

- (1)b. Ty- ś widział tę książkę.
you 2SG see + MASC + SG this book
 You saw/have seen this book.

In (1a), we have what is often referred to as a past tense verb form: *widziałeś* 'you saw'. In (1b), the element *-ś*, which one might conclude from (1a) is a verbal inflection, is attached to a subject pronoun. In this paper, we will look in some detail at this phenomenon and argue that the so-called 'past tense' is in fact a syntactic complex formed by a participle and a perfect auxiliary. We will also consider how the auxiliary can be combined with other elements of the sentence; on the face of it, when the auxiliary does not form a syntactic complex with the participle, it can appear almost anywhere to the left within the same sentence. Consider, for example, the following:

- (2)a. Ty jego widział- eś.
You him see + MASC + SG- 2SG
- b. Ty- ś jego widział
You- 2SG him see + MASC + SG
- c. Ty jego- ś widział
You him- 2SG see + MASC + SG
 You saw him.

In (2a), the auxiliary attaches to the preceding participle, in (2b) to the subject, and in (2c) to the object. There are even examples in which the auxiliary appears to be inside a phrase. Thus we have both (3a) and (3b):

- (3)a. Ewy książkę czytał- eś.
Ewa's book read + MASC + SG- 2SG
- b. Ewy- ś książkę czytał.
Ewa's- 2SG book read + MASC + SG
 You read Ewa's book.

However, there are restrictions on the position of the auxiliary: it cannot appear in a higher clause than the participle, attach to items to the right of the participle, or follow the negative particle or transitive prepositions.

We will argue that the combination of participle and auxiliary is the consequence of syntactic Incorporation in the sense of Baker (1988: 22): the participle raises to the auxiliary in the syntax. We will also propose that when the auxiliary is not attached to the participle, it always occupies

the same syntactic position, the I^0 -node, and subsequently undergoes a process of PF cliticization. In Polish, clitic auxiliaries are not in a special second position in the clause and can attach to a variety of elements because independently motivated phrasal movements allow these items to immediately precede them. Polish auxiliaries fail to attach to items which cannot prepose independently.

We have similar phenomena in conditional sentences. The following resemble the examples in (1):

- (4)a. Ty **wiział-** **byś** tę książkę.
you seen + MASC + SG- COND + 2SG this book
- b. Ty **byś** **widział** tę książkę.
you COND + 2SG seen + MASC + SG this book
- c. **Byś** **widział** tę książkę.
COND + 2SG seen + MASC + SG this book
 You would see this book.

In (4a) the conditional auxiliary is attached to the participle. In (4b–c) it is not attached to the auxiliary or anything else. Like the perfect auxiliary, the conditional can on the face of it appear anywhere to the left of the participle including inside a phrase. Thus we have the examples in (5) and (6), parallel to those in (2) and (3):

- (5)a. Ty jego **widział-** **byś**.
You him see + MASC + SG- COND + 2SG
- b. Ty **byś** jego **widział**.
You COND + 2SG him see + MASC
- c. Ty jego **byś** **widział**.
You him COND + 2SG see + MASC
 You would see him.
- (6)a. Ewy książkę **czytał-** **byś**.
Ewa's book read + MASC + SG COND + 2SG
- b. Ewy **byś** książkę **czytał**.
Ewa's COND + 2SG book read + MASC + SG
 You would read Ewa's book.

We will argue that the conditional auxiliary is very much like the perfect auxiliary, except that it is not a PF clitic.

An important feature of the analyses that we develop here is that they minimize the difference between Polish, other West Slavic languages, and South Slavic languages. Polish has Incorporation, whereas the other languages have Long Head Movement, that is, the movement of the participle to the complementizer across the auxiliary. Otherwise they are very similar. In addition, our analysis accounts for the distribution and positional restrictions of Polish auxiliaries, providing an explanation of why certain items can host a clitic auxiliary while others cannot.

The paper is organized as follows. Section 2 discusses Polish Incorporation of the verb to the auxiliary, and its syntactic contrasts with Long Head Movement of the verb to the complementizer in other Slavic languages. Section 3 deals with the position of the auxiliary in non-incorporated patterns, arguing for two main conclusions: first, the auxiliary is in the I⁰-position, just like a finite verb; second, word order results from the fronting of the phrase preceding the auxiliary. This latter conclusion shows that Polish is a configurational language with movement properties attested in many other languages. Section 4 considers negation in the Polish clause and its interaction with Incorporation. Section 5 argues, on the basis of conditionals in subjunctive and counterfactual clauses, for the hypothesis that Incorporation in Polish is a syntactic rather than a lexical operation.

2. SENTENCES WITH INCORPORATION FROM A SLAVIC PERSPECTIVE

In this section, we develop our analysis for Polish sentences involving Incorporation. Polish past and conditional sentences are particularly interesting from a general Slavic perspective because they differ in important ways from superficially similar sentences in other Slavic languages. We argue that this is because they involve the incorporation of a participle to the auxiliary in the syntax, a process which is absent from the other Slavic languages. Syntactic differences between Polish and languages like Czech, Slovak, and Bulgarian motivate this conclusion.

2.1. *Past Tense Paradigms*

Let us begin with the full range of past tense forms of a typical Polish verb such as *widzieć* 'see' in (7):

(7) SINGULAR	PLURAL
1P: a. <i>widział-em</i> 'I saw' seen + MASC + SG-1SG	<i>widzieli-śmy</i> 'we saw' seen + VIRILE + PL-1PL ¹
a'. <i>widziała-m</i> seen + FEM + SG-1SG	<i>widziały-śmy</i> seen + NON-VIRILE + SG-1PL
2P: b. <i>widział-eś</i> 'you saw' seen + MASC-2SG	<i>widzieli-ście</i> 'you saw' seen + VIRILE + PL-2PL
b'. <i>widziała-ś</i> seen + FEM + SG-2SG	<i>widziały-ście</i> seen + NON-VIRILE + PL - 2PL
3P: c. <i>widział</i> 'he saw' seen + MASC + SG	<i>widzieli</i> 'they saw' seen + VIRILE + PL
c'. <i>widziała</i> 'she saw' seen + FEM + SG	<i>widziały</i> seen + NON-VIRILE + PL
c''. <i>widziało</i> 'it saw' seen + NEUT + SG	

This paradigm makes it clear that the verb stem is followed by forms that show number and gender and that an additional marker indicating person and number completes the word. For instance, in the first person masculine singular form *widziałem* 'I saw', *widzi-* is the stem, *-al-* shows number (Sg) and gender (Masc), and the suffix *-em* indicates number (Sg) and person (1P).

Imperfective futures consist of an auxiliary and a participle as free forms, and as illustrated in (8), the participles which follow the future auxiliary are identical to the combination formed by the stem and the internal markers in the paradigm in (7). For instance, the bound form *widział-* in the masculine singular persons in (7) is identical to the free participle in (8a), which is a masculine singular form. Gender is a characteristic of participles, but not of other verb forms:

¹ 'Virile' is the traditional term in Slavic philology for the plural [+male] form, as opposed to the feminine/neuter plural form.

- (8)a. Chłopiec będzie widział książkę.²
boy will see + MASC + SG book
 The boy will see the book.
- b. Dziewczynka będzie widziała książkę.
girl will see + FEM + SG book
 The girl will see the book.
- c. Chłopcy będą widzieli książkę.
boys will see + VIRILE + PL book
 The boys will see the book.
- d. Dziewczynki będą widziały książkę.
girls will see + NON-VIRILE + PL book
 The girls will see the book.

Given the formal identity between the initial fragments of the 'pasts' and the participles of imperfective futures, we therefore conclude that the forms in (7a) consist of a participle followed by an auxiliary functioning as affix, as in (9):

- (9) [[PARTICIPLE] AUX]
 a. [[widział-] **em**] 'I saw'
 V + MASC + SG 1SG.
 b. [[widzieli-] **śmy**] 'we saw'
 V + VIRILE + PL 1PL

A similar analysis seems reasonable for conditionals like *widział-byś* 'you would see'. We therefore conclude that 'conditionals' also consist of a participle followed by an auxiliary.

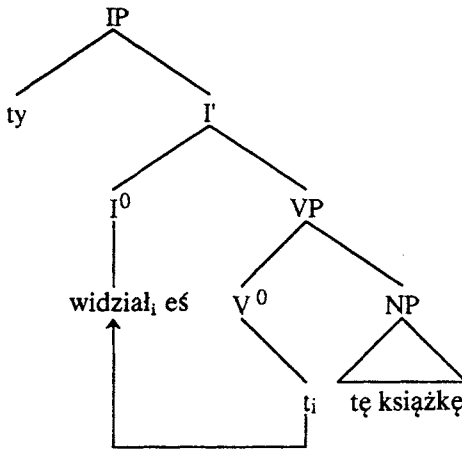
2.2. The Alternating Syntax of Past Sentences

As we noted at the outset, the Polish past does not always appear in the form shown in (7), but exhibits two alternative syntactic patterns. It can consist of a participle preceding an auxiliary, as in (10), exemplified by (1a) and repeated now as (12a), an order which is frequently used in

² The future auxiliary can also take an infinitive complement. (8a) is equivalent to

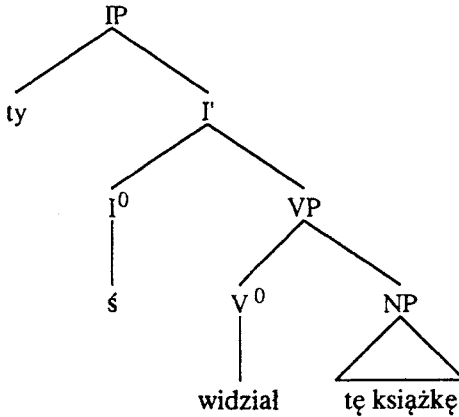
- (i) Chł opiez będzie widzieć książkę
boy will see + INF book

(13)a.



PARTICIPLE INCORPORATION

b.



UNINCORPORATED PERFECT

It has sometimes been suggested that patterns such as (12b), where the auxiliary precedes the participle, are the result of a process moving certain inflections away from a verb stem to the left (Gussman 1980, Sussex 1980, Borsley 1984, among others). There are a number of reasons for rejecting such a floating inflection approach to (12b). One is that it involves a questionable movement process which separates an affix from a stem. Another unusual feature of the analysis is that it appears to move an affix to a non c-commanding position located inside a phrase. In our analysis, the 'floating' inflection is an auxiliary that either cliticizes, giving (12b), or incorporates the participle, resulting in (12a).

2.3. *Incorporation in Past Sentences*

The process moving the participle to the perfect auxiliary in the past sentence in (13a) has the formal properties of syntactic Incorporation, pace Baker (1988: 22). Namely, it is an instance of Move α and adjoins a syntactic head to another head. That is, it takes an X^0 from an independent base structure position to combine it with another X^0 in the syntax, creating a complex category of the X^0 level and establishing a syntactic link between two positions in the phrase marker.

The proposed analysis implies that both the auxiliary in (13b) and the participle plus auxiliary in (13a) occupy the same slot in I^0 as the verb in the present in (14), assuming that this last pattern results from head-movement of the verb to I^0 :

- (14) Kiedy widzi- sz się z Janem?
 when see- Pres + 2SG REFL with Jan
 When are you seeing John?

As we shall see in Section 3, the prediction that Polish auxiliaries, incorporated forms, and ordinary inflected verbs have the same syntactic distribution appears to be correct. The parallelism, as we will argue, is due to the fact that inflected verbs and incorporated forms have parallel syntactic derivations. In the case of the inflected verb in the present, it is well accepted that a stem must raise to an affix. We propose a similar process for the incorporated perfect: a participle raises optionally to an inflected auxiliary.

2.4. *Motivating Incorporation*

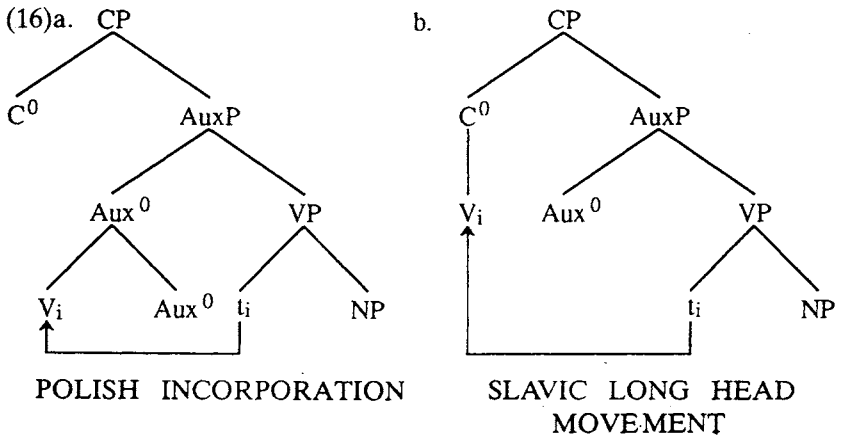
Having sketched the differences between patterns with and without Incorporation, let us consider arguments in favor of Incorporation. Support for the idea that Incorporation is responsible for sentences in which the participle precedes and is attached to the auxiliary comes from stress. Polish has penultimate stress, but past forms are exceptional in that they can have either penultimate or antepenultimate stress (see Booij and Rubach 1987 for detailed discussion). Thus, phonological evidence indicates that the past *czytaliśmy* 'we have read' is derived in a different way from the superficially similar *czytamy* 'we are reading'. Syntactic arguments for the proposal that participle + auxiliary sequences involve Incorporation are based on their distribution and on the position of pronominal clitics viewed from a general Slavic perspective.

2.4.1. *Incorporation versus Long Head Movement in Slavic*

Polish, Bulgarian, Czech, Serbo-Croatian, and Slovak share apparently identical participle + auxiliary + NP object sequences, as (15) illustrates:

- (15)a. Kupili- śmy lustro. (Polish)
bought- 1PL mirror
 We bought a mirror.
- b. Pročeli sme knjigata. (Bulgarian)
read Pres + 1PL book + the
 We read the book.
- c. Koupil jsi knihy. (Czech)
bought Pres + 2SG books
 You bought books
- d. Čitao sam knjigu. (Serbo-Croatian)
read Pres + 1SG book
 I read a book.
- e. Napísal som list. (Slovak)
written Pres + 1SG letter
 I wrote a letter.

However, the paralellism is only apparent and hides a crucial difference. On the one hand, Polish (15a) involves Incorporation, or the movement of the participle to the head of AuxP, as schematically shown in (16a). On the other the hand, the other Slavic examples in (15) have Long Head Movement, or the fronting of the participle to C⁰, bypassing the finite Aux⁰ altogether, as shown in its essential aspects in (16b) (see Rivero (1994) for Rumanian and Bulgarian; Lema and Rivero 1989 and 1992 for Bulgarian, Czech, European Portuguese, Old Spanish, and Rumanian; and Rivero 1991 for Serbo-Croatian, Slovak, and Czech in more detail):



Polish is unique within Slavic because it has Incorporation but no Long Head Movement, while the other languages have Long Head Movement and no Incorporation.

Similar comments apply to the Polish conditional in (17a), in contrast with Czech and Serbo-Croatian (17b–c). These patterns may look identical, but they hide a major difference with important syntactic consequences. In Polish they result from Incorporation of the participle to the conditional, as in (16a), while in the other languages they involve raising of the participle to the complementizer, as in (16b):

- (17)a. Czytał **bym** tę książkę. (Polish)
read- Cond + 1SG this book
 I would read this book.
- b. Koupil **bych** knihy. (Czech)
bought Cond + 1SG books
 I would buy books.
- c. Čitao **bih** knjigu. (Serbo-Croatian)
read Cond + 1SG book
 I would read a book.

In Polish the syntactic raising of the participle results in a complex dominated by a *single* X^0 in the phrase-marker, and this X^0 contains the auxiliary; in addition, in surface structure this Polish X^0 is in I^0 , where ordinary inflected Vs are also located. In the other languages, the raising of the participle results in two *different* X^0 s in the syntactic phrase-marker: the

higher X^0 is the complementizer (C^0) and contains the participle, and the lower X^0 contains the auxiliary.

We will now justify the claim that Polish participle + auxiliary sequences are the product of Incorporation of the participle to the auxiliary. Such sequences are unrestricted in distribution, in that they are found in root and non-root environments, including complements and relative clauses, as in (18a) and (18c). Incorporation is optional, so (18a), the pattern with Incorporation, alternates with (18b), the pattern without Incorporation:

- (18)a. Janek powiedział, że pojechał- eś do Warszawy.
Janek said that gone- 2SG to Warsaw
 Janek said that you went to Warsaw.
- b. Janek powiedział, że-ś pojechał do Warszawy.
- c. Piotr powiedział dokładnie, co kazał eś
Piotr said exactly what ordered- 2SG
 Piotr said exactly what you ordered

By contrast, Slavic LHM is a root phenomenon, so participle + auxiliary sequences occur in main and independent clauses but not in embedded clauses with non-root characteristics, such as relative clauses, or the complement clause in (19):

- (19) *Znam že pročeli sme knjigata. (Bulgarian)
I + know that read Pres + 1PL book + the
 I know that we read the book.

Notice too that participle + auxiliary sequences have the same distribution in LHM languages where clitic auxiliaries must necessarily be in the second syntactic position in the clause, such as Czech, and in languages where they need not, such as Bulgarian. In Bulgarian, the clitic auxiliary can be in the third syntactic position in the clause with no ill-effects, as in *Znam [že nie šte sme pročeli knjigata]* 'I know [that we will have read the book]'. This order is impossible in Czech. The root nature of these sequences follows from the hypothesis that the non-finite verb moves to C^0 . This movement is parallel to V2 in Germanic, where the finite verb raises to C^0 in sentences with root-like properties.

The hypothesis that Polish participle + auxiliary sequences are the result of Incorporation of the participle to the auxiliary in I and not movement of the participle to C thus accounts for the less restricted

distribution of such sequences in Polish compared with the other Slavic languages.

2.4.2. *Clitic Pronouns in Slavic*

A second argument for the view that Polish participle + auxiliary sequences are the result of Incorporation comes from the distribution of clitic pronouns. The contrast between Polish and other Slavic languages again provides the basis for our conclusion. Consider first the following Bulgarian examples:

- (20)a. Toj go e viždal. (Bulgarian)
he him Pres + 3SG seen
 He saw/has seen him.
- b. Viždal go e.
 He saw/has seen him.

Sentence (20a) shows the auxiliary followed by the participle as its complement. In (20b), the participle is in initial position, preceding both the auxiliary *e* 'has', and the clitic pronoun *go* 'him'. The fact that the clitic pronoun intervenes between participle and auxiliary suggests quite strongly that they do not form a complex X^0 in the syntax. In other words, it supports the view that participle + auxiliary sequences in Bulgarian are the result of LHM, i.e., the movement of the participle to C. The same fact holds for Serbo-Croatian, old and conservative Romance, and Romanian.

Polish clitic pronouns appear in a variety of positions, and their distribution is quite free (see Spencer 1991: 267–269). For example, they may follow any first major constituent such as the first *Wh*-word in the multiple *Wh*-question in (21) (Rudin 1988). Notice that examples such as (21) show the clitic to be an X^0 which is independent from the verb in syntax:

- (21) Kto się komu podoba?
who Refl to + whom likes?
 Who likes who?

By contrast, Bulgarian clitic pronouns must appear strictly adjacent to the inflected verb or auxiliary and follow all *Wh*-phrases. However, like clitic pronouns in other Slavic languages, Polish pronouns may not appear in initial position, as (22)–(23) illustrate:

(22)a. Maria go kocha. (Polish)
Maria him loves
 Maria loves him.

b. Kocha go.
 She loves him.

c. *Go kocha.

(23)a. Nie go vidiaxme. (Bulgarian)
we him saw
 We saw him.

b. Vidiaxme go.
 (We) saw him.

c. *Go vidiaxme.

Given the variety of positions in which Polish clitic pronouns can appear, we would expect it to be possible for a clitic pronoun to appear between a participle and the following auxiliary, as in Bulgarian. This is not possible, however, as the contrast between (24) and (25) illustrates:

(24)a. Zmusił-**em** go do zrobienia tego.
forced- 1SG him to doing this
 I forced him to do this.

b. Dał- **eś** mi go.
given- 2SG me it
 You gave it to me.

c. Widział-**eś** go.
seen- 2SG him
 You saw him.

(25)a. *Zmusił-go-m do zrobienia tego.

b. *Dał-mi-go-ś.

c. *Widział-go-ś.

The ungrammaticality of the examples in (25) is expected if the participle and auxiliary form a complex X^0 . Here, then, we have some further evidence for the view that Polish participle + auxiliary sequences are

the product of Incorporation of the participle to the auxiliary. Although participle + auxiliary cannot be separated by a clitic pronoun, auxiliary + participle sequences can, as (26) illustrates:

- (26) Kiedy-ś go widział?
when-2SG him seen?
 When did you see him?

This is predicted by our analysis since auxiliary and participle do not form a complex X^0 . It is also possible to have a clitic pronoun before a participle + auxiliary sequence, as (27) illustrates:

- (27) Kiedy go widział- ́s?
when him seen- 2SG
 When did you see him?

Again, this is as we would expect since the participle + auxiliary sequence forms a complex X^0 with the same distribution as the inflected verb in (22a).

We have now presented two arguments that Polish participle + auxiliary sequences are the product of Incorporation of the participle to the auxiliary and not of LHM to C^0 , which is responsible for superficially similar sequences in other West and South Slavic languages: these sequences are not restricted to root contexts, suggesting that they are not the result of movement to C^0 ; they cannot be separated by a clitic pronoun, suggesting that they form a complex X^0 .

2.4.3. Conditionals

Polish conditional patterns can be analyzed in the same way as those of the perfect. That is, the conditional auxiliary allows Incorporation of its complement participle, as illustrated in (29) for (28):

- (28) Czyj artykuł chciał-byś przeczytać?
which article liked-Cond + 2SG read?
 Which article would you like to read?

- (29) [_{AuxP} [_{Aux'} [_{Aux⁰} [chiał_i [_{Aux⁰} byś]]] [_{VP} t_i [_{VP} przeczytać]]]]]

The argument that the conditional involves Incorporation and that participle + conditional sequences are syntactic X^0 's and occupy I^0 is identical to that already developed for the perfect. A variety of items can separate auxiliary and participle when the two appear in that relative order: for

instance, in (30a) demonstrative *to* splits the two. However, when the participle begins the clause and precedes the auxiliary, the two items are not separable, indicating that Incorporation has applied to form a syntactic complex dominated by a common X^0 . Thus (30b) is fine, but (30c) is ungrammatical. As predicted, participle + conditional sequences are also possible in subordinate clauses, providing more support for Incorporation as opposed to LHM:

- (30)a. **Bym** to zrobil.
Cond + 1SG it done
 I would do it.
- b. Zrobil-**by**m to.
- c. *Zrobil to **by**m.

There are alternative analyses for conditionals that might be proposed, but they all have serious defects. One possibility is a version of the analysis proposed in Rivero (1991) for the Slovak conditional in (31):

- (31) Ja **by som** napisal list. (Slovak)
I Cond Pres + 1SG written letter
 I would write a letter.

Rivero proposes that such examples involve the structure in (32). Namely, the conditional marker *by* is the Specifier of the AuxP headed by *som*:

- (32) [_{Aux'} **by** [_{Aux'} **Aux**⁰ [_{VP} **V**⁰]]]

If this analysis were extended to Polish, the conditional auxiliary would result from the combining of the perfect auxiliary and its specifier *by*. Something like this analysis is proposed for Polish in Dogil (1987) and Booij and Rubach (1987). However, it has two defects. Firstly, it would not generate the grammatical (33a), while excluding the ungrammatical (33c). We analyze (33a) as in (33b): the verb must incorporate to the (inflected) auxiliary, as in the case of the perfect *chiał-eś* 'you have liked', which excludes (33c). Secondly, (33d) would involve Incorporation of the auxiliary to its specifier, something which is not allowed on standard assumptions (Baker 1988). In our view, (33d) does not involve Incorporation and shows the inflected auxiliary followed by its VP-complement:

- (33)a. *Chciał- byś.*
liked- Cond + 2SG
 You would like.
- b. $[_{Aux^0} V_i [_{Aux^0} Cond]] t_i$
- c. **By chciał-eś.*
- d. *Byś chciał.*
 You would like.

A second possibility, suggested by an anonymous referee, treats *by* as the head of a Modal Phrase with the maximal projection of the perfect auxiliary as its complement. This is similar to the analysis of the Bulgarian future perfect *Šte sŭm pročel* 'I will have read' proposed in Rivero (1991). On this analysis, we would have structures like the following:

- (34) $[_{MP} [_{M^0} \text{by}]] [_{AuxP} [_{Aux^0} \acute{s}]] [_{VP} [_{V^0} \text{chciał}]]]]$

However, in this approach, as in the previous one, it is not clear how (33c) could be excluded. Moreover, (33a) would involve a rather dubious non-local Incorporation process.

A third possibility would be to treat the perfect auxiliary as a head taking a complement headed by *by* as auxiliary or verb. *By* in turn would take the main verb as complement, as in (35a). This analysis must be rejected because it requires that *by* always raise to the perfect auxiliary as in (35b), to prevent the ungrammatical (35c) from being generated. Under this approach, (28) would require raising the main verb *chciał* to *by*, with the complex subsequently raising to the perfect auxiliary:

- (35)a. Basic structure: $AuxP[_{Aux^0}[-\acute{s}]] VP[V^0[\text{by-}] VP[\text{chciał}]]]$
- b. *By*-Inc (oblig.): $AuxP[_{Aux^0}[\text{by}_i-\acute{s}]] VP[V^0[t_i] VP[\text{chciał}]]]$
- c. **Czyj artykuł-eś by chciał przeczytać?*
which article-2SG Cond liked read?

Our analysis, in which the conditional auxiliary is a lexical entry different from the perfect auxiliary, avoids the problems that face the alternative approaches. In addition, under this treatment it follows naturally that *by*

should be the item with person marking when it precedes the participle, as in (33a), since this conditional item is an inflected auxiliary.⁴

2.5. *Incorporation and LHM: a General Perspective*

We have argued that Polish perfect constructions share the basic structure of perfect constructions in other Slavic languages: the clitic auxiliary heads a phrase and takes a VP-complement headed by a participle. However, Slavic languages differ in the type of Head-movement that may affect participles: Incorporation for Polish and LHM for the other languages. In root clauses, these two movements may result in apparently identical inverted perfects (or conditionals). However, when Incorporation applies in Polish, the resulting sequences form a complex dominated by a unique X^0 in syntax because the participle adjoins to the auxiliary and forms a syntactic unit with it. In contrast, when LHM applies in the other languages, the two items are separate constituents and do not form a syntactic X^0 . As a consequence, the incorporated Polish past or conditional formed by participle and auxiliary occupies the same X^0 -position as a present tense verb. By contrast, the participle + auxiliary sequence in other Slavic languages does not behave like a present tense verb because it is not a syntactic X^0 resulting from Incorporation.

Incorporation is unique to Polish within Slavic but has counterparts in other language families. In Old Romance, futures and conditionals are formed by the syntactic movement of an X^0 to another X^0 (Lema and Rivero 1991), just like Polish perfects and conditionals. For example, Old Spanish *ver-emos* '(we) will see' and *ver-íamos* '(we) would see' result from Incorporation of the infinitive *ver* 'see' to the future and conditional auxiliaries *emos/íamos* '(we) will/would'. Like their Polish counterparts, Old Romance verb + auxiliary sequences resulting from Incorporation occur in root and non-root environments.

In the light of the proposed analysis, three types of languages can be distinguished with respect to non-finite V^0 -raising in the presence of clitic auxiliaries. The first type is represented by South and West Slavic, which offers two options as to the position of the non-finite V. In languages such as Czech, Bulgarian, Serbo-Croatian, and Slovak, the non-finite V^0 either

⁴ In rejecting the alternative approaches, we are not denying that the conditional auxiliary is plurimorphemic. However, we would suggest that the perfect auxiliary is plurimorphemic in just the same way. Perfect and conditional constitute separate lexical entries and carry agreement markers for person. We do not discuss these markers, but it could be that they correspond to an AgrP that takes the maximal projection headed by the conditional and perfect auxiliaries as complement: AgrP[Agr⁰ AuxP[Aux⁰_{VP}[V⁰]]].

moves by LHM to C^0 or remains *in situ* and follows the auxiliary, as we will show in section 3. The second type of language is exemplified by medieval and 'conservative' Romance. Here, languages such as Old Spanish and 19th century European Portuguese show either LHM of V^0 to C^0 (parallel to Slavic) or Incorporation of V^0 to Aux^0 (like Polish), with the two patterns in almost perfect complementary distribution (Lema and Rivero 1991). Polish represents a third type of language with either Incorporation of V^0 to Aux^0 , as discussed in this section in detail, or the non-finite V^0 *in situ* in patterns which do not involve Incorporation. Polish Incorporation is optional, so constructions with V^0 incorporated to Aux^0 and those with V^0 *in situ* are in free variation in almost all cases. In addition, Polish differs from Slavic and medieval and conservative Romance in that it lacks Long Head Movement, i.e., the movement of V^0 to C^0 across Aux^0 .

3. AUXILIARIES IN SENTENCES WITH NO INCORPORATION

Let us now turn to sentences without Incorporation, as in (1b) repeated here as (36):

- (36) Ty-ś widział tę książkę.
You've seen this book.

Polish sentences where the participle and the auxiliary are not fused are important in that they provide motivation for the hypothesis that, despite its relative free word order, Polish is configurational (in the sense of Hale 1983). We will argue that the apparent flexibility in the position of the auxiliaries is the effect of phrasal movement rules which apply within a hierarchical clause structure, in the spirit of recent work on other free word order languages such as Japanese and German (Saito and Hoji 1983, Webelhuth 1985). We also demonstrate that the proposed movements, i.e., *Wh*-movement and Scrambling, always respect syntactic constituency and do not operate on the basis of phonological structure. We will show that Polish movements, which are varieties of Move α , obey the same constraints as do well-documented syntactic processes in languages where word order is more restricted.

3.1. *The Structure of Past Sentences without Incorporation in Slavic*

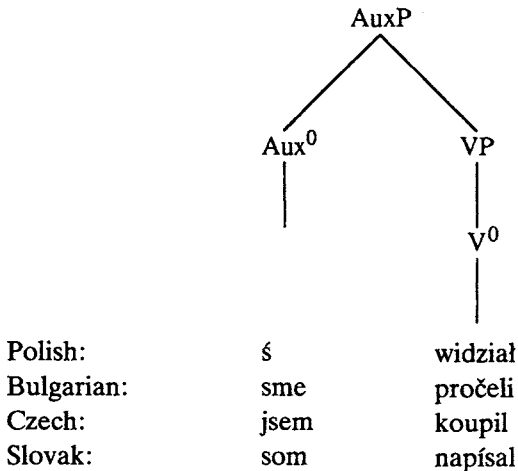
Let us begin by showing how Polish auxiliary structures without Incorporation resemble those of other Slavic languages. We propose that Polish

(36) is structurally parallel to the Bulgarian, Czech, and Slovak examples in (37):

- (37)a. Nie **sme** pročeli knjigata. (Bulgarian)
we Pres + 1PL read book + the
 We read the book.
- b. Tehdy **jsem** koupil knihy. (Czech)
then Pres + 1SG bought books
 Then I bought books.
- c. Ja **som** napísal list. (Slovak)
I Pres + 1SG written letter
 I wrote a letter.

In our view, the auxiliaries in (36) and (37) head their own X^{\max} and take a VP complement headed by the participle, as schematically shown in (38):

(38)



In these languages, the auxiliaries traditionally labelled 'clitics' cannot stand in initial position and must be supported by any preceding constituent, regardless of its category. As shown by the deviance of the examples in (39), the Polish perfect auxiliary is like the perfect auxiliary of the other Slavic languages in this respect:

- (39)a. ***Ś** widział tę książkę. (Polish)
2SG seen this book
- b. ***Sme** pročeli knjigata. (Bulgarian)
Pres + 1PL read book + the
- c. ***Jsem** koupil knihy. (Czech)
Pres + 1SG bought books
- d. ***Som** napísal list. (Slovak)
Pres + 1SG written letter

In view of the parallelism between Polish and other Slavic languages, we propose that a similar PF-process of cliticization fuses the auxiliary enclitic and the preceding constituent in all these languages, licensing the auxiliary. When no constituent precedes the auxiliary, as in (39), the structure is ungrammatical because the auxiliary is not licensed.⁵

The Polish conditional in (40a) shows auxiliary + participle order similar to examples with the perfect auxiliary. However, the conditional auxiliary is not a PF enclitic. That is, the conditional auxiliary does not undergo the PF-process which fuses perfect auxiliary and the preceding constituent, and as a result it may stand in absolute initial position, as shown in (40b):

- (40)a. Gdzie **byś** chciał iść?
where COND + 2SG liked go
 Where would you like to go?

⁵ The type of cliticization we propose cannot be a word-formation operation in models such as *Lexical Morphology*, where word-formation applies in the lexicon before items are inserted in the syntactic tree. This is because the process attaching the auxiliary to the pronoun in (36) operates across syntactic boundaries. Thus, in our analysis personal pronouns such as *ty* 'you' are not inflected for person and tense in the lexicon and inserted in the syntactic tree with such markers; rather, clitic auxiliaries bearing person and tense attach to personal pronouns in PF. See Booij and Rubach (1987) for the lexical approach we reject and Dogil (1987) and Aguado and Dogil (1989) for criticism. Dogil (1987) treats the auxiliary as a clitic in Agreement which is copied on its different hosts. Our analysis does not require any such rule. Toman (1981b: 306) reports that in colloquial Czech, the 2SG auxiliary may be optionally reduced, as in (i):

- (i) Ty jsi přišel. → Tys přišel. (Czech)
you Pres + 2SG come
 You have come.

Within our approach, the contraction in (i) is the result of the PF process of encliticization that Czech shares with Polish.

- (43)b. Czytać książkę będą.
read + INF book will + 3PL
 Read a book, they will.

(43) has a counterpart in Czech. In Czech, VP-Preposing is impossible with the perfect auxiliary but possible with the future auxiliary (Rivero 1991): [*Kupovat knihy*] *budu* 'Buy books, I will.' vs. *[*Koupil knihy*] *jsem* '*Bought books, I have.'

3.2. *The Position of the Auxiliary*

In the following discussion, we attempt to determine the position of the Polish auxiliary in auxiliary + participle sequences. We argue that in structures without Incorporation, the Polish perfect auxiliary is a clitic under I^0 and does not float to another position in syntax, except in one well-defined case discussed at the end of this section. We will show that Polish is not a language with Wackernagel effects for clitic auxiliaries and in this specific sense differs from Czech, Slovak, and Serbo-Croatian but resembles Bulgarian.

Identifying the position of the auxiliary in some structures that do not involve Incorporation is straightforward. For example, sentence (36), (*Ty-ś widział tę książkę*. 'You've seen this book.'), is like an English sentence containing a contracted auxiliary: the auxiliary is transparently in I^0 . The analysis is also quite straightforward where we have null subject sentences in which a variety of constituents precede the auxiliary:

- (44) Kiedy-ś widział królika?
when- 2SG seen rabbit
 When did you see the rabbit?
- (45) Jego-ś widział.
him- 2SG seen
 You saw him.
- (46) Jerzego- ś lubiła.
Jerzy- 2SG liked
 You liked Jerzy.

- (47) Daleko- m poszła.
far- 1SG gone
 I went far.

This order is the result of two processes which have well-known counterparts in many languages: movement to the CP-specifier position in cases like (44), i.e., *Wh*-movement, and movement to a position adjoined to IP by Scrambling in the following examples. In both cases, cliticization of the auxiliary to the preceding item applies across the empty subject, parallel to English examples such as *Who do you think's been here?* (Schachter 1984).

There are other examples that are less straightforward, although there is no reason to think that they involve movement of the auxiliary. Consider for example (2c) repeated as (48), which has an the NP-object between subject and auxiliary:

- (48) Ty jego- ś widział.
you him 2SG seen
 You saw him.

This shows that Polish clitic auxiliaries need not be in the Wackernagel position (second in the clause). In (48), in syntactic terms the auxiliary is in the third position after subject and object constituents and, in phonological terms, after two different accented words. We suggest that the position of the object NP in (48) is the result of Scrambling. As shown in (49), the object *jego* has adjoined to IP, and the subject *ty* has adjoined to IP, or Spec-of-CP:

- (49) Ty_j [_{IP} jego_i [_{IP} t_j [_{IO} ś] [_{VP} t_j widział t_i]]]

If this is correct, there is no reason to assume that the auxiliary is in a position other than I⁰ in (49).

Where the auxiliary appears to be inside a phrase, a non-movement analysis is not so obvious. (3b), repeated now as (50), and (51)–(55) are typical examples of this situation:

- (50) Ewy- ś książkę czytał.
Ewa's- 2SG book read
 You read Ewa's book.

- (51) Świadomy-ś tych problemów był.
aware- 2SG these problems been
 You were aware of these problems.
- (52) Którego-ś mężczyźne widział?
which- 2SG man seen
 Which man did you see?.
- (53) Ładne-ś kwiaty kupił.
nice- 2SG flowers bought
 You bought nice flowers.
- (54) Bardzo-ś ładnie wyglądał wczoraj.
very- 2SG nice looked yesterday
 You looked very nice yesterday.
- (55) Książkę-ś o Polsce napisał.
book- 2SG about Poland written
 You wrote a book about Poland.

In (50) we appear to have a pre-nominal modifier as specifier separated from its head by an auxiliary, while in (51) we seem to have an auxiliary separating a head from its complement. If Polish determiners such as *którego* 'which' are heads of DP's in the sense of Abney (1987) and take an NP complement, then (52) is parallel to (51). If determiners are specifiers of NP, (52) will be analogous to (50). In (53) and (54), the auxiliary separates a premodifier from the associated head, as in (50). In (55), the auxiliary separates a head from its complement, as in (51).

It may be tempting to think that examples (50)–(55) involve movement of clitic auxiliaries. However, there are parallel cases in which the present tense verb appears in the position of the auxiliary. The following correspond to (50)–(55):

- (56) Ewy **czytasz** książkę.
Ewa's read + Pres + 2SG book
 You are reading Ewa's book.
- (57) Świadomy **jesteś** tych problemów.
aware be + Pres + 2SG these problems
 You are aware of these problems.

- (58) Którego **widzisz** mężczyznę?
which see + Pres + 2SG man
 Which man are you seeing?
- (59) Ładne **kupujesz** kwiaty.
nice buy + Pres + 2SG flowers
 You are buying nice flowers.
- (60) Bardzo **wyglądasz** ładnie dzisiaj.
much look + Pres + 2SG nice today
 You are looking very nice today.
- (61) Książkę **piszesz** o Polsce.
book write + Pres + 2SG about Poland
 You are writing a book about Poland.

There are also parallel cases involving Incorporation of the participle to the perfect auxiliary, as in (62)–(67):

- (62) Ewy czytał-**eś** książkę.
Ewa's read- 2SG book
- (63) Świadomy był- **eś** tych problemów.
aware been- 2SG these problems
- (64) Którego widział-**eś** mężczyznę?
which seen- 2SG man
- (65) Ładne kupił- **eś** kwiaty.
nice bought-2SG flowers
- (66) Barzdo wyglądał-**eś** ładnie wczoraj.
much looked- 2SG nice yesterday
- (67) Książkę napisał-**eś** o Polsce.
book written-2SG about Poland

The above parallelisms follow from our assumption that a clitic auxiliary is either in I^0 alone, resulting in (50)–(55), or forms an X^0 -complex with the participle which optionally incorporates to it, resulting in (62)–(67). In addition, the verb in simple or one-word tenses such as the present moves to I^0 , resulting in (56)–(61). Thus it follows that inflected auxiliar-

ies, inflected participle + auxiliary complexes, and inflected ordinary verbs have the same distribution.

It is clear, then, that rather than being a peculiarity of clitics, the generalization uniting (50)–(67) involves the syntactic processes allowing certain types of constituents to precede the I^0 -position, namely *Wh*-movement and Scrambling.

3.3. Scrambling

Before we consider how Scrambling accounts for the properties of sentences with auxiliaries and no Incorporation, we need to flesh out its properties. We propose that in Polish, Scrambling is adjunction to an X^{\max} such as AuxP or VP and subsumes topicalization, which we regard as adjunction to IP. The process resembles *Wh*-movement in that it licenses parasitic gaps. Consider here the following relevant data:

- (68)a. Jan skrytykował ten film [przed obejrzeniem *(go)]
Jan criticized this film before seeing it
 Jan criticized this film before seeing it.
- b. Który film Jan skrytykował [przed obejrzeniem]
Which film Jan criticized before seeing
 Which film did Jan criticize before seeing?
- c. Ten film Jan skrytykował [przed obejrzeniem]
This film Jan criticized before seeing
 This film Jan criticized before seeing.
- d. Jan ten film skrytykował [przed obejrzeniem]
Jan this film criticized before seeing
 This film Jan criticized before seeing.

Example (68a) shows that the verbal noun *obejrzeniem* ‘seeing’ requires an overt object under normal circumstances. (68b–d) show that *Wh*-movement, Scrambling to IP, and Scrambling to VP respectively license parasitic gaps. It follows therefore that Scrambling is movement to an A-bar position.

Another piece of evidence that Polish Scrambling must be movement to an A-bar position is that it neither decreases nor increases anaphora possibilities, unlike movements to A-positions, which do (see the dis-

cussion in Déprez 1989, Mahajan 1990). In this connection consider the following data:

- (69)a. Jan spotkał swojego brata.
Jan met REFL brother
 John_i met his_i own brother.
- b. Swojego brata Jan spotkał.
REFL brother Jan met
- (70)a. *Swój brat spotka Jana.
REFL brother met Jan
 *His_i own brother met John_i.
- b. *Jana swój brat spotkał.
Jan REFL brother met

(69b) shows that topicalizing, or in our terms Scrambling, the object NP to IP does not decrease binding possibilities for anaphors. (70b) shows that Scrambling does not increase binding possibilities: the object precedes and c-commands the subject, but binding of the anaphor remains impossible. Similarly, the following data show that Scrambling to VP does not affect binding possibilities:

- (71)a. Jan kazał swojemu bratu spotkać Jerzego.
Jan told REFL brother meet Jerzy
 Jan_i told his_i own brother to meet Jerzy.
- b. Jan Jerzego kazał swojemu bratu spotkać.
 Jan_i told his_i own brother to meet Jerzy.
- (72)a. Jan kaza Marii umyć swój samochód.
Jan told Mary wash REFL car
 Jan_i told Mary_j to wash his_i/her_j car.
- b. Jan swój samochód kazał Marii umyć.
 Jan_i told Mary_j to wash his_i/her_j car.

In (71b) and (72b), object NPs have been scrambled, but the binding possibilities for the possessive anaphor remain unchanged. We feel that it is safe to conclude then that Scrambling in Polish adjoins a phrase to a

X^{\max} in the clause and creates a chain with the characteristics of *Wh*-chains (and see Witkoś 1993 for additional parallelisms and discussion).

3.4. *Scrambling and the Position of Auxiliaries*

We return now to the position that auxiliaries occupy in sentences without Incorporation. First, as example (50) (repeated below as (73)) shows, a specifier may be separated from the associated head ((56) and (62) illustrate the same phenomenon).⁶ Not obeying the Left Branch Condition is a common Slavic feature (for discussion of Polish see Borsley (1981, 1984) and Corver (1992), which appeared after this paper was written):

- (73) Ewy-ś książkę czytał.
Ewa's-2SG book read
 You read Ewa's book.

Given the assumption that Polish is underlyingly VO, (73) and similar

⁶ Examples where the clitic auxiliary stands between the constituents of a quantificational *Wh*-expression may belong to the type with determiner separated from the associated head. Consider the following from (Dogil 1987):

- (i) ?Jako-m -ś mu pomógł.
how-1SG Indef him helped
 I helped him somehow.

Here the auxiliary stands between the *Wh*-word and its indefinite marker. According to our consultants, this example is marginal, and the pattern is restricted to certain grammatical persons. For example, (ii), a plural counterpart of (i), is ungrammatical:

- (ii) *Jako-śmy-ś mu pomogli.
how-1PL-Indef him helped

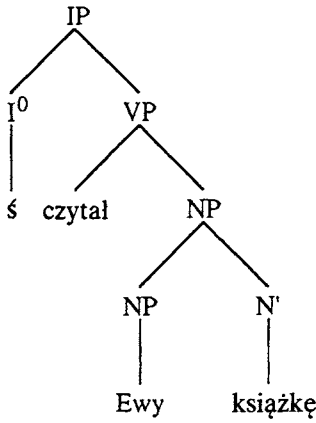
Similar comments apply to patterns with the clitic-auxiliary standing between a *Wh*-phrase and its generic marker. Thus, while both (iii. a) and (iii. b) seem fine, only the (a) example in (iv) is grammatical:

- (iii)a. Co- kolwiek zrobił-eś.
what-ever done-2SG
 Whatever you (SG) did
- b. Co-ś-kolwiek zrobił.
- (iv)a. Co- kolwiek zrobili-ście.
what-ever done-2PL
 Whatever you (PL) did
- b. *Co-ście-kolwiek zrobili.

Given such restrictions, it is perhaps the case that examples (i) and (iii. b) are the product of more idiosyncratic processes than the patterns discussed in the text.

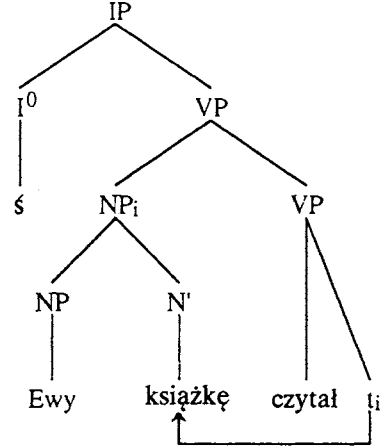
cases involve adjunction of a verbal complement to VP and adjunction of the specifier of this complement to IP, as in (74):

(74)a.



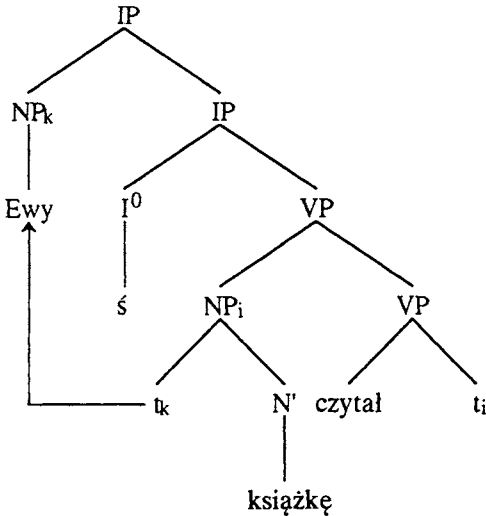
a. BASE

b.



b. SCRAMBLING TO VP

c.



c. SCRAMBLING TO IP

We conclude that the second process is adjunction to IP, rather than to the CP-Specifier because this same word order is found in subordinate clauses (Witkós 1993), as the following illustrates:

- (75) Wie, że Ewy- ś książkę czytał.
He + knows that Ewa's-2SG book read
 He knows that you read Ewa's book.

Examples such as (75), in which in embedded clauses the auxiliary need not immediately follow the complementizer, provide further evidence that Polish clitic auxiliaries are not in the Wackernagel position. Here we find a contrast with Czech, Serbo-Croatian, and Slovak. Serbo-Croatian is a typical Wackernagel language in this respect:

- (76)a. Jovan tvrdi da je Marija dosla. (Serbo-Croatian)
John claims that has Mary come
 John claims that Mary came.

b. *Jovan tvrdi da Marija je dosla.

The idea that Scrambling is the two-step process illustrated in (74) is supported by the fact that Polish allows Scrambling just to VP. So corresponding to (50), (53), and (54) we have the following:

- (77) Ty- ś Ewy książkę czytał.
you-2SG Ewa's book read
- (78) Ty- ś ładne kwiaty kupił.
you-2SG nice flowers bought
- (79) Ty- ś bardzo ładnie wyglądał wczoraj.
you-2SG much nice looked yesterday

Analogously, Scrambling to IP alone is also attested. We find this in sentences in which a present tense verb separates a specifier from the related head, as in (56), and in those in which a participle and auxiliary combination separates the two, as in (62).

Let us now consider examples in which the clitic auxiliary separates a head from its complement, as in (51), *Świadomyś tych problemów był* 'You were aware of these problems', and parallel cases. Such sentences are not instances of Long Head Movement, which, as we have noted, is not possible in Polish. Rather than being an X^0 that has undergone LHM to C^0 , *świadomy* is the head of a phrase that has moved as a X^{\max} . This becomes clear in examples where this head and its premodifier precede the auxiliary, as shown by (80). Since both the modifier and the auxiliary, that is *bardzo świadomy*, have been fronted, we conclude that the process

in (80) is phrasal movement and not X^0 -movement, which affects the head of the phrase in isolation:

- (80) Bardzo świadomy-ś tych problemów był.
much aware- 2SG these problems been

Examples such as (51) involve the scrambling of a complement out of the verbal complement to a pre-verbal position and the scrambling of the remainder of the verbal complement to a pre-auxiliary position. We have adjunction to the AuxP headed by *był* followed by adjunction to IP, as in (81).^{7,8} Notice that *był* is the head of the complement of the perfect auxiliary, explaining how it is able to undergo Incorporation to the perfect auxiliary, as illustrated by *był-eś* in (63):

⁷ The analysis in (81) is partly based on treatments proposed for German examples such as (i) (Webelhuth 1985, 1992, Koster 1987, den Besten and Webelhuth 1990):

- (i) Gelesen hat Hans das Buch nicht. (German)
read had Hans the book not
 John did not read the book.

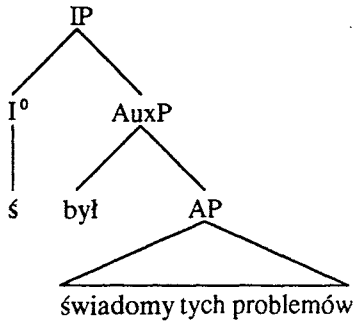
For the sentence in (i), which den Besten and Webelhuth consider a case of 'remnant topicalization', the hypothesis is that the VP containing *gelesen* fronts, while *das Buch* as complement of V remains behind because it has been scrambled out of the VP. Van Riemsdijk (1989) proposes that in (i) a non-maximal verbal projection is fronted, which the *Barriers* framework (Chomsky 1986) does not contemplate as a possibility.

⁸ The derivation in (81) raises interesting problems which are beyond the scope of this paper, and several of them are mentioned in the cited references for the parallel Dutch and German Scramblings; however, as far as we can tell, none of these problems would be particular to Polish, given our proposals.

R. Huybregts has pointed out to us that the preposed phrase in cases like (81c) has an unbound trace, a situation which will also arise in ordinary VP-Preposing in many languages, if subjects are considered VP-internal, and with preposed Passive VPs, however subjects are analyzed (*They said he was believed to be mad and believed to be mad he was*). For the parallel Dutch and German scrambled patterns, den Besten and Webelhuth (1990) propose a reconstruction device.

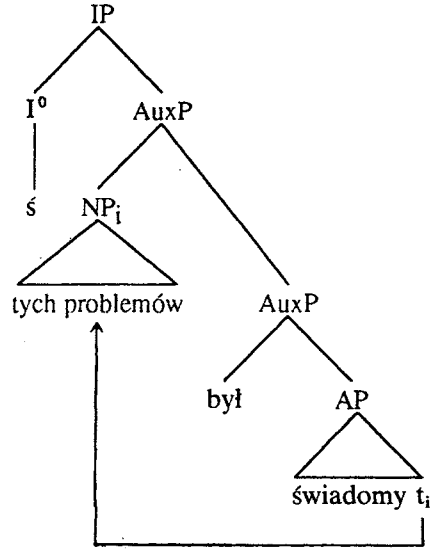
D. Adger has pointed out to us that in (81c) the phrase scrambled to AuxP intervenes between the phrase scrambled to IP and its trace, in apparent violation of Relativized Minimality (Rizzi 1989) if the two phrases are of the A-bar type, as we assume. One solution would be to consider that some scramblings have mixed properties – within our terminology, that they are A and A-bar at the same time (see Webelhuth (1992) and Déprez (1989) for different approaches to this issue). One way to implement this idea would be to assume that the movement in (81b) is to the Spec-of-AuxP instead and counts as A-movement for Relativized Minimality but has A-bar properties for Binding Theory. On the basis of some Weak Cross Over phenonema, Witkoś (1993: Chapter 7) also concludes that other scrambling patterns show mixed properties.

(81)a.



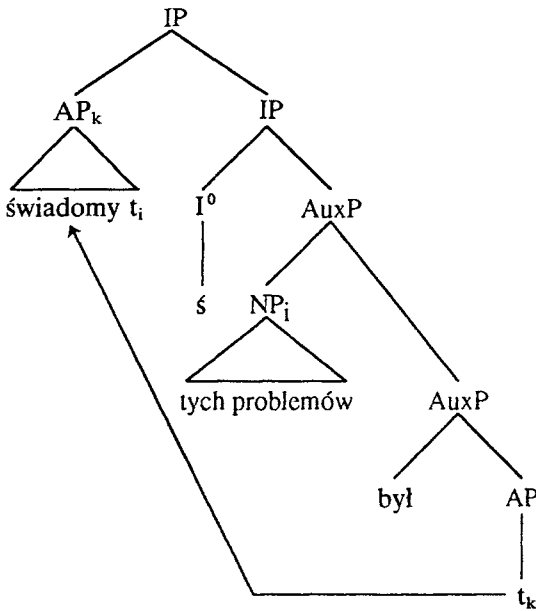
a. BASE

b.



b. SCRAMBLING TO AUXP

c.



c. SCRAMBLING TO IP

The second fronting in (81) is adjunction to IP, not movement to Spec-CP, because the same word order is found in subordinate clauses, as in (82):

- (82) Wie, że świadomy-ś tych problemów był.
He + knows that aware- 2SG these problems been
 He knows that you were aware of these problems.

As one would expect, examples involving just the first of these movement processes, Scrambling to AuxP in (81b), are possible, as in (83)–(84), thereby supporting the idea that the derivation involves a two-step procedure:

- (83) Ty- ś tych problemów był świadomy.
you-2SG these problems been aware
- (84) Ty- ś o Polsce napisał książkę.
you-2SG about Poland written book

Thus, examples in which a head and its complement are separated by verbal forms, including clitic auxiliaries, can be analyzed in essentially the same way: they involve the scrambling of a phrase to a position preceding the inflected auxiliary or verb which is in I^0 .

If sentences in which a clitic-auxiliary separates a head from its complement arise through movement of the complement, such patterns should occur only when it is in fact possible to move the complement. This seems to be the case, providing additional motivation for our analysis. For example, an auxiliary cannot be attached to a transitive preposition, as (85) illustrates:

- (85) *Do-ś Poznania pojechał.
to- 2SG Poznań gone
 You went to Poznań.

This is an automatic consequence of the fact that Polish does not allow preposition stranding, as (86b) illustrates:

- (86)a. O czym Jan rozmawia?
about what Jan talks
 What is Jan talking about?
- b. *Czym Jan rozmawia o?

Thus we need no special stipulation to account for the ungrammaticality of examples like (85). This account also predicts correctly that it should

be possible to attach a clitic-auxiliary to a fronted or scrambled intransitive preposition:

- (87) Dookoła-śmy przeszukali.
around- 1PL searched
 We searched around.

Finally, Polish has a restructuring process which combines a preposition with the first constituent of its complement (see Borsley and Jaworska 1988, 1989). As a result of this and the lack of Left Branch Condition effects, we have examples like the following, where preposition and *Wh*-word have been fronted together:

- (88) Z którym Jan rozmawia mężczyzną?
with which Jan talks man
 Which man is John talking to?

As Henk van Riemsdijk has pointed out to us, it should therefore be possible for a clitic auxiliary to apparently be inside the complement of a preposition. This is indeed the case, as the following illustrates:⁹

⁹ In the light of examples such as (i.b) it has been claimed that the position of clitics in Serbo-Croatian is not defined syntactically but phonologically. In this view, which differs from our syntactic treatment of Polish clitic auxiliaries, clitics appear after the first accented word in the clause and may break up a syntactic phrase (see the discussion in Spencer 1991: 355ff.):

- (i)a. Taj piesnik **mu je** dao autogram
This poet him has given autogram
 This poet has given him an autogram.
 b. Taj **mu je** piesnik dao autogram.

The sentences in (i) resemble the Polish examples where the clitic auxiliary appears to be inside a phrase, which we have proposed involve the fronting of X^{\max} , rather than a clitic placement process sensitive to phonology. For Serbo-Croatian, Čavar and Wilder (1992) have independently come to a conclusion that resembles our proposal for Polish. They point out that Serbo-Croatian is not sensitive to the Left-Branch condition, so (i.b) can be analyzed as involving the fronting of *taj*. In their view, the clitic cluster can interrupt a phrase only when the portion of the phrase which precedes can be extracted independently. For instance, PPs can be fronted, but Ps in isolation cannot, so a clitic cannot interrupt a PP in cases such as (ii), pointed to us by Ljiljana Progovac:

- (ii)a. Petar je krenuo [_{PP} prema njemu].
Peter has moved towards him
 b. [_{PP} Prema njemu] je Petar krenuo.
 c. *Prema je njemu Petar krenuo.

- (89) Z tym-ś mężczyzną rozmawiał.
with this-2SG man talked
 You talked with this man.

We have argued in the foregoing that there is no need to assume that the clitic-auxiliary is moved in examples in which it appears to be inside of a phrase. Rather, such sentences can be analyzed as the result of *Wh*-movement or Scrambling, with the auxiliary remaining in I^0 .

3.5. *A Special Position for Auxiliaries*

There are, however, certain sentence types which do involve a movement restricted to auxiliaries of various types, including non-clitics. Consider first (90a-c), which have the inflected auxiliary after two fronted *Wh*-phrases and before the main verb:

- (90)a. Co komu-ś dał?
what to + whom-2SG given
 What did you give to whom?
- b. Gdzie kto by poszedł?
where who Cond + 3SG gone
 Who would go where?

In connection with the phonological approach to clitic position, an anonymous reviewer calls attention to examples such as (iii), which our consultant D. Kudra finds literary but grammatical:

- (iii) U novom je hotelu ziveo.
In new has hotel lived
 He has lived in a new hotel.

This sentence, which resembles Polish (89) in that the clitic auxiliary follows a preposition and an adjective, could be open to the syntactic treatment we propose for Polish if the preposition restructures with an adjective as head of X^{max} . However, unlike the situation discussed for the Polish auxiliary, *je* in (iii) occupies a position in which ordinary inflected verbs cannot appear. The same reviewer mentions that when an adverb modifies the adjective, the auxiliary may follow the adjective, as in (iv.a), but not the adverb, as in (iv.b):

- (iv)a. U vrlo novom je hotelu ziveo.
In very new has hotel lived
 He has lived in a very new hotel
- b. *U vrlo je novom hotelu ziveo.

This situation appears compatible with syntactic approaches such as the one we advocate, but is problematic for phonological approaches.

- c. Co komu **będziesz** rozdawał?
what to+whom will+2SG given + away
 What will you give away to whom?

In cases like (90), it can be maintained that the auxiliary is in I^0 if we accept Rudin's analysis for multiple *Wh*-movement in Polish. Under this analysis, the first *Wh*-phrase fills the CP-specifier position, and other *Wh*-phrases are adjoined to IP and precede the I^0 position.

(90a-c) have variants (91a-c), in which the two *Wh*-elements are separated by the auxiliary, suggesting that auxiliaries can also be adjoined to IP:

- (91)a. Co-ś komu dał?
what-2SG to + whom given
- b. Gdzie **by** kto poszedł? (Toman 1981a)
where Cond + 3SG who gone?
- c. Co **będziesz** komu rozdawał?
what will+2SG to+whom given+away

Motivation for this auxiliary adjunction comes from the fact that when we have three *Wh*-elements, the auxiliary can intervene between the first and the second, or the second and the third, as in (92):

- (92)a. Co **by** komu kiedy Jan dał?
what Cond+3SG to+whom when Jan given
 What would Jan give to whom when?
- b. Co komu **by** kiedy Jan dał?
what to+whom Cond+3SG when Jan given

The sentences in (91) and (92) lead to two independent conclusions, the first of which has been already established on other grounds. First, the ordering of Polish auxiliaries above is *not* a second position phenomenon, so the auxiliaries are not in a special Wackernagel slot. Second, the auxiliary raising in (92) cannot be movement to C, since the second *Wh*-phrase in (92b) is adjoined to IP. Thus Polish contrasts not only with Wackernagel languages but with Germanic V2 languages, in which the auxiliary fills C^0 in cases like *What have you given to Mary?*

The combination of participle and auxiliary which results from Incorpor-

ation cannot separate a pair of *Wh*-elements. Thus, in contrast with (90a) and (91a), the following is impossible, except as an echo-question:

- (93) *Co dał- eś komu?
what given-2SG to+whom

Hence, it must be concluded that there is a process applying to the various finite auxiliaries in I^0 to optionally adjoin them to IP but that finite Vs and finite Incorporation-complexes containing V cannot be raised further than I^0 . This process could be adjunction of an X^0 to IP, which has been postulated by Kayne (1991) for Romance infinitives, and is compatible with the tenets of the *Barriers* framework.¹⁰ As far as we can see, however, this does not challenge our central conclusion, namely that the clitic-auxiliary is in I^0 in examples (48) through (55).

3.6. Summary

We have argued that auxiliary structures without Incorporation in Polish share the general characteristics of the auxiliary + participle structures of West and South Slavic. We have also argued that Polish is a configurational language, rather than one with flat structures. From this point of view, its freedom in word order is due to the effect of syntactic rules such as *Wh*-movement and Scrambling, which are sensitive to structural and hierarchical relations in the phrase-marker, rather than PF arrangements of phonologically defined groupings. We have also argued that Polish auxiliaries are generally in I^0 , the exception being where they move to a higher position in the clause. This position is neither the Wackernagel slot associated with Czech, Slovak, or Serbo-Croatian, nor the C^0 associated with

¹⁰ The contrast in movement properties between Polish auxiliaries and verbs partially parallels English. Pollock (1989) argues that English auxiliaries such as *have* can raise to T/Agr while verbs cannot because a Theta-criterion violation ensues in the second case, as a result of the properties of English Agr. When V raises to Agr, it forms a chain which prevents the transmission of the Theta roles this item assigns to its arguments; since auxiliaries do not assign Theta-roles, their movement is unproblematic. In contrast, in French, transmission of Theta-roles is possible after V-raising, so both verbs and auxiliaries can raise. If we accept this analysis, it could be suggested that Polish shares some properties of both French and English. On the one hand, Polish seems parallel to French in that auxiliaries and verbs can appear under the node we have labelled I^0 ; thus, raising V to I is not detrimental to Theta-role assignment in Polish. On the other hand, Polish resembles English in that movement to a position higher than I^0 is possible only for auxiliaries but not for verbs. Thus, it can be suggested that in Polish this second raising process creates a movement chain which prevents the transmission of Theta-roles to the arguments of V and that it is viable only with auxiliaries since those have no Theta-roles to assign.

Germanic V2 phenomena; in this respect, Polish contrasts with these two types of languages. This process of raising from I⁰ applies to clitic and non-clitic auxiliaries alike, but does not apply to participle + auxiliary combinations.

4. NEGATION

In this section we examine the distribution of negative particles in auxiliary structures with and without Incorporation. The determination of the position of negation in Polish is important from two points of view. The first is contrastive. It has been suggested by Rivero (1991) that there are two types of Slavic languages with respect to the position of Neg: (a) those such as Bulgarian and Serbo-Croatian where Neg takes T(ense)P(hrase) as complement; (b) those such as Czech and Slovak where Neg is the complement of T. We argue below that Polish belongs to the second type. Second, Incorporation is unique to Polish within Slavic and, as we will see, is at the root of what makes the distribution of negation in this language different from that of other Slavic languages.

We can begin by illustrating that the negative particle *nie* cannot precede the perfect or conditional auxiliary. As shown in (94), *nie* can precede the participle + auxiliary sequence but not the auxiliary alone:

- (94)a. Nie widział-**em** Marii.
not seen- 1SG Mary
 I did not see Mary.
- b. *Nie-**m** widział Marii.
- c. Nie widział**bym** Marii.
 I would not see Mary.
- d. *Nie **bym** widział Marii.

Thus, Incorporation of the participle to the auxiliary may appear obligatory in this context, while in other environments basic and incorporated variants alternate. We will show that the contrasts in (94) do not reflect restrictions imposed on the rule of Incorporation but can be attributed to the structural position of NegP in the clause, which groups Polish with Czech and Slovak.

4.1. *The Position of Negation*

As we have noted above, there are two types of Slavic languages as far as the position of Neg is concerned. The first group includes languages such as Bulgarian and Serbo-Croatian, in which negation must precede the perfect auxiliary:

- (95) (Az) ne sŭm pročel knigata. (Bulgarian)
 (I) *not have read book+the*

I have not read the book.

For this first group Rivero argues that Neg heads a NegP complement of CP and takes the highest functional projection within IP as complement. That is, Neg c-commands Tense and Agreement(s), whether these categories head different projections or are conflated under I⁰ as in our discussion, and the perfect auxiliary.

The second group includes Czech and Slovak, with negation following the perfect auxiliary:

- (96)a. Tehdy **jsem** nekoupil knihy. (Czech)
then have not + bought books

I did not buy books then.

- b. Ja **som** nenapísal list. (Slovak)
I have not+written letter

I did not write a letter.

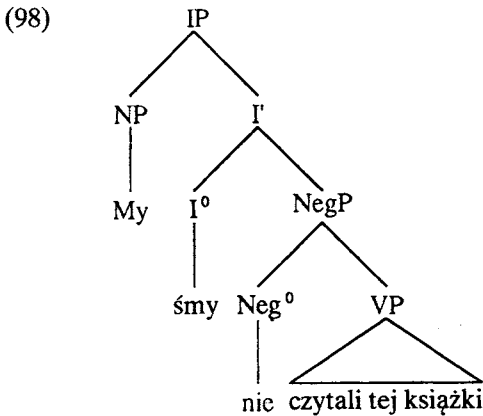
For this type, Rivero argues that Neg heads a NegP and is c-commanded by the perfect auxiliary instead of c-commanding it. More precisely, AuxP takes NegP as complement.

Adopting this analysis, let us consider negation in Polish, beginning with the perfect auxiliary. Examples such as (97) where Incorporation has not applied indicate that Polish belongs to the second type of Slavic language:

- (97) My-**śmy** nie czytali tej książki.
we- 1PL not read this book

We did not read this book.

In Polish, then, Neg is c-commanded by I⁰ and therefore (97) has the structure in (98):



As for the conditional auxiliary, (99a) shows that it is parallel to the Czech conditional in (99b) and must be located in the same structural position as *śmy* in (98), with Neg^0 lower than I^0 in the basic representation:

- (99)a. *My byśmy nie czytali tę książkę.*
we Cond + 1PL not read this book
 We would not read this book.

- b. *Pan by nekoupil.* (Czech)
man Cond + 3SG not + bought
 A man would not buy.

In brief, in Polish the AuxP headed by the perfect or the conditional auxiliary takes NegP as complement, as in Czech and Slovak.

4.2. Negation and Incorporation

We can now return to (94a), *Nie widział-em Marii* 'I did not see Mary', and negative sentences in which Incorporation has applied. Given that Neg in Polish heads the complement of AuxP (Aux – Neg – V), the order in (94b), **Nie-m widział Marii*, could arise only if *nie* fronted to a position preceding the auxiliary *-m* if Incorporation has not applied. If such a process is somehow disallowed, (94b) will be excluded, as required. As for (94a), it will be derived if Neg raises with the participle when Incorporation applies. Clearly, then, we must consider why it is impossible for Neg to front in isolation in cases like (94b) and how it is possible for Neg to raise together with the participle in cases like (94a). Similar comments apply to the conditional sentences in (94c) and (94d): *nie* cannot

precede *bym* unless Incorporation of the participle to the auxiliary has applied.

We suggest that these features of Polish are a consequence of a process adjoining Neg to the following V, similar to that discussed in Section 3, combining a preposition with the first item of its complement. Given this process, Neg and V will become a complex unit. As a result, they will raise together if Incorporation applies; Neg cannot raise alone. Why should Neg and P behave in the same way? We suggest that both are functional categories forming an extended projection with their complements (van Riemsdijk 1990, Grimshaw 1990). It seems, then, that certain Polish functional categories undergo a restructuring process, which combines them with the first item of their complement. Since lexical categories will not undergo this process, the scrambling discussed in the last section will not be affected.

An alternative approach might be to combine the participle with Neg through Incorporation, raising the participle to *nie*. As Riny Huybregts has pointed out to us, on this approach, (94a) and (94c) would involve Incorporation of a complex Neg into the auxiliary, necessitating the raising of Neg but only if it forms a complex with the participle, excluding (94b) and (94d). This last stipulation seems undesirable. In brief, we propose that the negation and the participle incorporate as a complex to the auxiliary, which gives the Neg + participle + auxiliary order of (94a) and (94c).

4.3. *The Effect of Negation in LHM*

Let us now turn to a major contrast between Polish on the one hand and Czech and Slovak on the other, which results from the effect of Long Head Movement in the latter two languages.

Recall that we assume that the Czech or Slovak participle which precedes the auxiliary in sequences like *Napísal som* 'I wrote' has undergone Long Head Movement to C^0 rather than Incorporation to the finite auxiliary in I^0 , as is the case in Polish. As a result of this difference, a Slovak negated sequence such as *Nenapísal som* 'I did not write' is linearly identical morpheme-per-morpheme to Polish *Nie widział-em* 'I did not see', but the similarity breaks down at the structural level: the Slovak Neg + participle complex *nenapísal* occupies C^0 , while the complete Polish sequence including the auxiliary is a unique X^0 in I^0 . As a consequence of their different syntactic structures, Slovak Neg + participle + auxiliary sequences are restricted to root clauses, while analogous Polish sequences appear in all types of clauses including subordinate structures, since they fill I^0 and

leave C^0 unaffected. This explains both the similarity and the contrast between the sentences in (100) and (101). In Slovak (100a) and Polish (101a), the negated main participle is below I^0 , so they are both grammatical. Slovak (100b) is ungrammatical because if the negated participle raises, it cannot incorporate to the auxiliary and has no landing site since C^0 is filled. Polish (101b) is grammatical because the negated participle incorporates to the auxiliary in I^0 rather than moving to C^0 :

(100)a. Spytal sa či som nenapísal list. (Slovak)
asked Refl if Pres + 1SG not + written letter
 He asked if I did not write the letter.

b. *Spytal sa či nenapísal som list.

(101)a. Janek powiedział, że-ś nie pojechał do Warszawy.
Janek said that-2SG not gone to Warsaw

b. Janek powiedział, że nie pojechał -eś do Warszawy.
Janek said that not gone- 2SG to Warsaw

4.4. Negation and the two types of Slavic auxiliaries

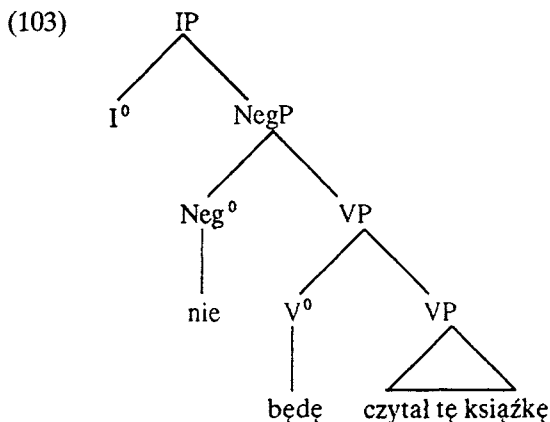
There is a further similarity between Czech/Slovak and Polish with respect to the position of Neg in a different type of auxiliary structure. In all three languages, the future auxiliary follows the negative particle, in contrast to the conditional and perfect auxiliaries in sentences like (96), (97), and (99):

(102)a. Nie będę czytał książki.
not will + 1SG read book
 I will not read the book.

b. Nebudu kupovat knihy. (Czech)
not + will + 1SG but books
 I will not buy books.

Such differences are presumably due to the lexical properties of the two types of auxiliaries and the different structural positions in which they are generated. The Czech and Polish future auxiliary selects VPs headed by imperfective Vs and thus imposes selectional constraints on its complement. This contrasts with the conditional and perfect auxiliary, which can take any type of VP as complement. The selectional properties of the

future auxiliary suggest that it has a more complex lexical structure than the other auxiliaries. Perhaps the future counts as a *lexical* auxiliary generated in the V-slot, a position c-commanded by both I^0 and Neg^0 . If so, (102a) has the structure in (103), which should be contrasted with that proposed for past sentences in (98):



Neg combines with the future auxiliary and the resulting complex raises to I^0 , just like ordinary V's with argument structure, giving the order in (102).

As noted above, the perfect and conditional auxiliaries lack selectional properties, so they are functional rather than lexical categories. The syntactic consequence of this is that they are generated in a higher position than the future auxiliary, c-commanding Neg . We have not discussed recent proposals where I^0 is split into several functional heads (Pollock 1989), so we simply suggest that the perfect and the conditional auxiliaries occupy a functional position in the clause, and we label this position I^0 , as shown in (98). In other Slavic languages such as Serbo-Croatian, where the future auxiliary lacks selectional properties and is used with all types of verbs, this auxiliary behaves syntactically like the perfect and the conditional auxiliaries in every respect and in our terms is a functional category.¹¹

¹¹ For distinctions between functional and lexical auxiliaries in Slavic and Old Romance see (Lema and Rivero 1989, 1991, 1992). Another contrast, pointed out in section 3, is that lexical auxiliaries such as the future license VP-Preposing while functional auxiliaries such as the conditional do not.

4.5. *Summary*

In Polish, Neg heads a NegP complement of the functional category I^0 containing the perfect and conditional auxiliaries and takes a VP headed by lexical categories such as the future auxiliary or the verb as its complement. Neg is a bound morpheme which obligatorily combines with the head of its complement, i.e., with the future auxiliary or the main verb. In this sense, Polish is similar to Czech and Slovak, in which Neg is a bound morpheme in a position below I^0 in the syntactic phrase-marker. However, Polish differs from these languages in that it has Incorporation of participles to the perfect and conditional auxiliaries. As a consequence of the basic position of Neg and the effect of Incorporation, two syntactic patterns alternate in negative sentences in Polish. Neg + participle + auxiliary sequences result from Incorporation of the Neg + participle-complex to Aux, and auxiliary + Neg + participle sequences result when Incorporation does not apply. Neg + auxiliary + participle sequences are impossible.

5. INCORPORATION IS SYNTACTIC

This section motivates the claim that Incorporation in Polish is syntactic rather than lexical, on the basis of the fact that it is 'bled' by the application of syntactic movements. The behavior of the conditional auxiliary in subjunctive complements and counterfactual conditional clauses provides the primary evidence for our conclusion.

5.1. *Conditional Contexts with and without Incorporation*

Conditionals show both incorporated and basic forms in three syntactic environments: root clauses (104), relative clauses (105), and complements of Vs of knowledge, traditionally labelled 'Indicatives' (106):

(104)a. Ja to zrobił-bym.

b. Ja to bym zrobił.

I would do it.

(105)a. Mężczyzna, którego odwiedził-byś, jest
man who visited- Cond + 2SG is
 bratem Marii.
brother Mary

- b. Mężczyzna, którego byś, odwiedził jest
man who Cond + 2SG visited is
 bratem Marii.
brother Mary
 The man you would visit is Mary's brother.

(106)a. Wie, że lustro byśmy kupili.
he + knows that mirror Cond + 1PL bought

- b. Wie, że lustro kupili-byśmy.
 He knows that we would buy a mirror.

However, in three other syntactic contexts, Incorporation of the participle fails to apply, and the auxiliary forms an inseparable unit with the complementizer: Subjunctive complements of V_s of volition, as in (107), the protasis of the counterfactual conditional construction, as in (108), and certain purpose clauses, which we do not discuss for lack of space:

(107)a. Chcę, że- byś widział królika.
I + want COMP-COND + 2SG seen rabbit
 I want you to see the rabbit.

- b. *Chcę, że widział-byś królika.

(108)a. Gdy- bym miał czas, poszedł-bym
COMP-COND + 1SG had time, gone + COND + 1SG
 do kina.

to cinema

If I had the time I would go to the cinema.

- b. *Gdy miał-bym czas, poszedł-bym do kina.

(108a) manifests both syntactic contexts. On the one hand, the counterfactual clause shows the necessarily unincorporated participle, while the apodosis as root clause shows (optional) Incorporation of the participle to the conditional. In complement clauses such as (107a), the complementizer *że* can be omitted, but Incorporation remains impossible.

5.2. *Incorporation in syntax*

Assuming a model inserting already inflected items in a syntactic tree, the above patterns show that Incorporation of the participle to the auxiliary cannot be a morphological or exclusively lexical operation. This is because the environments where Incorporation cannot operate must be defined syntactically rather than morphologically, and they involve the notion of clausal type. For instance, Incorporation cannot apply in the complement clause selected by a verb of volition.

The detailed investigation of these patterns is beyond the scope of this paper, but we suggest that the conditional moves to the complementizer in the syntax, in a way which precludes Incorporation of the participle to the auxiliary.¹² For instance, it could be that the conditional incorporates to C⁰, which functions as prefix, or that the auxiliary cliticizes onto C⁰ obligatorily in syntax, so as to be adjacent, and that Incorporation of the participle to the auxiliary destroys the necessary adjacency. Motivation for the idea that the complementizer and the auxiliary combine is provided by the fact that in (107a) and (108a), they cannot be separated. NPs and other constituents cannot stand between the two, as illustrated in (109):

(109)a. *Chcę, że ty byś widział królika.

I + want COMP you COND + 2SG seen rabbit

b. Chcę, że- byś ty widział królika.

I + want COMP- COND + 2SG you seen rabbit

I want you to see the rabbit.

By contrast, in indicative complements containing conditional auxiliaries, a complementizer and an auxiliary are two separate constituents, so NPs and other constituents can intervene between the two, as demonstrated by (106a).

In this sense, Polish is parallel to Czech, where the conditional is cliticized to clause-initial *a* in subjunctives (Comrie 1991):

(110) Učitel mi řekl, a- bych mluvil hlasite. (Czech)

teacher me told, that-Cond + 2SG spoken loudly

The teacher told me to speak loudly.

If the approach we have outlined is correct, the absence of Incorporation in subjunctive and counterfactual clauses requires a common explanation,

¹² Dogil (1987) proposes to generate one *by* in COMP and another one in INFL. The first is selected by the main V, the second is independent from it.

so we offer one further suggestion to unify these two syntactic structures and to answer the question why the conditional auxiliary raises to the complementizer in the two cases. First, consider the complements in (107a), which are clauses selected by a main V. In this case, raising of the conditional to C could be triggered if the selection requirements of the verb can be satisfied by conditional *by* and not by the complementizer *ze*, because it is inert. Now consider counterfactual clauses which contain the complementizer *gdy*, as in (108a). If this complementizer is also inert, clausal operator properties could be activated by raising the conditional auxiliary to C. This could provide a common account for the two syntactic structures where the auxiliary forms a complex with the complementizer.

To conclude, we have identified syntactic contexts which disallow Incorporation in Polish and concluded that the process is syntactic rather than lexical, given its sensitivity to the type of clause structure.

6. SUMMARY

In this paper we have discussed two syntactic patterns in Polish past and conditional sentences. One type consists of an inflected auxiliary preceding a VP complement headed by a participle, with general characteristics found in other Slavic languages and similar to English examples like *I've seen a book*. This analysis contrasts with earlier treatments, which view the auxiliary as a unique-to-Polish moving affix. Within our approach, the auxiliary has the usual distribution of items which occupy the I⁰ position, including finite non-auxiliary verbs. It can be preceded by constituents of many types because Polish is a configurational language and has several types of syntactic fronting processes.

The second type of past and conditional sentence contains the complement participle forming a complex X⁰ with the inflected auxiliary, as the result of syntactic Incorporation. This second pattern is unique to Polish within Slavic because other languages in this family lack Incorporation, but it has close counterparts in medieval and conservative Romance languages, which form futures and conditionals by a similar syntactic process.

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