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NATURAL SYNTAX: ENGLISH REPORTED SPEECH

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ABSTRACT

Natural Syntax is a developing deductive theory, a branch of Naturalness Theory. The naturalness judgements are couched in naturalness scales, which proceed from the basic parameters (or "axioms") listed at the beginning of this paper. The predictions of the theory are calculated in the deductions, whose chief components are a pair of naturalness scales and the rules governing the alignment of corresponding naturalness values. Parallel and chiastic alignments are distinguished, in complementary distribution. Chiastic alignment is mandatory in deductions limited to unnatural environments.

This paper exemplifies Natural Syntax using language data associated with reported speech in Standard English. Some of the deductions compare direct and indirect speech, and some operate within direct speech or within indirect speech. Special attention is directed toward the verbal nucleus of the reporting clause and on frequency phenomena as defined under 1 below in criteria (d) and (e).

1. Introduction

Natural Syntax is a (developing) deductive linguistic theory that determines the presuppositions on the basis of which a (morpho)syntactic state of affairs can be made predictable, and thus synchronically explained. The two basic kinds of presuppositions are naturalness scales and rules of alignment among corresponding values of any two scales. Every (morpho)syntactic state of affairs is represented by two comparable variants. Natural Syntax contains no generative component.

I begin by listing the criteria with which Natural Syntax substantiates naturalness scales:

a) The parameter of favourable for the speaker and of favourable for the hearer. What is favourable for the speaker is more natural, the speaker being the centre of communication. This view of naturalness is commonplace in linguistics (Havers 1931: 171), under the names of tendency to economise (utilized first of all by the speaker) and tendency to be accurate (mainly in the hearer's interest).

b) The principle of least effort (Havers 1931: 171). What conforms better to this principle is more natural for the speaker. What is cognitively simple (for the speaker) is easy to produce, easy to retrieve from memory, etc.

c) Degree of integration into the construction. What is better integrated into its construction is more natural for the speaker.

d) Frequency. What is more frequent tokenwise is more natural for the speaker. What is cognitively simpler (for the speaker) is used more. (However, the reverse does not obtain: what is natural for the speaker is not necessarily more frequent.)

e) Small vs. large class. The use of (a unit pertaining to) a small class is more natural for the speaker than the use of (a unit pertaining to) a large class. During speech, small classes are easier for the speaker to choose from than are large classes.

f) The process criterion. Any process is natural; only movement requires special comment. Given a construction, the movement of a unit to the left is more natural for the speaker than the movement of a unit to the right. (Movement to the left is more natural than non-movement; movement to the right is less natural than non-movement.)

g) Acceptable vs. non-acceptable use. What is acceptable is more natural for the speaker than what is not acceptable. The very reason for the acceptability of a syntactic unit is its greater naturalness for the speaker with respect to any corresponding non-acceptable unit.

h) What is more widespread in the languages of the world is more natural for the speaker (the typological criterion). What is cognitively simpler (for the speaker) is realized in more languages.

The basic format of the naturalness scales is >nat (A, B), in which A is favourable for the speaker and B is favourable for the hearer. A and B are the "values"

of the scale. Two expanded scales are allowed, namely >nat (A + B, B) and >nat (A, A + B); they are valid if the corresponding scale of the format >nat (A, B) is valid. Exemplification below.

The above criteria of naturalness (henceforth, axioms) are utilised to support the naturalness scales. Normally it suffices to substantiate any scale with one criterion, which backs up either value A or value B of the scale; the non-supported value is allotted the only remaining position in the scale. Of course, a scale may be supported with more than one criterion. Any clash among the criteria applied to a scale is to be handled with constraints on the combinations of criteria. So far only a few constraints have been formulated; I have not yet encountered much useable crucial language data.

The naturalness scales are an essential part of deductions, in which Natural Syntax expresses its predictions about the state of affairs in language data. An example of a deduction:

English. The numerical indication of frequency normally consists of a cardinal number followed by the word *times* – e.g., *four times* – except that there are one-word expressions available for the lowest numbers: *once*, *twice*, and archaic *thrice* (*Collins Cobuild* 1990: 270-271).

The two variants: the type *once* and the type *four times*.

1. The assumptions of Natural Syntax:

1.1. >nat (type *once*, type *four times*)

I.e., the type *once* is more natural than the type *four times*. According to the criterion of least effort, item (b) in the list of axioms.

1.2. >sem (low, non-low) / number

I.e., any low number is more natural than any non-low number (Mayerthaler 1981: 15). – Low numbers are more easily accessible to the speaker. According to the criterion of favourable for the speaker and of favourable for the hearer, item a in the list of axioms.

2. The rules of parallel alignment of corresponding values:

2.1. value A tends to associate with value C,

2.2. value B tends to associate with value D. See Note 4.1 below.

3. The consequences:

If a language distinguishes between low and non-low numbers in numerical indications of frequency such that one kind of number uses the pattern *four times* and the other kind of number uses the pattern *once*, it is the low numbers that tend to use the pattern *once* and it is the non-low numbers that tend to use the pattern *four times*. *Q.E.D.* (The reverse situation is not expected.)

4. Notes

4.1. Value A of scale 1.1. (= the type *once*) tends to combine with value C of scale 1.2. (= low number). Value B of scale 1.1. (= the type *four times*) tends to combine with value D of scale 1.2. (= non-low number); similarly in the remaining deductions, with the proviso that the alignment (unlike here) is chiastic in most cases. Chiastic alignment is explained below.

4.2. Natural Syntax cannot predict the cut-off point between low and non-low numerals.

This deduction maintains that the state of affairs cannot be the reverse; i.e., that the numerals above "two" (or "three") would be one-word formations and that the numerals under "three" (or "four") would be two-word formations. All predictions of Natural Syntax are restricted to such modest claims about the unlikelihood of the reverse situation.

In every deduction, the rules of alignment play a prominent role; compare item 2 in the above deduction. The alignment rules regulate the combinations of corresponding values of the two naturalness scales mentioned in the deduction. The alignment can be parallel or chiastic. Suppose that the two scales are >nat (A, B) and >nat (C, D). Parallel alignment pairs value A with value C, and value B with value D. Chiastic alignment pairs A with D, and B with C.

A paramount question is when the alignment is parallel and when chiastic. Parallel alignment is the default case. Chiastic alignment is necessary whenever a given deduction is limited to language data obtaining within an "extremely unnatural environment". Such an environment is defined as value B of the scale >nat (A, B), provided the scale cannot be extended to the right; that is, if there is no such value that would be even less natural than value B.

An example. Consider the scale >nat (main, dependent) / clause, substantiated by the frequency criterion, item d in the list of axioms: in any language, main clauses are more frequent tokenwise than dependent clauses. The value "dependent clause" is an extremely unnatural environment because the scale cannot be extended to the right. This means: all deductions whose language data lie within the environment "dependent clause" require the implementation of chiastic alignment.

At the time of this writing, the state of the art cannot explain why there are two kinds of alignment and why they are distributed as they are.

Some of my recent related work published in English: Orešnik (2002, 2002-2003, 2003a-c, 2004, with Varja Cvetko-Orešnik 2007).

2. Reported speech

There is a connection between the original utterance (or speech) and the corresponding reported speech. They enter the naturalness scale >nat (original speech, reported speech). The scale can be substantiated by the appeal to the hearer, who hears some reported speech and faces the task of reconstructing the original speech. The hearer's task is difficult and therefore the original speech must be mentioned in slot A of the scale. The original speech is particularly difficult for the hearer to reconstruct if it is only thought, thus known only to the speaker. A further difficulty for the hearer is the reconstruction of the original speech from indirect reported speech.

Because reported speech is placed in slot B and because the naturalness scale cannot be extended to the right in this particular case, reported speech exemplifies an extremely unnatural environment. All deductions restricted to reported speech require chiastic alignment of the values in the participating scales. Consequently, Natural Syntax predicts a few combinations within reported speech that appear somewhat unexpected. See below.

Reported speech is either direct or indirect reported speech. Both of these are usually accompanied by a reporting clause (at the beginning, in the middle, or at the end). The reporting clause usually signals some details of the original speech that are present in it or in its context. It can be said that original speech is reflected in conjunction by reported speech and by the accompanying reporting clause.

Direct and indirect speech are encapsulated in the scale >nat (indirect, direct) / speech. It is easier for the hearer to decode direct than indirect speech, and therefore direct speech must be mentioned in slot B of the scale. Indirect speech is difficult for the hearer because in it the hearer is confronted with modified tenses and deictic elements, if any; in short, decoding takes time. Therefore, indirect speech must be mentioned in slot A of the scale and counts as natural. This is supported by the circumstance that indirect speech is better integrated into its construction than direct speech because it is usually embedded in a superordinate reporting clause.

There follow a few deductions dealing with certain simple aspects of English reported speech. The sections are: I. Reported speech, II. The reporting clause of reported speech, III. The reporting clause of direct speech, IV. Indirect speech, and V. Miscellaneous.

I. Reported speech

1. Reported speech. Direct speech is used more than indirect speech in languages at large. A number of languages do not use indirect speech at all or only sparingly; for lists of such languages, see Noonan (1985: 111), Li (1986: 39), etc.

The two variants: direct and indirect speech. – The deduction proceeds in the extremely unnatural environment "reported speech".

1. The assumptions of Natural Syntax:

1.1. >nat (indirect, direct) / speech

I.e., indirect speech is more natural than direct speech. – It is easier for the hearer to decode direct speech. According to the criterion of favourable for the speaker and of favourable for the hearer, item (a) in the list of axioms.

1.2. >nat (more, less) / common in the languages of the world

I.e., what is more common in the languages of the world is more natural than what is less common in the languages of the world. – According to the typological criterion, item (h) in the list of axioms.

2. The rules of chiastic alignment:

2.1. value A tends to associate with value D,

2.2. value B tends to associate with value C.

3. The consequences:

If a language distinguishes between direct and indirect speech such that one is more common and the other is less common in the languages of the world, then it is direct speech that tends to be more common and it is indirect speech that tends to be less common. *Q.E.D*. (The reverse situation is not expected.)

4. Note. Scale 1.1. could be couched in typological terms, and it would be >nat (direct, indirect) / speech (seeing that many languages lack indirect speech or use it only sparingly). However, further reflection opts for the scale mentioned in the deduction. The scale works well in a great many deductions (as will be seen below), whereas the variant based on typological considerations fails to work provided that the remaining parameters (in particular the alignment rules) are not changed.

The circumstance that scale 1.1. of the deduction gives precedence to the hearer, not to typology, requires the following stipulation. In any confrontation between axiom (a) and the typological criterion, precedence must be given to axiom (a). A possible commonsensical argument in favour of such a choice can be seen in the circumstance that the typological criterion reflects the situation in the human brain much more indirectly than the remaining criteria enumerated under (A) above.

2) English. Reported speech in the spoken language. Direct speech is used more than indirect speech (Biber et al. 1999: 1118). For German data, see Jäger (1971: 127) and Schank (1989: 168-186, 235, 246-249).

The two variants: direct and indirect speech in the spoken language. – The deduction proceeds in the extremely unnatural environment "reported speech".

1. The assumptions of Natural Syntax:

1.1. >nat (indirect, direct) / speech

I.e., indirect speech is more natural than direct speech. – It is easier for the hearer to decode direct speech. According to the criterion of favourable for the speaker and of favourable for the hearer, item (a) in the list of axioms.

1.2. >nat (+, –) / frequent

I.e., what is more frequent is more natural than what is less frequent. – This is the frequency criterion itself, item (d) in the list of axioms.

2. The rules of chiastic alignment:

2.1. value A tends to associate with value D,

2.2. value B tends to associate with value C.

3. The consequences:

If a language distinguishes, within the spoken language, between direct and indirect speech such that there is more of one and less of the other, then it is direct speech that tends to be more frequent and it is indirect speech that tends to be less frequent. *Q.E.D*. (The reverse situation is not expected.)

4. Note. The situation is complicated in the written language: direct speech is used most in fiction and news, as an imitation of the spoken language.

3) English. Reported speech. Thoughts are more usually reported in indirect speech than in direct speech; for instance, *He thought she was worried* (*Collins Cobuild* 1990: 319).

The two variants: direct and indirect speech. – The deduction does not proceed in the extremely unnatural environment "reported speech" because original speech is also involved.

1. The assumptions of Natural Syntax:

1.1. >nat (indirect, direct) / speech

I.e., indirect speech is more natural than direct speech. – It is easier for the hearer to decode direct speech. According to the criterion of favourable for the speaker and of favourable for the hearer, item (a) in the list of axioms.

1.2. >nat (thoughts, words) / original speech

I.e., original speech composed of thoughts is more natural than original speech composed of words. – It is easier for the hearer to reconstruct original speech from words, and therefore such original speech must be mentioned in slot B of the scale. According to the criterion of favourable for the speaker and of favourable for the hearer, item (a) in the list of axioms.

A special case of 1.2.:

1.2.1. >nat (thoughts & words, only words) / original speech

Scale 1.2.1. assumes the permitted expanded format >nat (A + B, B) and is automatically valid because the corresponding basic scale 1.2. has been substantiated.

2. The rules of parallel alignment:

2.1. value A tends to associate with value C,

2.2. value B tends to associate with value D.

3. The consequences:

If a language distinguishes between direct and indirect speech such that one recapitulates original speech composed of words only and the other recapitulates original speech composed of words or thoughts, then it is direct speech

that tends to recapitulate original speech composed of words only, and it is indirect speech that tends to recapitulate original speech composed of words or thoughts. *Q.E.D*. (The reverse situation is not expected.)

4) English. Reported speech. In direct speech the quote is a main clause, or more generally a coordination; for instance, *She replied, "I live alone"*. What is reported in indirect speech is either a main or a dependent clause, or more generally a coordination or a subordination; for instance, *She said that she lived alone; She lived alone, she said* (Huddleston – Pullum 2002: 1024, 1026-1027).

The two variants: direct and indirect speech. – The deduction proceeds in the extremely unnatural environment "reported speech".

1. The assumptions of Natural Syntax:

1.1. >nat (indirect, direct) / speech

I.e., indirect speech is more natural than direct speech. – It is easier for the hearer to decode direct speech. According to the criterion of favourable for the speaker and of favourable for the hearer, item (a) in the list of axioms.

1.2. >nat (coordination, subordination)

I.e., coordination is more natural than subordination. – In numerous languages subordination is lacking or used sparingly. According to the typological criterion, item (h) in the list of axioms.

A special case of 1.2.:

1.2.1. >nat (only coordination, coordination & subordination)

Scale 1.2.1. assumes the permitted expanded format >nat (A, A + B) and is automatically valid because the corresponding basic scale 1.2. has been substantiated.

2. The rules of chiastic alignment:

2.1. value A tends to associate with value D,

2.2. value B tends to associate with value C.

3. The consequences:

If a language distinguishes between direct and indirect speech such that one consists of a coordination and the other either of a coordination or of a subordination, then it is direct speech that tends to consist of a coordination and it is

indirect speech that tends to consist either of a coordination or of a subordination. *Q.E.D*. (The reverse situation is not expected.)

II. The reporting clause of reported speech

5) English. Reported speech. The verbs introducing direct speech are fewer by half than the verbs introducing indirect speech (*Collins Cobuild* 1990: 318, 321).

The two variants: direct and indirect speech. – The deduction proceeds in the extremely unnatural environment "reported speech".

1. The assumptions of Natural Syntax:

1.1. >nat (indirect, direct) / speech

I.e., indirect speech is more natural than direct speech. – It is easier for the hearer to decode direct speech. According to the criterion of favourable for the speaker and of favourable for the hearer, item (a) in the list of axioms.

1.2. >nat (small, large) / class of verbs

I.e., a small class is more natural than a large class. – This is the very criterion of small vs. large class, item (e) in the list of axioms.

2. The rules of chiastic alignment:

2.1. value A tends to associate with value D,

2.2. value B tends to associate with value C.

3. The consequences:

If a language distinguishes between direct and indirect speech such that the verbs introducing one of them form a small class and the verbs introducing the other form a large class, then it is the verbs introducing direct speech that tend to form a small class and it is the verbs introducing indirect speech that tend to form a large class. *Q.E.D*. (The reverse situation is not expected.)

6) English. Reported speech. The reporting clause of direct speech is predominantly at the end (for instance, *"You have to keep trying, Mabel", he said*), and the reporting clause of indirect speech is predominantly at the beginning (for instance, *Henry said that he wanted to go home – Collins Cobuild* 1990: 318, 320).

The two variants: direct and indirect speech. – The deduction proceeds in the extremely unnatural environment "reported speech".

1. The assumptions of Natural Syntax:

1.1. >nat (indirect, direct) / speech

I.e., indirect speech is more natural than direct speech. – It is easier for the hearer to decode direct speech. According to the criterion of favourable for the speaker and of favourable for the hearer, item (a) in the list of axioms.

1.2. >nat (at the end, at the beginning) / reporting clause

I.e., the reporting clause at the end is more natural than the reporting clause at the beginning. – The reporting clause at the beginning is more favourable for the hearer because it supplies him early with clues about the original speech; also, the reporting clause draws the hearer's attention to the fact that reported speech is about to follow. Therefore the position at the beginning must be mentioned in slot B of the scale. According to the criterion of favourable for the speaker and of favourable for the hearer, item (a) in the list of axioms.

2. The rules of chiastic alignment:

2.1. value A tends to associate with value D,

2.2. value B tends to associate with value C.

3. The consequences:

If a language distinguishes between direct and indirect speech such that the reporting clause accompanying one of them is usually at the beginning and the reporting clause accompanying the other is usually at the end, then it is direct speech that tends to have the accompanying reporting clause usually at the end and it is indirect speech that tends to have the accompanying reporting clause usually at the beginning. *Q.E.D*. (The reverse situation is not expected.)

7) English. Reported speech; the reporting clause in the middle or at the end. The postposed subject of the reporting clause is more usual in direct than in indirect speech. Indirect speech: *The person most likely to benefit, thought Jill, was herself*. Direct speech: *"Your father's arrived", said Sue* (Huddleston – Pullum 2002: 1024, 1027).

The two variants: direct and indirect speech. – The deduction proceeds in the extremely unnatural environment “reported speech”.

1. The assumptions of Natural Syntax:

1.1. >nat (indirect, direct) / speech

I.e., indirect speech is more natural than direct speech. – It is easier for the hearer to decode direct speech. According to the criterion of favourable for the speaker and of favourable for the hearer, item (a) in the list of axioms.

1.2. >nat (more, less) / frequent postposing of subject

I.e., more frequent postposing of the subject is more natural than less frequent postposing of the subject. – According to the frequency criterion, item (d) in the list of axioms.

2. The rules of chiastic alignment:

2.1. value A tends to associate with value D,

2.2. value B tends to associate with value C.

3. The consequences:

If a language distinguishes between direct and indirect speech accompanied by a reporting clause in the middle or at the end such that one option has more postposing of the subject in the reporting clause and the other option has less postposing of the subject in the reporting clause, then it is indirect speech that tends to have less postposing of the subject, and it is direct speech that tends to have more postposing of the subject. *Q.E.D.* (The reverse situation is not expected.)

4. Notes

4.1. Because deduction (7) is successful, its scale 1.2. testifies that the felicity of frequency criterion (d) does not dependent on the (non-)naturalness of the counted unity. Thus the postposing of the subject (= the counted unity) is of little naturalness (cf. scale 1.2. of deduction (15), yet the frequency criterion applied to it operates in the same way as with the natural verb of saying *say* (= the counted unity) in scale 1.2. of deduction (11).

4.2. Compare deduction (15).

8) English. Reported speech. The reporting clause placed in the middle of indirect speech is less usual than the reporting clause placed in the middle of direct speech; for instance (direct speech), *"Jennifer", he called, "have you seen my glasses?"*; (indirect speech) *The person most likely to benefit, thought Jill, was herself* (Huddleston – Pullum 2002: 1024, 1026).

The two variants: direct and indirect speech. – The deduction proceeds in the extremely unnatural environment "reported speech".

1. The assumptions of Natural Syntax:

1.1. >nat (indirect, direct) / speech

I.e., indirect speech is more natural than direct speech. – It is easier for the hearer to decode direct speech. According to the criterion of favourable for the speaker and of favourable for the hearer, item (a) in the list of axioms.

1.2. >nat (more, less) / frequent reporting clause in the middle of reported speech

I.e., a more frequent reporting clause is more natural than a less frequent reporting clause. – According to the frequency criterion, item (d) in the list of axioms.

2. The rules of chiastic alignment:

2.1. value A tends to associate with value D,

2.2. value B tends to associate with value C.

3. The consequences:

If a language distinguishes between direct and indirect speech such that with one option the reporting clause placed in the middle of reported speech is more frequent and with the other option the reporting clause placed in the middle of reported speech is less frequent, then it is the reporting clause placed in the middle of INDIRECT speech that tends to be less frequent and it is the reporting clause placed in the middle of DIRECT speech that tends to be more frequent. *Q.E.D*. (The reverse situation is not expected.)

9) English. A small group of verbs of saying (among them *speak*, *talk*) cannot be used in the reporting clause of reported speech (*Collins Cobuild* 1990: 315).

The two variants: verbs of saying such as *speak*, *talk* vs. other verbs of saying. – The deduction does not proceed in the extremely unnatural environment "reported speech" because verbs such as *speak*, *talk* are avoided in reported speech.

1. The assumptions of Natural Syntax:

1.1. >nat (–, +) / verb of saying in reporting clause

I.e., the absence of a verb of saying from the reporting clause is more natural than its presence. – According to the criterion of least effort, item (b) in the list of axioms.

1.2. >nat (small, large) / class of verbs of saying

I.e., a small class of verbs of saying is more natural than a large class of verbs of saying. – According to the criterion of small vs. large class, item (e) in the list of axioms.

2. The rules of parallel alignment:

2.1. value A tends to associate with value C,

2.2. value B tends to associate with value D.

3. The consequences:

If a language distinguishes, within verbs of saying, between those used in the reporting clause of reported speech and those not used in the reporting clause of reported speech such that one alternative forms a small class and the other alternative forms a large class, then it is those verbs of saying not used in the reporting clause that tend to be a small class and it is those verbs of saying used in the reporting clause that tend to be a large class. *Q.E.D.* (The reverse situation is not expected.)

It is possible to formulate a similar deduction restricted to reported speech, therefore using chiastic alignment:

10) English. A small group of verbs of saying (among them *speak*, *talk*) cannot be used in the reporting clause of reported speech (*Collins Cobuild* 1990: 315).

The two variants: verbs of saying such as *speak, talk* vs. "other" verbs of saying. – The deduction proceeds in the extremely unnatural environment "reported speech".

1. The assumptions of Natural Syntax:

1.1. >nat (small, large) / class of verbs of saying

I.e., a small class of verbs of saying is more natural than a large class of verbs of saying. – According to the criterion of small vs. large class, item (e) in the list of axioms.

1.2. >nat (+, –) / acceptable

I.e., what is acceptable is more natural than what is not acceptable. – This is the very criterion of acceptability, item (g) in the list of axioms.

2. The rules of chiastic alignment:

2.1. value A tends to associate with value D,

2.2. value B tends to associate with value C.

3. The consequences:

If a language distinguishes within verbs of saying between those that form a small class and those that form a large class such that one option is acceptable in reported speech and the other option is not acceptable in reported speech, then it is the small class that tends not to be acceptable in reported speech and it is the large class that tends to be acceptable in reported speech. *Q.E.D*. (The reverse situation is not expected.)

11) English. Reported speech. The verb *tell* of the reporting clause concentrates on the contents of the reported clause; for instance, *She told him they were going on holiday*; the verb *say* of the reporting clause concentrates on the words of the reported clause; for instance, *"Hello", she said* (Carter – McCarthy 2006: 806).

The two variants: the verbs *say* and *tell* of the reporting clause. – The deduction proceeds in the extremely unnatural environment "reported speech".

1. The assumptions of Natural Syntax:

1.1. >nat (*say*, *tell*) / in reporting clause

I.e., the verb *say* is more natural than the verb *tell*. – The verb *say* is the most frequent verb of reporting clauses. According to the frequency criterion, item (d) in the list of axioms.

1.2. >nat (contents, words) / of reported clause

I.e., the contents of the reported clause are more natural than the words of the reported clause. – It is easier for the hearer to decode the words than the

contents of the reported clause. Therefore the words must be mentioned in slot B of the scale. According to the criterion of favourable for the speaker and of favourable for the hearer, item (a) in the list of axioms.

2. The rules of chiastic alignment:

2.1. value A tends to associate with value D,

2.2. value B tends to associate with value C.

3. The consequences:

If a language distinguishes between the verbs *say* and *tell* of the reporting clause such that one of them concentrates on the words and the other concentrates on the contents of the reported clause, then it is *say* that tends to concentrate on the words of the reported clause and it is *tell* that tends to concentrate on the contents of the reported clause. *Q.E.D*. (The reverse situation is not expected.)

12) English. Reported speech. The verb *say* can introduce direct speech, whereas the verb *tell* usually cannot (Carter – McCarthy 2006: 806).

The two variants: the verbs *say* and *tell* of the reporting clause. – The deduction proceeds in the extremely unnatural environment "reported speech".

1. The assumptions of Natural Syntax:

1.1. >nat (*say*, *tell*) / in reporting clause

I.e., the verb *say* is more natural than the verb *tell*. – The verb *say* is the most frequent verb of reported speech. According to the frequency criterion, item (d) in the list of axioms.

1.2. >nat (indirect, direct) / speech

I.e., indirect speech is more natural than direct speech. – It is easier for the hearer to decode direct speech. According to the criterion of favourable for the speaker and of favourable for the hearer, item (a) in the list of axioms.

A special case of 1.2.:

1.2.1. >nat (only indirect, indirect & direct) / speech

Scale 1.2.1. assumes the permitted expanded format >nat (A, A + B) and is automatically valid because the corresponding basic scale 1.2. has been substantiated.

2. The rules of chiastic alignment:

2.1. value A tends to associate with value D,

2.2. value B tends to associate with value C.

3. The consequences:

If a language distinguishes between the verbs *say* and *tell* of the reporting clause such that one of them introduces direct or indirect speech and the other introduces indirect speech only, then it is the verb *say* that tends to introduce direct or indirect speech and it is the verb *tell* that tends to introduce indirect speech only. *Q.E.D*. (The reverse situation is not expected.)

13) English. The verb *say* of the reporting clause can be followed by a prepositional object + reported speech; for instance, *I said to her*, *"When I'm ready I'll tell you"*. However, the reported clause is not obligatory; for instance, *say something to him*. *Say* without a prepositional object: *He said yes, She said where she worked*. *Say* lacking a prepositional object is more frequent than *say* with a prepositional object (according to Biber et al. 1999: 368, 417) *say* lacking a prepositional object is five times more frequent in conversation than *say* with a prepositional object.

The two variants: verb *say* +/– prepositional object. – The deduction does not proceed in the extremely unnatural environment "reported speech" because the deduction also encompasses some situations outside reported speech.

1. The assumptions of Natural Syntax:

1.1. >nat (–, +) / prepositional object after *say*

I.e., the absence of a prepositional object is more natural than its presence. – According to the criterion of least effort, item (b) in the list of axioms.

1.2. >nat (more, less) / frequent

I.e., what is more frequent is more natural than what is less frequent. – This is the frequency criterion itself, item (d) in the list of axioms.

2. The rules of parallel alignment:

2.1. value A tends to associate with value C,

2.2. value B tends to associate with value D.

3. The consequences:

If a language distinguishes between *say* with a prepositional object and *say* lacking a prepositional object such that one option is more frequent and the other option is less frequent, then it is *say* lacking a prepositional object that tends to be more frequent and it is *say* with a prepositional object that tends to be less frequent. *Q.E.D*. (The reverse situation is not expected.)

14) English. Reported speech. The verb *tell* of the reporting clause takes an indirect object almost obligatorily referring to the addressee; for instance, *She told him where she worked* (Carter – McCarthy 2006: 806–807).

The two variants: *tell* +/– indirect object. – The deduction proceeds in the extremely unnatural environment "reported speech".

1. The assumptions of Natural Syntax:

1.1. >nat (–, +) / indirect object

I.e., the absence of an indirect object is more natural than its presence. – According to the criterion of least effort, item (b) in the list of axioms.

1.2. >nat (+, –) / acceptable

I.e., what is acceptable is more natural than what is not acceptable. – This is the very criterion of acceptability, item (g) in the list of axioms.

2. The rules of chiastic alignment:

2.1. value A tends to associate with value D,

2.2. value B tends to associate with value C.

3. The consequences:

If a language distinguishes, with the verb *tell*, between the presence and absence of an indirect object such that one option is acceptable and the other option is not acceptable, then it is the presence of an indirect object that tends to be acceptable and it is the absence of an indirect object that tends to be unacceptable. *Q.E.D*. (The reverse situation is not expected.)

4. Note. A similar deduction involving the verb *say* cannot be formulated because equal valency of the verb, namely +/– indirect object, obtains both outside and inside reported speech.

III. The reporting clause of direct speech

15) English. The reporting clause of direct speech. Postposing the subject of the reporting clause is more or less restricted both to the written language and to the reporting clause placed after direct speech; for instance, *"And have we found a tenant for that charming room upstairs?" asked Mr Perkins* (Carter – McCarthy 2006: 817).

The two variants: the reporting clause after direct speech and elsewhere. – The deduction proceeds in the extremely unnatural environment "reported speech".

1. The assumptions of Natural Syntax:

1.1. >nat (at the end, elsewhere) / reporting clause

I.e., the reporting clause placed at the end is more natural than the reporting clause placed elsewhere. – The reporting clause at the end is the most frequent option and therefore natural according to the frequency criterion, item (d) in the list of axioms. The reporting clause elsewhere is more favourable for the hearer because it supplies him early with data about some details of the original speech. Therefore the reporting clause placed elsewhere must be mentioned in slot B of the scale. According to the criterion of favourable for the speaker and of favourable for the hearer, item (a) in the list of axioms.

1.2. >nat (–, +) / postposed subject

I.e., the absence of a postposed subject is more natural than its presence. – Postposing the subject is a move to the right, thus of little naturalness according to the process criterion, item (f) in the list of axioms.

A special case of 1.2.:

1.2.1. >nat (–, +/–) / postposed subject

Scale 1.2.1. assumes the permitted expanded format >nat (A, A + B) and is automatically valid because the corresponding basic scale 1.2. has been substantiated.

2. The rules of chiastic alignment:

2.1. value A tends to associate with value D,

2.2. value B tends to associate with value C.

3. The consequences:

If a language distinguishes, within direct speech, between the reporting clause placed at the end and the reporting clause placed elsewhere such that one option allows the postposition of the subject and the other option does not allow it, then it is the reporting clause placed at the end that tends to allow the postposition of the subject and it is the reporting clause placed elsewhere that tends not to allow the postposition of the subject. *Q.E.D.* (The reverse situation is not expected.)

4. Notes

4.1. If the reporting clause is placed before direct speech, the postposition of the subject is occasionally to be found in news; for instance, *Says a spokesman cagily*: *"Pamela is away on holiday at the moment"* (Carter – McCarthy 2006: 817–818). Natural Syntax cannot account for this situation.

4.2. Compare deduction (7).

16) English. Direct speech. All verbs of saying can be used if the reporting clause is placed at the end. If, however, the reporting clause is placed at the beginning, a few verbs of saying (such as *agree*, *command*, *promise*, *wonder*) cannot be used (*Collins Cobuild* 1990: 319).

The two variants: reporting clause at the beginning and at the end. – The deduction proceeds in the extremely unnatural environment "reported speech".

1. The assumptions of Natural Syntax:

1.1. >nat (at the end, at the beginning) / reporting clause

I.e., the reporting clause placed at the end is more natural than the reporting clause placed at the beginning. – The reporting clause at the end is the most frequent option, and therefore natural according to the frequency criterion, item (d) in the list of axioms. The reporting clause placed at the beginning is more favourable for the hearer because it supplies him early with data about some details of the original speech. Therefore the reporting clause placed at the beginning must be mentioned in slot B of the scale. According to the criterion of favourable for the speaker and of favourable for the hearer, item (a) in the list of axioms.

1.2. >nat (small, large) / class of verbs

I.e., a small class is more natural than a large class. – This is the very criterion of small vs. large class, item (e) in the list of axioms.

2. The rules of chiastic alignment:

2.1. value A tends to associate with value D,

2.2. value B tends to associate with value C.

3. The consequences:

If a language distinguishes, within direct speech, between the reporting clause placed at the beginning and the reporting clause placed at the end such that one option allows more verbs of saying in the reporting clause and the other option allows fewer verbs of saying in the reporting clause, then it is the reporting clause at the beginning that tends to allow fewer verbs of saying and it is the reporting clause at the end that tends to allow more verbs of saying. *Q.E.D.* (The reverse situation is not expected.)

17) English. Direct speech. If the reporting clause is placed at the beginning, direct speech is its argument; for instance, *She replied, "I live alone"*. If the reporting clause is placed at the end, direct speech is not its argument; for instance, *"I live alone", she replied* (Huddleston – Pullum 2002: 1026).

The two variants: the reporting clause at the beginning and at the end of direct speech. – The deduction proceeds in the extremely unnatural environment "reported speech".

1. The assumptions of Natural Syntax:

1.1. >nat (at the end, at the beginning) / reporting clause

I.e., the reporting clause placed at the end is more natural than the reporting clause placed at the beginning. – The reporting clause at the end is the most frequent option, and therefore natural according to the frequency criterion, item (d) in the list of axioms. The reporting clause placed at the beginning is more favourable for the hearer because it supplies him early with data about some details of the original speech. Therefore the reporting clause placed at the beginning must be mentioned in slot B of the scale. According to the criterion of favourable for the speaker and of favourable for the hearer, item (a) in the list of axioms.

1.2. >nat (more, less) / integrated into construction

I.e., what is better integrated into its construction is more natural than what is less integrated into its construction. – This is the very criterion of integration into the construction, item (c) in the list of axioms.

2. The rules of chiastic alignment:

2.1. value A tends to associate with value D,

2.2. value B tends to associate with value C.

3. The consequences:

If a language distinguishes, within direct speech, between the reporting clause at the beginning and at the end such that in one option the reported clause is an argument of the reporting clause and in the other option the reported clause is not an argument of the reporting clause, then it is the reporting clause at the beginning that tends to have the reported clause as its argument, and it is the reporting clause at the end that tends not to have the reported clause as its argument. *Q.E.D*. (The reverse situation is not expected.)

4. Note. The same two scales are implemented in deduction (18).

18) English. Direct speech. If the reporting clause is placed at the beginning, it can be integrated into a superordinate construction; for instance, *I was taken aback when she replied, "I live alone"*. If the reporting clause is placed at the end, such integration is impossible (Huddleston – Pullum 2002: 1026).

The two variants: reporting clause at the beginning and at the end of direct speech. – The deduction proceeds in the extremely unnatural environment "reported speech".

1. The assumptions of Natural Syntax:

1.1. >nat (at the end, at the beginning) / reporting clause

I.e., the reporting clause placed at the end is more natural than the reporting clause placed at the beginning. – The reporting clause at the end is the most frequent option, and therefore natural according to the frequency criterion, item (d) in the list of axioms. The reporting clause placed at the beginning is more favourable for the hearer because it supplies him early with data about some details of the original speech. Therefore the reporting clause placed at the beginning must be mentioned in slot B of the scale. According to the criterion of favourable for the speaker and of favourable for the hearer, item (a) in the list of axioms.

1.2. >nat (more, less) / integrated into a construction

I.e., what is better integrated into its construction is more natural than what is less integrated into its construction. – This is the very criterion of integration into a construction, item (c) in the list of axioms.

2. The rules of chiastic alignment:

2.1. value A tends to associate with value D,

2.2. value B tends to associate with value C.

3. The consequences:

If a language distinguishes, within direct speech, between the reporting clause at the beginning and at the end such that one kind of reporting clause can be integrated into a superordinate construction and the other kind of reporting clause cannot be thus integrated, then it is the reporting clause at the beginning that tends to allow integration into a superordinate construction and it is the reporting clause at the end that tends not to allow integration into a superordinate construction. *Q.E.D.* (The reverse situation is not expected.)

4. Note. The same two scales are implemented in deduction (17). Deductions (17) and (18) taken together demonstrate that the presuppositions of the consequences (predictions) do not consist of naturalness scales and alignment rules only, but also of the chosen description of language material and of the chosen list of variants. Otherwise it would be inconceivable that the same two scales combined with the same set of alignment rules can yield different consequences (predictions).

19) English. Three verbal expressions of the reporting clause are used only in direct speech: *go*, *be*, and *be like* (restricted to the spoken language, especially of younger speakers); for instance, *I was like, "Oh, thank God for that!"* (Carter – McCarthy 2006: 823). This deduction deals with the restriction to the spoken language.

The two variants: *go*, *be*, and *be like* as verbs of saying and in "other" meanings. – The deduction proceeds in the extremely unnatural environment "reported speech".

1. The assumptions of Natural Syntax:

1.1. >nat (+, –) / spoken language

I.e., spoken language is more natural than written language. – Numerous languages use spoken language only or preponderantly. According to the typological criterion, item (h) in the list of axioms.

1.2. >nat ("other" meanings, verb of saying) / *go*, *be*, *be like*

I.e., "other" meanings of *go*, *be*, and *be like* are more natural than their use as verbs of saying. – "Other" meanings of these verbal expressions are more frequent than their use as verbs of saying. Therefore "other" meanings are natural according to the frequency criterion, item (d) in the list of axioms.

A special case of 1.2.:

1.2.1. >nat (only "other" meanings, "other" meanings and use as verb of saying) / *go*, *be*, *be like*

Scale 1.2.1. assumes the permitted expanded format >nat (A, A + B) and is automatically valid because the corresponding basic scale 1.2. has been substantiated.

2. The rules of chiastic alignment:

2.1. value A tends to associate with value D,

2.2. value B tends to associate with value C.

3. The consequences:

If a language distinguishes between spoken and written language such that one option uses the verbal expressions *go*, *be*, and *be like* as verbs of saying and in "other" meanings, and the other option uses those verbal expressions in "other" meanings only, then it is the spoken language that tends to use *go*, *be*, and *be like* as verbs of saying and in "other" meanings, and it is the written language that tends to use *go*, *be*, and *be like* in "other" meanings only. *Q.E.D.* (The reverse situation is not expected.)

4. Note. Together with the verbs of saying *go*, *be*, and *be like*, even *I says* is often mentioned. However this has a different distribution in the language from the other three (Carter – McCarthy 2006: 823) and therefore *I says* must be treated separately. See deduction (20).

20) English. *I says* of the reporting clause is used only in direct speech and is limited to the spoken language; for instance, *I says, "I won't come here again*

you know", I says has broader usage than *go*, *be*, and *be like* (Carter – McCarthy 2006: 823).

The two variants: *I say* and *I says*. – The deduction proceeds in the extremely unnatural environment "reported speech".

1. The assumptions of Natural Syntax:

1.1. >nat (+, –) / spoken language

I.e., spoken language is more natural than written language. – Numerous languages use spoken language only or preponderantly. According to the typological criterion, item (h) in the list of axioms.

1.2. >nat (*I say*, *I says*)

I.e., *I say* is more natural than *I says*. – According to the criterion of least effort, item (b) in the list of axioms.

A special case of 1.2.:

1.2.1. >nat (only *I say*, *I say* and *I says*)

Scale 1.2.1. assumes the permitted expanded format >nat (A, A + B) and is automatically valid because the corresponding basic scale 1.2. has been substantiated.

2. The rules of chiastic alignment:

2.1. value A tends to associate with value D,

2.2. value B tends to associate with value C.

3. The consequences:

If a language distinguishes, within direct speech, between spoken and written language such that one option allows *I say* and *I says*, and the other option allows only *I say*, then it is the spoken language that tends to allow *I say* and *I says*, and it is the written language that tends to allow only *I say*. *Q.E.D.* (The reverse situation is not expected.)

21) English. Four verbal expressions of the reporting clause are used in direct speech only: *I says*, *go*, *be*, and *be like* (limited to spoken language, producing

dramatic effect); for instance, *I was like, "Oh, thank God for that!"* (Carter – McCarthy 2006: 823). This deduction treats the limitation to direct speech. The restriction to spoken language is dealt with in deductions (19) and (20). The dramatic effect is the subject-matter of deduction (22).

The two variants: *I says*, *go*, *be*, and *be like* vs. "other" verbs of saying. – The deduction proceeds in the extremely unnatural environment "reported speech".

1. The assumptions of Natural Syntax:

1.1. >nat (indirect, direct) / speech

I.e., indirect speech is more natural than direct speech. – It is easier for the hearer to decode direct speech. According to the criterion of favourable for the speaker and of favourable for the hearer, item (a) in the list of axioms.

1.2. >nat (*I says*, *go*, *be*, *be like*; "other" verbs)

I.e., the verbs *I says*, *go*, *be*, and *be like* are more natural than "other" verbs of saying. – The verbs *I says*, *go*, *be*, and *be like* form a small class whereas "other" verbs of saying form a large class. According to the criterion of small vs. large class, item (e) in the list of axioms.

A special case of 1.2.:

1.2.1. >nat (*I says*, *go*, *be*, *be like* and "other" verbs; only "other" verbs)

Scale 1.2.1. assumes the permitted expanded format >nat (A + B, B) and is automatically valid because the corresponding basic scale 1.2. has been substantiated.

2. The rules of chiastic alignment:

2.1. value A tends to associate with value D,

2.2. value B tends to associate with value C.

3. The consequences:

If a language distinguishes between direct and indirect speech such that one of them uses *I says*, *go*, *be*, and *be like* and "other" verbs of saying, and the other uses only "other" verbs of saying, then it is direct speech that tends to use *I*

says, *go*, *be*, and *be like* and "other" verbs of saying, and it is indirect speech that tends to use only "other" verbs of saying. *Q.E.D.* (The reverse situation is not expected.)

22) English. Four verbal expressions of the reporting clause are used in direct speech only: *I says*, *go*, *be*, and *be like* (limited to spoken language, producing dramatic effect); for instance, *I was like, "Oh, thank God for that!"* (Carter – McCarthy 2006: 823). This deduction treats the dramatic effect. The limitation to direct speech is the subject-matter of deduction (21). The restriction to spoken language is dealt with in deductions (19) and (20).

The two variants: *I says*, *go*, *be*, and *be like* vs. "other" verbs of saying in direct speech. – The deduction proceeds in the extremely unnatural environment "reported speech". The dramatic effect (while signalled in the said verbal expressions of the reporting clause) affects first of all the accompanying direct speech.

1. The assumptions of Natural Syntax:

1.1. >nat (–, +) / dramatic effect

I.e., the lack of dramatic effect is more natural than the presence of dramatic effect. – According to the criterion of least effort, item (b) in the list of axioms.

1.2. >nat (I says, go, be, be like; "other" verbs)

I.e., the verbs *I says*, *go*, *be*, and *be like* are more natural than "other" verbs of saying. – The verbs *I says*, *go*, *be*, and *be like* form a small class whereas "other" verbs of saying form a large class. According to the criterion of small vs. large class, item (e) in the list of axioms.

2. The rules of chiastic alignment:

2.1. value A tends to associate with value D,

2.2. value B tends to associate with value C.

3. The consequences:

If a language distinguishes between *I says*, *go*, *be*, and *be like* and "other" verbs of saying such that one class is accompanied by a dramatic effect and the other class is not accompanied by such an effect, then it is *I says*, *go*, *be*, and *be like* that tend to be accompanied by a dramatic effect, and it is "other" verbs that tend not to be accompanied by a dramatic effect. *Q.E.D.* (The reverse situation is not expected.)

23) English. Direct speech. If the reporting clause is placed at the end, it cannot be interrogative; for instance, *"Will I be invited", did she say?* is not acceptable (implied in Huddleston – Pullum 2002: 1024, 1027).

The two variants: reporting clause at the beginning and at the end. – The deduction proceeds in the extremely unnatural environment "reported clause".

1. The assumptions of Natural Syntax:

1.1. >nat (at the end, at the beginning) / reporting clause

I.e., the reporting clause at the end is more natural than the reporting clause at the beginning. – The reporting clause at the beginning is more favourable for the hearer because it supplies him early with clues about the original speech; also, the reporting clause draws the hearer's attention to the fact that reported speech is about to follow. Therefore the position at the beginning must be mentioned in slot B of the scale. According to the criterion of favourable for the speaker and of favourable for the hearer, item (a) in the list of axioms.

1.2. >nat (+, –) / acceptable

I.e., what is acceptable is more natural than what is not acceptable. – This is the very criterion of acceptability, item (g) in the list of axioms.

2. The rules of chiastic alignment:

2.1. value A tends to associate with value D,

2.2. value B tends to associate with value C.

3. The consequences:

If the language distinguishes, within direct speech, between an interrogative reporting clause at the beginning and at the end such that one option is acceptable and the other option is not acceptable, then it is the interrogative reporting clause at the beginning that tends to be acceptable, and it is the interrogative reporting clause at the end that tends to be unacceptable. *Q.E.D.* (The reverse situation is not expected.)

IV. Indirect speech

24) English. Indirect speech. If indirect speech is embedded, the reporting clause precedes it; for instance, *She said that she lived alone*. If indirect speech is not embedded, the reporting clause follows it; for instance, *She lived alone, she said* (Huddleston – Pullum 2002: 1024).

The two variants: embedded and non-embedded indirect speech. – The deduction proceeds in the extremely unnatural environment “reported speech”.

1. The assumptions of Natural Syntax:

1.1. >nat (more, less) / integrated indirect speech

I.e., better integrated indirect speech is more natural than less integrated indirect speech. – According to the criterion of integration into a construction, item (c) in the list of axioms.

1.2. >nat (at the end, at the beginning) / reporting clause

I.e., the reporting clause at the end is more natural than the reporting clause at the beginning. – The reporting clause at the beginning is more favourable for the hearer because it supplies him early with clues about the original speech; also, the reporting clause draws the hearer’s attention to the fact that reported speech is about to follow. Therefore the position at the beginning must be mentioned in slot B of the scale. According to the criterion of favourable for the speaker and of favourable for the hearer, item (a) in the list of axioms.

2. The rules of chiastic alignment:

2.1. value A tends to associate with value D,

2.2. value B tends to associate with value C.

3. The consequences:

If a language distinguishes between more and less integrated indirect speech such that one option is preceded by a reporting clause and the other option is followed by a reporting clause, then it is the better integrated indirect speech that tends to be preceded by a reporting clause, and it is the less integrated indirect speech that tends to be followed by a reporting clause. *Q.E.D*. (The reverse situation is not expected.)

25) English. Indirect speech. If indirect speech is embedded into a superordinate clause, it has the structure of a dependent clause; for instance, *She said that she lived alone*. If indirect speech is not embedded, it has the structure of a main clause; for instance, *She lived alone, she said* (Huddleston – Pullum 2002: 1024).

The two variants: indirect speech as a main and dependent clause. – The deduction proceeds in the extremely unnatural environment “reported speech”.

1. The assumptions of Natural Syntax:

1.1. >nat (main, dependent) / clause

I.e., a main clause is more natural than a dependent clause. – Numerous languages lack dependent clauses or they are rare. According to the typological criterion, item (h) in the list of axioms.

1.2. >nat (more, less) / integrated indirect speech

I.e., better integrated indirect speech is more natural than less integrated indirect speech. – According to the criterion of integration into a construction, item (c) in the list of axioms.

2. The rules of chiastic alignment:

2.1. value A tends to associate with value D,

2.2. value B tends to associate with value C.

3. The consequences:

If a language distinguishes, within indirect speech, between a main and a dependent clause such that one of them is better integrated into the superordinate clause and the other is less integrated into the superordinate clause, then it is the main clause that tends to be less integrated into the superordinate clause and it is the dependent clause that tends to be better integrated into the superordinate clause. *Q.E.D*. (The reverse situation is not expected.)

26) English. Indirect speech. If indirect speech is not embedded, the reporting clause can be placed in its middle; for instance, *Ten years ago, Moumoni explained, some government people had come to inspect the village* (*Collins Cobuild* 1990: 322).

The two variants: embedded and non-embedded indirect speech. – The deduction proceeds in the extremely unnatural environment “reported speech”.

1. The assumptions of Natural Syntax:

1.1. >nat (+, –) / reporting clause in the middle of indirect speech

I.e., a reporting clause in the middle of indirect speech is more natural than a reporting clause placed elsewhere. – A reporting clause placed in the middle of indirect speech is better integrated into its construction than a reporting clause

placed elsewhere. According to the criterion of integration into a construction, item (c) in the list of axioms.

A special case of 1.1.:

1.1.1. >nat (+/–, –) / reporting clause in the middle of indirect speech

Scale 1.1.1. assumes the permitted expanded format >nat (A + B, B) and is automatically valid because the corresponding basic scale 1.1. has been substantiated.

1.2. >nat (more, less) / integrated indirect speech

I.e., better integrated indirect speech is more natural than less integrated indirect speech. – According to the criterion of integration into a construction, item (c) in the list of axioms.

2. The rules of chiastic alignment:

2.1. value A tends to associate with value D,

2.2. value B tends to associate with value C.

3. The consequences:

If a language distinguishes between more and less integrated indirect speech such that with one option the reporting clause can be in the middle of indirect speech and with the other option the reporting clause cannot be in the middle of indirect speech, then it is more integrated indirect speech that tends not to allow the reporting clause in its middle and it is less integrated indirect speech that tends to allow the reporting clause in its middle. *Q.E.D.* (The reverse situation is not expected.)

27) English. Indirect speech. If indirect speech and the accompanying reporting clause are both interrogative, reporting clause + indirect speech differs in meaning from indirect speech + reporting clause. For instance, (given the original utterance *John$_1$ won't be invited*) *Did she say if I$_1$'ll be invited?* provides an answer to the reporting clause (a possible answer would be *No, she didn't say*), whereas *Will I$_1$ be invited, did she say?* provides an answer to indirect speech (a possible answer would be *No, you$_1$ won't be invited*) (Huddleston – Pullum 2002: 1024).

The two variants: answer to the reporting clause and answer to indirect speech. – The deduction proceeds in the extremely unnatural environment "reported speech".

1. The assumptions of Natural Syntax:

1.1. >nat (indirect speech, reporting clause) / answer to

I.e., an answer to indirect speech is more natural than an answer to a reporting clause. – Answers to interrogative indirect speech are clearly more frequent than answers to an interrogative reporting clause. According to the frequency criterion, item (d) in the list of axioms.

1.2. >nat (more, less) / integrated indirect speech

I.e., better integrated indirect speech is more natural than less integrated indirect speech. – According to the criterion of integration into a construction, item (c) in the list of axioms.

2. The rules of chiastic alignment:

2.1. value A tends to associate with value D,

2.2. value B tends to associate with value C.

3. The consequences:

If a language distinguishes, within interrogative indirect speech accompanied by an interrogative reporting clause, between indirect speech that is better integrated into the superordinate clause and indirect speech that is less integrated into the superordinate clause such that one kind of indirect speech provokes an answer to the reporting clause and the other kind of indirect speech provokes an answer to indirect speech itself, then it is indirect speech that is better integrated that tends to provoke an answer to the reporting clause and it is indirect speech that is less integrated that tends to provoke an answer to itself. *Q.E.D*. (The reverse situation is not expected.)

V. Miscellaneous

28) English. Verbs of thinking are a smaller class than verbs of saying. This is evident from the statistics valid for the reporting clause of indirect speech: 47 verbs of thinking vs. 99 verbs of saying (*Collins Cobuild* 1990: 315-316).

The two variants: verbs of thinking and verbs of saying. – Both kinds of verbs are used even outside reported speech, so there is no need for chiastic alignment in this deduction.

1. The assumptions of Natural Syntax:

1.1. >nat (verbs of thinking, verbs of saying)

I.e., verbs of thinking are more natural than verbs of saying. – Verbs of thinking are difficult for the hearer because they are abstract. Therefore they must be mentioned in slot A of the scale. According to the criterion of favourable for the speaker and of favourable for the hearer, item (a) in the list of axioms.

1.2. >nat (small, large) / class of verbs

I.e., a small class is more natural than a large class. – This is the very criterion of small vs. large class, item (e) in the list of axioms.

2. The rules of parallel alignment:

2.1. value A tends to associate with value C,

2.2. value B tends to associate with value D.

3. The consequences:

If a language distinguishes between verbs of thinking and verbs of saying such that one group of verbs forms a small class and the other group of verbs forms a large class, then it is the verbs of thinking that tend to form a small class and it is the verbs of saying that tend to form a large class. *Q.E.D.* (The reverse situation is not expected.)

29) English. If the type *Liz intended Pat to read* expresses the coreferentiality of both referents, the latter referent is ellipted: *Liz intended to read*. There is, however, a (much larger) class of verbs of thinking and saying whose latter referent is not ellipted but replaced with a reflexive personal pronoun: the type *Liz believed Pat to be friendly* becomes *Liz believed herself to be friendly* (Huddleston – Pullum 2002: 1203).

The two variants: the type *Liz intended to read* and the type *Liz believed herself to be friendly*. – The deduction does not proceed in the extremely unnatural environment "reported speech" because it also encompasses verbs such as *intend* (= verb of volition).

1. The assumptions of Natural Syntax:

1.1. >nat (type *Liz intended to read*, type *Liz believed herself to be friendly*)

I.e., the type *Liz intended to read* is more natural than the type *Liz believed herself to be friendly*. – This follows (because of +/– *herself*) from the criterion of least effort, item (b) in the list of axioms.

1.2. >nat (small, large) / class of matrix verbs

I.e., a small class is more natural than a large class. – This is the very criterion of small vs. large class, item (e) in the list of axioms.

2. The rules of parallel alignment:

2.1. value A tends to associate with value C,

2.2. value B tends to associate with value D.

3. The consequences:

If a language distinguishes between the type *Liz intended to read* and the type *Liz believed herself to be friendly* such that the matrix verbs of one type form a small class and the matrix verbs of the other type form a large class, then it is the matrix verbs of the type *Liz intended to read* that tend to form a small class, and it is the matrix verbs of the type *Liz believed herself to be friendly* that tend to form a large class. *Q.E.D.* (The reverse situation is not expected.)

30) English. Verbs of saying in fiction. Some express the speech act (*to complain*), some express the manner of speaking (*to mutter*), and some nothing of the kind. The list of common verbs introducing indirect speech contains 99 items, only 14 of which express the manner of speaking; almost all the rest express a speech act. The situation is similar in direct speech (*Collins Cobuild* 1990: 315, 318).

The two variants: (in fiction) verbs of saying: those expressing a speech act and those expressing the manner of speaking. – The deduction proceeds in the extremely unnatural environment "fiction". Compare the scale >nat (+, –) / spoken language, from which it follows that any form of written language is an extremely unnatural environment. The deduction does not proceed in the extremely unnatural environment "reported speech" because verbs of saying can be used even outside reported speech.

1. The assumptions of Natural Syntax:

1.1. >nat (speech act, manner of speaking) / reading of verb of saying

I.e., with verbs of saying, their speech-act reading is more natural than their manner-of-speaking reading. – It is easier for the hearer to decode a verb expressing the manner of speaking than a verb expressing a speech act, the latter reading being more abstract. Therefore the manner of speaking must be mentioned in slot B of the scale. According to the criterion of favourable for the speaker and of favourable for the hearer, item (a) in the list of axioms.

1.2. >nat (small, large) / class of verbs of saying

I.e., with verbs of saying, a small class is more natural than a large class. – According to the criterion of small vs. large class, item (e) in the list of axioms.

2. The rules of chiastic alignment:

2.1. value A tends to associate with value D,

2.2. value B tends to associate with value C.

3. The consequences:

If a language distinguishes, within verbs of saying used in fiction, between those expressing a speech act and those expressing the manner of speaking such that one option forms a small class and the other option forms a large class, then it is those verbs of saying expressing a speech act that tend to be a large class, and it is those verbs of saying expressing the manner of speaking that tend to be a small class. *Q.E.D*. (The reverse situation is not expected.)

3. Conclusion

As can be seen above, Natural Syntax, utilizing the deduction format and the criteria of naturalness enumerated under (A), can predict certain aspects of the language behaviour observed in English reported speech. This presentation covers a selection of simple and clear examples, with a slight preference for frequency phenomena as defined in criteria (d) and (e); frequency is often neglected in syntactic theories.

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