STRUCTURAL RELATIVITY IN LANGUAGES*

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ABSTRACT

The hierarchical syntactic structures are considered as linear algebraic formulae.†

Word order being language-specific, the formulae do not consider word order as a universal deep-structure feature. The deep-structure is considered to be amorphous.

The verb, *a primitive concept, is taken as the nucleus for the definition of all other syntactic elements and structures.*

The Sentence is considered to be merely a conjunct verb.

The traditional (as well as modern Chomskyan) Subject-Predicate (NP + VP) *division of a sentence is considered to be only one of the many alternative ways of 'conjunct verb formation'.*

Conjunct verbs could be either lexically conjunct or syntactically conjunct depending upon the transformational context.

The transformation of lexical verbs into conjunct modal auxiliaries under certain conditions is discussed.

The relation between logical and linguistic elements and their fusion into pseudo-linguistic elements are discussed.

In short, the main subject of discussion is the 'intralinguistic' and 'interlinguistic' relativity *in language structures.*

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† The author's apologies to linguists all over the world for his departure from canonical forms of treatment. He is prepared to be severely castigated by all his colleagues for this violation of the accepted symbolisms, terminology and theoretical bases and for his unconventional psychological attitude towards language structure.

1. INTRODUCTION

It is impossible to give here more than a glimpse of what we have to say on some aspects of language structure.

1.1. *Grammar, Grammar and Grammar*

Languages like Sanskrit, which have, so to speak, a straight-jacket morphology with a minimum of syntactic surface structure, could be described by not more than a few alternative grammars, all of which would overlap over a large body of rules. They could differ only in minor details.

A language like English, on the other hand, which has a minimum of morphological paradigmatic formal structure but has a more pronounced syntactic structure (with stricter word order), could be described by a number of different alternative grammars that differ largely from one another but could all be equally valid. Illustrations are abundant in published literature.

Between Sanskrit and English are ranged a whole series of other languages.

1.2. *More and More Grammar*

There have been grammars that considered the traditional parts of speech as being rigid compartments.

There appeared other grammars which revamped these compartments. Thus more and more grammars of the most widely described languages have been appearing in print.

1.3. *No Nore New Grammar*

Our purpose in presenting this paper is not to propose any further new grammar but to put forward a new way of looking at syntactic structures.

For this purpose we rest upon three premises:

(1) Any syntactic sentence in a language is at once a number of different semantic sentences.

(2) A language (like English) that has shed its rigid morphological paradigmatic surface structures is in an active process of very rapid and wide-ranging evolution at the syntactic-semantic levels.

(3) All structural descriptions are subject to the phenomenon of *relativity*.

For our present discussion we restrict our attention to the concept of the verb, the verb being the central element (taken as a self-evident entity) in relation to which all other elements (parts of speech, etc.) could be defined.

2.0. *The Sentence and Its Structure*

All descriptions of syntactic structure try to deal directly with the *linear* structure of the sentence. The linear structure is language-specific. The underlying non-language-specific structure is not linear and is what could be called an 'amorphous sentence', which in its turn has an underlying logical 'proposition'.

If we have:

S' — the amorphous sentence,

S — the proposition underlying a sentence,

* — the 'semantic determinant' (that tells us something about the case-role relationships of the components of a sentence, as well as the nature of the sentence: declarative, interrogative, negative, etc.),

V — the verb (a self-evident entity, defined indirectly through logical, semantic or formal pointers or by listing), and

J — the 'argument' (or arguments) of the verb,

then, we define an amorphous sentence as:

$$S' \rightarrow {}^{*}S \tag{1}$$

and

$$S \rightarrow (\text{`}V\text{'}\ \text{`}J\text{'}) \tag{2}$$

where the brackets ( ) stand for the sentence boundary and the quotes ' ' stand for an optional element.

Thus, there would be a sentence with no verb present in it, such as:

Sommer (in German)

or

Leto (in Russian)

meaning:

'It is Summer'.

There could also be a sentence with neither verb nor any of its arguments, such as:

Hm.

or

Hm?

(that is, a statement or a question composed mainly of 'intonation' and no 'morpheme' of any other kind in the language).

2.1. *Unorthodox View of the Verb*

The verb itself could be of the form:

$$V \rightarrow (\text{'}V_1\text{'}\ \text{'}J_1\text{'})$$

V_1 and J_1 being minor sub-sets of V and J.

This would account for 'phrasal verbs' (or 'conjunct verbs') acting as a single unit.

3.0. *The Components of J*

J represents a number of arguments of the verb, each argument representing a component reflecting a particular case role characteristic.

Thus:

$$J \rightarrow J1\ J2\ J3\ J4 \ldots$$

where, for example:

$J1$ may be the 'agent-subject'

$J2$ — the 'patient-object'

$J3$ — a 'locational adverb' or equivalent,

etc., in the active voice. (If the surface level 'voice' is disregarded, then $J1$ and $J2$ are still the 'agent' and 'patient'.)

In expanding the inner components of any of these J's (that is, of $J1$, $J2$, $J3$, etc.), we may ignore the suffixes and apply the general substitution rules given below. However, the suffixes should be taken into account to decide which of a set of alternative substitutions are to be either obligatorily present or absent for a particular case-role J.

These different case-role J's are obtained in our general rules through the application of recursive formulas.

3.1. *Rules for a General Amorphous Syntactic Structure*:

(1) $S' \rightarrow {}^{*}S$

(2) $S \rightarrow (\text{`}J\text{'}, \text{`}V\text{'})$

(3) $J \rightarrow Z\,\text{`}Z'\text{'}$

(4) $Z' \rightarrow J$

(5) $Z \rightarrow \langle P \times \text{`}Q\text{'} \rangle$

(6) $Q \rightarrow P$

(7) $P \rightarrow \begin{Bmatrix} \langle \Sigma P_{(i)} \rangle \\ \langle Z \rangle \end{Bmatrix}$

(8) $\begin{Bmatrix} (a) \\ (b) \\ (c) \\ (d) \end{Bmatrix} P_{(i)} \rightarrow \begin{Bmatrix} \langle C \rangle \\ \langle NO \rangle \\ \langle AO \rangle \\ \langle DO \rangle \end{Bmatrix}$

(9) $C \rightarrow (\Sigma\ C_{(i)})$

(10) $C_{(i)} \rightarrow (\text{`}J_{(i)}\text{'}\ \text{`}V_{(i)}\text{'})$

(11) $NO \rightarrow \langle \Sigma\ NO_{(i)} \rangle$

(12) $NO_{(i)} \rightarrow \begin{Bmatrix} \langle \text{`}T\text{'}\,NA \rangle \\ \langle R_1 \rangle \\ \langle R_2 \rangle \end{Bmatrix}$

(13) $T \rightarrow \{\langle T_1 \rangle, \langle T_2 \rangle, \ldots\}$

(14) $NA \rightarrow \{\text{`}\langle AO \rangle\text{'}\ N\}$

(15) $N \rightarrow \{\langle N_1 \rangle, \langle N_2 \rangle, \ldots\}$

(16) $AO \rightarrow \langle \Sigma\ AO_{(i)} \rangle$

(17) $AO_{(i)} \rightarrow \langle \text{`}\langle DO \rangle\text{'}\ A \rangle$

(18) $DO \rightarrow \langle \Sigma\ DO_{(i)} \rangle$

(19) $DO_{(i)} \rightarrow \langle D \times \text{`}Y\text{'} \rangle$

(20) $Y \rightarrow DO_{(i)}$

(21) $A \rightarrow \{\langle A_1 \rangle, \langle A_2 \rangle, \ldots\}$

(22) $D \rightarrow \{\langle D_1 \rangle, \langle D_2 \rangle, \ldots\}$

(23) $R_1 \rightarrow \{\langle PR_1 \rangle, \langle PR_2 \rangle, \ldots\}$

(24) $R_2 \rightarrow \{\langle RR_1 \rangle, \langle RR_2 \rangle, \ldots\}$

(25) $\{T_1, T_2, \ldots\} \rightarrow$ {Lexical determiners like: *a*, *the*, *this*, *my*, etc.}

(26) $\{N_1, N_2, \ldots\} \rightarrow$ {Lexical nouns}

(27) $\{A_1, A_2, \ldots\} \rightarrow$ {Lexical adjectives}

(28) $\{D_1, D_2, \ldots\} \rightarrow$ {Lexical adverbs}

(29) $\{PR_1, PR_2, \ldots\} \rightarrow$ {Lexical pronouns}

(30) $\{RR_1, RR_2, \ldots\} \rightarrow$ {Relative pronouns}

(31) $\begin{Bmatrix}(a)\\(b)\end{Bmatrix} V \rightarrow \begin{Bmatrix}VC\\VO\end{Bmatrix}$

(32) $VC \rightarrow (XJ)$

(33) $\begin{Bmatrix}(a)\\(b)\end{Bmatrix} X \rightarrow \begin{Bmatrix}VC\\VO\end{Bmatrix}$

(34) $\begin{Bmatrix}(a)\\(b)\\(c)\end{Bmatrix} VO \rightarrow \begin{Bmatrix}VK\\VI\\VT\end{Bmatrix}$

(35) $VK \rightarrow \{VK_1, VK_2, \ldots\}$

(36) $VI \rightarrow \{VI_1, VI_2, \ldots\}$

(37) $VT \rightarrow \{VT_2, VT_1, \ldots\}$

(38) $* \rightarrow +' \; ' + '$

(39) $+' \rightarrow \left\{\begin{array}{l}\text{The} - \text{`modalities components'}\\ \text{including psychological and}\\ \text{logical associations and}\\ \text{formal presentation)}\end{array}\right\}$

(40) $+ \rightarrow \left\{\begin{array}{l}\text{(The extended Fillmore `case-}\\ \text{role' components)}\end{array}\right\}$

where, the various brackets stand for what is written within them below:

(S—structures; C—structures or Conjunct verbs).
(P— structures),
{Alternatives} and
' Optionals '.

4.0. *The Verb and the Sentence*:

In our present view, if *VO* is a simple lexical verb, then *VC* is a conjunct verb, so that a C-structure or S-structure is merely a complex variety of a conjunct verb. In such a case, there is no such thing as a 'verbless sentence', since the sentence itself is a conjunct verb!

4.1. *Structural Reatlivity within a Single Language System*

The 'semantic determinant'* represents the major set of all possible case-role, tense-aspect and other modal and associative characteristics of 'parts of speech', of intermediate structures and of the entire utterance forming a sentence. Sub-sets of this * are distributed among the different members of a sentence.

For example:

$$S' \rightarrow {}^*S$$
$$^*S \rightarrow {}^*(J1\ J2\ J3\ \ldots\ V)$$
$$\rightarrow {}^*_s({}^*_a J1\ {}^*_b J2\ {}^*_c J3\ \ldots\ {}^*_p V)$$

(These elements $*_s$, $*_a$, $*_b$, $*_c$ and $*_p$ are chosen *pre-linguistically* at the psychological and logical levels.)

There could be alternative ways of this distribution of * among the components of *S*. For example, we may have relations such as:

$${}^*_q J_m\ {}^*_p V \rightleftarrows {}^*_r J_m\ {}^*_t VC$$

(where, *VC* is a conjunct verb given by $VC \rightarrow (VO\ J_i)$.

If

$S' \rightarrow$ *We talked about him*

then

$S \rightarrow$ (⟨We⟩ talked ⟨+ about him⟩)

or

$S \rightarrow$ (⟨We⟩ (talked ⟨about⟩) ⟨him⟩).

here

$${}^*_r J_m \rightarrow \langle him \rangle \text{ and } {}^*_q J_m \rightarrow \langle + \text{ about him} \rangle.$$

An element like $*_q$ could be indicated as $+ M_n$ and called a 'marker' telling us something about the case-role characteristics of the P-structure containing it.

This marker in some languages could be a preposition as in English, a preposition and case ending as in Russian or just case ending as in Sanskrit.

For convenience we shall always attach a + sign to a marker in our discussions.

4.2. *Structural Relativity between Languages*

Assuming that 'picture' (Eng.), 'peinture' (Fr.), 'Kartina' (Russ.) and 'patxam' (Tamil) are lexically equivalent, we may have equivalent statements in the four languages, such as:

I look at the picture (Eng.)

Je regarde la peinture (Fr.)

Ja smetrju na kartinu (Russ.) and

Naan patxattai paarkkirheen (Tamil).

(*N.B.*—The Romanised spelling used here for Tamil has the following peculiarities: *t*— dental stop., *tx*—retroflex stop; *r*—dental trill, *rh*—alveolar trill; short and long vowels: *a*/*aa* and *e*/*ee* and so on.)

The French, Russian and Tamil sentences could be analysed respectively as:

(⟨ *Je* ⟩ regarde ⟨ la peinture ⟩)
(⟨ *Ja* ⟩ smetrju ⟨ + na kartin + u ⟩)
(⟨ Naan ⟩ ⟨ Patxatt + ai ⟩ paarkkirheen).

The English structure, however, could be analysed alternatively as:
(⟨ I ⟩ look ⟨ + at the picture ⟩)

which would correspond to Russian, component for component, and:
(⟨ I ⟩ ⟨ look ⟨ at ⟩ ⟩ ⟨ the picture ⟩)

which would correspond to French, component for component. When we say 'component' here we refer to the immediate 'inner' members of an 'outer' structure, starting from the outermost brackets.

Thus:

regarde (Fr.) ≠ (look ⟨ at ⟩) (Eng.)

whereas

smetrju (Russ.) ≠ look (Eng.).

Further, if we take *1J1 → ⟨ *I* ⟩, *2J2 → ⟨ the picture ⟩, *3J3 → ⟨ + at the picture ⟩, V1 → look, and V2 → (look ⟨ at ⟩), then:

French and English have the common structure:

(*1J1 *2J2 *aV2).

Russian and English have the common structure:

($*_1J_1$ $*_3J_3$ $*_bV_1$)

Disregarding for the present the (tense, mood, voice, . . .) characteristics of the verb represented by *a and *b, $*_1$ and $*_2$ of French and English depend purely on the relative positions of J_1 and J_2 on either side of the verb.

Thus we have:

($*_1 J_1$ $*_2 J_2 V_2$) → (J_1 V_2 J_2).

Because of the marker +*at* and because of the nominative form *I*, it is quite possible (at least in poetic formulations) to say in English:

(⟨ + At the picture ⟩ look ⟨ *I* ⟩)

corresponding to:

(⟨ +Na kartin + *u* ⟩ smotrju ⟨ ja ⟩)

in Russian (disregarding questions of stress).

However, while this freedom of position is more common in Russian, it is highly restricted in English.

In Tamil, on the other hand, the verb usually comes as the last element in a sentence.

This interlinguistic relativity is therefore ever present at the surface level,

However, in this particular example, English, French and Tamil have the same underlying theoretical structure:

$$(\ *_1J\ *_2J\ V_2).$$

The main difference is that $*_2$ is represented by 'position' after the verb in English and French, whereas it is represented by the marker $+ai$ in Tamil.

5.0. *Structural Transformations*

Let us discuss this question of structural transformations by taking an example. Disregarding the 'semantic determinant'*, we have:

$$\begin{aligned} S &\rightarrow (J\ V) \\ &\rightarrow (J_1\ J_2\ V). \end{aligned}$$

This sentence may be converted into a 'virtual noun' by choosing either J_1 or J_2 as the noun-head and what remains as its attribute.

In our present system this could be simply done by converting S into a P-structure, giving:

$$\langle S \rangle \rightarrow \langle (J_1\ J_2\ V) \rangle.$$

With this step, the virtual noun $\langle S \rangle$ can now be used in a metalanguage sentence saying something about the object language sentence S itself. For example, if:

$$S \rightarrow (\langle \text{The man} \rangle \text{ talked } \langle + \text{about the house} \rangle)$$

then:

$$(\langle S \rangle \text{ is } \langle \text{a sentence} \rangle)$$

would be the metalanguage sentence.

If $\langle S \rangle$ has to be used not as the object itself but as a referent to an extralinguistic object, then another transformation, 'algebraically' taking out the noun-head from the C-structure represented by S, must be carried out.

When this is done, its place in the C-structure is taken ever by a 'dummy' element and the C-structure itself is converted into a P-structure, giving us:

$$\langle J_1 \times \langle (J_1'\ J_2\ V) \rangle \rangle$$

where $\times$ denotes an attributive relationship and J_1' in some languages is the relative pronoun $\langle RR_i \rangle$ and in some others a relativising particle in a participial construction. In English and other Western languages:

$$J_1' \rightarrow (RR_i)$$

Or, taking J_2 as the noun-head, we have:

$$(J_2 \times \langle (J_2' \; J_1 \; V) \rangle)$$

Examples in English:

$$\begin{aligned} S &\rightarrow (J_1 \; J_2 \; V) \\ &\rightarrow (J_1 \; V \; J_2) \\ &\rightarrow (\langle \text{The man} \rangle \;\; (\text{talked} \langle \text{about} \rangle) \langle \text{the house} \rangle) \end{aligned}$$

$$\begin{aligned} \langle S \rangle &\rightarrow \langle (J_1 \; V \; J_2) \rangle \\ &\rightarrow \langle J_1 \times \langle (J_1' \; V \; J_2) \rangle \rangle \\ &\rightarrow \langle J_1 \times \langle ([\, RR_i \,] \; VJ_2) \rangle \rangle \\ &\rightarrow \langle \langle \text{The man} \rangle \times \langle (\langle \text{who} \rangle \;\; (\text{talked} \langle \text{about} \rangle) \\ &\qquad \langle \text{the house} \rangle) \rangle \rangle \end{aligned}$$

Or,

$$\begin{aligned} \langle S \rangle &\rightarrow \langle J_2 \times \langle (J_2' \; J_1 \; V) \rangle \rangle \\ &\rightarrow \langle J_2 \times \langle (\langle RR_j \rangle \; J_1 \; V) \rangle \rangle \\ &\rightarrow \langle \langle \text{The house} \rangle \times \langle (\langle \text{which} \rangle \langle \text{the man} \rangle (\text{talked} \\ &\qquad \langle \text{about} \rangle) \rangle) \rangle \rangle. \end{aligned}$$

We however have a choice:

$$RR_j \rightarrow \left\{ \begin{matrix} \phi \\ \text{which} \\ \text{that} \end{matrix} \right\}$$

With

$RR_j \rightarrow \phi$, we get:
$\langle \langle \text{The house} \rangle \times \langle (\langle \text{the man} \rangle (\text{talked} \langle \text{about} \rangle)) \rangle \rangle$.

Now, in the active voice, if we have:

$$S \rightarrow (\langle \text{The man} \rangle \left\{ \begin{matrix} \text{comes} \\ \text{is coming} \\ \text{came} \\ \text{was coming} \\ \text{will come} \\ \text{will be coming} \end{matrix} \right\} \langle + \text{along the road} \rangle)$$

then all the alternatives in this have the same structure:

$$S \rightarrow (J_1 \; V \; J_2)$$

where only the * element attached to V will be different for the differen alternatives.

We then have:

$$\langle S \rangle \rightarrow \langle J_1 \times \langle (J_1' \; V \; J_2) \rangle \rangle$$

where

$$J_1 \rightarrow \begin{Bmatrix} \langle RR_i \rangle \\ \phi \end{Bmatrix}.$$

If

$$\begin{aligned} J_1' &\rightarrow \langle RR_i \rangle \\ &\rightarrow \langle \text{who} \rangle \end{aligned}$$

the verb will still have the same alternative forms. But, if $J_1' \rightarrow \phi$ then all the alternatives of V will be replaced by $*_g{}^V$, giving:

$$\begin{aligned} V &\rightarrow *_g V \\ &\rightarrow V + \text{ing}. \end{aligned}$$

So that, we have:

$$\begin{aligned} \langle S \rangle &\rightarrow \langle J_1 \times \langle (V + \text{ing} \; J_2) \rangle \rangle \\ &\rightarrow \langle \langle \text{The man} \rangle \times \langle (\text{coming} \langle + \text{along the road} \rangle) \rangle \rangle. \end{aligned}$$

In the passive voice, we have:

$$\begin{aligned} S &\rightarrow (\langle \text{The house} \rangle \begin{Bmatrix} \text{is} \\ \text{is being} \\ \text{was} \\ \text{was being} \\ \text{will be} \end{Bmatrix} (\text{talked} \langle \text{about} \rangle) \langle + \text{by} \times \rangle) \\ &\rightarrow (J_1 \; V \; J_2). \end{aligned}$$

Now,

$$\langle S \rangle \rightarrow \langle J_1 \times \langle (J_1' \; V \; J_2) \rangle \rangle$$

where

$$J' \rightarrow \begin{Bmatrix} \langle RR_j \rangle \\ \langle \phi \rangle \end{Bmatrix} \text{ and } \langle RR_j \rangle \rightarrow \begin{Bmatrix} \langle \text{which} \rangle \\ \langle \text{that} \rangle \end{Bmatrix}$$

With

$$J_1' \rightarrow \langle RR_j \rangle,$$

the verb will be unaltered.

But if

$$J_1' \rightarrow \phi, \text{ then:}$$
$$V \rightarrow {}^*_g V$$
$$\rightarrow V + \text{ing.}$$

where V stands for:

$$V \rightarrow VC \text{ and}$$
$$VC \rightarrow \text{be (talked } \langle \text{about} \rangle)$$

So that:

$$\langle S \rangle \rightarrow \langle \langle \text{The house} \rangle \times \langle (\text{being (talked } \langle \text{about} \rangle) \langle + \text{by } X \rangle) \rangle \rangle.$$

The passive auxiliary in the $+ing$ form can further be *elided*, and we get:

$$\langle S \rangle \rightarrow \langle \langle \text{The house} \rangle \times \langle ((\text{talked } \langle \text{about} \rangle) \langle + \text{by } X \rangle) \rangle \rangle.$$

The reference to the agent $\langle + \text{by } X \rangle$ could also be elided, giving:

$$\langle S \rangle \rightarrow \langle \langle \text{The house} \rangle \times \langle ((\text{talked } \langle \text{about} \rangle)) \rangle \rangle.$$

Now, if:

$\langle\ \rangle$ wholly occupies another $\langle\ \rangle$

or

( ) wholly occupies another ( ),

then

$$\langle\langle\ \rangle\rangle \rightarrow \langle\ \rangle$$
$$((\ )) \rightarrow (\ ).$$

For further simplicity in our notation, we may omit the mark × of attributive relationship and also omit the ⟨ ⟩ breckets enclosing a 'pure' noun phrase, giving:

⟨ *S* ⟩ → ⟨ The house ⟨ (talked ⟨ about ⟩) ⟩ ⟩

5.1. *The Verb Structure*:

Verbs as units in a syntactic structure (disregarding modifications caused by *) could be classified into several groups:

(1) *Simple verb.*—The verb may be simple, that is, consisting only of a lexical verb (with no particle attached), such as *saw* or *goes* as in:

(⟨ I ⟩ saw ⟨ him ⟩)
(⟨ He ⟩ goes).

(2) *Conjunct verb.*—The verb may be 'conjunct' and may further be subdivided into:

(*a*) *Simple conjunct.*—A structure like (talked ⟨ about ⟩), when it takes part in transformations (including interlinguistic translations) as a single entity, is simple conjunct, as in:

(⟨ I ⟩ (talked ⟨ about ⟩) ⟨ him ⟩).

This could of course be alternatively looked upon as:

(⟨ I ⟩ talked ⟨ + about him ⟩),

in which case *talked* is a simple verb.

(*b*) *Complex conjunct*: A conjunct verb may be complex, as the structure:

((gave ⟨ it ⟩) ⟨ up ⟩)

in

(⟨ I ⟩ ((gave ⟨ it ⟩) ⟨ up ⟩)).

However, we have:

(⟨ I ⟩ (gave ⟨ up ⟩) ⟨ smoking ⟩)

where (gave ⟨ up ⟩) is simple conjunct.

We also have:

(⟨ I ⟩ (gave ⟨ up ⟩) ⟨ the whole matter ⟩)

as well as:

$$(\langle \text{I} \rangle ((\text{gave } \langle \text{the whole matter} \rangle) \langle \text{up} \rangle)).$$

This suggests that there is an intermediate structure such as:

$$(\langle \text{I} \rangle ((\text{gave } \langle \text{up} \rangle) \langle \text{smoking} \rangle))$$

and

$$(\langle \text{I} \rangle ((\text{gave } \langle \text{up} \rangle) \langle \text{the whole matter} \rangle)).$$

The structure $\langle$ smoking $\rangle$, further, could be a nominalised version of a verbform (smoking), giving us:

$$\langle (\text{smoking}) \rangle.$$

Thus, if $J_1 \rightarrow \langle D \rangle$, *i.e.*, an adverb or adverbial particle attached to the verb, then:

$$J_2 \rightarrow \begin{Bmatrix} \langle C \rangle \\ \langle NO \rangle \end{Bmatrix},$$

where $C \rightarrow (V\ J)$, and, if $\langle NO \rangle$ is a noun phrase, which may be long, we have:

$$VC \rightarrow ((V\ J_1)\ J_2).$$

Or

$$J_2 \rightarrow \begin{Bmatrix} \langle R_1 \rangle \\ \langle NO \rangle \end{Bmatrix},$$

where $\langle NO \rangle$ is a noun phrase, which may not be too long, giving:

$$VC \rightarrow ((V\ J_2)\ J_1).$$

Thus, only if, say, $J_2 \rightarrow \langle NO \rangle$ and $J_1 \rightarrow \langle D \rangle$, where $\langle NO \rangle$ is not too long, we would have:

$$((V\ J_1)\ J_2) \rightleftarrows ((V\ J_2)\ J_1).$$

Further, $((V\ J_2)\ J_1)$ is always complex conjunct, whereas in the case of $((V\ J_1)\ J_2)$ the following reduction is possible:

$$((V\ J_1)\ J_2) \rightleftarrows (V\ J_1)\ J_2$$

giving us a simple conjunct verb on the right hand side.

5.2. *The Subject-Predicate Structure*

From our present point of view, the traditional Western grammars and the *consequent* Chomskyan $NP + VP$ division of a sentence into a subject and a predicate is only a special case of conjunct verb formation:

If, in Chomskyan grammar,

$$S \rightarrow NP + VP,$$

in our view:

$$\begin{aligned} S &\rightarrow (J\ V) \\ &\rightarrow (J_1\ J_2\ J_3\ \ldots\ V) \\ &\rightarrow (J_1\ (J_2\ J_3\ \ldots\ V)) \end{aligned}$$

which grouping is only one of the several alternative possibilities. In this special case we have the correspondences:

$$\begin{aligned} &\text{Chomskyan } NP \rightarrow J_1 \\ &\text{Chomskyan } VP \rightarrow (J_2\ J_3\ \ldots\ V). \end{aligned}$$

It is theoretically possible, however, to think of alternative groupings, such as:

$$S \rightarrow ((J_1\ J_2\ V)\ J_3\ J_4)$$

or

$$S \rightarrow ((J_1\ V)\ J_2\ J_3\ J_4)$$

or

$$S \rightarrow (J_1\ J_2\ (V\ J_3\ J_4)).$$

Thus it is possible to group the elements as shown below in Tamil, English, etc.:

English:

(⟨ I ⟩ did ⟨ that work ⟩)
(⟨ I ⟩ (did ⟨ that work ⟩))
((⟨ I ⟩ did) ⟨ that work ⟩).

The last of these may be the emphatic statement answering the question: "who did that work?".

Tamil:

(⟨ Naan ⟩ ⟨ anta veelay + ai ⟩ ceyteen)
(⟨ Naan ⟩ (⟨ anta veelay + ai ⟩ ceyteen))
((⟨ Naan ⟩ ceyteen) ⟨ anta veelay + ai ⟩).

5.3. *Conjunct Verb Formation and Particular Transformations*

Even within a single language a particular transformation is associated with a particular conjunct verb formation. For example:

$$S \rightarrow (J_1\ V\ J_2)$$
$$\rightarrow (\langle \text{The man} \rangle \text{ did } \langle \text{that job} \rangle)$$

If

$$(J_1\ V\ J_2) \rightarrow (J_1\ (V\ J_2)) \rightarrow (J_1\ VC_1),$$

then

$$S \rightarrow (\langle \text{The man} \rangle\ (\text{did } \langle \text{that job} \rangle))$$

where

$$VC_1 \rightarrow (\text{did } \langle \text{that job} \rangle).$$

Now

$$\langle S \rangle \rightarrow \langle J_1 \times \langle (J_1'\ VC_1) \rangle \rangle$$
$$\rightarrow \langle \langle \text{the man} \rangle \times \langle (\langle \text{who} \rangle\ (\text{did } \langle \text{that job} \rangle)) \rangle \rangle.$$

Or we may have:

$$(J_1\ V\ J_2) \rightarrow ((J_1\ V)\ J_2) \rightarrow (VC_2 J_2),$$

so that:

$$S \rightarrow (VC_2\ J_2)$$
$$\rightarrow ((\langle \text{The man} \rangle \text{ did }) \langle \text{that job} \rangle)$$

where

$$VC_2 \rightarrow (\langle \text{Thle man} \rangle \text{ did}).$$

Now,

$$\langle S \rangle \rightarrow \langle J_2 \times \langle (J_2' \ VC_2) \rangle \rangle$$
$$\rightarrow \langle \langle \text{That job} \rangle \times \langle (\langle \text{which} \rangle \ (\langle \text{the man} \rangle \ \text{did}))) \rangle.$$

In English, the form of $\langle S \rangle$, as given in the examples above, is unaffected wherever we use it in another sentence:

$$S_1 \rightarrow (\langle S \rangle \text{ is } \langle \text{interesting} \rangle).$$
$$S_2 \rightarrow (\langle \text{I} \rangle \text{ like } \langle S \rangle).$$

However, the position of $\langle S \rangle$ before or after the verb indicates that $\langle S \rangle$ is not the same in S_1 and S_2, that is, the * component associated with each is different. So that, if

$$S_1 \rightarrow (*_1 \langle S \rangle \text{ is } \langle \text{interesting} \rangle)$$
$$S_2 \rightarrow (\langle \text{I} \rangle \text{ like } *_2 \langle S \rangle).$$

Accordingly, we would have in Russian:

$$S_1 \rightarrow ((\langle \text{Et} + \text{a rabot} + \text{a} \rangle \ \langle (\langle \text{kotor} + \text{uju} \rangle \ \text{delaet} \ \langle \text{chelovek} \rangle))) \ (\phi) \ \langle \text{interesn} + \text{aja} \rangle)$$

with perhaps a conjunct verb formation such as:

$$((\phi) \langle \text{interesn} + \text{aja} \rangle)$$

giving us by a transformation: $(\langle \text{interesn} + \text{a} \rangle)$.

In a similar manner (if we could use 'Ja ljublju' instead of 'mne nravitsja' corresponding to 'I like' in English), we would have:

$$S_2 \rightarrow (\langle \text{Ja} \rangle \text{ ljublju } \langle \langle \text{et} + \text{u rabot} + \text{u} \rangle \ \langle (\langle \text{kotor} + \text{uju} \rangle \ \text{delaet} \ \langle \text{chelovek} \rangle)))).$$

Many other types of interlinguistic transformations are to be met with in translation. For example:

$$S \rightarrow (\langle \text{Leto} \rangle)$$
$$\rightarrow ((\phi) \langle \text{leto} \rangle)$$
$$\rightarrow ((\langle \text{It} \rangle \text{ is }) \ \langle \text{Summer} \rangle)$$
$$\rightarrow (\langle \text{It} \rangle \text{ is } \langle \text{Summer} \rangle)$$

or

$$\rightarrow (\langle \text{Leto} \rangle (\phi))$$
$$\rightarrow (\langle \text{Summer} \rangle (\text{is}))$$
$$\rightarrow ((\langle \text{It} \rangle \text{ is } \langle \text{Summer} \rangle)$$
$$\rightarrow (\langle \text{It} \rangle \text{ is } \langle \text{Summer} \rangle).$$

6.0. *Logical Relations in Linguistic Structure*

The main logical relations that we could consider are:

$\wedge$, $\vee$ and NOT

(We have indicated the logical and linguistic elements of negation as 'NOT' and 'not' in the present discussion).

If we have:

$$S \rightarrow (V\ J)$$

then

$$\text{NOT } S \rightarrow \text{NOT}(V\ J)$$
$$\rightarrow ((\text{NOT } V)\ J)$$

or

$$\rightarrow (V \langle \text{NOT } J \rangle).$$

If

$$S_1 \rightarrow (V_1\ J_1)$$

and

$$S_2 \rightarrow (V_2\ J_2)$$

then we may have:

$$S \rightarrow (S_1 \wedge S_2)$$
$$\rightarrow ((V_1\ J_1) \wedge (V_2\ J_2))$$
$$\rightarrow ((V_1\ J_1) = \text{and} = (V_2\ J_2)).$$

If

$$V_1 \equiv V_2 \equiv V,$$

then

$$S \rightarrow (V \langle J_1 = \text{and} = J_2 \rangle).$$

Or, if

$$J_1 \equiv J_2 \equiv J,$$

then

$$S \rightarrow (((V_1) = \text{and} = (V_2))\, J).$$

Words like *and, or, not*, etc., though clothed in linguistic garb, are indicative of purely logical (and psychological) relations.

They can be used to transform any structure or any two (or more) structures of the same form or status in a sentence into one structure having the same status.

Thus:

$$\begin{aligned} \langle A \rangle \wedge \langle B \rangle &\rightarrow \langle \langle A \rangle = \text{and} = \langle B \rangle \rangle \\ S_1 \wedge S_2 &\rightarrow (S_1 = \text{and} = S_2) \\ &\rightarrow ((V_1 J_1) = \text{and} = (V_2 J_2)) \\ \text{NOT } \langle A \rangle &\rightarrow \langle \text{NOT } A \rangle \\ &\rightarrow \langle \text{not } A \rangle. \end{aligned}$$

6.1. *Logical and Linguistic Elements in Fusion*:

Certain logical relations like $\wedge$ and certain linguistic elements (adverbials like: ⟨ however ⟩, ⟨ nevertheless ⟩, ⟨ on-the-other-hand ⟩, etc.) could be fused into a logical-linguistic element like *but*.

$$\begin{aligned} S_1 &\rightarrow (\langle \text{She} \rangle \text{ is } \langle \langle \text{bright} \rangle = \text{and} = \langle \text{beautiful} \rangle \rangle) \\ S_2 &\rightarrow (\langle \text{He} \rangle \text{ is } \langle \langle \text{intelligent} \rangle = \text{but} = \langle \text{lazy} \rangle \rangle) \\ &\rightarrow (\langle \text{He} \rangle \text{ is } \langle \langle \text{intelligent} \rangle = \text{and} - \langle \text{nevertheless} \rangle - \\ &\qquad = \langle \text{lazy} \rangle \rangle) \end{aligned}$$

If now we have:

$$S_1 \rightarrow (\langle \text{It} \rangle \text{ is } \langle \text{NOT } A \rangle)$$

and

$$S_2 \rightarrow (\langle \text{It} \rangle \text{ is } \langle B \rangle)$$

then

$$S \rightarrow (S_1 = \text{and} = S_2)$$
$$\rightarrow ((\langle \text{It} \rangle \text{ is } \langle \text{NOT } A \rangle) = \text{and} = (\langle \text{It} \rangle \text{ is } \langle B \rangle))$$

Algebraically taking out the common factor (⟨ it ⟩ is), we get:

$$S \rightarrow ((\langle \text{It} \rangle \text{ is}) \langle \langle \text{NOT } A \rangle = \text{and} = \langle B \rangle)$$

which linguistically reduces to:

$$S \rightarrow (\langle \text{It} \rangle \text{ is } \langle + \text{not } \langle A \rangle = \text{but} = \langle B \rangle \rangle)$$

Or, again:

If

$$S_1 \rightarrow \text{NOT } S_1' \text{ and if } S_1' \rightarrow (\langle \text{It} \rangle \text{ is } \langle A \rangle),$$

then:

$$S_1 \rightarrow (\langle \text{It} \rangle \text{ is not } \langle A \rangle)$$
$$S_2 \rightarrow (\langle \text{It} \rangle \text{ is } \langle B \rangle)$$
$$S \rightarrow (S_1 = \text{and} = S_2)$$
$$\rightarrow ((\langle \text{It} \rangle \text{ is not } \langle A \rangle) = \text{and} = (\langle \text{it} \rangle \text{ is } \langle B \rangle))$$
$$\rightarrow (\text{NOT } S_1' = \text{and} = S_2)$$
$$\rightarrow (+ \text{Not } S_1' = \text{but} = S_2)$$

Assuming $+ \text{Not } S_1' \rightarrow \text{NOT } S_1'$, we get, by substituting S_1 for NOT S_1':

$$S \rightarrow (S_1 = \text{but} = S_2)$$
$$\rightarrow ((\langle \text{It} \rangle \text{ is not } \langle A \rangle) = \text{but} = (\langle \text{it} \rangle \text{ is } \langle B \rangle))$$
$$\rightarrow ((\langle \text{It} \rangle \text{ is}) \langle + \text{not } \langle A \rangle = \text{but} = \langle B \rangle \rangle)$$

Let now:

$$S_1 \rightarrow (\langle \text{It} \rangle \text{ is } \langle \text{NOT } A \rangle)$$
$$S_2 \rightarrow (\langle \text{It} \rangle \text{ is } \langle \text{NOT } B \rangle)$$

then:

$$S \rightarrow (S_1 = \text{and} = S_2)$$
$$\rightarrow ((\langle \text{It} \rangle \text{ is } \langle \text{NOT } A \rangle) = \text{and} = (\langle \text{it} \rangle \text{ is } \langle \text{NOT } B \rangle))$$
$$\rightarrow ((\langle \text{It} \rangle \text{is}) \langle \langle \text{NOT } A \rangle = \text{and} = \langle \text{NOT } B \rangle \rangle)$$
$$\rightarrow ((\text{(It) is}) \langle + \text{neither } \langle A \rangle = \text{nor} = \langle B \rangle \rangle)$$

which is a logical and linguistic relation connecting two negative elements, represented by the pair of linguistic markers $+$ *neither* ... $=$ *nor* $=$.

7.0. *Common Factors in Several Sentences*

Case 1:

$S_1 \rightarrow$ (⟨ They_1 ⟩ go_1 ⟨ home ⟩)

$S_2 \rightarrow$ (⟨ He ⟩ goes ⟨ home ⟩)

$S \rightarrow$ (S_1 = and = S_2)

$\rightarrow$ ((⟨ They_1 ⟩ go_1 ⟨ home ⟩) = and = (⟨ he ⟩ goes ⟨ home ⟩))

$\rightarrow$ (((⟨ They_1 ⟩ go_1) = and = (⟨ he ⟩ goes)) ⟨ home ⟩)

$\rightarrow$ ((⟨ They_1 ⟩ = and = ⟨ he ⟩) ((go) = and = (goes))) ⟨ home ⟩)

$\rightarrow$ ((⟨ They_2 ⟩ go_2) ⟨ home ⟩)

$\rightarrow$ (⟨ They ⟩ go ⟨ home ⟩)

Case 2:

$S_1 \rightarrow$ (⟨ I ⟩ went ⟨ + to the shop ⟩)

$S_2 \rightarrow$ (⟨ I ⟩ bought ⟨ some cakes ⟩)

$S \rightarrow$ (S_1 = and = S_2)

$\rightarrow$ ((⟨ I ⟩ went ⟨ + to the shop ⟩) = and = (⟨ I ⟩ bought ⟨ some cakes ⟩))

$\rightarrow$ (⟨ I ⟩ ((went ⟨ + to the shop ⟩) = and = ⟨ bought ⟨ some cakes ⟩)))

This has the pattern of derivation:

$S \rightarrow$ ($S_1 \wedge S_2$)

$\rightarrow$ ((V_1 J_1) $\wedge$ (V_2 J_2))

If J_1 expands into J_{11} J_{12} and J_2 into J_{21} J_{22}, then

$S \rightarrow$ ((V_1 J_{11} J_{12}) $\wedge$ (V_2 J_{21} J_{22})).

If

$J_{11} = J_{21} = J$,

then

$$S \rightarrow (J((V_1\ J_{12}) \wedge (V_2\ J_{22}))).$$

In English the logical relation $\wedge$ connecting S_1 and S_2 as well as any J_k and any J_l is = and =. The forms of V_1 and V_2 when two sentences are compounded by *and* remain unchanged.

In Tamil, on the other hand,

$$\langle J_k \wedge J_L \rangle \rightarrow \langle J_k = \text{um} = J_L + \text{um} \rangle.$$

But when $\wedge$ connects S_1 and S_2, $\wedge$ is represented by ϕ.

The * component attached to V_1 and V_2, behaves in the following way :

V_2 being the last verb met with in the compounded sentence, $*V_2$ remains unchanged. However, since V_1 is a non-final verb in the compounded sentence, it follows the rule:

$$*V_1 \rightarrow \left\{ \begin{matrix} *' \\ * \end{matrix} \right\} V_1$$

where $*'V_1$ is a past adverbial participle, whereas * would indicate the same tense for both V_1 and V_2.

We would then have:

$$S_1 \rightarrow (\langle \text{Naan} \rangle \langle \text{katxai} + \text{ku} \rangle \text{pooneen})$$
$$S_2 \rightarrow (\langle \text{Naan} \rangle \langle \text{keek} \rangle \text{vaangkineen})$$
$$S \rightarrow ((V_1\ J_1) \wedge (V_2\ J_2))$$
$$\rightarrow (J((V_1\ J_{12}) \wedge (V_2\ J_{22})))$$
$$\rightarrow \left\{ \begin{matrix} (J((V_1\ J_{12})\ (V_2 J_{22}))) \\ (J((*'\ V_1\ J_{12})\ (V_2\ J_{22}))) \end{matrix} \right\}$$

Since V_1 and V_2 normally are the last elements in S_1 and S_2 in Tamil we have:

$$(V_1\ J_{12}) \rightarrow (J_{12}\ V_1)$$
$$(*'\ V_1\ J_{12}) \rightarrow (J_{12}\ *'\ V_1)$$
$$(V_2\ J_{22}) \rightarrow (J_{22}\ V_2)$$

giving finally:

$$S \rightarrow \left\{\begin{array}{c}(\langle \text{Naan} \rangle\ ((\langle \text{katxai} + \text{ku} \rangle\ \text{pooneen})\ (\langle \text{keek} \rangle \\ \text{vaangkineen}))) \\ (\langle \text{Naan} \rangle\ (\langle (\text{katxai} + \text{ku} \rangle\ \text{pooy})\ (\langle \text{keek} \rangle \\ \text{vaangkineen}))).\end{array}\right\}$$

Further, the entire structure containing $*'V_1$, namely $(*'V_1\ J_{12})$ could be considered in Tamil as an adverbial element modifying $(V_2\ J_{22})$ containing the finite verb V_2. In that case we get:

$$S \rightarrow (J\ J_x\ VC_y)$$

where

$$J_x \rightarrow \langle (J_{12} *'V_1) \rangle \text{ and } VC_y \rightarrow (J_{22}\ V_2)$$

giving:

$$\begin{aligned} S &\rightarrow (J \langle (J_{12} *'V_1) \rangle\ (J_{22}\ V_2)) \\ &\rightarrow (\langle \text{Naan} \rangle \langle (\langle \text{katxai} \times \text{ku} \rangle\ \text{pooy}) \rangle \\ &\quad (\langle \text{keek} \rangle\ \text{vaangkineen})). \end{aligned}$$

VC_y behaves as a conjunct verb in the total structure.

In this example we have seen once again the interlinguistic relativity between English and Tamil for the same logical relations.

Case 3:

$$\begin{aligned} S_1 &\rightarrow (\langle \text{He} \rangle\ \text{wanted}\ \langle + \text{to}\ (\text{work}) \rangle) \\ S_2 &\rightarrow (\langle \text{He} \rangle\ \text{could not work}) \\ S &\rightarrow (S_1 = \text{and} = S_2) \\ &\rightarrow ((\langle \text{He} \rangle\ \text{wanted}\ \langle + \text{to}\ (\text{work}) \rangle) \\ &\quad = \text{and} = (\langle \text{he} \rangle\ \text{could not work})). \end{aligned}$$

Since

$$\langle V_1 \langle + \text{to}\ (V_2) \rangle \rangle \rightleftarrows (VC_1\ V_2)$$

where

$$\begin{aligned} VC_1 &\rightarrow (V_1 \langle \text{to} \rangle), \text{ we get:} \\ S &\rightarrow ((\langle \text{He} \rangle\ (\text{wanted}\ \langle \text{to} \rangle)\ \text{work}) = \text{and} = \\ &\quad (\langle \text{he} \rangle\ \text{could not work})). \end{aligned}$$

Taking out the common factors ⟨ he ⟩ and (work), we get:

$$S \rightarrow (\langle \text{He} \rangle (((\text{wanted } \langle \text{to} \rangle)) = \text{and} = (\text{could not})) \text{ work})$$

where

$$((\quad)) \rightarrow (\ ).$$

Noting that:

$$(V_1 = \text{and} = V_2) \rightarrow (V_1 = \text{but} = \text{not } V_2')$$

where

$V_2 \rightarrow$ NOT V_2', we have:

$S \rightarrow (\langle \text{He} \rangle ((\text{wanted } \langle \text{to} \rangle) = \text{but} = (\text{could not})) \text{ work})$

In conventional English this algebraic structure is further modified and the main verb (work) goes with the first auxiliary and gets omitted after the second, giving us:

$$S \rightarrow (\langle \text{He} \rangle (((\text{wanted } \langle \text{to} \rangle) (\text{work})) = \text{but} = ((\text{could not}) (\ldots)))$$

$\rightarrow$ *He wanted to work but could not.*

Here we have made use of the relation:

$$((((V)))) \leftrightarrows (V) \leftrightarrows V$$

*V*where is a single surface form like *work.*

This phenomenon is also a general one, not peculiar to English alone.

8.0. *Transformation of Certain Lexical Verbs into Conjunct Modal Auxiliaries*

We have used a general relation in Case 3 of the preceding section, which could be stated in general terms as:

$$V_i J_i \rightleftarrows VC_j V_j$$

where

$$J_i \rightarrow \langle + M_i C_i \rangle$$

and VC_j is a modal auxiliary that may be either simple or conjunct.

In English, if we take

$$M_i \rightarrow to$$

then

$$\begin{aligned} V_i\ J_i &\rightarrow V_i\ \langle +\text{to}\ C_i \rangle \\ &\rightarrow V_i\ \langle +\text{to}\ (V_j) \rangle \end{aligned}$$

So that we get by substitutions:

$$\begin{aligned} V_i\ J_i &\rightarrow \text{want}\ \langle +\text{to}\ (\text{go}) \rangle \\ VC_j\ V_j &\rightarrow (\text{want}\ \langle \text{to} \rangle)\ \text{go} \end{aligned}$$

giving us:

$$V_i\ J_i \leftrightarrows VC_j\ V_j$$

That is:

$$(\langle \text{I} \rangle\ \text{want}\ \langle +\text{to}\ (\text{go}) \rangle) \leftrightarrows (\langle \text{I} \rangle\ (\text{want}\ \langle \text{to} \rangle)\ \text{go}) \qquad \ldots\ (\text{A})$$

In Tamil,

$$M_i \rightarrow \phi,$$

and the word order gives:

$$\begin{aligned} V_i\ J_i &\rightarrow J_i\ V_i \\ VC_j\ V_j &\rightarrow V_j\ VC_j \end{aligned}$$

leading to:

$$\begin{aligned} J_i\ V_i &\rightarrow \langle C_i \rangle\ V_i \\ &\rightarrow \langle (V_j) \rangle\ V_i \end{aligned}$$

where V_j is in a non-finite form in Tamil.

$$\begin{aligned} J_i\ V_i &\rightarrow \langle (\text{pooka}) \rangle \quad \text{veenxtxum} \\ V_j\ VC_j &\rightarrow \text{pooka} \quad\quad\ \text{veenxtxum} \end{aligned}$$

giving us:

$$J_i\ V_i \leftrightarrows V_j\ VC_j$$

or

$$(J_1\ (J_i\ V_i)) \leftrightarrows (J_1\ (V_j\ VC_j))$$

forming a sentence with some other element J_1, such as:

$$\begin{aligned} &(\langle \text{Enakku} \rangle\ (\langle (\text{pooka}) \rangle\ \text{veenxtxum})) \leftrightarrows \\ &\quad (\langle \text{Enakku} \rangle\ (\text{pooka veenxtxum})) \end{aligned} \qquad (\text{B})$$

In the left hand side of (A) and (B) *want, veenxtxum* are lexical verbs. In the right hand side of (A) and (B) (*want* ⟨ *to* ⟩), *veenxtxum* are modal auxiliaries.

We could also state another general relation:

A simple verb is a conjunct verb of the form:

$$(((V\ \langle M_1 \rangle)\ \langle M_2 \rangle)\ \langle \ldots \rangle)$$

where $M_1, M_2, \ldots M_n$ are ϕ, or where $M_1, M_2, \ldots M_n$ are part of an accompanying J outside of the verb.

The left hand side of (A) and (B) has a structure similar to:

(⟨ I ⟩ want ⟨ bread ⟩)

or

(⟨ Enakku ⟩ ⟨ rotxtxi ⟩ veenxtxum)

in both the languages, where the verbs have *noun* objects.

8.1. *Lexically Conjunct* vs. *Syntactically Conjunct Verbs*

The preceding discussion on conjunct verb formation during the course of transformations is a syntactic phenomenon. Thus:

(⟨ I ⟩ go ⟨ home ⟩) = and = (⟨ I ⟩ take ⟨ rest ⟩)) ≠
(⟨ I ⟩ (go ⟨ home ⟩) =and= (take ⟨ rest ⟩)))

On the left hand side of this relation we have *go* and *take* treated as simple verbs. On the right hand side we have (*go* ⟨ *home* ⟩) and (*take* ⟨ *rest* ⟩) treated as syntactical conjunct structures.

It depends on how we define a verb like *go* or *take* to decide whether:

(*go* ⟨ *home* ⟩) and (*take* ⟨ *rest* ⟩)

are also *lexically* conjunct.

If we note the productive nature of the verb *take* in such constructions as:

(take ⟨ coffee ⟩)
(take ⟨ snuff ⟩)
(take ⟨ rest ⟩)
(take ⟨ notice ⟩)
(take ⟨ care ⟩)

etc., we may treat *take* as a simple verb. But if these are considered idiomatic (either unilingually or in an interlinguistic context). then they are lexically conjunct.

For example, in the interlinguistic context of English and Tamil, they are all lexically conjunct verbs:

English		*Tamil*
(take ⟨ coffee ⟩)	⇄	(⟨ kaappi ⟩ caappitxu)
(take ⟨ snuff ⟩)	⇄	(⟨ potxi ⟩ pootxu)
(take ⟨ rest ⟩)	⇄	(⟨ ilxəippu ⟩ aarhu)
(take ⟨ notice ⟩)	⇄	(⟨ kavanam ⟩ celuttu)
(take ⟨ care ⟩)	⇄	(⟨ jaakkirataiyaaka ⟩ iru)

where there is no unique equivalent for *take* in Tamil.

There are, of course, cases of unilingual conjunct verbs in English such as (take ⟨ off ⟩), (take ⟨ after ⟩), etc., which at all times could be considered as lexical conjunct verbs.

9.0. *General*

Since our work is mainly concerned with more than one language at a time in the context of interlinguistic translation (mechanical or otherwise), our treatment of any individual language would be very wide of the unilingual description of the same language.

Even apart from this, our general view is that the description of any given language could vary within wide limits. There could be transformational relations between one limiting system of description and another. Somewhere between two extreme limiting descriptions of a language lies an optimum system that matches with an optimum description of another language.

If we have structures a and b in language A and structures c and d in language B, then it is possible that a and d are limiting cases that do not match between A and B. But structures b and c could.

In such a case we may have:

Unilingual transformation in A;

$$a \rightarrow b$$

Transformation from A to B:

$$b \rightarrow c$$

and

Unilingual transformation in B;

$$c \rightarrow d.$$

It is possible that a and d are traditional or any other normally accepted canonical structures, while b and c are not.

Compare, for example, the same physical situation described in different languages in different ways:

I shake my head (English)

I shake myself the head (German)

and

I shake myself by the head (Russian).

We do not hesitate to go over to an intermediate non-canonical description, if it has practical advantages.

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