

XI. LINGUISTICS*

Prof. R. Jakobson	Chief Red Thunder Cloud	S. -Y. Kuroda
Prof. A. N. Chomsky	T. G. Bever	T. M. Lightner
Prof. M. Halle	J. L. Fidelholtz	P. S. Peters, Jr.
Prof. G. H. Matthews	R. S. Glantz	C. B. Qualls
Prof. J. A. Fodor	J. S. Gruber	J. R. Ross
Prof. J. J. Katz	Barbara C. Hall	S. A. Schane
Prof. P. M. Postal	T. J. Kinzer III	R. J. Stanley
Dr. Paula Menyuk	R. P. V. Kiparsky	J. J. Viertel
Dr. W. Weksel		A. M. Zwicky, Jr.

A. ON THE SYNTAX OF THE INTRANSITIVE VERB 'wait'

In this report we consider the verb 'wait', like the verb 'sleep', to be intransitive; we shall show, however, that the verb 'wait' is of a different nature than the verb 'sleep' even though both verbs may be used in the seemingly identical simplex constructions "she is waiting" and "she is sleeping."

The existence of sentences like "she is waiting for the train" (note the absence of *"she is sleeping for the train") suggests that "she is waiting" may be derived from an underlying "she is waiting for something" by a simple deletion; such a derivation might then be considered analogous to the derivation of "he is eating" from an underlying "he is eating something."

In spite of the initial attractiveness of this suggestion, we are obliged to reject it. In the first place, the existence of sentences like "she is waiting for the doctor" alongside "she is waiting for the train" shows that if we were to permit "she is waiting" to be derived from "she is waiting for something," we would be obliged to permit an alternative derivation from "she is waiting for someone." The existence of two underlying strings for a single terminal string suggests that the terminal string is grammatically ambiguous; the sentence "she is waiting," however, displays no grammatical ambiguity.

In the second place, sentences like "she is waiting for the train to arrive," "she is waiting for the doctor to examine her" show that the sentences "she is waiting for the train," "she is waiting for the doctor" may themselves be considered reduced forms of an underlying "she is waiting for something/someone to do something." Continued application of this argument would force one to draw the incorrect conclusion that "she is waiting" is not ambiguous in only one sense, but in many senses. We shall therefore reject this analysis and propose an analysis that accounts for all of the sentences mentioned thus far and that does not require us to consider "she is waiting" ambiguous.

We derive all of the sentences from an underlying "she is waiting COMP," where COMP underlies a full sentence and may optionally be deleted. Deletion yields "she is

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waiting." If COMP is not deleted, we require insertion of the element for and the use of an infinitival form of the main verb within the COMP. This process yields "she is waiting for the train to arrive" and "she is waiting for the doctor to examine her." If a dummy verb is used in the COMP, we derive the reduced sentences "she is waiting for the train" and "she is waiting for the doctor."

The passive transformation may apply to strings under the node COMP, thereby producing sentences like "she is waiting for John to be examined by the doctor." If the object of the verb in the COMP is the same as the subject of 'wait', and if the string under the node COMP undergoes the passive transformation, then the usual deletion of repeated elements occurs and produces "she is waiting to be examined by the doctor" and not * "she is waiting for herself to be examined by the doctor." Addition of a marker for extra-heavy stress (emphasis) may block deletion of repeated elements to derive "she is waiting for HERSELF to be examined by the doctor."

Wh-transformations may apply within the COMP, but only if the dummy verb is used. These transformations will derive sentences like "who/what is she waiting for." Note the absence of * "who is she waiting for to examine her" and * "what is she waiting for to arrive."

The Neg-transformation may apply within the COMP only when marked with extra-heavy stress, as in "she is waiting for the train NOT to arrive" and "she is waiting for the doctor NOT to examine her." For some speakers these sentences may be marginal or unacceptable.

Nominalization transformations may apply within the COMP; if the verb 'await' is used in place of 'wait', the element for does not occur: "she is waiting for the arrival of the train," "she is awaiting the arrival of the train," "she is waiting for the construction of an even larger building," "she is awaiting the construction of an even larger building," etc., but not * "she is awaiting for the arrival of the train," * "she is awaiting for the construction of an even larger building," etc.

If the verb phrase in the COMP contains an object, nominalizations produce non-grammatical sentences like * "she is (a)waiting (for) the doctor's examination of her(self)" (from "the doctor examines her"), * "she is (a)waiting (for) the winning of the Series by the Dodgers" (from "the Dodgers win the Series"), * "she is (a)waiting (for) the breaking of a window by the storm" (from "the storm breaks a window"), * "she is (a)waiting (for) his covering of the table with a cloth" (from "he covers the table with a cloth").

Note that sentences like "she is (a)waiting (for) an outstanding generative phonologist's analysis of the morphophonemic component of Russian" are not derived from the COMP "an outstanding generative phonologist analyzes the morphophonemic component of Russian," but from the COMP "an outstanding generative phonologist VERB_{dum} an analysis of the morphophonemic component of Russian," as can be seen from the

existence of sentences like "she is waiting for an outstanding generative phonologist to present/to discover/to think up/ ... an analysis of the morphophonemic component of Russian."

T. M. Lightner

B. ON THE PHONOLOGY OF tort, tolt, tert, telt IN OLD CHURCH SLAVONIC AND RUSSIAN

It is well known that the Proto-Slavic clusters *tort, *tolt, *tert, *telt developed to trat, flat, trět, tlět in Old Church Slavonic (OCS) and to torot, tolot, teret, tolot in Russian (R). In this report, we discuss the mechanism of these two developments and show that the historical development must be reflected in the synchronic descriptions of OCS and R. We use the abbreviations C for any segment specified [+ consonantal], V for any segment specified $\begin{bmatrix} + \text{vocalic} \\ - \text{consonantal} \end{bmatrix}$, and L for any segment specified $\begin{bmatrix} + \text{vocalic} \\ + \text{consonantal} \end{bmatrix}$.

The OCS development is accounted for by application of the following transformational rules:

(A) Structural Description: $\begin{matrix} C & V & \underbrace{L & C} \\ X & 1 & Y & \end{matrix}$ where $V = \begin{bmatrix} - \text{diffuse} \\ - \text{tense} \end{bmatrix}$

Structural Change: $1 \rightarrow 11$

(B) SD: $\begin{matrix} V \\ 1 \end{matrix}$

SC: $11 \rightarrow \begin{bmatrix} + \text{tense} \\ 1 \end{bmatrix}$

(C) SD: $\begin{matrix} C & V & L & C \\ X & 1 & 2 & Y \end{matrix}$ where $V = [- \text{diffuse}]$

SC: $12 \rightarrow 21$

The development of OCS grad-ъ 'city', from the underlying root gord is thus as follows:

gord $\rightarrow A \rightarrow$ goord $\rightarrow B \rightarrow$ gōrd $\rightarrow C \rightarrow$ grōd = grad

In Russian, the development is the same, except that rule B does not apply; R gorod 'city' thus has the following development:

gord $\rightarrow A \rightarrow$ goord $\rightarrow C \rightarrow$ gorod

The synchronic descriptions of OCS and R must contain these rules in order to

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account for the alternations VL ~ L \bar{V} (OCS) and VL ~ VLV (R): OCS inf. klati 'to stab' and 3 sg. koljetъ 'stabs!'; R inf. kolot' 'to chop' and 3 sg. kolet 'chops'. The root cluster ol in both languages undergoes the application of rules A-C in the inf. because the cluster lies before a consonant; in the pres. tense forms, however, ol does not lie before a consonant and therefore remains unaffected by rules A-C.

The gravity of lax vowels before lC in R is accounted for by application of the following rule:

$$(D) \begin{bmatrix} + \text{vocalic} \\ - \text{consonantal} \\ - \text{tense} \end{bmatrix} \rightarrow [+ \text{grave}] \quad \text{in env: } \underline{\quad} \quad 1 \text{ C}$$

The synchronic derivation of the el cluster in R inf. molot' and 3 sg. melet 'grind', for example, is as follows (note that D must apply before A):

3 sg: mel+e+t \rightarrow D \rightarrow no \rightarrow A \rightarrow no = melet

Inf: mel+t' \rightarrow D \rightarrow mol+t' \rightarrow A \rightarrow mool+t' \rightarrow C \rightarrow molo+t' = molot'

We shall now account for the existence of pairs of forms in R of the type gorod ~ grad, bereg ~ breg, molod ~ mlad, etc.¹ Each of the pairs is derived from a single underlying lexical morpheme. The difference in derivation is accounted for by marking the lexical morpheme either [+R] or [-R]. The synchronic rules, given in the order in which they must apply, are as follows:

$$(D) \begin{bmatrix} + \text{vocalic} \\ - \text{consonantal} \\ - \text{tense} \end{bmatrix} \rightarrow [+ \text{grave}] \quad \text{in env: } \left[\begin{array}{c} \underline{\quad} \\ +R \end{array} \right] 1 \text{ C}$$

$$(A) \text{ SD: } \begin{array}{c} C \ V \ \underline{L \ C} \\ X \ 1 \ \quad Y \end{array} \quad \text{where} \quad V = \begin{bmatrix} - \text{diffuse} \\ - \text{tense} \end{bmatrix}$$

$$\text{SC: } 1 \rightarrow 11$$

$$(B) \text{ SD: } \begin{bmatrix} + \text{vocalic} \\ - \text{consonantal} \\ - R \end{bmatrix} \\ 1$$

$$\text{SC: } 11 \rightarrow \begin{bmatrix} + \text{tense} \\ 1 \end{bmatrix}$$

$$(C) \text{ SD: } \begin{array}{c} C \ V \ L \ C \\ X \ 1 \ 2 \ Y \end{array} \quad \text{where} \quad V = [- \text{diffuse}]$$

$$\text{SC: } 12 \rightarrow 21$$

The following are sample derivations:

gorod: $\left[\begin{array}{c} \text{gord} \\ +\text{R} \end{array} \right] \rightarrow \text{D} \rightarrow \underline{\text{no}} \rightarrow \text{A} \rightarrow \left[\begin{array}{c} \text{goord} \\ +\text{R} \end{array} \right] \rightarrow \text{B} \rightarrow \underline{\text{no}} \rightarrow \text{C} \rightarrow \text{gorod}$

grad: $\left[\begin{array}{c} \text{gord} \\ -\text{R} \end{array} \right] \rightarrow \text{D} \rightarrow \underline{\text{no}} \rightarrow \text{A} \rightarrow \left[\begin{array}{c} \text{goord} \\ -\text{R} \end{array} \right] \rightarrow \text{B} \rightarrow \left[\begin{array}{c} \text{gōrd} \\ -\text{R} \end{array} \right] \rightarrow \text{C} \rightarrow \text{grōd} = \text{grad}$

moloko: $\left[\begin{array}{c} \text{melk+o} \\ +\text{R} \end{array} \right] \rightarrow \text{D} \rightarrow \left[\begin{array}{c} \text{molk+o} \\ +\text{R} \end{array} \right] \rightarrow \text{A} \rightarrow \left[\begin{array}{c} \text{moolk+o} \\ +\text{R} \end{array} \right] \rightarrow \text{B} \rightarrow \underline{\text{no}} \rightarrow \text{C} \rightarrow$

molok+o = moloko

mleko: $\left[\begin{array}{c} \text{melk+o} \\ -\text{R} \end{array} \right] \rightarrow \text{D} \rightarrow \underline{\text{no}} \rightarrow \text{A} \rightarrow \left[\begin{array}{c} \text{meelk+o} \\ -\text{R} \end{array} \right] \rightarrow \text{B} \rightarrow \text{mēlk+o} \rightarrow \text{C} \rightarrow$

mlēk+o = mleko

M. Halle, T. M. Lightner

References

1. The pairs of this type have been exhaustively listed by Šaxmatov, Ōčerĭk sovremennogo russkogo literaturnogo jazyka (Leningrad, 1930), pp. 21-25.

C. HISTORICAL DEVELOPMENT OF THE FRENCH SYNTACTIC CONSTRUCTION:

Ce + ETRE + noun or pronoun

In this report we shall undertake to formulate a small set of transformational rules to explain the various stages in the development of the syntactic construction: ce + ETRE + noun or pronoun.

All data for the early periods of the language are taken from Foulet.¹ The forms that we cite have been normalized in accordance with current French orthography.

1. Background

We shall speak of three separate stages in order to classify the data conveniently, without being specific as to the exact point of division between these successive stages. In Stage I (XII century) one finds the following type of paradigm:

Ce suis je	Ce sommes nous
Ce es tu	Ce êtes vous
Ce est il	Ce sont ils

Here it is seen that the form of the verb is determined by the following subject; the predicate ce standing in word initial position. It should be borne in mind that all nouns and pronouns at this stage of the language were in one of two cases, the nominative or the oblique; hence, sentences of the type object-verb-subject were about as equally

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common as subject-verb-object. In constructions of the type which we are examining, however, ce tended to be the preverbal element.

In Stage II (XIV century) case distinction had been lost in nouns; word order became more rigid; the first noun or pronoun was generally the subject. In the construction, Ce + ETRE + noun or pronoun, ce becomes grammatical subject, the paradigm then being

*Ce est je	Ce est nous
Ce est tu	Ce est vous
Ce est il	*Ce est ils

The forms preceded by an asterisk have never been attested. Weakened je was replaced by moi, whereas ce sont ils probably persisted for some time as a unique form.

In Stage III (Modern French) the ce est moi type of paradigm becomes generalized:

C'est moi	C'est nous
C'est toi	C'est vous
C'est lui	C'est eux

C'est eux has often been considered as colloquial. There is also the somewhat more literary alternative Ce sont eux. Also in Modern French the disjunctive form of the pronoun has replaced the conjunctive. This change will not be discussed, as it is not directly relevant to the syntactic problem as herein formulated.

2. The Data

In addition to the Ce + ETRE + pronoun construction, the third position can also be occupied by a noun; e. g., Ce est Jean (Stage I). Although the latter superficially resembles its pronoun counterpart Ce est il, structural differences are apparent when one examines the nondeclarative forms: interrogative, est il ce? : est ce Jean?; negative, ce ne est il pas : ce ne est pas Jean; negative-interrogative, ne est il pas ce? : ne est pas ce Jean? The rules of the grammar must explain differences of this sort. We append a chart summarizing the different orderings of pronouns and nouns for each stage of the language.

	<u>Declarative</u>	<u>Interrogative</u>	<u>Negative</u>	<u>Neg-Interrog</u>
I	ce es tu	es tu ce	ce ne es tu pas	ne es tu pas ce
II	ce est tu	est ce tu	ce ne est tu pas	ne est ce tu pas
III	c'est toi	est-ce toi	ce n'est pas toi	n'est-ce pas toi
I	ce est Jean	est ce Jean	ce ne est pas Jean	?ne est pas ce Jean
II	ce est Jean	est ce Jean	ce ne est pas Jean	?ne est ce pas Jean
III	c'est Jean	est-ce Jean	ce n'est pas Jean	n'est-ce pas Jean

Tu, of course, is representative of the other pronouns of the paradigms; Jean is typical

of nouns. For each stage we shall construct a different grammar to explain the facts for that stage.

3. Stage I

This stage is characterized by

- 1) verb is determined by the following subject;
- 2) ce is inverted in questions;
- 3) pronoun subject precedes other elements (pas and/or ce) in negation and/or interrogation;

4) noun subject follows the other elements in negation and/or interrogation.

The ? before ne est pas ce Jean indicates that this form was not given by Foulet and has been reconstructed on the basis of the other forms (which are all given by Foulet).

The following is a small segment of a phrase-structure grammar. It will produce the underlying strings for those forms noted above as data, as well as several other derivations not discussed here. These rules do not purport in any sense to be complete. They are but a fragment that would doubtlessly be changed considerably if a more complete grammar were considered. Their purpose here is therefore an illustrative one.

1. $S \rightarrow (\text{NEG}) (\text{QU}) \text{NP Aux VP}$
2. $\text{VP} \rightarrow \text{V} \left(\begin{array}{l} \{\text{NP}\} \\ \{\text{Pred}\} \end{array} \right) (\text{Adv})$
3. $\text{V} \rightarrow \left\{ \begin{array}{l} \text{ETRE} \\ \text{V}_{\text{trans}} \\ \text{V}_{\text{intrans}} \end{array} \right. \left. \begin{array}{l} \text{in env: } \text{---} \text{Pred} \\ \text{in env: } \text{---} \text{NP} \end{array} \right\}$
4. $\text{Pred} \rightarrow \left\{ \begin{array}{l} \text{Adj} \\ \text{Loc} \\ \text{NP} \end{array} \right\}$
5. $\text{NP} \rightarrow \left\{ \begin{array}{l} \text{Pron} \\ (\text{Det}) \text{N} \end{array} \right\}$
6. $\text{Pron} \rightarrow \left\{ \begin{array}{l} \text{PPro} \\ \text{ce} \end{array} \right. \left. \begin{array}{l} \text{in env: } \text{---} \text{Aux V} \left\{ \begin{array}{l} \text{Adj} \\ \text{Loc} \end{array} \right\} \\ \left\{ \begin{array}{l} \text{N} \\ \text{PPro} \end{array} \right\} \text{Aux V} \text{---} \end{array} \right\}$
7. $\text{N} \rightarrow \left\{ \begin{array}{l} \text{N}_{\text{com}} \\ \text{N}_{\text{prop}} \end{array} \right. \left. \begin{array}{l} \text{in env: } \text{Det} \text{---} \end{array} \right\}$
8. $\text{Aux} \rightarrow \text{Tense}$
9. $\text{Tense} \rightarrow \left\{ \begin{array}{l} \text{pres} \\ \text{past} \end{array} \right\}, \text{ etc.}$

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10. Adv \rightarrow aujourd'hui, etc.
11. V_{trans} \rightarrow regarde, etc.
12. $V_{intrans}$ \rightarrow marche, etc.
13. Adj \rightarrow brave, etc.
14. Loc \rightarrow là-bas, etc.
15. PPro \rightarrow je, tu, etc.
16. N_{com} \rightarrow garçon, etc.
17. N_{prop} \rightarrow Jean, etc.
18. Det \rightarrow le, un, etc.

From the rules above we can derive the underlying strings: Tu pres ETRE ce (Tu es ce, after subject-verb agreement and morphophonemics); Jean pres ETRE ce (Jean est ce). A sample of a derivational tree follows:

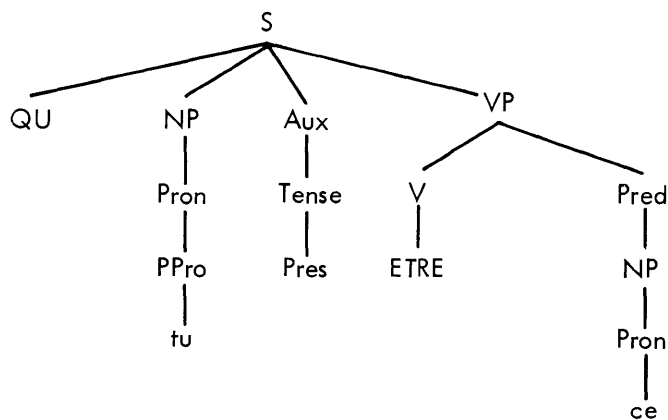


Diagram 1

We shall need, in addition, the following four transformational rules to handle those forms in question:

- A) Ce-placement: NP - Aux - V - ce \Rightarrow 4 - 2 - 3 - 1
- B) Inversion: QU - NP - Aux - V \Rightarrow 3+4 - 2 - 0 - 0
- C) Negation: NEG - X - Tense - V \Rightarrow 0 - 2 - ne+3 - 4+pas
- D) Pronoun-attraction: V - X - PPro \Rightarrow 1+3 - 2 - 0

Rule A interchanges ce and the subject; rule B inverts the subject and verbal complex (Aux - V) in interrogative forms; rule C places ne... pas around the verbal complex in negative forms; rule D places the pronoun subject immediately after the verb. Complete derivations follow. It should be noted that in the derivations verb forms are given in their orthographic representation for the convenience of the reader. These verb forms should really be interpreted as the verbal complexes (Aux - V; i. e., Pres - ETRE) noted above.

	tu es ce	QU tu es ce	NEG tu es ce	NEG QU tu es ce
A	ce es tu	QU ce es tu	NEG ce es tu	NEG QU ce es tu
B	-	es ce tu	-	NEG es ce tu
C	-	-	ce ne es pas tu	ne es pas ce tu
D	ce es tu	es tu ce	ce ne es tu pas	ne es tu pas ce
	Jean est ce	QU Jean est ce	NEG Jean est ce	NEG QU Jean est ce
A	ce est Jean	QU ce est Jean	NEG ce est Jean	NEG QU ce est Jean
B	-	est ce Jean	-	NEG est ce Jean
C	-	-	ce ne est pas Jean	ne est pas ce Jean
D	-	-	-	-

4. Stage II

The phrase structure is similar to Stage I. The proper restrictions must be set up to derive $ce - \text{Tense} - \text{ETRE} - \left\{ \begin{matrix} N \\ \text{Pron} \end{matrix} \right\}$ instead of $\left\{ \begin{matrix} N \\ \text{Pron} \end{matrix} \right\} - \text{Tense} - \text{ETRE} - ce$ (e. g., $\text{Pron} \rightarrow ce$ in env Aux V Pred). This allows ce to determine the form of the verb.

No additional rules of the type A-D are needed; these are simply reordered and A), the ce-placement rule, is eliminated.

New ordering: C) Negation
D) Pronoun-attraction
B) Inversion

Complete derivations follow:

	ce est tu	QU ce est tu	NEG ce est tu	NEG QU ce est tu
C	-	-	ce ne est pas tu	QU ce ne est pas tu
D	ce est tu	QU ce est tu	ce ne est tu pas	QU ce ne est tu pas
B	-	est ce tu	-	ne est ce tu pas
	ce est Jean	QU ce est Jean	NEG ce est Jean	NEG QU ce est Jean
C	-	-	ce ne est pas Jean	QU ce ne est pas Jean
D	-	-	-	-
B	-	est ce Jean	-	ne est ce pas Jean

5. Stage III

As in Stage II, for Stage III we eliminate one of the rules B-D, reordering the remaining two:

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New ordering: C) Negation
B) Inversion

Complete derivations follow:

	c'est toi	QU c'est toi	NEG c'est toi	NEG QU c'est toi
C	—	—	ce n'est pas toi	QU ce n'est pas toi
B	—	est-ce toi	—	n'est-ce pas toi
	c'est Jean	QU c'est Jean	NEG c'est Jean	NEG QU c'est Jean
C	—	—	ce n'est pas Jean	QU ce n'est pas Jean
B	—	est-ce Jean	—	n'est-ce pas Jean

It is interesting to note that for each of the stages, once the underlying string is established, the same set of rules A-D) is used to derive all forms, although the full set of rules is not necessarily used for each subsequent stage and ordering varies. Thus

Stage I	Stage II	Stage III
<u>ce</u> -placement	Negation	Negation
Inversion	Pronoun-attraction	Inversion
Negation	Inversion	
Pronoun-attraction		

6. Conclusion

It is seen that linguistic change is not simply the result of different grammatical rules operating at each given stage in the development of the language. Nor is it simply the addition of new rules or the elimination of other rules. There also remains to be considered the possibility of a set of rules from one stage of the language undergoing reordering in the subsequent stage. The latter factor, in addition to the others considered, accounts for the diversity in output which is observable from one stage of the language to the next.

S. A. Schane

References

1. L. Foulet, Comment on est passé de <Ce suis je > à <C'est moi >, Romania, 46-83 (1920).