MULTIPLE WH-QUESTIONS IN POLISH:
A TWO-COMP ANALYSIS

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This paper examines the structure of multiple wh-word sequences in Polish. It is shown that an analysis which permits a proliferation of COMP nodes does not account for certain distributional facts. These are better represented in a two-constituent structure which is also suggestive in accounting for extraction. Furthermore, the two-constituent analysis has motivation in an extension of "minimal c-command." Consequences for the doubly-filled COMP filter, the Absorption rule and subjacency are mentioned.

1.0 The Problem

A well-known fact about Polish is the presence of several interrogative words in clause-initial position (Wachowicz 1974, Toman 1981): more than one wh-word can appear in the same sentence and these wh-words all normally occur clause-initially. An example with a sequence of three interrogative words is given in (1) and (2).

(1)  [Kto komu co] dał?
    who-NOM who-DAT what-ACC gave
    'Who gave whom what?'

(2)  Jan pytał [Ś [kto komu co] dał]?
    John asked
    'John asked who gave whom what?'

In this paper we examine the question of how to represent such sequences of wh-words, in particular at S-structure. We first look at the COMP Proliferation Hypothesis (suggested in Toman 1981) and make use of distributional facts of Polish to argue against it. We then propose a two-COMP analysis and support it with cooccurrence and extraction evidence. The
nature of the analysis requires that we reconsider Chomsky & Lasnik's (1977) double-filled COMP filter, that we find a way to semantically interpret the resulting structure, and that we provide theoretical motivation for it.

While the analysis presented here is related to the question of subjacency it appears that neither subjacency nor a two-COMP analysis is entirely satisfactory in explaining all of the data. Rather, our approach is that both may ultimately be related in such an explanation. Our main concern is to show that the facts of Polish require two COMP positions.

2.0 The COMP Proliferation Hypothesis

Toman (1981) proposes that the complementizer system of languages such as Polish and Czech might have an arbitrary number of COMPs generated in the base. In his analysis multiple wh-questions are formed by moving wh-words into COMPs so that each wh-word occupies a separate COMP. The structure that he is suggesting looks like (3):

(3)

```
S
  |COMP
  |   S
  |COMP
  |   S
  |       S
  |        \...
      wh_1
    |COMP
  wh_j
    |COMP
  wh_k
    ...
  ...t_i t_j t_k...
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With respect to pre-S structure this analysis has several merits. One is that the doubly-filled COMP filter is not violated because no COMP is multiply-filled. Another is that there are no problems of c-command: each wh_1
c-commands its trace. We see that this solution is both simple and theoretically appealing. We claim, however, that despite its attractiveness this proposal is problematic. On the one hand, it is ad hoc; there exists no independent motivation for multiple COMP nodes in some languages and not in others. If anything, such an analysis takes away much of the empirical content of the Complementizer Universal. On the other hand, it does not stand up to a careful investigation of Polish data.

2.1 Some Relevant Data

Besides the kind of interrogatives which question constituents that are NP arguments - as in (1) and (2) above - Polish permits wh-questions which question parts of constituents - for example (4) and (5).

(4) \[ S \left[ \text{Jaką} \right] \left[ S \text{ pisziesz \left[ NP t \text{ książkę} \right]} \right] \]

'What kind-ACC you-write book-ACC'

What kind of book are you writing?

(5a) \[ S \left[ \text{Jaką o czym}_2 \right] \left[ S \text{ pisziesz \left[ NP t_1 \text{ książkę t}_2 \right]} \right] \]

and about what

(5b) \[ * \left[ S \text{ Jaką o czym}_2 \right] \left[ S \text{ pisziesz \left[ NP t_1 \text{ książkę t}_2 \right]} \right] \]

'What kind of book about what are you writing?'

In these sentences the wh-words are modifiers which are separated from their NPs. The separation is across two bounding nodes - S and NP - and this presents an apparent violation of subjacency. Note also that (4) and (5) violate the left branching condition. Despite these (apparent) violations such constructions are very common in Polish and are just as acceptable as sentences with no separation:

(6a) \[ S \left[ \text{Jaką książkę} \right] \left[ S \text{ pisziesz t} \right] \]

'What kind-ACC book-ACC you-write'

What kind of book are you writing?'

(6b) \[ S \left[ \text{Jaką i o czym książkę} \right] \left[ S \text{ pisziesz t} \right] \]

'What kind-ACC and about what book-ACC you write'

'What kind of book about what are you writing?'

Furthermore, it is not unusual to have this separation in non-wh structures.
We point out that the presence of the conjunction i ('and') is obligatory in cases where a noun can have two wh modifiers. This parallels the requirement that sequences of two or more adverbial wh-words contain i:

(7a) \[ S[Dlaczego \ i \ kiedy][S\ wyjechałeś \ t \ z \ kraju]\]

why and when you-left out of country

(7b) *\[S[Dlaczego \ kiedy][S\ wyjechałeś \ t \ z \ kraju]\]

'Why and when did you leave your country?'

This seemingly unusual fact will play an important role in arguments presented below.

2.2 Clitic Placement

One problem with the COMP Proliferation Hypothesis has to do with clitics. In Polish certain clitics such as się (reflexive) and by ('would') - but not others such as s (2sg.) - can occur after any major constituent but not within it. This is shown in the following sentences (from Toman 1981:295-6):

(8a) \[ Ten \ stary \ pan \] wczoraj się ogolić

this old man yesterday refl he-shaved

(8b) \[ Ten \ stary \ pan \] się wczoraj ogolił

(8c) *\[ Ten \ stary \ się \ pan \] wczoraj ogolić

(8d) *\[ Ten \ się \ stary \ pan \] wczoraj ogolić

'This old man shaved yesterday.'

Given this diagnostic for constituents consider the distribution of clitics among wh-words.

(9a) \[ Gdzie \ by \ kto \] poszedł?

where would who-NOM go

(9b) \[ Gdzie \ kto \ by \] poszedł?

'Who would go where?'

(10a) \[ Kto \ się \ komu \] podoba?

who-NOM refl who-DAT likes

(10b) \[ Kto \ komu \ się \] podoba?

'Who likes whom?'
Because by and się occur after each wh-word it seems reasonable to say that sequences of wh-words do not behave as single constituents and that each wh-word forms a major constituent. Consider (11).

(11a) \[[[\text{Kto}_1 \text{ by komu}_2 \text{ jak}_3 \text{ t}_4 \text{ napisać t}_2 \text{ t}_3 \text{ książkę}]]\] ?
who-NOM would who-DAT what kind-ACC write book-ACC

(11b) \[[\text{Kto komu by jaką} \text{ napisać książkę}]] ?

(11c) \[[\text{Kto komu jaką by} \text{ napisać książkę}]] ?

'Who would write what kind of book for whom?'

There are three wh-words in these sentences and the clitic attaches to the first and third but not to the second. Now take a sequence of four wh-words.

(12a) \[[[\text{Kto}_1 \text{ by komu}_2 \text{ jak}_3 \text{ i o czym}_4 \text{ t}_4 \text{ napisać t}_2 \text{ t}_3 \text{ książkę} t_4]]\] ?

(12b) \[[\text{Kto komu by jaką i o czym} \text{ napisać książkę}]] ?

(12c) \[[\text{Kto komu jaką by i o czym} \text{ napisać książkę}]] ?

(12d) \[[\text{Kto komu jaką i o czym by} \text{ napisać książkę}]] ?

'Who would write what kind of book about what for whom?'

In these sentences the clitic attaches to the first and fourth wh-words but not to the second and third. The observations in (9) to (12) lead to the generalization that in a sequence of n wh-words clitics attach to the first and n-th members of the sequence. Now, if the structure proposed in (3) is correct it should accommodate this generalization. However, (3) predicts that clitics can follow each element of a sequence of wh-words, which is clearly not the case.

2.3 Parentheticals

Like clitics, parentheticals provide a test for structure. In general, it is known that these expressions occur after major constituents. In this light consider (13).

(13a) \[\text{[S[Kto}_1 \text{ według ciebie komu}_3 \text{ co}_2 \text{ S t}_4 \text{ dać t}_2 \text{ t}_3]]\] ?
who-NOM according to you who-DAT what-ACC gave

(13b) \[[\text{Kto komu według ciebie co} \text{ dać}]] ?

(13c) \[[\text{Kto komu co według ciebie} \text{ dać}]] ?

'Who in your opinion gave what to whom?'
In a sequence of three wh-words the parenthetical appears after the first and third elements but not after the second. Again, if (3) is the correct structure we would expect that the parenthetical also follow the second wh-word.

2.4 Intonation

Syntactic constituents often correspond to intonational phrases (cf. Selkirk 1980) so that boundaries between major constituents are marked by certain tones. The following intonation facts relevant to wh-word sequences have been observed by G. Dogil (personal communication).

(14a) * Kto komu co dař ?
(14b) Kto komu co dař ?
'Who gave whom what?'

These representations indicate that breaks in intonation contours occur after the first and third wh-words but not after the second. The implication is that the second and third wh-words belong not to separate constituents but to one. The structure in (3) claims that these are separate constituents and thus predicts that one entire intonational phrase can occur on the second wh-word, in contradiction to (14).

2.5 Conjunction

We observed above that sequences of wh-words which are modifiers of N require the i conjunction (cf. (5)). However, sequences which are arguments of the verb do not have this conjunction.

(15a) * [Kto komu i co] dař ? 'Who gave whom what?'
(15b) * [Kto i komu] dař prezent ? 'Who gave whom the present?'
(15c) * [Kto i co] dař ? 'Who gave what?'
(15d) * [Komu i co] dař Staš? 'To whom did Stan give what?'

When both types of wh-words occur in the same sentence, we find the following:
In (16) the wh-words have been scrambled among themselves but two details remain constant. One is that the conjunction is always present and the other is that it remains in the same place - before the final wh-word. What appears important is that a wh-word which is an argument can occur after ᵃ in comparison with (15) where this is not the case. If anything this suggests a case of coordination: because the elements of the wh-word sequence have the same semantic function and are of the same syntactic function (i.e. [+wh]) they satisfy the criteria of Schacter's (1977) Coordinate Constituent Constraint and require an appropriate structure.

How does the conjunction fit the structure proposed in (3)? Three possibilities are given in (17).

(17)

The conjunction might be found at one of the sites 1, 2, 3. However, none of these possibilities captures the required coordinate structure.

In summary, we find that facts relevant to wh-word sequences involving
clitics, parentheticals, intonation and the conjunction \( i \) are not accommodated by the structure proposed by the COMP Proliferation Hypothesis. We need to consider an alternative analysis.

3.0 Towards a Two-COMP Analysis

3.1 A Reanalysis of Multiple Wh-Questions

Any reanalysis of the multiple wh-word data presented will have to account for the shortcomings discussed above. On the one hand, given the facts about clitics and parentheticals such a reanalysis will require two major constituents. On the other, the conjunction argument indicates that several wh-words should be related in a conjoined structure. These lead us to posit the following skeletal representations:

\[(18a)\]

(18a) accommodates the conjunction at site 2, clitics and parentheticals at site 3. However, it is suitable only if in some way it can account for the clitic and parenthetical data at 1. A solution might be to place a restriction on the second position in a sequence of wh-words, a sort of Wackernagel Position. Such a restriction is, as L. Rizzi (personal communication) points out, difficult to admit: while the Wackernagelian generalization is an interesting one it is not clear what kind of linguistic category or notion "second position" is. In this respect, (18b) is superior to (18a). Also, (18b) accommodates the basic facts: clitics and parentheticals can occur at both sites 1 and 3, and the conjunction \( i \) can be located at site 2. Thus, the shortcomings of the COMP Proliferation Hypothesis are better overcome by the (18b) analysis.

Formalizing (18b) we posit the following rules:

\[(19a) \quad S \rightarrow \text{COMP}_1 \text{COMP}_2 S \quad \text{(in UG)}\]
(19b) COMP₁ → wh  (in UG)
(19c) COMP₂ → wh*  (in Polish)

Besides generating the structure argued for above, (19) makes the claim that a rule such as (19c) is specific to Polish and that language acquisition in Polish will have to accommodate it. We elucidate further the nature of the two COMPs.

3.2 Cooccurrence

Polish has direct cooccurrence evidence for some of the elements which occupy the COMPs. Consider first wh-words and the źe complementizer in (20).

(20a) [Po co] kupiłeś tę książkę ?
    for what you-bought this book-ACC

(20b) *[Po co źe] kupiłeś tę książkę ?
    that

(20c) [Po co źeś] kupiłeś tę książkę ?
    that-2sg bought

'Why did you buy this book?'

In general, wh-words do not occur with źe - as in (20a), (20b). If the complementizer has a clitic attached to it, such as a verbal particle, the wh-word appears first - as in (20c). Sentences such as (20c), although they are considered as slang, are both acceptable and frequent in spoken Polish. Also, it seems that only one wh-word can appear before źe+clitic: more than one wh-word gives unacceptable readings.

(21a) *[Po co komu źeś] kupiłeś tę książkę ?
    for what who-DAT that-2sg bought this book-ACC
    'Why did you buy this book for whom?'

(21b) *[Komu po co i jak źeś] kupiłeś tę książkę ?
    who-DAT for what and how that-2sg bought this book-ACC
    'Why and how did you buy this book for whom?'

Hence, one wh-word occupies the position before the źe position.

Let us now look at relative clauses. The most common kind of relative is introduced by pronouns which start with the "kt" words. These have full
declension paradigms, e.g. który (masc.NOMsg.), któremu (masc.DATsg.), and
take case from the position relativized on. Exactly one (and no more than
one) relative pronoun appears in the pre-S position of a clause, and it
cannot be deleted. There are no returning pronouns. For example:
(22a) Widziałem chłopca [któremu [kupiłeś książkę t]].
I-saw boy-ACC who-DAT you-bought book-ACC
'I saw the boy for whom you bought a book.'

It is noteworthy that another kind of relative exists which involves the
invariant relative pronoun co and a returning pronoun, but we do not con-
sider it here.

The że complementizer occurs variably with relatives. Consider the
following:
(22b) * Widziałem chłopca [któremu że [kupiłeś książkę]]
(22c) * Widziałem chłopca [że któremu [kupiłeś książkę]]
(22d) Widziałem chłopca [któremu żeś [kupił książkę]]
who-DAT that-2sg bought

The relative occurs in general without the complementizer - as in (22a),
(22b), (22c). If the że complementizer carries a verbal clitic the relative
precedes że - as in (22d). This parallels the distributional evidence of a
wh-question word preceding a cliticized complementizer. Why this is so is not
clear, but it does provide evidence for the structure of COMP. On the basis
of these ccurrences we adjust the rules in (19) as follows:
(23a) \[ COMP_1 \rightarrow \{wh \{relative\} \] 
(23b) \[ COMP_2 \rightarrow \{wh^* \{że\} \] 

These rules are further borne out by extraction facts.

3.3 Extraction

It has been shown that extraction from a clause in Polish is difficult
(cf. for equatives Borsley 1981, for wh-questions Toman 1981). Thus, sen-
tences like (24) are at best marginal:
(24) ?? Gdzie myślisz [że pójdziemy t] ?
where you-think that we-go
'Where do you think that we will go?'
This is a consequence of subjacency: Chomsky (1980) suggests that in such cases \( S \) and \( S \) may be bounding categories making COMP-to-COMP movements impossible. In fact, \( S \) is not a bounding category in infinitival clauses. This is evidenced in (25), (26).

(25) \[ \frac{S}{S} \] Co \[ S \] Janek \( S \) chce \[ S \] zrobić \( t \) \]

what John he-wants to do

'What does John want to do?'

(26) \[ \frac{S}{S} \] Która \( S \) książkę \[ S \] Janek chce \[ S \] niezapomnieć \( S \) kupić \( t \) \]

which book-ACC John he-wants not-to-forget to buy

'Which book does John want to remember to buy?'

We will assume, though, that \( S \) may be a (weak) bounding category for finite clauses - along with \( S \). There are several potential counterexamples to this subjacency account. Interestingly enough, these provide important evidence for the two-COMP hypothesis.

One set of data has to do with a set of verbs which permit extraction out of a finite clause complement. Consider the following:

(27) \[ * \frac{S}{S} \] Co \[ S \] Janek myśli \[ S \] 'że \[ S \] studenci czytają \( t \) \]

what-ACC John he-thinks that students they-read

'What does John think that the students read?'

(28) Co Janek mówi \[ 'że studenci czytają ' \]

'What did John say that the students read?'

(28) Co Janek powiedział \[ 'że studenci czytają ' \]

'What did John say/tell that the students read?'

Unlike myślić ('to think'), mówić ('to say') and powiedzieć ('to tell') are bridge verbs, having the property that they delete the \( S \) of the clausal complement and replace it with \( S \). Given this property, applying wh-movement does not violate subjacency. This same argument predicts that the following should be acceptable:

(30) \[ * \] Kogo \[ Janek mówi \[ t 'że \[ policja aresztowała t \] \]

'Who did John say that the police arrested?'

(31) \[ * \] Kto \[ Janek mówi \[ t 'że \[ t aresztowali studentów\] \]

'Who did John say that arrested the students?'
Changing the wh-word to be extracted with respect to case (or perhaps gender) is somehow related to this change in acceptability. For the present purposes, what is significant is that a wh-word can be extracted from a finite complement clause. Furthermore, two wh-words cannot be extracted, as shown in the following:

(32) * [Dlaczego, co2 [Janek mówi [t₁ t₂ że [studienci czytają t₁ t₂]]]? why what-ACC he-said that students-NOM they-read

'Why what did John say that the students read?'

That only one wh-word can be extracted corresponds to the claim that one wh-word occupies the first COMP position, and suggests that COMP₁ is an extraction position. We bring other evidence to bear on this hypothesis.

Extraction from wh-islands should be blocked by subjacency. This is very much the case with interrogatives. Consider (33).

(33a) * [Na które pytanie, co2 zdecydowałeś się [t₁ t₂] on which question you-decided refl jak₂ [odpowiedzieć t₁ t₂]]? how to answer

'Which question did you decide how to answer?'

(33b) * [Na które pytanie, co2 zdecydowałeś się [t₁ jak₂ t₂] Staś odpowiedział t₁ t₂]? 'Which question did you decide how Stan answered?'

(33c) * [Jak₂ na które pytanie, co2 zdecydowałeś się [t₁ t₂] Staś odpowiedział t₁ t₂]? The wh-movement is blocked in all three cases because the wh-words cross two bounding nodes. The situation with relativization is different.

(34a) Pytanie [na które, jak₂ zdecydowałeś się [t₁ t₂] question on which you-decided refl how [odpowiedzieć t₁ t₂]] było trudne. to answer was difficult

'The question which you decided how to answer was difficult,'
The question which you decided how Stan answered was difficult.'

The wh-word crosses the same set of bounding nodes as in (33) and yet the result is acceptable. Thus there is an asymmetry between interrogatives and relatives with respect to extraction out of wh-islands which subjacency does not readily handle.

While we do not propose an explanation for this asymmetry it is interesting to give further consideration to relativization out of wh-islands. Consider (35), (36).

(35) Pytanie na ktoře_1 domyślasz się komu_2 \{\&\} dlaczego_3 t_1

question on which you-guess refl who-DAT \{\&\} why

u_1 odpowiedział t_1 t_2 t_3 ] ]]]...  

Stan he-answered

'The question which you are guessing for whom \{\&/and\} why Stan answered...'

(36) Pytanie na ktoře_2 domyślasz się kto_1 \{??\} komu_3 t_2

question on which you-guess refl who-NOM \{\&\} who-DAT

he answered

'The question which you are guessing who answered to whom...'

In these sentences the wh-movement is out of an embedded clause with two wh-words in initial position. Significantly, these wh-words are conjoined by the conjunction _\_i; otherwise the sentences are unacceptable or at best marginal. In the case of (36), the two wh-words are usually not conjoined — be it in matrix sentences (cf.(15b)) or in embedded sentences (cf.(2)) — so it is important that the reading of (36) with _\_i is acceptable. Now, given that in the structure proposed by the two-COMP analysis (cf.(18b)) the conjunction occurs in COMP_2, it is plausible that the wh-words occupy
this position leaving the COMP₁ position empty. This suggests again that COMP₁ is an extraction position.

Treating the head of S as the position for extraction appears to be a reasonable analysis for at least one other Slavic language that allows extraction. Czech (cf. Toman 1981) permits exactly one interrogative to be moved out of an embedded clause.

(37a)  Kde si myslíš, že budeme spát ?

where refl you-think COMP we-will sleep
'Where do you think that we will sleep?'

(37b) * Kde kdy si myslíš, že budeme spát ?

where when refl you-think COMP we-will sleep
'When do you think that we will sleep where?'

Furthermore, cliticization evidence shows that the first element of a sequence of wh-words occupies a separate major constituent.

(38a)  Kdo ho kde viděl je nejasné.

who him where saw is unclear

(38b) * Kdo kde ho viděl je nejasné.

'Who saw him where is unclear.'

Thus, it appears that the first wh-word occupies a separate position which is accessible to COMP-to-COMP movement. This closely parallels the Polish data and suggests that if the complementizer system proposed for Polish be verified for Czech the prediction is that only elements in COMP₁ are subject to extraction. Also, given that Russian does not permit extraction at all (cf. Chomsky 1981:52) an investigation of its COMP structure might reveal more about the nature of extraction. This approach would aim either at reworking the (present) subjacency principle or at providing another explanatory principle to account for extraction.

To summarize, extraction facts are not always neatly accounted for by subjacency - especially in the case of the asymmetry between relativization and interrogation out of wh-islands. Nevertheless, these facts are not contradicted by the two-COMP hypothesis proposed here. They support the multiple wh-question and cooccurrence evidence in the claim that COMP₁
contains exactly one wh-word and a relative pronoun and COMP₂ contains several wh-words and the ze complementizer.

3.4 Some Problems for the Two-COMP Analysis

We recall the structure proposed by the two-COMP analysis (cf. (18b)).

(39)

An obvious problem for this structure concerns the doubly-filled COMP filter. This putative universal is violated by COMP₂ which can be filled by several wh-words. We argue, though, that there is empirical evidence that such a filter does not exist - at least not in UG. Polish is not the only language with multiple wh-questions in pre-S position; other Slavic languages, Dutch, Finnish, Greek also have this property. If such strings are analysed as being in COMP - and this is plausible - it seems highly probable that the fact that English requires such a filter is language-specific.

This immediately brings up the question of c-command. While the wh-word in COMP₁ c-commands its trace this is not the case for the wh-words in COMP₂. One aspect of the problem is that these wh-words cannot receive semantic interpretation. However, it is possible here to make use of the rule of Absorption as proposed in Higginbotham & May (1981). This mapping into LF permits pairs of n-tuples of wh-words to be bound by a single operator: WH. Thus, in (39), Absorption takes the wh operators wh_j, wh_k, wh_l and transforms them into WH_{jkl} so that the traces t_j, t_k, t_l are properly bound, being c-commanded by WH_{jkl}. We point out that we are assuming that the rule applies not only to wh-words which are NPs, as discussed in Higginbotham & May (1981), but also those which are Adjectives and Adverbs. In any case, interpretation readily applies in LF. Of course, the question of variables being c-commanded at S-Structure is still open.
3.5 Motivation for the Two-COMP Analysis

It is curious that the syntax of COMP in Polish as proposed above permits exactly two constituents. We need to explain why two. We observe that other languages with complex pre-S structures also have two COMP positions. In Hebrew (Reinhardt 1981) one is a general COMP and the other a Question position. In Italian (cf. Reinhardt’s reanalysis of Rizzi 1978) both are general COMP positions. In Old and Middle English (White 1976) the first position was occupied by WH and the second by that. The analyses of these languages are based on varying degrees of extraction evidence. While the nature of the COMP position with respect to the kind of elements which occupy it and its extraction potential appears to be language-specific, the constant fact is that exactly two COMPs show up.

An explanatory principle underlying these observations is suggested by A. Rouveret (personal communication) in his notion of "minimal c-command with respect to a node." This is an extension of "minimal c-command" (in the sense of Chomsky 1982) and it offers a restriction on the class of possible grammars. It is defined as:

\[(40) \quad \alpha \text{ minimally c-commands } \beta \text{ with respect to } \alpha \text{ iff}
\]

either (i) \(\alpha\) is head of a maximal projection

or (ii) \(\alpha = X^0\), and

\(\alpha\) c-commands \(\beta\) and there is no \(\gamma = \alpha\) such that

\(\alpha\) c-commands \(\gamma\) and \(\gamma\) c-commands \(\beta\).

Let us apply this principle to the structure proposed by the COMP Proliferation Hypothesis (cf. (3)).

\[(41)\]

\[\begin{array}{c}
\text{S} \\
\text{COMP}_1 \\
\text{wh}_1 \\
\text{S} \\
\text{\text{COMP}_2} \\
\text{wh}_2 \\
\text{\text{COMP}_3} \\
\text{wh}_3 \\
\text{...t}_1 \text{t}_2 \text{t}_3... \\
\end{array}\]
We observe: \( \text{wh}_1 \) minimally c-commands its trace by (i); \( \text{wh}_3 \) does so by (ii); the \text{wh}-word in \( \text{COMP}_2 \), however, does not minimally c-command its trace with respect to \( \text{COMP} \) because there is another \( \text{COMP} \) node, \( \text{COMP}_3 \), which intervenes between \( \text{COMP}_2 \) and \( t_2 \) - so (ii) is not met, nor is (i). Therefore, the structure in (41) does not meet the condition of "minimal c-command with respect to \( \text{COMP} \)." If we consider structures with four or more \( \text{COMP} \) nodes it is clear that they too will not meet the condition. A structure with two \( \text{COMP} \)s, however, will meet it - the first \( \text{COMP} \) will satisfy (i), the second (ii). A structure with one \( \text{COMP} \) also meets the condition. We have then a principle which limits \( \text{COMP} \) structure to no more than two positions, so that hypotheses of node proliferation are restricted.

The closeness of the fit between an extended theoretical notion and the empirical generalization about pre-Modern English, Hebrew, Italian and Polish makes Rouveret's condition a reasonable candidate for a principle of core grammar. Of course, the validity and range of variation of this proposal need to be subjected to broader testing. In any case, it does provide a potential explanation for the two-\( \text{COMP} \) analysis of Polish.

4.0 Conclusion

We have argued that both distributional and extraction evidence support a two-\( \text{COMP} \) analysis of multiple \text{wh}-questions in Polish, as opposed to an analysis which permits a proliferation of \( \text{COMP} \) nodes. As a result, we have touched on several important constructs - the doubly-filled \( \text{COMP} \) filter and the rule of Absorption - and we have suggested some modifications. Our analysis is significant because the requirement of two \( \text{COMP} \) positions receives theoretical motivation in an extension of "minimal c-command" and empirical motivation from languages which are different with respect to extraction. This presents the hypothesis that at most two \( \text{COMP} \)s belong in UG. The relation of this hypothesis to subjacency remains to be clarified as do the extraction facts of Polish which, as shown in this paper, challenge our explanatory principles.
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REFERENCES


Chomsky, N. (1980)


Lectures in Government and Binding. Dordrecht: Foris.

Chomsky, N. & H. Lasnik (1977)
"Filters and Control." LI 8:425-504.


Rizzi, L. (1978)

Schacter, P. (1977)
"Constraints on coordination." Lg 53:83-103.

Selkirk, E. (1980)

Toman, J. (1981)


White, L. (1976)