beginners. b. We recommend you to buy it. c. I forbid you speak to me in that way. d. Tell them in the jungle never to forget me. e. He bade me to come in.
(138) I leave it to you to do it. I couldn't mention it to him to bring the dictionary.

5.4. Finally, lets us also examine a few verbs which take infinitive object clauses, without being verbs of obligatory control, in the sense that they allow the *for-to* pattern alongside of the PRO-to, and even with the PRO-to complement the controller is not always the same argument of the verb. The verbs under consideration are three-place predicates, where one argument is optional; they belong to the following subclasses:

a) verbs that subcategorize for [--DP ^ PP] or [DP ^ CP, such as, *beg smb. for smth, ask smb. for smth, beseech smb. for smth*., etc.

b) verbs that subcategorize for [-- NP/CP ^ PP], such as, *shout /scream /yell smth to/at smb*; *mumble smth to smb*; *request/ require/ beg / ask smth of smb*., etc.

c) verbs that subcategorize for [--PP ^ PP/CP], such as, *plead with smb. about smth*., *argue with smb. about smth*., *agree with smb. about smth*. etc.

When they are used with infinitive complements all these verbs are interpreted as exercitives, having to do with "the giving of a decision for or against a certain course of action." This is why the complement clause is non stative.

Verbs of optional control exhibit different control patterns. First they are compatible with the *for-to* construction, as in (139). Secondly, if only the main clause subject is present, then the main clause subject must be the controller, as in (140). When the PP object is present and the infinitive clause is not passive, the IO is the controller, in agreement with the Minimal Distance Principle (sentences (141)). If the infinitive complement is passive, there is control shift, and the main clause subject controls PRO, even if the IO or DO is present (sentences (142)).

(139) a. I begged / implored Bill [for Harry to be forgiven].
b. I screamed / shouted to Bill [for Harry to be allowed to leave].

(140) a. I_i begged / asked / implored [PRO_i-to go].
b. I_i requested / implored / asked [PRO_i-to be given permission to leave].

(141) a. I screamed / shouted to $Bill_i$ [PRO_i-to go].
b. I begged / asked / implored / besought $Bill_i$ [PRO_i-to go].

(142) a. I_i screamed/ shouted / to Bill [PRO_i-to be allowed to go].
b. I_i begged / asked / implored / besought $Bill_j$ [PRO_i-to be allowed to go].

When the verb is semantically symmetrical (e.g. *agree, argue*), the main clause subject and the oblique term share their privileges as controllers:

(143) I_i agreed with $Bill_j$ [$PRO_{i/j}$-to go].

6. To complete the range of syntactic functions of *for-to / PPR-to* infinitive, one should mention that they may appear as predicative clauses, attributive clauses and adverbials.

6.1. The following sentences illustrate the use of *for-to* and *PRO*-to infinitive clauses as ***predicatives***:

(144) a. The tendency was for the instruction to be more specialized]. b. A solution would be [for the shops to open at noon]. c. To admire oneself is to deceive oneself. d. What she hadn't asked him then was [PRO to sate to her where and how he stood for her]. d. The obvious thing now, if his torch would last long enough, was [PRO to fetch help].

6.2. *For-to* and *PRO-to* complements may appear as ***attributes*** (actually, complements of nouns) with both abstract underived nouns (e.g., *right*, *idea*, *power*, *instinct*) and with nominalizations (e.g., *ability, capacity, wish, desire, hope, expectation*). Here are a few examples:

(145) a. I had no desire [PRO-to revive old memories]. b. We believed in the American dream, and in their power to make that dream come true]. c. He knew that Mrs. B. had no right to be thus addressed.

6.3. As to the use of infinitive complements as ***adverbials***, the following situations are more common:

6.3.1 First the infinitive clause may be a noun complement in a PP which is standardly used as a "conjunctive phrase": *in order to, on purpose to, with intent to*, etc. Sometimes, no introductory element is present.

(146) a. I am going there earlier *in order* [PRO-to get a good seat]. b. I went into the shop [PRO-*to* buy some cakes].c. I went there myself *on purpose to* know the truth of it. d. He was brought up on charge of forging and altering securities, *with intent* [PRO-*to* defraud].

6.3.2 Infinitive clauses frequently function as adverbials of result in comparative structures based on the degree determiners *too* or on the quantifier *enough*.

(147) a. The brown paper is too thick to light the fire with. b. The river is too deep to wade across. c. This burden is too heavy to put upon a fallible mortal. d. The weather was too severe for them to be out. e. He wasn't rich enough for her to marry him. e. She is lucky enough to have a servant who does the heavy work.

The complement clause depends on the degree determiner *too* or the quantifier *enough*, as is illustrated below:

(148) a. It is too good to be true.
b. * It is [ ] good to be true.
c. He is old enough to know better.
d. * He is old [ ] to know better.