FUNCTIONAL CATEGORIES IN COMPLEMENTATION

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0. Introduction

This chapter examines the role played by several functional categories in complementation. Given space limitations and the extreme proliferation of functional categories in recent analyses, our scope will only cover some of the major areas in complementation. Section 1 will be devoted to CP; section 2 approaches some classical issues in tense and mood in subordination. Finally, in section 3, we turn to functional categories such as Negative Phrases and Focus Phrases.

1. Complementizers and the CP complex

This section will concentrate on the role of complementizers and their projection in subordination. We will describe formal markers of subordination (1.1), movements of various elements to the head C and its specifier (1.2), and features the head C may host (1.3).

1.1. Formal markers of subordination

1.1.1. Independent complementizers

Most European languages introduce tensed complements by independent complementizers like Germanic that, dat, daß, Romance que, qui, Finnish että, Georgian rom, Megrelian namda, etc. Their appearance to the left or to the right follows the general pattern one would expect given the head parameter, especially in head first languages. However, the situation is more complex in head-last languages: those that are rigidly head final and maintain medial clausal complements usually follow the head last pattern at the CP level too, displaying clause final particles. This is the case of Abkhaz, for instance. Head-final languages which allow postverbal complement clauses, though, often possess clause-initial 'conjunctions'. This is found in many Germanic languages, in Hungarian and also in Turkish, where initial ki appears in postverbal clauses; Georgian rom and Svan ere are also initial, since tensed complements are postverbal in these languages (see Vamling, this volume). Sometimes, the expected clause final complementizer coexists with a clause initial element. Megrelian namda, clause initial, is found along with the enclitic final complementizer ni; Georgian initial rom often accompanies final -mekti, -tko or -o; finally, in earlier Basque initial ezen occurs with enclitic final -(e)la:

(1) entzunik ezen zapatagina hil z-ela ... BSQ
hearing that shoe-maker die AUX-COMP
'upon hearing that the shoe-maker had died...'

It is possible that these initial particles do not occupy any initial C position, unlike German, but Spec of CP. IP would intervene between them and the actual complementizer clitic.

1.1.2. Affixal and clitic complementizers

Many complementizers are not independent lexical items, but appear attached to other elements, most typically, although not exclusively, verbal forms: Megrelian -ni, Basque -la/-n, Bulgarian -li. A standard question which arises when confronting such clitic complementizers is whether we are dealing with phonetic or syntactic clitics, that is, whether phonetic rules fuse the complementizer to adjacent phonetic phrases or whether syntactic processes, head movement in particular, can account for the morphologically complex form.

Megrelian -ni (and the root interrogative complementizer -o, see Vamling, this volume) looks like a phonetic clitic: it occupies a clause final position in all of the examples provided there, as one would expect in a head final language, and it forms a phonetic word with the preceding element, which can be either a verbal head (inflected for tense, agreement, etc.), an NP or an Adverb Phrase. On the other hand, Bulgarian -li provides a good example of an enclitic complementizer whose position can be accounted for by independent syntactic principles. As Rivero (1993) shows, -li may occur to the right of the verb in initial position in positive questions, but it precedes the verb and follows clitics in negative questions:

(2) Pitam se izpratix li mu kniga? BLG
ask.PRES.1SG REFL send.PST.1SG Q to.him book
'I wonder if I sent him a book.'

(3) Pitam se ne mu li izpratix kniga? BLG
NEG
'I wonder if I did not send him a book.'

V moves to C in (2), adjoining to the left of the complementizer. The presence of a negative head in NEGP, which Rivero locates between C and T, blocks V-to-C raising, so -li lowers, left adjoining to the inflected verb in (3). This bound complementizer changes positions due to its interaction with head-movement processes. -li can also appear to the right of a focused constituent (cf. Comrie, this volume). This would follow if focused elements move to Spec of CP. Thus, -li can find a host if a head merges with it, or if an XP phrase specifies it. Otherwise it lowers to the inflected head.

A lowering C-to-I analysis is also proposed for Irish clause initial particles in McCloskey (1992), although the exact status of these elements is far from clear, as the review of proposed analyses in Borsley (this volume, 3.1) indicates. The apparently mixed nature of such particles, which seem to combine complementizer and inflectional functions, is not surprising given the existence of a wide variety of instances where arguably inflectional affixes mark subordination, alone or in combination with an independent complementizer. The possibility of analyzing some complementizers as affixes related to INFL rather than C is especially clear where the apparent complementizers always occur cliticized to INFL. This analysis may be appropriate for Hungarian -e, an interrogative clitic found in embedded yes/no questions and always attached to finite verbs (Kenesei, this volume):

(4) Anna nem tudja [hogy [Eszter [látta-e Pétert]]] HNG
not knows that Esther saw-Q Peter.ACC
'Anna doesn't know whether Esther saw Peter.'

The particle -e coexists with the overt complementizer hogy, and may be related to the functional category which according to Kenesei (1994) hosts Q features in Hungarian: Infl. The main problem inflectional complementizer affixes present is that of their exact status, especially unclear in a context where inflectional heads are decomposed into discreet heads.

Clitic complementizers, where they may be motivated to originate in C, unlike most clitics, are more readily seen lowering to a clausemate head than raising, which would take them to a higher clausal domain. There are few, if any, clear instances of complementizers attaching to elements in the matrix clause in European languages. Roberts (1992:60) reports that Turkish ki, which may introduce postverbal clausal complements, cliticizes to the preceding word, but claims it is a case of phonetic cliticization. In Lezgian, a verb final language like Turkish, complement clauses may be extraposed to a final position (Haspelmath 1991:63). In such cases, a particle xi, borrowed from Turkic ki, follows the matrix verb, and both are intonationally separated from the complement clause itself:

(5) Selim-a laha-na xi Nabisat šeher.di-z fe-na LZG
Selim-ERG say-AOR PART Nabisat town-DAT go-AOR
'Selim said that Nabisat had gone to town.'

An expletive analysis of the particle does not seem viable, since one would expect such expletives to occupy the preverbal object position. The fact that the particle follows the matrix predicate works against a phonological clitic approach.

1.1.3. Zero complementizers

We will first deal with cases where the complementizer is missing, but alternates with a phonetically realized overt form (complementizer deletion), turning later to cases where no overt complementizer may be realized.

English, like many Germanic languages, provides an example of a complementizer which may be omitted under some syntactic conditions, as discussed in Stowell (1981). Stowell proposed that complementizer deletion could be accounted for by the ECP: a deleted complementizer would only be possible in positions where its content could be identified by a proper governor. This accounts for the asymmetry in (6):

(6) a. I knew (that) he would be arriving on time ENG

b. *(That) he would be arriving on time was well-known

The theta-government requirement on proper government also accounted for the impossibility of deleting the complementizer in complement clauses which, arguably, are not assigned a theta-role by the matrix predicate. This can be observed in complements of manner-of-speaking verbs (7), whose lack of theta-government or L-marking (see the Introduction) is corroborated by their island status:

(7) a. Peter mumbled *(that) he had met Susan that very day

b.*Who did Peter mumble that he had met that very day?

Similar contrasts between L-marked and non L-marked complement asymmetries are also noted for Hungarian in Kenesei (1994). Although, as is well known, there are counterexamples to Stowell's analysis, the general intuition behind it seems to be correct: complementizers are far more easily deletable in complements than in adjuncts, perhaps because they are subject to recoverability, which ECP requirements enforce in different ways. In Hungarian, [+wh] complementizers which are selected and marked by the matrix predicate are deletable even in contexts which do not admit complementizer deletion with declarative complements, as shown in (8), from Kenesei (1994):

(8) Csak Emma tudja (hogy) miért merült ki az akku HNG
only Emma knows that why went-dead the battery
'Only Emma knows why the battery went dead.'

The complementizer is omissible in (8) even though hogy is not deletable in declarative complements where a matrix constituent is focalized (here csak Emma). On top of the [+wh] feature selected by the matrix, recoverability is ensured by the presence of an interrogative operator. The availability of C deletion in some modal contexts (primarily subjunctives) might be related to recoverability, in the sense that complementizers seem to host modal features or be associated with modal operators selected by the matrix predicate. Moreover, like infinitival complements, subjunctive clauses seem to be, in an intuitive sense, more closely merged with the matrix (see section 2 below). Thus, subjunctive complements, especially those with unrealized tense,provide one of the few cases where deletion is admitted in Spanish:

(9) Espero (que) sepa lo que hace SPA
hope that know.3SG.SUBJ the that make.3SG
'I hope s/he knows what s/he is doing.'

Modality also plays a role in Georgian, where the complementizer rom can only be deleted in modal subjunctive (optative) contexts, those Vamling (1989), following Ransom (1986), calls Action modality. Rom can be deleted under unmarked control cases, where Georgian tensed complements are expressed in other languages with tenseless forms, that is in (10) and (11), but not in (12):

(10) vests'rapvi, (rom) es movamzado GRG
1-3-aim-PRS that it.NOM 1-3-prepare-OPT
'I aspire to prepare it.'

(11) vtxov, (rom) es gaak'etos GRG
1-3-3-ask-PRS 3-3-do-OPT
'I ask him to do it.'

(12) vests'rapvi, *(rom) Gia gaak'etos GRG
1-3-aim-PRS
'I aspire for Gia to do it.'

As often the case, C-deletion in Georgian is only possible where the subjunctive clause is an argument, but not in the apparently identical form corresponding to a final adjunct (Vamling 1989:96). Complementizer deletion is also found in subjunctive clauses in Balkan languages like Albanian and Rumanian. In the latter, as noted in Rivero (this volume), the sequence complementizer-subjunctive particle is dialectal in complement clauses, where the complementizer is deleted, but standard in final adjunct clauses. As a final illustration of the relationship between modality and C-deletion, we may also note Salentino, a Southern Italian dialect where the subjunctive complementizer ku is deletable in like-subject contexts only (Calabrese 1991), much as in Georgian.

It is also relatively common to find subcases of complementizer deletion which seem to be due to merely stylistic reasons. Thus, Hungarian hogy is deleted in contexts where there is a sufficiently close complementizer, like interrogative ha in (13):

(13) Emma felismerte (hogy) ha Ervin nem érkezik meg bajban leszünk. HNG
Emma recognized that if Ervin not arrives PRT trouble-INE will.be
'Emma has recognized that if Ervin does not come, we will be in trouble.'

Similar effects might be involved in another of the few instances of optional complementizer deletion found in Spanish, illustrated in (14):

(14) un tema [OP$_i$ que creo [(que) debes tratar e$_i$]] SPA
a topic which think.1SG that should.2SG deal with
'a topic which I think you should deal with'

As (14) shows, the complementizer of a complement clause within a relative is optional in Spanish.

Now, we have been treating the cases above as 'complementizer deletion', but this deleted complementizer may be different from a base-generated empty complementizer. First, there are structures in which overt C is not realized, such as those where it is ruled out by a Doubly Filled Comp effect, or infinitival constructions where a CP has been assumed, such as control structures. Rizzi (1990) posited an independent empty complementizer with abstract agreement features to account for that-trace effects. In his approach, this C head provided with agreement allows for head government of the subject trace in (15):

(15) Who$_i$ do you think [$_{CP}$ t$_i$ [φ [$_{IP}$ t$_i$ will drive]]] ? ENG

The overt complementizer that would not bear any abstract features and the subject trace would not be head-governed, producing an ECP violation. If that is deleted, the 'erased' complementizer would not be expected to bear any features either, so deleted complementizers would differ from empty ones like that in (15).

1.1.4. Complementizers in tensed versus tenseless clauses

Transparent complementizers are less widespread or easy to find in tenseless clauses. A number of languages make use of distinct complementizers to introduce finite and nonfinite clauses, much like English that and for or Romance che and di:

(16) a. Dicono [che tu non capisci] ITL
say.PRES.3PL that you not understand
'They say that you don't understand.'

b. Dicono [di non capire]
COMP not understand.INF
'They say they don't understand.'

Some languages of the Scandinavian branch, have identical complementizers for finite and nonfinite clauses, at least under some interpretations, cf. Borjars (1991).

(17) a. Han lovade [att han aldrig skulle ljuga] SWD
he promised that he never should lie.INF
'He promised that he would never lie.'

b. Han lovade [att aldrig ljuga]
'He promised never to lie.'

A large class of languages, in turn, do not display overt complementizers in nonfinite sentences, but there is often indirect evidence for positing a null complementizer. Kornfilt (1993) argues on the basis of Rizzi's (1991) Wh-Criterion, which requires that a wh-operator be in Spec-Head relation with a [+WH] head and vice versa, and the PRO Theorem, which disallows governed PRO positions, that both simple and interrogative nonfinite clauses are CPs that contain a covert final complementizer. Head-movement will guarantee that the verbs move across the head of IP into C at S-structure.

(18) a. Ahmet [$_{CP}$ [$_{IP}$ PRO bir kitap oku-mak] C] isti-yor TRK
[-WH]
a book read-INF want-PRES
'Ahmet wants to read a book.'

b. [$_{CP}$ [$_{IP}$ Parti-ye kim-in gel-di -in] C] -i bil-iyor-um
[+WH]
party-DAT who-GEN come-DIK-3SG ACC know-PRES-1SG
'I know who came to the party.'

It is the analogy between the DP and the CP, as proposed most recently in Szabolcsi (1994), that calls for a CP analysis of at least one type of infinitival clause in Hungarian, the one with a dative marked subject, cf. Kenesei (this volume). Just as possessors in DPs are marked dative by the D head of the phrase, so are infinitival subjects of CPs case-marked by the C head of the clause, whether Agreement is overt, as in the (a) example, or not as in the (b) sentence.

(19) a. Lehetett [$_{CP}$ Péter$_i$-nek C [$_{AgrP}$ e$_i$ [$_{TP}$ e$_i$ úsz$_j$-ni-a [$_{VP}$ e$_i$ e$_j$]]]] HNG
was-possible Peter-DAT swim-INF-3SG
'It was possible for Peter to swim.'

b. Lehetett [$_{CP}$ Péter-nek$_i$ C [$_{TP}$ $\underline{e}_i$ úsz$_j$-ni [$_{VP}$ $\underline{e}_i$ $\underline{e}_j$]]]
swim-INF
'It was possible for Peter to swim.'

1.1.5. Complementizers in root clauses

It is a fairly general observation that matrix sentences with neutral speech act values, i.e. in the indicative, have no overt complementizers. When, however, they serve to express questions, commands, exclamations or wishes, complementizers surface in a large number of languages. It thus seems reasonable to suppose that the markedness of nonneutral sentences is localized in the head of the CP. The choice of the items that occur in the relevant positions is highly limited. Main clause questions, just like embedded ones, can have a complementizer different from noninterrogatives, as in Catalan (Hualde 1992), Gascon (Campos 1992) and Estonian (Kenesei, this volume).

(20) a. Kas oni ujub? EST
COMP uncle swims
'Is the uncle swimming?'

b. Que vols més patates? CAT
COMP want.2SG more potatoes
'Do you want more potatoes?'

c. E dromen los mainatges ŕ l'internat? GSC
INT sleep the children at the dormitory
'Do the children sleep at the dormitory?'

The complementizer that is ordinarily used to mark indicative complement clauses often occurs in root clauses with various meanings, such as imperative (21) or exclamation (22). For the indicative complementizer in Gascon root clauses, see 1.1.6 below. For the sources of some of the examples, see Hualde (1992:27f) and Radford (1988:297).

(21) a. Daß du ja die Füße vom Tisch läßt! GER
COMP you yes the feet off table keep
'Keep your feet off the table!'

b. Que et portis bé CAT
COMP 2SG behave.SUBJ well
'Behave yourself'

c. Datoz-ela guztiak! BSQ
come-COMP all
'Let them all come!'

(22) a. At du junne gøre det! DAN

COMP you could do it
'How could you do such a thing!'

b. Qu'elle est bavarde! FR
COMP-she is talkative
'What a chatterbox she is!'

c. Zer liburu erosi du-en Jonek! BSQ
What book bought has-COMP Jon.ERG
'What a book Jon has bought!'

e. Hogy mennyien eljöttek! HNG
COMP how.many came
'What a lot of people have come!'

In addition to alternative questions illustrated above in (20), overt complementizers can surface in wh-questions and wh-exclamations as well.

(23) a. Où que tu vas? (Nonstandard) FR
where COMP you go
'Where are you going?'

b. Wat oft ik drinke woe? FRS
what COMP I drink would
'What would I drink?'

(24) a. Che belle gambe che hai! ITA
what beautiful legs COMP have.2SG
'What beautiful legs you have!'

b. quina patum que ets CAT
which hotshot COMP be.2SG
'What a hotshot you are!'

If there is no overt complementizer in a root clause, its presence can be inferred by identifying the landing sites of head-movement, as is well-known from structures containing wh-questions or other preposed constituents as illustrated below.

(25) a. $[_{CP}$ what$_i$ $[_C$ can$_j$ $[_{IP}$ you $\underline{e}_j$ $[_{VP}$ see $\underline{e}_i]]]]$ ENG

b. $[_{CP}$ Heute$_i$ $[_C$ ist$_j$ $[_{IP}$ Hans $\underline{e}_i$ angekommen $\underline{e}_j$ $]]]$ GER
today is arrived
'Hans has arrived today.'

1.1.6. CP recursion and C-splitting

The verb-second (V2) phenomena of Germanic languages are analyzed by fronting a topicalized phrase and moving the inflected verb into C, as shown in (25b). In subordinate clauses, however, the C position is occupied by the overt complementizer, which precludes head-movement to C, consequently V2. The exceptions to the prohibition of V2 in embedded sentences in Frisian and Mainland Scandinavian have been accounted for by CP recursion in Vikner (1995), Authier (1992) and Iatridou and Kroch (1993).

In the Frisian and Danish examples below V2 is shown to be possible in complement clauses.

(26) a. Pyt sei [dat my hie er sjoen] FRS
said COMP me have he seen
'Pyt said that he had seen me.'

b. Peter troede [at den film havde Marie ogsĺ set] DAN
thought COMP that film had also seen
'Peter thought that Mary had also seen the film.'

It is supposed that whenever the matrix verb governs the clause it licenses the recursion of a semantically empty complementizer, which is deleted at LF, in the following schematic fashion:

(27) [V [CP_1 [CP_2]]]

The regular complementizer occupies C_1, and topicalization targets the Spec of CP_2, while the tensed verb moves into C_2. CP-recursion is blocked in adjuncts, sentential subjects, relative clauses and complex NPs, as well as in indirect questions, irrealis clauses, and complement clauses to negative verbs, all of which have semantically nonempty complementizers. The languages, such as Icelandic and Yiddish, which have V2 in clauses not licensed in Frisian and Mainland Scandinavian, are analyzed by (1991) also as instances of CP-recursion, but Iatridou and Kroch (1993) claim that they topicalize phrases into the Spec of IP instead. (See Rögnvaldsson & Thraínsson (1990) for an alternative analysis of Icelandic, and also Rivero and Roberts (this volume).)

(28) a. Ég vil [aδ á morgun fari María snemma á fætur] ICE
I want COMP tomorrow go early on feet
'I want Mary to go on foot tomorrow.'

b. Er vil [az morgn zol ikh geyn in krom] YID
he wants COMP tomorrow should I go to store
'He wants me to go to the store tomorrow.'

Other proposals suggest different ways in which the complementizer system can be divided: Branigan (1992) opts for a πP, while Campos (1992) favors a PrP (for Propositional Phrase) in Gascon, where subjects can precede what appears to be the indicative complementizer in root clauses.

(29) a. He is the man [$_{CP}$ to whom [$_{\pi P}$ under no circumstances
would [$_{IP}$ I give flowers]]] ENG

b. [$_{CP}$ [$_{PR"}$ Miqueu [$_{PR}$ que [va tau Mont de Marsan]]] GSC
Miquču COMP goes to.the Mont de Marsan
'Miquču goes to Mont de Marsan.'

On the basis of data from (other) Germanic languages, Shlonsky (1992) and Platzack (1994), among others, argue for an AgrcP between CP and AgrsP. This functional category with an argument position in its Spec can be used to account for agreeing complementizers in West Flemish, as well as the matrix order of unstressed pronouns in German, and multiple complementizers in Dutch and Scandinavian. The following illustrate.

(30) [da-n-k (ik) morgen goa-n] WFL
COMP-1SG-I I tomorrow go-1SG
'that I am going to go tomorrow

(31) a. Das Kind/Es hat das brot gegessen GRM
the child/it has the bread eaten
'The child/It has eaten the bread.'

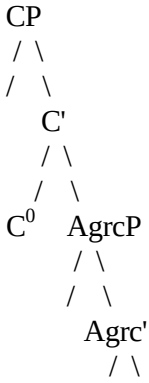
b. Das Brot/*Es hat das Kind gegessen
'The child has eaten the bread/it.'

(32) a. Det verkar [som om han inte var sjuk] SWE
it looks COMP COMP he not was sick

b. Hij wet [welke jongen of dat je gezien hebt] DUT
He knows which boy COMP COMP you seen have

In the West Flemish example the subject agreement marker and the subject clitic justifies the introduction of an AgrcP. The German examples receive a natural explanation if only stressed pronouns can occur in nonargument positions; then subject pronouns are locally moved into Spec or AgrcP, while object pronouns would have to be placed in Spec of CP through A-bar movement. Split complementizers, which are either root or selected by bridge verbs (and not by C^0), would be accommodated in structures like the one below. For more details on verb movement, see Rivero and Roberts (this volume).

(33)



/ \
Agrc^0 AgrsP

Note that Breton and Welsh also have CP-recursion as seen in Borsley (this volume).

1.2. Movements in CP

A large class of movement operations mark out the head or the Spec of CP as the landing site of movement. Since one cannot do justice to competing analyses of possible phenomena involving CP positions in the limited space available, the overview given will be arranged according to what items may move in which position in the relevant groups of languages.

1.2.1. Movements to C

Movement into C^0 can be substitution or adjunction. Since perhaps the most important difference between matrix and embedded clauses consists in the absence versus presence of a complementizer, instances of head movement to C by substitution are primarily attested in matrix sentences, and in particular, questions, in which the inflected verb occupies the otherwise empty C position in a number of languages. Verb-second languages move the inflected verb into the matrix C along with the preposing of some other constituent into the Spec of CP, as illustrated below.

(34) a. [$_{C'}$ Will$_i$ [$_{IP}$ Jeff $\underline{e}_i$ come tomorrow]] ENG

b. [$_{CP}$ When$_j$ [$_{C'}$ will$_i$ [$_{IP}$ Jeff $\underline{e}_i$ come $\underline{e}_j$] ENG

(35) a. [$_{C'}$ Hast [$_{IP}$ du das Buch gestern gelesen $\underline{e}_i$]] GRM
have you the book yesterday read
'Did you read the book yesterday?'

b. [$_{CP}$ Das Buch$_i$ [$_{C'}$ hast$_j$ [$_{IP}$ du gestern $\underline{e}_i$ gelesen $\underline{e}_i$]]
'You read the book yesterday.'

Though substitution is not excluded in complement clauses, it is restricted to certain bridge verbs in Germanic, see Roberts (1991) and references therein. For the discussion of verb-second phenomena, as well as movement of nonfinite verbs (i.e. Long Head Movement), see Rivero and Roberts (this volume).

In the languages where head movement to C is realized as adjunction, embedded questions can, for example, be formed by this device. In Russian the enclitic -<u>li</u> is optional in matrix questions, but it is obligatory in embedded interrogatives. In the most neutral case, it is the embedded (inflected) verb that moves onto -<u>li</u>, which functions as the interrogative complementizer since its indicative counterpart, <u>to</u> cannot surface in question clauses, cf. King (1993).

(36) a. [$_{C'}$ Pro itala$_i$ (-li) [$_{IP}$ ona $\underline{e}_i$ etu knigu]] RUS
read.PAST.FEM Q.COMP she this book-ACC
'Has she read this book?'

b. Petr sprosil [pro itala$_i$ *(-li) ona $\underline{e}_i$ etu knigu]
asked
'Peter asked if she had read this book.'

A similar operation of verb movement to C is observed in other Slavic languages, such as Bulgarian, cf. (2) and (3) above. Finally, instances of Aux-movement can also involve the complementizer or its position. As Cardinaletti and Cinque (1994) argued, movement of the clitic+aux complex in French and Italian targets the head of CP:

(37) a. [Se [Gianni lo avesse programmato in anticipo]] ITA
if it had programmed ahead
'If Gianni had programmed it ahead, ...'

b. [[Lo avesse]$_i$ [Gianni $\underline{e}_i$ programmato in anticipo]]
'Had Gianni programmed it ahead, ...'

Note that the C-substitution in the (b) example is very much like the movement of Aux in its English translation, available only in embedded clauses.

1.2.2. Movements to Spec of CP

The Spec of CP is a nonargument position and is regularly identified as the landing site for wh-movement and/or topicalization, the latter especially in the V2 languages (see also Rudin (1988) for parametric variation in this respect). In accordance with current principles of grammatical theory, we assume that items are lexically or otherwise marked for the appropriate features (e.g. [+wh] or [+topic]), which have to be checked against the C head in this case at the level of Phonetic Form, thus ensuring overt movement. Note that feature checking works identically for the instances of head movement outlined above, where the head of IP can be marked for [+wh] and checked in C. For some languages, e.g. English or Greek, it is sufficient for there to be a single wh-phrase in the Spec of CP at PF; indeed there cannot be more than one there. Other languages, such as Bulgarian or Rumanian, have to prepose all wh-phrases in overt syntax, and according to Rudin (1986), one wh-phrase is placed in the Spec of Comp, the other is adjoined to IP. For more, see Rivero (this volume).

(38) a. I wonder [$_{CP}$ where$_i$ [$_{C'}$ you bought what to whom $\underline{e}_i$] ENG

b. Den ksero [pjos [pije pu]] GRK
NEG know who went where
'I don't know who went where.'

(39) a. Ne razbiraš [$_{CP}$ na koja ^{v}zena$_i$ kakâv mâ$\rangle_j$ [$_{C'}$ $\underline{e}_i$ trjabva $\underline{e}$i]] BLG
NEG understand.2SG to which woman what man is.necessary
'You don't understand what kind of man which woman needs.'

b. I-am arâtat [care$_i$ pe unde$_j$ [bânuiesc RUM
him-PF.PRES.1SG showed which about where think.1SG

[câ $\underline{e}_i$ a trecut granita $\underline{e}_j$]]]
that PF.PRES.3SSG crossed border.the

'I showed him which one I think crossed the border where.'

It is well known that a prohibition against 'doubly filled complementizers' precludes the cooccurrence of a wh-phrase and the head of CP in English and a number of other languages, such as Georgian or Megrelian, cf. Vamling et al. (this volume). Other languages, e.g. Scandinavian (except Icelandic), either allow or make it obligatory to have double complementizers, thus displaying some kind of reversed doubly filled COMP effect, cf. Borjars (1991).

(40) a. Hon visste inte [vem (som) Oscar hade sett] SWE
she knew not who COMP had seen
'She disn't know who Oscar had seen.'

b. Hon frĺgade [vem *(som) ringde pĺ dörren] SWE
she asked who COMP rang on door.the
'She asked who had rung the door bell.'

Since the occurrence of the complementizer is 'subject-dependent', the phenomena illustrated here seem to be related to the issue of the split complementizer discussed in section 1.1.6.

There is yet another group of languages that allows overt complementizers alongside with preposed wh-phrases. But although they also move wh-phrases into the left periphery, they do not fall under either option outlined so far. In particular, Finnish and Hungarian, and possibly Basque, can be argued to have nonargument positions distinct from Spec of CP, cf. Kenesei (this volume) and Ortiz de Urbina (this volume).

(41) a. Jukka kysyi [että mitä$_i$ (-kö) [Pekka luki $\underline{e}_i$]] FIN
Jukka asked COMP what.PRT Q Pekka read
'Jukka asked what Pekka had read.'

b. Péter nem tudta [hogy mit$_i$ [olvasott Pál $\underline{e}_i$]] HNG
not knew COMP what.ACC read
'Peter didn't know what Paul had read.'

c. Ez dakit [noiz heldu d-en Jon] BSQ
NEG know when arrive AUX-COMP Jon
'I don't know when Jon has arrived.'

Since in at least Finnish and Hungarian the wh-phrases are placed to the right of the general (tensed) complementizer, they cannot be in Spec of CP. For more on this, see below in section 3.5.

1.3. C features

Many of the movements described in the previous section have been related to the ability of the head C to host a large variety of features and/or operators for questions, agreement, negation, emphasis, mood, command, etc. We will review some of the major features in this section, along with some of the problems they present.

The C-feature that has received greatest attention is that found in interrogative contexts, both root and embedded. This is also the complementizer with richest overt manifestations, again both in root and embedded contexts. Actually, not any interrogative [+wh] C element may surface overtly: by far the most common one is the one cooccurring with yes/no operators. Given that many languages do not allow complementizer heads cooccurring with wh-words (the central part of the Doubly Filled Constraint) it is not so easy to isolate an overt interrogative complementizer in partial interrogative complements. Perhaps surprisingly, many languages which do not obey such filter exhibit standard declarative complementizers along with the wh-word, as in one of the standard cases illustrated below, Flemish (from Haegeman 1991):

(42) Ik weet niet wie dat Jan gezien heeft FLE
I know not who that Jan seen has
'I don't know who Jan has seen.'

Similarly, dass occurs in Bavarian indirect partial questions, that in Early English relative clauses along with the wh-relative operator, que in Quebec French indirect questions, etc. Dutch, on the other hand allows both [+wh] of and [-wh] dat. It is therefore yes/no questions that usually display specialized CP elements: English whether/if, Welsh a, Breton ha, Romance se/si, Polish czy, Bulgarian (da)li, Rumanian daca, Greek an, Estonian kas, Megrelian -mej, etc. In principle, such elements may be overt yes/no operators in Spec of CP, cooccurring with covert C elements like other interrogative operators, or overt realizations of the [+wh] C. Kayne (1991) argues that whether is an operator, while if is a C. If lexical C head governs PRO, control would be blocked with if but not with the operator whether:

(43) I don't know whether/*if PRO to go ENG

The same test signals French si as a C element. The interaction of Bulgarian -li with other heads and phrases suggest that this is also a complementizer (Rivero 1993). One would then expect Early English to allow whether that sequences, but not if that, and Quebec French would also disallow si que sequences, unless, of course, recursive CPs are possible.

In many languages where relative operators coincide with interrogative ones, relative clauses are similar to indirect wh-questions, and, unless the Doubly Filled Comp filter is not in effect (as in Early English), the C position will be empty. But relativized NPs may also be represented in ways similar to yes/no questions, where an empty operator occupies Spec and C is overt (and apparently [-wh], like English that or Romance que).

The usage of full alternative forms (Adyghe, Kabardian), or reduced 'or not' tags is common in many languages for yes/no embedded questions. These tags can often improve the

acceptability of tenseless polar questions, missing in several languages (Celtic, see Borsley, this volume). Thus, in Basque, which does not have overt yes/no operators and complementizers only appear in tensed clauses, only the tag ala ez 'or not ' may salvage the infinitival question in (44):

(44) Ez dakit joan *(ala ez) BSQ
not know go or not
'I don't know whether to go.'

Where, as in (45), the overt element in a yes/no indirect question is a complementizer, an empty operator is assumed to occupy Spec:

(45) Ez dakit [OP [ni joango naiz]en] BSQ
not know I go.FUT AUX.COMP
'I don't know whether I will go.'

We have discussed affixal complementizers above, some of them occurring in interrogative contexts. Finno-Ugric languages display yes/no particles which may be claimed to originate as heads of functional projections lower than CP, like Finnish -ko or Hungarian -e. These bound particles can coexist with overt complementizers (see below, section 3.2). -ko is analyzed as the head of a Focus Phrase. Hungarian -e only attaches to verbs. The fact that these wh-particles are distinct from the head of C may be a consequence of the availability of a landing site for wh-words other than C. Thus, the functional head hosting the [+wh] feature is claimed to be Focus in Finnish and INFL in Hungarian.

Another C-feature which often surfaces with a specialized overt form is that for modality. A case in point is that of several Balkan languages, which often display both modal particles and subjunctive complementizers. Thus, in Greek subjunctive oti contrasts with subjunctive na; the Rumanian complementizer cî is used in subjunctive contexts, sometimes along with the modal particle ∏î, as opposed to the indicative complementizer cî. Albanian uses që as a general complementizer and restricts se to indicative complements (see Rivero, this volume). The modal sensitivity of complementizers is expected, since different predicates may select for the modal inflection of their complements and the distance between the two is mediated by the head of C (see sections 1.1.6 and 2). Further functional categories may intervene, and these too may behave as links of this modal chain. Thus, Rivero (this volume) considers modal particles in Balkan languages to be functional heads projecting their own Modal Phrase. In the following Albanian example we find several mood-sensitive functional heads: C, the modal particle, NEG and the embedded INFL:

(46) Unë dua që Brixhida të mos kendojë ALB
I want that Brigitte MP neg sing.PRS.3SG
'I want Brigitte to sing.'

Apparently modal complementizers are generally found in many Slavonic languages (reviewed in Comrie, this volume), although they are morphologically complex sequences made up of a complementizer plus the modal particle by: Russian _toby, Polish ⎜eby (which may also be found with infinitives), Czech, Slovak aby. etc. These may be the result of a head movement of the modal particle by.

Closely related to modal complementizers are those which seem to host features for the truth-value of the complement. Although this may be expressed by mood (see section 2 below for subjunctive in Icelandic) the clausal head C is cross-linguistically a common locus for overt marking. Such information validating features receive an overt realization in languages like Russian, where the complementizer budto distantiates the speaker from the truth value of the complement.

The C head may also encode information as to whether the complement is presupposed or not. Thus, it is not uncommon to find special complementizers with factive complements. Continuing with Slavic languages, Serbo-Croatian uses što for factive complements, rather than da (Comrie, this volume). Factive-emotive complements may occur with the complementizer wos in Modern Yiddish, alongside with general az (Taube 1994). Since Kiparsky and Kiparsky (1971), it has been clear that factive complements often have nominal characteristics. Morphologically, determiner-like elements occur in factive complements in Portuguese (Raposo 1987:97) and in Biscayne Basque (Ortiz de Urbina, this volume). See Borsley, Kornfilt and Vamling for >nominal= clauses.

Raposo discusses factive complements with inflected infinitivals in Portuguese and concludes that they lack CP and are actually transparent to government of the embedded INFL by the matrix, accounting thus for the absence of inversion in (47), produced by INFL-to-C in non-factive complements like (48):

(47) Nós lamentamos o eles terem recebido pouco dinheiro PRT
we lament the they have.3PL received little money
'We lament that they have received little money.'

(48) O Manel pensa terem os amigos levado o livro PRT
the Manel thinks have.3PL the friends taken the book
'Manel thinks that the friends have taken the book.'

In contrast, tensed presupposed complements like the one in the Basque example (49a) are less transparent than other declarative complements:

(49) a.*Ez dute sinisten Jonek ezer erosi du-en-a BSQ
not aux believe Jon.ERG anything bought AUX-COMP-DET
'They don't believe that Jon has bought anything.'

b. Ez dute sinisten Jonek ezer erosi du-en-ik
AUX-COMP-PRTV
'They don't believe that Jon has bought anything.'

c.*Nork ez dute sinisten ezer erosi du-en-a
who not aux believe anything bought aux-comp-det
'Who don't they believe has bought anything?'

As is well-known, negation of the matrix verb does not affect a presupposed complement, so the complement in (49a) is outside of the scope of negation and the negative polarity item ezer 'anything' is not licensed. This contrasts with (49b), where the same item is succesfully licensed,

since the embedded clause is interpreted under the scope of negation (and/or contains a negative feature in the complementizer: Laka 1992). One way of accounting for the scopal facts is to claim that presupposed clauses, like specific phrases, raise at LF, so that the polarity item would not be c-commanded by the matrix negation at LF in presupposed complements (Uribe-Etxebarria 1994). (49c) also shows that extraction is not possible out of presupposed -na clauses in Basque, perhaps as a function of the extra phrase headed by the determiner. Similarly, complementizer deletion is difficult in English and Germanic in general with factive complements and, crucially, also with noun complements.

According to Laka (1992), (49b) illustrates the overt realization of another feature of COMP: [neg]. Similar claims have been made for English lest or Latin ne, although the label 'negative complementizer' is applied to rather different phenomena (see Vincent 1992, Roberts 1992, and section 3.1 below.).

In a theoretical framework in which many syntactic phenomena are accounted for in terms of features that have to be checked, C has figured prominently as host of several abstract features that trigger head-movements targetting C and/or phrasal movement targetting its specifier (see section 1.2, and Rivero and Roberts, this volume, for V2). The existence of abstract agreement features in C figures prominently in Rizzi's (1990) account of that-trace effects (cf. section 1.1 above). In the case of English, the overt morphological manifestation of [AGR] in C would be the alternation that/φ. Similarly, the que/qui alternation in French reduces to the same phenomenon, and the different value for the agreement features of C would be morphologically reflected. Roberts (1992) further shows that there might be two null complementizers, one [+AGR], head governing subject traces in that-trace contexts, and a [-AGR] one found with subjunctive contexts like (50):

(50) ??The man who I require φ t be here ENG

[-AGR] C can no longer salvage the trace (although this seems less severe than an ECP violation). This would mean that subjunctive complements have a [-AGR] feature, differing from indicative ones. And this in turn fits quite well with the cross-linguistic evidence that shows that mood can (indirectly) have a reflection in the morphological shape of the complementizer. This link between mood and [AGR] features in C can also be observed in the behaviour of inflected infinitives like the ones in (47) and (48) above: the agreeing inflected complementizer is attracted to C with complements of verbs which take indicative complements like pensar 'think', while those that take subjunctive [-AGR] like lamentar 'lament' do not attract the agreeing infinitive.

C may also host illocutionary features other than [∀wh], such as Exclamation and Imperative. Imperative features manifest themselves both in the appearance of overt imperative particles and in the existence of V-movements that target C in imperatives (as seen in Belfast English go you away or in the usage of enclisis in French imperatives). Rivero (1994) and Rivero and Terzi (1995) claim that C in some, though not all, languages with morphological imperative hosts a strong feature for commands. Imperative verbs must then move to C. If independent factors prevent movement to C in such a language, a surrogate form is used, with a morphological shape not specific to commands, and which, therefore, need not raise to C to be licensed. This is the situation of Modern Greek and Spanish. Morphological imperatives in these languages cannot be negated (b):

(51) a. Ven! SPA
come.IMP
'Come!'

b.*No ven
not

c. No vengas!
come.SUBJ.2SG
'Don't come!'

(52) a. Diavase! GRK
read.IMP
'Read!'

b.*Den/mi diavase!
not

c. Den diavases
read.IND.2SG
'Don't read!'

Instead, the surrogate, non-specific forms in (c) must be used. If NEGP stands betwen CP and IP, and V cannot incorporate Neg on its way to C, NEG will stand as a minimality barrier that V cannot bypass. Since the imperative morphology cannot be licensed, a surrogate form is used.

Illocutionary features are properties of root C's: [+wh] and [+command] can only be freely available in that position. While verbs may select interrogative complements, it seems that verbs of command do not usually select C with the [command] feature: imperatives are excluded from such contexts in Spanish (although not in Ancient Greek, for instance). In Spanish, the surrogate subjunctive forms are used instead, with the usual subjunctive properties of disjoint reference, etc. (see below section 2):

(53) Juan_i ordena que pro_j venga SPA
orders that pro comes.2SG.SUBJ
'Juan orders (him/her) to come.'

As Rivero (1994) observes, this parallels V2 phenomena: C is already occupied by the complementizer que. Illocutionary features like [+wh] or [command] differ from other features in that they may be independent C features, not necessarily related to selection from the main verb. Modal features pattern in a similar way, giving illocutionary readings in root contexts.

Roberts (1992) points out that many of the C features reviewed here can also be found in other categories, or can be treated as other categories such as NEG, AGR, etc. raising the question of whether there are any features intrinsic to C.

2. Inflection and functional categories

Given the proliferation of functional categories and their crucial role in accounting for 'inflectional' facts, it would not be feasable to give even a brief account of the major issues related to this section's topic. We will therefore restrict our attention to just two classical areas in complementation, mood and tense. We will try to see how functional categories may provide interesting approaches to some of the basic data related to mood and tense.

2.1. Mood

Many European languages present different modal paradigms in their complements, which serve to express semantic distinctions such as assertion vs. non-assertion, negative vs. positive propositional attitude, realis vs. irrealis, etc. (see relevant section in the Introduction, and also Noonan 1985 for a survey). Predicates that belong to the relevant semantic classes are said to license the appearance of one type of mood over the other. In this section, we will concentrate on subjunctive complements. Mood is usually expressed by a specific inflection, and, in principle, the same categories (AGR and TNS) which play a role in indicative complements should account for syntactic phenomena prominent in subjunctive complements. Mood Phrases have been proposed for Balkan languages, but not on the basis of subjunctive inflection per se, but to accomodate mood-specific particles, which can be interpreted as heading their own MP projections. The existence of an extra functional head may explain the absence of clitic climbing in Greek (54), so that the M head would have the same effect as the complementizers in Spanish (55):

(54) *I Maria to prospathise na grapsi GRK
det Maria 3SG.ACC wants PRT write
'Maria wants to write it.'

(55) *Juan los_i quiere que Pedro escriba t_i SPA
Juan them wants that Pedro write.SUBJ
'Juan wants Pedro to write them.'

Terzi (1994) uses Brindisi Salentino to show that the unacceptability of (54) is due to the extraction over an MP projection, rather than out of a tensed clause. Brindisi Salentino allows for the deletion of the subjunctive particle ku, which Terzi analyzes as a modal head. When deleted, clitic climbing is possible out of the tensed subjunctive clause:

(56) a. Voggyu (ku) lu kattu SAL
want.1SG PRT it buy.1SG
'I want to buy it.'

b.*Lu voggyu ku kattu

c. Lu we katti
it want.2SG buy.2SG
'You want to buy it.'

Since clitic climbing is possible out of a tensed clause in (56c), AGR and TNS are claimed not to block CC in (54) either; rather, the modal head does. If ku is interpreted as a complementizer, the unacceptability of (56b) would immediately follow, but not the acceptability of (56c). More factors may be involved, since examples with deleted complementizer and clitic climbing are still ruled out in Spanish:

(57) a. Espero (que) lo hayas visto SPA
hope that it have.2SG.SUBJ seen
'I hope that you have seen it.'

b. *Lo espero hayas visto

This means that the unacceptability of (54) may be explained without the assumption that na heads a Modal Phrase, but the acceptability of (56c) is still surprising.

Leaving MPs aside, languages without modal particles would not require mood-specific functional projections. Thus, effects induced by the appearance of subjunctive inflection must be accounted for as the result of properties of other projections, typically CP and TP.

In general, the most outstanding characteristic of subjunctive complements is their apparently transparent character: elements such as anaphors, pronominals and polarity items seem to enter into relationships with matrix elements which would be blocked in indicative complements. Extraction of wh-words is also claimed to be easier from subjunctive than from indicative clauses in Slavonic languages.

To begin with negative polarity items (= NPIs), Romance languages exhibit cases where NPIs like nadie 'anybody' locally licensed by negation, appear in an embedded subjunctive clause, although they are still unacceptable in an indicative complement:

(58) a.*No dijo que Pedro vió a nadie SPA
not said.3SG that Pedro saw.IND anyone
'S/he didn't say that Pedro saw anyone.'

b. No espero que Pedro vea a nadie
hope.1SG see.SUBJ
'I don't expect Pedro to see anyone.'

The matrix negation includes the subjunctive clause in its domain licensing the NPI in (58b), but not the indicative complement in (58a).

Similarly, as discussed in Kempchinsky (1986), subjects of some subjunctive clauses display disjoint reference effects with respect to the matrix subject:

(59) a. Juan_i quiere que $\text{pro}_{*i,j}$ venga SPA
wants that comes.SUBJ
'Juan wants him/her to come.'
b. Juan_i dice que $\text{pro}_{i,j}$ viene
says comes.IND
'Juan says that he is coming.'

It looks as if the subject pronominal in the subjunctive complement is included in the binding domain of the matrix clause, precluding coreference, while the indicative clause forms an independent domain.

Extended binding domains linked to modality are also well-known in Icelandic. As Thraínsson (1990) shows, long distance reflexive binding of sig/sin is possible in subjunctive complements but not indicative ones:

(60) Jón las ţað í blaðinu að María hefði komið til sín
Jon read in the papers that M. had.SUBJ come to him
'Jon read in the newspaper that Maria had come to him.'

Here sín is coreferential with matrix Jón.

Thus, in general terms, one might say that subjunctive complements often enter into more local relations with the matrix than indicative complements. The phenomena mentioned above do not distribute equally in all languages exhibiting mood sensitivity, or even within the same language. In fact, the label 'subjunctive complement' also fails as a descriptive label: Sigurđsson (1990) claims that long distance reflexives in Faroese are possible in cases similar to those of Icelandic, even though no subjunctive mood exists in the language at present. The explanation must be found in terms of configurations of (features of) functional categories, which may or may not be directly reflected in morphological mood.

In an approach to account for some of the previous facts, Kempchinsky (1986) assumes the existence of a subjunctive operator in the COMP of volitional complements, which must be identified at LF. Subjunctive INFL identifies such operator by moving to C:

(61) $[_{CP}\ V/I_i\ [_{IP}\ t_i\ [\ t_i$

As a consequence of this movement, the minimal complete functional complex which contains the embedded subject and its governor is not the embedded IP, since INFL has been moved, but the next VP, defining the matrix INFL as the relevant CFC. This in effect extends the domain of the matrix clause to include the embedded one, preventing the embedded subject from sharing the same index as the matrix subject.

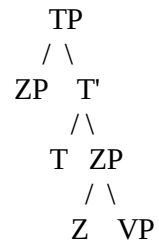
An alternative, and quite common line of research focusses on TNS as the functional category responsible for subjunctive transparency. This approach capitalizes on the apparently dependent nature of tense in subjunctive clauses (see Picallo 1984, and Kornfilt (this volume), among others). The morphology of subjunctive tenses is also quite restricted in many languages. In this line of research, this poverty would stem from the inability of subjunctive clauses to express independent tense by themselves, so that their tense would be anaphoric on the matrix tense. Progovac (1993) extends this approach, claiming that C and INFL in Subjunctives delete at LF if recoverable.

2.2. Tense and complements

Tense has played a very prominent role in linguistic theory, especially due to its role in association with Case assignment and Binding Theory. In recent years, however, there has been a revived interest in the referential content of tenses and the range of tense construals in embedded contexts, seeking to provide a syntactic basis for the notions developed in Reichenbach (1947) and for the traditional concerns with sequences of tenses (see for instance Hornstein 1990). Enç (1987) already develops a theory of tense interpretation based on anchoring, the requirement that tenses be bound within local domain to other tenses or to Comp, which holds the reference time. Thus, in the following sentence the past tense of the matrix is interpreted with respect to the utterance time, the reference time located in the ungoverned root Comp:

(62) Sally thought that John drank the beer ENG

The embedded past tense, on the other hand, is not interpreted just as a past with respect to the utterance time, but also with respect to the matrix event time: this is the 'past-shifted' reading of the eventive complement. This is so, according to Enç, because the matrix past binds the embedded Comp, providing a new reference time for the embedded past. Otherwise, ungoverned Comp would refer to utterance time. However, it is not immediately clear why Comp may have such temporal-referential content (see also Ogihara (1995) for an alternative view). In a different line of research, beginning with Zagona (1990), the emphasis has changed to assign such content to a temporal predicate taking temporal arguments, internal and external. Thus, Stowell (1994), considering also tense to have a predicative content ordering the event time with respect to a reference time, proposes a functional structure for tense roughly as in (84), where ZP stands for temporal 'Zeit Phrases', and the predicate T is a Past Tense predicate:

(63)


The event time of the complement of T is ordered before the reference time in the specifier ZP by the Past Tense predicate. Reference ZP is PRO-like: in root contexts, it is not controlled and if it refers to utterance time. In an embedded context, this PRO-like ZP will be controlled by the closest time-denoting ZP, the matrix event time. In (62) the embedded reference time is then that of the matrix event, thinking. The Past Tense in the embedded orders the event time of drinking before the reference time (thinking), obtaining the past-shifted reading. Scopal movements may place the embedded clause in different positions, varying control over the external argument PRO-ZP and generating different readings. Morphological tense is related to the head of the internal argument Z, rather than directly to T, and Stowell develops a theory of morphological tenses as polarity expressions, licensed under c-command by the Tense predicates.

As discussed in the previous section, Tense has played an important role in the explanation of some of the phenomena found in subjunctive contexts. It is often claimed that subjunctive tense is anaphoric, dependent on the matrix one. Morphologically, it seems true that subjunctive tenses tend to be far more restricted than indicative ones: in Slavonic languages, subjunctive clauses appear in a single form, identical to morphological past tense; restrictions on the tense of the subjunctive complements in Georgian and Megrelian are described in Vamling (this volume). Similarly, in Spanish verbs like querer 'want' take subjunctive complements whose morphological tense 'matches' with that of the matrix:

(64) a. Quiere que vengas/*vinieras SPA
want.3SG.PRS that come.2SG.PRS/2SG.PAST
'He wants you to come.'

b. Quería que *vengas/vinieras
want.3SG.PAST that come.2SG.PRS/2SG.PAST
'He wanted you to come.'

'Anaphoric' tense in these examples may be interpreted in the light of morphological licensing, rather than as a statement about the referential context of the elements in TP: the embedded clauses in the previous examples do have a PRO-ZP controlled by the matrix event time, and an internal event time. The two are ordered temporally in such a way that the event time occurs after the external reference time. Given that Stowell's Tense system only hinges on [∀Past] and there is no Future tense per se, it is not clear what T might be. Stowell suggests T may be empty sometimes and assigned different interpretations. In subjunctive contexts of this type there seems to be present a prospective modality, and Kempchinsky (1986) claims volitional subjunctives contain a modal operator, similar in a way to modal future in English. In fact, it is not uncommon to find in European languages prospective/final clauses expressed by subjunctive clauses exclusively marked by the complementizer or particle, without any further indication of their adjunct status (just like their infinitival counterparts in English). This is the case of Albanian, Rumanian, Georgian and Basque:

(65) Liburu bat erosi nuen nere semeak irakur zeza-n BSQ
book one buy AUX my son.ERG read AUX.SUBJ-COMP
'I bought a book (so) that my son (would) read it.'

The modal-temporal meaning by itself provides the unrealized future interpretation. With this is mind, it is not clear to what extent subjunctive clauses are 'anaphoric' on matrix tense. If this is unclear with complements to volitional predicates, it if far more dubious with other subjunctive taking predicates, such as factive-emotives, dubitatives, etc, which also have a wider range of possibilities of independent tense denotation and morphological realization (see Suńer and Padilla-Rivera 1987 for Spanish). This also casts some doubt on 'anaphoric tense' approaches to subjunctive transparency, at least for some of the phenomena illustrated in the preceding section.

On top of purpose infinitivals in languages like English, prospective/unrealized tense is also found in infinitival complements of many languages, and this temporal characteristic has been recently claimed to play an important role in the distribution of PRO (Chomsky and Lasnik 1993, Martin 1992).

3. Other functional projections

3.1. NegP and negative complementizers

Suggestions concerning functional categories in Chomsky (1986a) were followed by further articulations in Pollock (1989) and Chomsky (1989). One consequence has been the rise of a new category headed by Neg, which, together with other functional categories like Agr and Tense, serve to account for different surface constituent orders in negative clauses in English and French.

(66) a. $[_{AgrsP}$ John [Agrs $[_{NegP}$ Neg $[_{TP}$ T $[_{VP}$ understand]]]] ENG

b. $[_{AgrsP}$ John $[_{Agrs}$ does$_i$+not$_j$ $[_{NegP}$ $\underline{e}_j$ $[_{TP}$ $\underline{e}_i$ $[_{VP}$ understand]]]]

(67) a. $[_{AgrsP}$ Jean [Agrs $[_{NegP}$ Neg $[_{TP}$ T $[_{VP}$ comprend]]]] FR

b. $[_{AgrsP}$ Jean $[_{Agrs}$ ne comprend$_i$+T $[_{NegP}$ pas $[_{TP}$ $\underline{e}$ $[_{VP}$ $\underline{e}_i$]]]]

Reinterpreting Pollock's original insight in terms of current theory (cf. Chomsky (1993)), the verb has to raise ultimately to Agrs in overt syntax in French because its 'φ-features' (gender, number, case) have to be checked in overt syntax, while this not being the case in English, the verb is not forced to raise there, consequently it must not do so according to the principle of Procrastination. Thus there is a typology of languages in terms of visible verb movement to Agrs, depending on whether the morphological features of the verb have to be 'checked' in overt syntax, as in French, or such operations can be 'deferred' to Logical Form, which amounts to the absence of visible movement.

As was shown in Mitchell (1991) and Kenesei (1992), the interaction of NegP with TenseP and AgrsP is particularly well evidenced in Finnish, where a so-called negative verb occurs. The negative auxiliary ei is inflected for agreement but not for tense, and it has no nonfinite forms.

(68) a. Me lue-mme sitä kirjaa FIN
we read-1PL this book.PAR
'We are reading this book.'

b. Me e-mme lue sitä kirjaa FIN
NEG-1PL read
'We are not reading this book.'

(69) a. Me lu-i-mme sitä kirjaa FIN
read-PAST-1PL this book.PAR
'We read this book.'

b. Me e-mme luke-neet sitä kirjaa FIN
NEG-1PL read-PAST.PART
'We didn't read this book.'

(70) a. Me ole-mme luke-neet sitä kirjaa FIN
have-1PL read-PAST.PART
'We have read this book.'

b. Me e-mme ol-leet luke-neet sitä kirjaa FIN
NEG-1PL have-PAST.PART read.PAST.PART
'We haven't read this book.'

It follows from the above paradigm that agreement morphology in Finnish must be checked in overt syntax. Therefore, whenever Neg is present, it moves into Agrs. If NegP is not selected, the next highest verb, i.e. either the tense auxiliary olla 'have' or, if it is not selected, the main verb moves into Agrs (across the head of TP). Since Neg is inserted 'above' Tense, it cannot take on tense morphology, and since it is an independent verb itself, no other verb can move into its position, either by substitution or by adjunction.

Laka (1990) extends the analysis of NegP to include affirmative expressions as well with reference to data primarily from Basque, where negative and affirmative (= AFF) particles are in complementary distribution.

(71) a. Irune ba-da etorri BSQ
AFF-has arrived
'Irune has so arrived.'

b. Irune ez da etorri BSQ
NEG has arrived
'Irune has not arrived.'

The emerging category that takes the place of NegP in Laka's analysis is dubbed ΣP, and is shown to have equivalent roles in English, Spanish and other languages.

In more recent work, Laka (1992) argues for negative complementizers based on the properties of negative polarity items, such as anybody, which have to be licensed by a c-commanding negative item. In the example below the negative complementizer is selected by the matrix verbs.

(72) The witnesses denied that$_{Ng}$ anybody left the room before dinner. ENG

Again Basque provides crucial evidence here, since it has a specialized negative complementizer (see Ortiz de Urbina, this volume, and the references cited there).

3.2. Focus movement and Focus Phrase

Focus is a semantic relationship between some constituent and the proposition accommodated in a structure similar to that required by quantifiers. In other words, if focussing is 'in situ', as in English, the item focussed is moved into quantifier position at the level of Logical Form, shown in the (b) example below. Other languages, such as Hungarian, have obligatory focus movement in overt syntax. (Items focussed are capitalized.)

(73) a. Pál met PETER in the bar ENG

b. Peter$_i$ [Pál met e_i in the bar]

(74) a. Pál találkozott Péterrel a bárban HNG
met Paul.INST the bar.INE
'Pál met Peter in the bar.'

b. PÉTERREL$_i$ [találkozott$_j$ [Pál e_j e_i a bárban]
'It's Peter that Pál met in the bar.'

The languages that apply overt movement may select various A'-positions as landing sites for focussed phrases. Russian, for instance, makes use of the Spec of CP in question clauses, cf. King (1993).

(75) a. Oni sprosili [$_{CP}$ [$_C$ ušel$_i$-li [$_{IP}$ Ivan e_i v era]]] RUS
they asked left-COMP.Q yesterday
'They asked if Ivan had left yesterday.'

b. Oni sprosili [$_{CP}$ IVAN$_i$ [$_C$ li [$_{IP}$ $\underline{e}_i$ ušel v era]]] RUS
'They asked if it was Ivan that had left yesterday.'

c. Oni sprosili [$_{CP}$ V ERA$_i$ [$_C$ li [$_{IP}$ Ivan ušel $\underline{e}_i$]]] RUS
'They asked if it was yesterday that Ivan had left.'

The interrogative complementizer can have the feature +F for focus, and if some constituent is randomly assigned the feature +F in the clause, it has to be checked in overt syntax, in one version of focussing. The other version applies no movement, except for that of the verb into C, which can also be focussed, as illustrated below.

(76) a. Oni sprosili [$_{CP}$ [$_C$ ušel$_i$-li [$_{IP}$ IVAN $\underline{e}_i$ v era]]] RUS
'They asked if it was Ivan that had arrived yesterday.'

b. Oni sprosili [$_{CP}$ [$_C$ ušel$_i$-li [$_{IP}$ Ivan $\underline{e}_i$ V ERA]]] RUS
'They asked if it was yesterday that Ivan had left.'

c. Oni sprosili [$_{CP}$ [$_C$ UŠEL$_i$-li [$_{IP}$ Ivan $\underline{e}_i$ v era]]] RUS
They asked if Ivan had LEFT yesterday.'

What is at work here is again the principle of Procrastination: once a constituent (whether the inflected verb or any maximal category) marked for +F has its feature checked in CP, no other item is forced to move, and therefore their overt movement is not licensed. It follows that when the inflected verb is marked for +F, its source could be the verb itself, and then it has contrastive focus, or the inflection, when it is understood as a yes-no choice as to the proposition expressed by the clause, cf. King (1993).

Other Slavic languages do not follow the Russian pattern closely. Rudin (1986, 1990) reports that Bulgarian has a Topic position preceding CP and a Focus position following it.

(77) a. [$_{CP}$ Pismôto [$_{CP}$ dali [$_{IP}$ RADA [$_{IP}$ šte ni donese]]]] BUL
letter.the COMP.Q will us bring.3SG
'As for the letter, is it Rada who will bring it to us?'

b. [$_{CP}$ Ráda [$_{CP}$ dali [$_{IP}$ PISMÔTO [$_{IP}$ šte ni donese]]]] BUL
'As for Rada, it is the letter that she will bring us.'

While Bulgarian, according to Rudin, makes use of adjunction to focus (and topicalize) constituents, other languages can apply a functional category different from complementizers. Finnish, for example, has a position to the right of the complementizer marked optionally by a set of focussing clitics, cf. Kenesei (this volume). This is also the position into which a wh-phrase has to move.

(78) a. Matti kysyi [että JUSSI-ko luki sen kirjan] FIN
Matti asked COMP Jussi-Q read that book
'Matti asked if it was Jussi that read that book.'

b. Matti sanoi [että JUSSI-han luki sen kirjan] FIN
Matti said COMP Jussi-FOC read that book
'Matti said that it was Jussi who read that book.'

Verbs can also move into the focus position, but then no other phrase can be focussed.

(79) a. Matti kysyi [että luki-ko Jussi sen kirjan] FIN
Matti asked COMP read-Q Jussi that book
'Matti asked if Jussi had (indeed) read that book.'

b. *Matti kysyi [että JUSSI luki-ko sen kirjan] FIN

Since the position in question can be headed by a clitic that may be taken to carry the feature +F, it is reasonable to assume that the clitic determines a Focus Phrase (FP) in which constituents randomly marked for +F can be checked in overt syntax. The rest of the picture presented by Finnish is similar to that seen in Russian above. Once some item has moved to FP, Procrastination prevents any other one to follow suit, thus prohibiting (79b). Verb movement to the head of FP can be interpreted either as contrastive focus ('read rather than do something else') or as offering affirmative vs. negative alternatives for the proposition ('whether or not'). Somewhat like the case in Russian, it is not obligatory for a phrase marked for focus to move overtly in syntax. Then 'in situ' focussing by stress and intonation is applied, much like it is in English.

We note here that Brody (1990) offers an analysis of focussing (and wh-movement) in Hungarian, implemented by obligatory overt movement, in terms of FP, but others, including É. Kiss (1994) and Horvath (1995), account for focussing by positing +F in the head of the VP or IP, respectively, since there is no overt focus morphology in this language. For more on this, see Kenesei (this volume).

The position of focus in Basque is also an issue still debated. Ortiz de Urbina (1989, 1995) attributes focussing effects to the head of CP, Laka (1990) offers the head of the Assertion Phrase, ΣP, as the possible locus of the focus feature.

4. Conclusion

In this chapter we have given an overview of the functional categories determining the structure of sentences (as against those in noun phrases). Traditional notions, such as subordination, finite vs. nonfinite, tense, mood, negation and focus, are easily and systematically accommodated in the analysis presented here, which makes use of recent advances in grammatical theory.

The structure of the Complementizer complex shows a remarkable unity across languages, even though they may vary according to the placement, composition and movement into this category. While, for example, languages do not have overt complementizers in sentences with neutral speech act value, complementizers often surface in interrogatives, exclamations and the like. Movement of phrases into and across the head or the specifier of the Complementizer Phrase (CP) was discussed at length, with special attention to the various features (e.g., [∀WH], factivity, negativity, command). Mood, which is realized primarily as a distinction between indicative and subjunctive in the languages studied, was seen to interact with other factors such

as negation, movement or binding. The 'anaphoric' tense of complement clauses is controlled by the matrix tense.

Among the other functional categories, optional Negative Phrases were illustrated in Finnish and Basque, while the Focus Phrase was argued to exist in a number of languages, whether or not they have overt focus morphology.

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