

## THE IMPERATIVE IN NATURAL SYNTAX

Natural Syntax is a pseudo-deductive linguistic theory, and this is its most recent version. Natural Syntax determines the presuppositions on the background of which a (morpho)syntactic state of affairs can be made predictable, and thus synchronically explained. The two basic kinds of presuppositions are what are known as 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.

Natural Syntax is a special case of the approach usually called Naturalness, which arose as a reaction against the pervasive abstractness of generative grammars. (This abstractness was first of all embodied in the distinction between deep and corresponding surface structures). Initially Naturalness was active in phonology (Stampe 1979) and – to a much greater extent – in morphology (Mayerthaler 1981 and amply in Dressler; e.g., Kilani-Schoch/Dressler 2005). The present author added syntax about 1985. Natural Syntax (as my framework is dubbed) introduced a new set of basic criteria and confined the processed language material to what could be assumed to constitute pairs of variants (rather than single structures). Natural Syntax is a deductive theory except that the basic criteria are not couched in mathematical terms, and thus are not true axioms. Therefore Natural Syntax is more correctly described as pseudo-deductive.

The present state of the art can be summarized as follows. Natural Syntax does not perform as efficiently as generative grammars, which circumstance is partly counterbalanced by the much simpler apparatus of Natural Syntax. Natural Syntax is nonetheless interesting in its own right because it has developed a few (not language-particular) distinctions presumably lacking in generative grammars. Restricting myself to what is presented in greater detail below, I mention natural and unnatural environments (crucially combined with parallel and chiasmic alignments).

The basic format of my naturalness scales is  $\text{>nat}(A, B)$ , in which  $A$  is more natural than  $B$ . Two expanded scales are allowed, viz.  $\text{>nat}(A + B, B)$  and  $\text{>nat}(A, A + B)$ ; they are valid if the corresponding scale of the format  $\text{>nat}(A, B)$  is valid. Exemplification below.

I proceed to list the criteria with which Natural Syntax substantiates naturalness scales. (The following basic criteria (a–h) are sometimes referred to as axioms in this paper in order to draw attention to the circumstance that the criteria are presupposed.)

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- (a) The speaker/hearer parameter. In the scale >nat (A, B), value A is natural for the speaker (and unnatural for the hearer); value B is unnatural for the speaker (and natural for the hearer). The basic naturalness scale is >nat (favourable for the speaker, favourable for the hearer). This view of naturalness is commonplace in linguistics (Havers 1931: 171), under the names of tendency to economize (utilized first of all by the speaker) and tendency to be accurate (mainly in the hearer's interest).

I follow Mayerthaler (1981: 13 ff.) in assuming that the speaker is the centre of communication, and therefore most properties of the speaker are natural; for instance, being the first person and/or the subject and/or +human and/or +masculine (!) and/or +singular and/or +definite and/or +referential, etc.

What is favourable for the hearer may be less natural for the speaker. This is a pivotal point in Natural Syntax and will be maintained until some good counterexample nullifies it. By way of illustration it can be pointed out that producing a longish noun phrase may be "tiresome" for the speaker (= less natural for him), but may ease the hearer's decoding process considerably (= be more natural for the hearer).

- (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, and so on.
- (c) Degree of integration into the construction. What is better integrated into its construction is more natural for the speaker.

As a rule of thumb, what is located at the margin of a construction is less natural (for the speaker) than what is placed inside a construction.

- (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. (This is frequency typewise.)
- (f) The process criterion. Any process is natural. Examples of processes: movement, agreement.
- (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.

I have been applying the above criteria (a–h) to language material covering several languages and miscellaneous (morpho-)syntactic states of affairs. Throughout my work, the criteria have compelled me, time and again, to reject certain solutions and to give precedence to other solutions. Given this encouraging experience, I will preserve the present list (a–h) until some convincing and irreparable counterexample casts doubt upon my axioms. The occurrence of such an event is in the overriding interest of Natural Syntax anyway. The only realistic aim of deductive theories is that they are eventually disproved. I am afraid that any improvement of the axioms would lead to a reduction of the chances for the desirable definitive outcome.

The above criteria of naturalness are utilized to support my 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 no convincing constraints have been formulated; I have not yet encountered much useable crucial language data.

The naturalness scales are an essential part of what are known as 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. >nat (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 speaker/hearer criterion, 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 the 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) can be chiasitic. Chiasitic alignment is explained below.
- 4.2. Natural Syntax cannot predict the cut-off point between low and non-low numerals.
- 4.3. Henning Andersen (p.c.) has pointed out to me that there is a parallel system covering numerical indications of frequency, *one additional time, two/three/four additional times*, etc., which does not make use of the dichotomy treated in the above deduction. Donald Reindl (p.c.) has added *one more time, two/three/four more times*, etc.
- 4.4. In item 3 the use of the verb *tend* is important. The principled implication is that any language phenomenon can have exceptions.

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.

The following are the deduction-internal presuppositions that must be accepted for the consequences (in fact, predictions) stated in item 3 of any deduction to obtain:

- (i) The description of the language data adopted in the deduction;
- (ii) The choice of the two variants treated in the deduction;
- (iii) The choice of the natural or the unnatural environment in which the deduction proceeds;
- (iv) The choice of the naturalness scales that form the basis of the computation within the deduction.

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 chiasitic. Suppose that the two scales are  $\text{>nat}$  (A, B) and  $\text{>nat}$  (C, D). Parallel alignment pairs value A with value C, and value B with value D. Chiasitic alignment pairs A with D, and B with C.

A paramount question is when the alignment is parallel and when chiasitic. Parallel alignment is the default case. Chiasitic alignment is necessary whenever a given deduction is limited to the language data obtaining within an "unnatural environment". This is defined as value B of the scale  $\text{>nat}$  (A, B).

An example: in the scale  $\text{>nat}$  (main, dependent) / clause, the value "dependent clause" is an unnatural environment. This means: all deductions whose language data lie within the environment "dependent clause" require the implementation of chiasitic alignment.

Chiastic alignment is prohibited when a naturalness scale is substantiated with an axiom. If, however, an axiom is engaged as one of the scales in a deduction, it obeys the usual distribution of the alignment rules. Although Natural Syntax in principle does not deal with semantic phenomena, it does happen sometimes that semantics is involved in a deduction. My experience so far suggests that semantic phenomena block chiastic alignment within such a deduction. See section (C) below.

The insistence of Natural Syntax on the distinction between parallel and chiastic alignments stems indirectly from the work of Henning Andersen within markedness theory. Andersen observes situations such as the following in all human semiotic systems: on an everyday occasion casual wear is unmarked, and formal wear marked; on a festive occasion it is the formal wear that is unmarked, whereas casual wear is marked. See Andersen (1972: 45, esp. fn. 23). This example expressed with Natural Syntax scales: (i) >nat (casual, formal) / wear, (ii) >nat (-, +) / marked. A third scale as the source of the environment of the deduction: >nat (everyday, festive) / occasion. If the environment is "everyday occasion", the alignment within (i–ii) is parallel; if the environment is "festive occasion", the alignment within (i–ii) is chiastic.

The purpose of this paper is twofold: (i) to acquaint the reader with the application of Natural Syntax a step outside its original domain; namely, in morphology; and (ii) to demonstrate how Natural Syntax treats the morphology and in part the syntax of the imperative. To facilitate the reader's initiation, the illustration is as simple as possible. A brief conclusion ends the paper.

The imperative is almost ubiquitous and its functions display relatively little variation. Yet the imperative is a virtually unsolved linguistic riddle regarding where it belongs. Some linguists advocate the complete independence of the imperative, some pair it with the indicative, and some with the non-indicative moods. Natural Syntax cannot be of help in this quandary; it can only determine whether the imperative is a less or more natural category. From the answer to this question it could follow whether the imperative is less or more natural than the indicative mood, and so on.

I shall proceed in the format of deductions:

(1) Slovenian. There are a synthetic and several analytic imperatives; for instance, *delaj* 'work (2sg)' and *daj delati* give to-work 'work (2sg)'. The analytic imperatives are used only in the colloquial language (Toporišič 2000: 519).

The two variants: the synthetic and the analytic imperative. – The deduction proceeds in the unnatural environment "imperative".

1. The assumptions of Natural Syntax:

1.1. >nat (synthetic, analytic) / imperative

I.e., the synthetic imperative is more natural than the analytic imperative. –

According to the criterion of least effort, item (b) in the list of axioms.

1.2. >nat (+, -) / colloquial language

I.e., the colloquial language is more natural than the non-colloquial language. – Many languages do not use non-colloquial language or use it sparingly. According to the typological criterion, item (h) in the list of axioms.  
A special case of 1.2:

1.2.1. >nat (+, +/-) / colloquial language

Scale 1.2.1 has the permitted format >(A, A + B) and is 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 the language distinguishes between the synthetic and the analytic imperative such that one option is used in the colloquial language and the other option is used both in the colloquial and in the non-colloquial language, then it is the analytic imperative that tends to be used in the colloquial language, and it is the synthetic imperative that tends to be used both in the colloquial and the non-colloquial language. Q.E.D. (The reverse situation is not expected.)

In this deduction, only the imperatives and the (non-)colloquial language cover the entire deduction. The colloquial language is natural, the non-colloquial language is unnatural; thus the default value is natural. Under this assumption, the only trigger of chiastic alignment in deduction (1) can be the synthetic and the analytic imperatives. Consequently the synthetic imperative (like the analytic imperative) must be an unnatural category. This is somewhat surprising, given the known shortness of the synthetic imperative's sound body, at least in the second person singular. However, additional deductions will corroborate this newly obtained conclusion.

(2) Italian. The second person singular imperative. The affirmative imperative ends in a special desinence whereas the negative imperative is formed on the infinitive; for instance, *canta* 'sing (sg.)', *non cantare* 'don't sing (sg.)' (Maiden/Robustelli 2000: 247).

The two variants: the affirmative and the negative imperative of the second person singular. – The deduction proceeds in the unnatural environment "imperative".

1. The assumptions of Natural Syntax:

1.1. >nat (affirmative, negative) / imperative

I.e., the affirmative is more natural than the negative. – The affirmative is usually zero coded in the languages of the world, and therefore the affirmative is natural according to the criterion of least effort, item (b) in the list of axioms.

1.2. >nat (+, -) / infinitive = imperative

I.e., an infinitive expressing an imperative is more natural than a normal infinitive. – Decoding the imperative hidden in an infinitive is difficult for the hearer, and therefore

infinitive = imperative must be mentioned in slot A of the scale. According to the speaker/hearer criterion, 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 the language distinguishes (in the second person singular) between the affirmative and the negative imperatives such that one option assumes the form of an infinitive and the other option does not assume that form, then it is the affirmative imperative that tends not to assume the form of an infinitive and it is the negative imperative that tends to assume the form of an infinitive. Q.E.D. (The reverse situation is not expected.)

4. Note. Excluded from the deduction is the generic infinitive = imperative, acceptable as it is even in the affirmative form: *spingere* 'push', *tirare* 'pull' (signs on doors; Maiden/Robustelli 2000: 248, and Tjaša Miklič p.c.).

(3) Swahili. The imperative ends in *a*; for instance, *soma* 'read (sg.)'. If the imperative has an affix attached, the form ends in *e*; for instance, *some-ni* 'read (pl.)', *vi-some* 'read (sg.) them' (Perrott 1951: 46).

The two variants: the imperatives *soma* and *some*. – The deduction proceeds in the unnatural environment "imperative".

1. The assumptions of Natural Syntax:

1.1. >nat (*some*, *soma*) / imperative

I.e., the form *some* is more natural than the form *soma*. – The form *some* is better integrated into its full form (because of its obligatory affixes), and therefore natural according to the criterion of integration into construction, item (c) in the list of axioms.

1.2. >nat (-, +) / affix

I.e., the absence of an affix is more natural than its presence. – According to the criterion of least effort, item (b) 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 between the imperative variants *soma* and *some* such that one variant has affixes attached and the other variant lacks any affixes, then it is *some* that tends to have affixes attached and it is *soma* that tends to lack any affixes. Q.E.D. (The reverse situation is not expected.)

(4) Turkish. The imperative ending in *a* (disobeys a sound-law and) does not replace the *a* with *ı* before desinence-initial *y*. For instance, *başla-yın* 'begin (pl.)' does not change to *başlı-yın* (Lewis 1953: 80).

The two variants: the imperative forms *başlı-yın* in *başla-yın*. – The deduction proceeds in the unnatural environment "imperative".

1. The assumptions of Natural Syntax:

1.1. >nat (*başlı-yın*, *başla-yın*) / imperative forms

I.e., the form *başlı-yın* is more natural than the form *başla-yın*. – The form *başlı-yın* exhibits repetition whereas the form *başla-yın* lacks repetition. Repetition is a kind of imitation; humans have inherited imitation from higher mammals, and therefore imitation is very natural.

1.2. >nat (+, -) / acceptable

I.e., acceptable is more natural than unacceptable. – This is the very criterion of acceptability, item (g) in the list of axioms.

2. The rules of chiasitic 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 between the imperative variants *başlı-yın* and *başla-yın* such that one variant is acceptable and the other variant is not acceptable, then it is the variant *başlı-yın* that tends not to be acceptable and it is the variant *başla-yın* that tends to be acceptable. Q.E.D. (The reverse situation is not expected.)

The assumption that the imperative is an unnatural category clashes (at least apparently) with the circumstance that the following combination of the Slovenian imperative with the grammatical number requires parallel alignment: >nat (*teci*, *tecita/-te*) 'run (sg.) [vs] run (du.), run (pl.)' and >nat (singular, non-singular). Chiasitic alignment is expected, seeing that the deduction just set lies wholly within the unnatural environment "imperative", yet in reality, I repeat, only parallel alignment yields the correct result. To justify parallel alignment it must be stipulated that the former scale is arbitrarily restricted to the imperative. This is supported by the following deliberation:

Given the scale >nat (singular, non-singular), adduced above, the non-singular is an unnatural environment, and as such requires chiasitic alignment. Consider now the agreement (of the subject with the finite verb) within the indicative of the present tense. (I continue to use Slovenian as example.) The following pairs of scales are relevant:

(5) >nat (singular, dual) / subject, >nat (singular, dual) / finite verb. This means: if the subject is in the singular or the dual, even the corresponding finite verb is in the singular or the dual, respectively. The alignment is parallel, as expected in a deduction not restricted to an unnatural environment. The two scales correctly predict the situation in the language material.



(6)  $\text{>nat}$  (singular, plural) / subject,  $\text{>nat}$  (singular, plural) / finite verb. Everything is comparable to item (5), including the alignment (it is parallel). Again, the two scales correctly predict the situation in the language material.

(7)  $\text{>nat}$  (plural, dual) / subject,  $\text{>nat}$  (plural, dual) / finite verb. This deduction proceeds in the unnatural environment "non-singular" (mentioned above) and chiasitic alignment is required. More precisely, the plural subject agrees with the finite verb in the dual; the dual subject agrees with the finite verb in the plural. As can be seen, the deduction predicts a false situation in the language material. For this reason the scales under (7) must be removed from Natural Syntax, and this operation should be undertaken in a principled way.

I see a solution in the experiment to encompass the agreement of all subjects and all finite verbs in one and the same deduction:

(8)  $\text{>nat}$  (singular,  $\alpha$ non-singular) / subject,  $\text{>nat}$  (singular,  $\alpha$ non-singular) / finite verb. In both scales,  $\alpha$  stands for the dual or plural. The alignment must be parallel seeing that the deduction is not restricted to any unnatural environment. The prediction is correct: if the subject is in the singular, the finite verb is likewise in the singular, and so on. The deduction takes care of the imperative forms as well and, again, correctly predicts the situation in the language material.

The principled character of this move is reflected in the circumstance that the new solution leaves behind the problem connected with the imperative and with deductions (5–7) in the sense that the problem becomes a special case of the solution not to be separately mentioned in the solution. This is achieved by stipulating that a good solution tends to encompass as much relevant language material as possible, depending, of course, on the potential of the formalism of Natural Syntax.

There follows another example involving the imperative and the grammatical number, yet completely restricted to the imperative, and consequently quite different from the previous matter:

(9) Old French. The singular forms of the imperative are different from the corresponding indicative forms (*chante* 'sing (sg.)', *dorm* 'sleep (sg.)', *vent* 'sell (sg.)'), whereas the plural forms of the imperative equal the corresponding indicative forms (Bourciez 1967: 332).

The two variants: the singular and the plural of the imperative. – The deduction proceeds in the unnatural environment "imperative".

1. The assumptions of Natural Syntax:

1.1.  $\text{>nat}$  (singular, plural) / imperative

I.e., the singular is more natural than the plural. – In many languages the singular is zero coded and therefore natural according to the criterion of least effort, item (b) in the list of axioms.

1.2. >nat (+, -) / imperative = indicative mood

I.e., any imperative in the form of the indicative is more natural than any imperative different from the indicative mood. – The decoding of the imperative from the indicative mood is difficult for the hearer, and therefore imperative = indicative must be mentioned in slot A of the scale. According to the speaker/hearer criterion, item (a) in the list of axioms.

2. The rules of chiasitic 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 between the imperative's singular and plural such that one grammatical number equals the indicative and the other grammatical number does not equal the indicative, then it is the singular that tends not to equal the indicative and it is the plural that tends to equal the indicative. Q.E.D. (The reverse situation is not expected.)

I proceed to the question of why the imperative (at least but often not only of the second person singular) is conspicuously short in most languages. There even used to be a fashion in structuralist morphology to derive the forms of any verb from its imperative as a basis, if only the imperative lacked any desinences. Natural Syntax cannot explain how the shortness of the imperative comes into being; this issue pertains to historical grammar and to the generative component (if available) of descriptive grammar. However, Natural Syntax has a legitimate interest in why the imperative has remained persistently short for centuries if not millennia, and quite frequently manages to avoid the lengthening of its sound body. The immediate answer is that the shortness of the imperative must be descriptively motivated (must have a deeper sense, descriptively speaking). I propose to approach a detailed answer through a discussion about zero case endings of the Slovenian noun. If the noun has a zero ending in the nominative singular (e.g., *klobuk-∅* 'hat'), that ending does not cause much surprise because the nominative is an unmarked case; this circumstance makes the *-∅* sufficiently motivated. There is a different situation in the genitive non-singular when it displays a zero ending; for instance, *žab* from *žaba* 'frog', *konj* from *konj* 'horse', *mest* from *mesto* 'town', and *volov* from *volovi* 'oxen'. What is the motivation of such a short genitive? The language is certainly able to change a genitive of this kind; for instance, in addition to the genitive *konj-∅* 'of horses' there is now also *konj-ev*. However, the language does not always act thus, but instead preserves the short form endowing it – I suggest – with a special motivation: any unexpectedly short form is classified as an ordinary (thus stable) word after it has received a special feature; let the feature be called a "shortened word". Shortened words are stable words that are permitted to live a long life in spite of their shortness. Natural Syntax assigns the fea-

ture "shortened word" by aid of the scale >nat (shortened, ordinary) / word. Consider the deduction in which the genitive *žab* is assigned that feature:

(10) Slovenian. The noun *žaba* 'frog' has a case ending in all its forms except in the genitive non-singular: *žab*.

The two variants: *žab* + case ending and the bare *žab*.

1. The assumptions of Natural Syntax:

1.1. >nat (bare *žab*, *žab* + case ending)

I.e., the bare *žab* is more natural than *žab* + case ending. – According to the criterion of least effort, item (b) in the list of axioms.

1.2. >nat (shortened, ordinary) / word

I.e., a shortened word is more natural than an ordinary word. – According to the criterion of least effort, item (b) 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 the language distinguishes, within the inflexion of the noun *žaba*, between the bare *žab* and *žab* + case ending such that one option is a shortened word and the other option is an ordinary word, then it is the bare *žab* that tends to be a shortened word and it is the form *žab* + case ending that tends to be an ordinary word. Q.E.D. (The reverse situation is not expected.)

4. Notes

4.1. It can be seen in scale 1.1 that the feature "shortened form" can be assigned whenever such a form undergoes pressure from the remaining forms of the paradigm.

4.2. Two further examples. The Latvian vocative *siev* 'madam' beside the longer nominative *sieva* 'mistress' (Mayrhofer 1986: 149). The Indo-European vocative of *ā*-stems was a shortened form in *-ā* (subsequently *-o* in Slavic languages; for instance, Croatian vocative *žen-o* from *žena* 'woman').

4.3. In Serbian and Croatian Štokavian dialects the inherited genitive *žab* did not obtain the status of a shortened word nor was it given any other support, and the form underwent renewal so as to become an ordinary word: *žab-ā*.

The genitive plural *žab* is an important example. The zero case ending resulted from regular sound changes in the history of the language and has been preserved throughout the last millennium. The form does not display any tendency to develop a non-zero ending. This circumstance happens to remind the author of the two Slovenian verbs *nesti* and *nositi*, both meaning 'to carry', whose root vowels *e* and *o* are inherited from Proto-Indo-European. The original motivation for the vowel difference ceased to be active thousands of years ago, yet there is no inclination towards change: for instance, towards the neutralization of the vowel difference. In both cases (i.e., with the genitive *žab* and with the pair *nesti/nositi*) the descriptive grammar must explain

why the two cases are stable or, more precisely, what deeper sense they are ascribed in the brains of native speakers of Slovenian. The pair *nesti/nositi* will not be discussed here; the genitive *žab* has just been interpreted in the framework of Natural Syntax.

After this discussion on frogs, I return to the imperative. To shortened words will now be added shortened constructions.

(11) English. A covert subject of the imperative corresponds to the unaccented personal-pronoun subject of non-imperative finite verbs: *you go* (*you* unaccented) is not acceptable.

The two variants: imperative *go* and non-imperative *you + go*.

1. The assumptions of Natural Syntax:

1.1. >nat (imperative *go*, non-imperative *you + go*)

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

1.2. >nat (shortened, ordinary) / word/construction

I.e., a shortened word/construction is more natural than an ordinary word/construction. – According to the criterion of least effort, item (b) 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 the language distinguishes between the imperative *go* and the non-imperative *you + go* such that one option is a shortened word/construction and the other option is an ordinary word/construction, then it is the imperative *go* that tends to be a shortened word/construction and it is the non-imperative *you + go* that tends to be an ordinary word/construction. Q.E.D. (The reverse situation is not expected.)

4. Notes

4.1. It can be seen in scale 1.1 that the feature "shortened construction" can be assigned whenever such a construction undergoes pressure from the remaining constructions of the paradigm.

4.2. Accordingly the imperative *go* is a shortened word/construction. What has been removed is its pronominal subject = the unaccented *you*.

4.3. This deduction cannot predict the exact shape of any single shortened word/construction.

4.4. A different deduction could predict that the imperative *you go* (*you* unaccented) is not acceptable.

4.5. Deduction (11) is valid for all languages featuring obligatory pronominal subjects; thus in Europe for the Germanic and in part the Romance languages. For the Icelandic case cf. Note 4.6.

- 4.6. An Icelandic example: the old two-word imperative *ger þú* (*þú* unaccented [!]) 'do (sg.)' was shortened to the present single-word *gerðu*; similarly with all imperatives of the second person.

(12) German. The infinitive can be used as a generic imperative: *aufpassen* 'take care'. With the reflexive verbs (for example, *sich beeilen* 'hurry up', *sich hinauslehnen* 'lean out') the imperative use of the infinitive lacks the reflexive pronoun; for instance, *bitte beeilen* 'please hurry up', *nicht hinauslehnen* 'don't lean out', warning under window of train (*Duden. Richtiges und gutes Deutsch* 1985: 361).

The two variants: the infinitive *sich beeilen* and the imperative *beeilen*.

1. The assumptions of Natural Syntax:

1.1. >nat (+, -) / infinitive = imperative

I.e., an infinitive expressing an imperative is more natural than a normal infinitive. – Decoding the imperative hidden in an infinitive is difficult for the hearer, and therefore infinitive = imperative must be mentioned in slot A of the scale. According to the speaker/hearer criterion, item (a) in the list of axioms.

1.2. >nat (shortened, ordinary) / word/construction

I.e., a shortened word/construction is more natural than an ordinary word/construction. – According to the criterion of least effort, item (b) 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 the language distinguishes (with reflexive verbs) between an imperative and a non-imperative infinitive such that one option represents a shortened word/construction and the other option represents an ordinary word/construction, then it is the imperative infinitive that tends to represent a shortened word/construction and it is the non-imperative infinitive that tends to represent an ordinary word/construction. Q.E.D. (The reverse situation is not expected.)

4. Notes

4.1. The imperative infinitive, being a shortened word/construction, has lost the reflexive pronoun.

4.2. The reflexive pronoun is removed from the imperative infinitive by aid of the scale >nat (-, +) / reflexive pronoun, to replace item 1.2.

Imperative clauses can be long or short; for instance, *go (where destiny calls you)*. Yet short imperative clauses are in the majority and it may be right to assign them the status of shortened constructions.

Shortened constructions are also to be found outside imperative clauses. Suffice it to mention the prevailing short reporting clause of reported speech; for instance, *John said that it was too late*.

It happens less often that an second person singular imperative is lengthened:

(13) Modern Greek. The second person singular of the imperative 'say' ought to be *pe*, but the true form is *pe-s*. (Thus only in a few verbs; Sofroniou 1962: 91.)

The two variants: the imperatives *pe* in *pes*. – The deduction proceeds in the unnatural environment "imperative".

1. The assumptions of Natural Syntax:

1.1. >nat (*pe*, *pes*) / imperative

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

1.2. >nat (+, -) / acceptable

I.e., acceptable is more natural than unacceptable. – This is the very criterion of acceptability, item (g) in the list of axioms.

2. The rules of chiasitic 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 between the imperative variants *pe* and *pes* such that one variant is acceptable and the other variant is not acceptable, then it is the variant *pes* that tends to be acceptable and it is the variant *pe* that tends not to be acceptable. Q.E.D. (The reverse situation is not expected.)

4. Notes

4.1. The extension *-s* was in use with a few (aorist) imperatives as early as Ancient Greek; for instance, *skhē-s* 'get, obtain (sg.)'. The origin of the extension is not clear (Sihler 1995: 602).

4.2. The second person singular imperative of Proto-Indo-European athematic (thus shortest possible) verbs probably originally consisted of the bare root frequently accompanied by the particle *dhi*. The imperative + particle *dhi* was in time shortened to the imperative ending in *-dhi*. (With thematic verbs the imperative of the second person singular was likewise a shortened word equal as it was to the verbal stem.)

4.3. In Lithuanian all imperatives are extended with *-k(-)*; for instance, *sup-k* 'rock (2nd sg.)', *sup-ki-me* 'let us rock', *sup-ki-te* 'rock (2nd pl.)' (Ambrazas ed. 1997: 315). This phenomenon is not limited to the second person singular and only resembles the modern Greek state of affairs. Notice that the extension *-k(-)* is not followed by anything else in the second person singular, which is thus a shortened word.

The notion "shortened word/construction" (the expression has an ad hoc character) is meant to be a grammatical category. I propose that the status of a word/construction as a shortened word/construction is evaluated by the brain as relevant information and is forwarded to subsequent generations of native speakers of that language during the acquisition of their native language. This guarantees the stability of any shortened word/construction.

## CONCLUSION

The basic idea has been to illustrate how a (pseudo-)deductive theory of syntax performs if it insists on avoiding abstract solutions, and in particular on excluding any generative component. The main limitation of such an approach seems to consist in the compulsory reliance on language material that contains pairs of variants (aspects of whose syntactic behaviour can be made predictable using suitable presuppositions). Single constructions have no place in Natural Syntax.

In this paper Natural Syntax has been applied to the morphology and in part the syntax of the imperative. Apparently the framework can be successful even in an area outside syntax proper.

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Abstract  
THE IMPERATIVE IN NATURAL SYNTAX

The framework of this paper is Natural Syntax initiated by the author in the tradition of (morphological) naturalness as established by Wolfgang U. Dressler and †Willi Mayerthaler.

Natural Syntax is a pseudo-deductive linguistic theory, and this is its most recent version. The naturalness judgements are couched in naturalness scales, which follow from the basic parameters (or "axioms") listed at the beginning of the paper. The predictions of the theory are calculated in what are known as deductions, the chief components of each being a pair of naturalness scales and the rules governing the alignment of corresponding naturalness values. Parallel and chiasitic alignment is distinguished and related to Henning Andersen's early work on markedness.

The basic idea is to illustrate how a (pseudo)deductive theory of syntax performs if it insists on avoiding abstract solutions, and in particular on excluding any generative component.

In this paper the framework of Natural Syntax is applied mostly outside its original domain; namely, to the morphological behaviour of the imperative in various languages.

Povzetek  
VELELNİK V NARAVNI SKLADNJI

Naravna skladnja je deduktivna teorija v razvoju in veja teorije naravnosti. Sodbe o naravnosti so ubesedene v lestvicah naravnosti, ki sledijo iz osnovnih meril (ali "aksiomov"), naštetih v začetku sestavka. Napovedi teorije se izračunavajo v t.i. izpeljavah, katerih glavni sestavini sta par lestvic naravnosti in pravila o ujemanju med soodnosnimi vrednostmi naravnosti. Ločimo vzporedno in križno ujemanje, ki sta v dopolnjevalni razvrstitvi. Križno ujemanje je obvezno v izpeljavah, omejenih na nenaravno okolje.

Glavni namen naravne skladnje je določati pogoje, pod katerimi so razmere v nekem jezikovnem gradivu napovedljive.

Sestavek je posvečen velelniku v raznih jezikih, in sicer z oblikoslovnega stališča. (Čista skladnja je upošteta le bolj obrobno.) Velelnik je določen kot nenaravna kategorija. Zlasti oblika za drugo osebo ednine je po jezikih nenavadno kratka in zvečine ne kaže razvojne težnje k podaljšanju. Ta okoliščina je v članku osmišljena tako, da je kratkemu velelniku pripisana (nova) slovnična oznaka "skrajšana beseda", ki se z usvajanjem materinščine prenaša iz rodu v rod naravnih govorcev tistega jezika ter je porok za trajnost (stabilnost) velelnikove kratkosti.

Kot skrajšane besede so v članku prepoznani tudi roditeljski neednine vrste *žab* in *mest*, kot skrajšane zgradbe pa m.dr. spremni stavki poročanega govora.