

Actants in semantics and syntax II: actants in syntax*

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Abstract

Part II of the article deals with deep-syntactic and surface-syntactic actants. A deep-syntactic actant slot is defined by its correspondence to a semantic actant slot; a deep-syntactic actant of a lexical unit L either fills a deep-syntactic slot of L or corresponds to a surface-syntactic actant of L. The article discusses the numbering of deep-syntactic actant slots, some problematic cases of such numbering, restrictions on the surface realizations of deep-syntactic actant slots, and the ways to change the active deep-syntactic valence of a given lexical unit. Surface-syntactic actants are defined inductively — by bundles of relevant syntactic properties that a clause element shares with an established surface-syntactic actant, such as the subject or the direct object. The problem of “actants vs. circumstantials” is considered, including the DO SO test. The correspondence between semantic, deep-syntactic, and surface-syntactic actant slots of a lexical unit is characterized, with special attention to the four cases of discrepancy between them. The concept of government pattern of a lexical unit L is introduced and illustrated.

After the notion of semantic actant has been clarified in Part I of this article (Linguistics 42[1]), I can move to actants in syntax. As stated in Section 2, Part I, an important feature of my approach is a systematic distinction between deep- and surface-syntactic actants/actant slots. Therefore, I start with an examination of deep-syntactic actants [DSyntAs] (Section 4), to continue with SSyntAs (Section 5), after which a survey of possible correspondences between actants of the three types is presented (Section 6); finally, the government pattern of a lexical unit is characterized (Section 7).

4. Deep-syntactic actants

4.1. General considerations and definitions

DSyntAs constitute an interface between SemAs, determined mainly by semantic considerations (plus expressibility), and SSyntAs, determined exclusively by syntactic considerations (distribution, word order, structural words, agreement and government, morphological forms, control of gerunds/reflexives, and the like, relativization, etc.). DSyntAs are called in to strike a balance and to find a compromise between these two types of considerations so as to facilitate the description of the correspondence Sem-Structures \Leftrightarrow SSynt-Structures.

Definition 9: DSynt-actant slot in a government pattern

A DSyntA-slot is introduced into the government pattern of a lexical unit [= LU] L if and only if it corresponds to a SemA-slot in the definition of L.

Definition 10: Deep-syntactic actant

An LU \mathcal{P} is a DSynt-Actant of L in utterance \mathcal{U} if and only if one of the following two conditions is satisfied:

- a. either \mathcal{P} fills a DSyntA-slot of L—this is a prototypical DSyntA of L; or
- b. \mathcal{P} corresponds to a SSyntA of L such that it implements a prototypical DSyntA of a prototypical DSyntA(L).

As one sees, I allow for such DSyntAs that are not controlled by a SemA-slot of L itself and therefore have no corresponding DSyntA-slot, but pass to L from one of its prototypical DSyntAs (cf. Subsection 6.2.1).

DSyntAs appear in the DSynt-structure (of a sentence), which can be characterized with respect to two aspects: its representational means (i.e. its formal language) and its organization.

From the viewpoint of its inventory of representational means, the DSyntS must meet the following three requirements:

- it must be cross-linguistically universal in that it uses a universal inventory of DSynt-relations;
- it must be convenient for the description of restricted lexical co-occurrence;
- it must be convenient for the formulation of paraphrasing rules.

Cross-linguistic universality of the DSyntS. The DSyntS must be abstract enough to be valid for most or even all languages. Its formalism, used to reflect the syntactic organization of sentences, must be sufficient

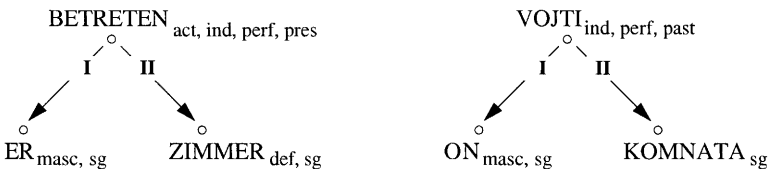
to represent whatever syntactic constructions the researcher may encounter. Therefore, the DSyntS should represent syntactic constructions of language \mathcal{L} in the most general way, so that particular syntactic properties of an \mathcal{L} 's real sentence do not appear in its DSyntS. (They will, of course, be shown in the Surface-SyntS.) For this reason, the DSyntS of a sentence does not contain:

1. “Grammatical,” or “structural,” words, that is:
 - governed (= lexically predictable) prepositions and conjunctions;
 - analytical markers of inflectional categories whose grammemes may have non-morphological expression (as a result, an analytical form is represented by one DSynt-node, with the corresponding subscripts for the grammemes expressed);
 - empty structural elements of the sentence (i.e. dummy subjects and objects, such as Eng. IT in *It rains*, *It is easy to see . . .*, *It can be recurred to this method*, *This method makes it possible to neutralize the consequences*, etc.).
2. Words that make up the inner structure of idioms (= complete phrases), so that an idiom is represented by one DSynt-node.
3. The substitute pronouns (HE, SHE, IT, . . .); only their lexical antecedents may appear.

As a result, the DSyntSs of two synonymous sentences that widely differ at the SSynt-level are very similar or identical. Thus, take German sentence (38a) and its Russian equivalent (38b), which have fairly different syntactic organization:

- (38) a. Germ. *Er hat das Zimmer betreten*,
lit. ‘He has entered the room’.
b. Rus. *On vošël v komnatu*,
lit. ‘He entered in room’.

Their DSyntSs are, however, identical (of course up to the lexical “filling” and grammemes; the German present perfect of the verb corresponds to the Russian past in the perfective aspect; Russian does not have the category of definiteness):



The important syntactic differences between (38a) and (38b) — the presence of the auxiliary verb and the article in German, as well as that of the preposition V 'in' in Russian — which lead to nonhomomorphic syntactic structures, appear only at the next, closer-to-surface, level: in the SSyntS.

As can be seen from these DSyntSs, DSynt-relations are very general and thus very few. For the time being, there are twelve DSyntRels:

- APPEND(itive);
- COORD(inative) and QUASI-COORD (for the special construction where the following member elaborates on the preceding one, adding more precise information):
John was born in the USA, —QUASI-COORD→ in New York,
—QUASI-COORD→ in Manhattan, —QUASI-COORD→ on the
56th Street);
- ATTR(ibuve)_{restr(ictive)} [written, as a default case, ATTR] and ATTR_{qual(ificative)};
- and six actantial DSyntRels (I, II, . . . , VI) plus a DSyntRel to encode the direct speech (II_{dir,speech}, which is, so to speak, a variant of the DSyntRel II); the actantial DSyntRels will be characterized below, in Section 4.2.¹

Lexical co-occurrence restrictions and the DSyntS. It is well-known that most collocations in all languages can be systematically and exhaustively described in terms of lexical functions [= LFs; Žolkovskij and Mel'čuk 1967; Mel'čuk 1996]:²

– Collocations such as *a HEAVY smoker, a KEEN interest, a THICK accent, LOUDLY acclaim, pursue VIGOROUSLY, as alike AS PEAS IN A POD* are covered by the LF Magn, which represents an intensifying attribute; it must syntactically depend on its key word via the ATTR DSynt-relation:

Magn ←ATTR— SMOKER [= *heavy smoker*],
 Magn ←ATTR— ACCLAIM [= *pursue vigorously*],
 Magn ←ATTR— ALIKE [= *as alike as two peas in a pod*], etc.

– In collocations of the type *BE in despair, GIVE an account, OFFER an apology, CONDUCT a poll, STRIKE a pose, PAY a visit*, we find another LF: Oper₁; its value is a “light” verb (a verb emptied of semantic content) that links the DSyntA I NP₁ of the key word L to L itself — in such a way that NP₁ is DSyntA I of Oper₁, while L is its DSyntA II:

This person ←I— *is* [= Oper₁] —II→ *in despair* [= L].

As is immediately seen, an element of the value of an LF, its keyword and DSyntAs of this keyword fulfill specific DSynt-roles with respect to each other. However, from the viewpoint of surface-syntactic structure, *heavy*

smoker, pursue vigorously, and as alike as two peas in a pod are very different constructions; an abstract DSynt-relation ATTR is needed to express their commonality and make it possible to describe them all by one LF [= Magn]. The same is true about the phrases *[to] be in despair, [to] offer an apology*: to cover them by one LF [= Oper₁] we need an abstract DSynt-relation II.

Paraphrasing rules and the DSyntS. Using DSyntRels makes it possible to formulate relevant syntactic operations needed in order to carry out all theoretically feasible (quasi-)synonymic transformations of syntactic structures. Since the DSyntRels are universal, their number small, and their configurations limited, we can develop a finite set of linguistically universal rules that apply in any language, provided it is described by an appropriate dictionary, where for each LU L, the values of all LFs of (L) are specified. (This set of rules is relatively small: less than a hundred for all languages.) Two examples follow.

Example 1. Consider the equivalences of the following types:

<i>X aids Y</i>	<i>X logs in Y</i>
≡ <i>X gives aid to Y</i>	≡ <i>X does a log-in into Y</i>
<i>X lies to Y</i>	<i>X visits Y</i>
≡ <i>X tells a lie to Y</i>	≡ <i>X pays a visit to Y</i>
<i>X objects to Y</i>	<i>X operates on Y</i>
≡ <i>X raises an objection to Y</i>	≡ <i>X performs an operation on Y</i>
<i>X apologizes to Y</i>	<i>X permits Y to Z</i>
≡ <i>X offers an apology to Y</i>	≡ <i>X grants Y a permission to Z</i>

There are thousands of such equivalences, based on the synonymy between a verb and a corresponding verbo-nominal collocation; all of them are described (and that, for any language) by a simple universal formula

$$V \equiv \text{Oper}_1(\text{S}_0(V)) \text{---II} \rightarrow \text{S}_0(V),$$

where S₀ stands for deverbal action/event/state noun of the verb V and Oper₁(S₀(V)) is the support verb (mentioned above) selected by this noun.

Example 2. Here are some equivalences of a different type (they are approximate, which is irrelevant for our purposes here):

<i>X is plagued by doubt</i>	≡ <i>X feels gnawing doubt</i>
<i>X spares no effort</i>	≡ <i>X makes huge efforts</i>
<i>X flashes a smile at Y</i>	≡ <i>X gives Y a (big/dazzling) smile</i>
<i>X heaps praise on Y</i>	≡ <i>X sings high praise of Y (to Z)</i>

These equivalences, also very numerous, are described by another universal formula:

$$\begin{aligned} [\text{Magn} + \text{Oper}_1](S_0(V)) &\text{---II--}\rightarrow S_0(V) \\ &\equiv \text{Oper}_1(S_0(V)) \text{---II--}\rightarrow S_0(V) \text{---ATTR--}\rightarrow \text{Magn}(S_0(V)) \end{aligned}$$

This is intensifier transfer: the semanteme 'intense', present in the meaning of [to] PLAGUE used with [a] DOUBT (*John is plagued by doubt*), is lexicalized separately as the adjective GNAWING, which is syntactically transferred to the noun DOUBT (*John feels gnawing doubt*). Similarly for [to] SPARE [no N]: 'intense', included in 'spare no . . .', can be lexicalized as HUGE, the latter being attached to EFFORT; etc.

A few dozen such formulas — universal paraphrasing rules — turn out to be more or less³ sufficient for the description of synonymic paraphrasing in all languages (Žolkovskij and Mel'čuk 1967; Mel'čuk 1974: 149–176, 1988: 77ff., 1992: 31ff.) and for structural transfers between languages (since translation can be viewed as a particular case of interlingual paraphrasing). It is obvious that DSyntAs should be introduced and numbered in language \mathcal{L} in such a way as to ensure the applicability of paraphrasing rules and the production of correct synonymous expressions within \mathcal{L} and between languages.

As to the organization of a particular DSyntS, it must, on the one hand, preserve all Sem-distinctions specified in the starting SemS and, on the other hand, ensure a maximal homomorphism with the SSyntS to be produced.

The preservation of initial semantic distinctions is based on two techniques.

First, the set of DSynt-relations is specified in such a way that in most cases (i.e. in most cross-linguistically widespread syntactic constructions) these DSyntRels, taken of course together with the lexical entries of the LUs involved, ensure the complete preservation of meaning.

Second, in idiosyncratic constructions, where and when need be, the DSyntS has recourse to artificial, or *fictitious*, *lexical units*. Some syntactic constructions can be themselves meaningful — that is, some highly idiomatic surface-SyntRels do carry meaning. For instance, consider the Russian sentence "*Da kak ty smeeš'!*" — *rasserdilsja Ivan*, lit. "But how dare you! became-angry Ivan" = '... said <exclaimed> Ivan, angry'. In the SSyntS, it is represented by the following configuration (see Iordanskaja and Mel'čuk 1981):

"DA KAK TY SMEEŠ'!" ←quotative— RASSERDIT'SJA,

where the meaning 'say' is expressed by the quotative SSyntRel. The DSynt-representation of this configuration presents a problem: what is

the DSyntRel between RASSERDIT'SJA '[to] become angry' and the direct speech expression? It should be, of course, an actantial DSyntRel, but the direct speech expression does not correspond to any SemA-slot or any DSyntA-slot of RASSERDIT'SJA: $X [= \text{I}] \text{ rasserdilsja na } Y\text{-a} [= \text{II}]$ 'X became angry with Y'. The simplest solution available is to introduce into the DSyntS a fictitious lexical unit which would express the meaning of 'say' carried by the Russian quotative SSyntRel, so that we obtain the DSynt-configuration

“DA KAK TY SMEEŠ'!” $\leftarrow \Pi_{\text{dir.speech}} \text{—} \langle \langle \text{SAY} \rangle \rangle \text{—ATTR} \rightarrow$ RASSERDIT'SJA,

the quotes « » indicating the fictitious character of the LU «SAY» (as if it were . . . *he said becoming angry*). The other logically possible solution is to introduce an additional DSyntRel to cover such constructions. This, however, would result in the loss of universality and simplicity of the present system of DSyntRels.⁴ For more on fictitious LUs in the DSyntS, see Section 6.4.2 below.

The desired maximal homomorphism with the SSyntS requires to observe the following principle (rule of thumb):

Structural homomorphism between the DSyntS and SSyntS of the same sentence

The DSyntS should not admit inversions of Synt-dependencies between its elements with respect to their SSynt-correspondents, except when it is absolutely unavoidable.

All the necessary inversions should then happen between the SemS and DSyntS, that is, between Sem-dependencies and DSynt-dependencies. Thus, the sentences [*They drank*] *three bottles of wine* and [*They saw*] *three girls* have structurally identical SemSs that correspond to the following schema: 'X' $\leftarrow 1 \text{—}$ 'quantity' $\text{—} 2 \rightarrow$ 'Y':

['drink' $\text{—} 2 \rightarrow$] 'wine' [= X] $\leftarrow 1 \text{—}$ 'quantity' $\text{—} 2 \rightarrow$

[Y =] 'three' $\text{—} 1 \rightarrow$ 'bottles'

and

['see' $\text{—} 2 \rightarrow$] 'girls' [= X] $\leftarrow 1 \text{—}$ 'quantity' $\text{—} 2 \rightarrow$ [Y =] 'three'.

The SSyntSs of these sentences, however, are very different:

[THREE \leftarrow quantitative —] BOTTLES — nominal-complete \rightarrow OF WINE

vs.

THREE \leftarrow quantitative — GIRLS

The quantitative expression THREE BOTTLES, which is a noun phrase, syntactically dominates the quantified expression WINE, while the quantitative expression THREE, which is a numeral, syntactically depends on the quantified expression GIRLS. According to the principle of structural

homomorphism, the DSyntS must preserve the orientation of these Synt-dependencies, so that we have:

[THREE ←ATTR—] BOTTLES —I→ WINE vs. THREE ←ATTR— GIRLS

As is obvious from this example, in cases in which there is no homomorphism between semantics and surface syntax,

the violation of the isomorphism must be represented as happening between Sem- and DSynt-structures, that is, between semantics and syntax — rather than between deep- and surface-syntactic structures, that is, inside syntax.

After all, the DSyntS, even though it is deep, is first and foremost a SYNTACTIC structure and should faithfully reflect the syntactic organization of the sentence.

4.2. *Numbering of DSyntA-slots*

In accordance with their intermediate character, DSyntA-slots(L) are numbered as a function of two different set of properties: the relationships with the surface-syntactic actants and the relationships with semantic actants.

Syntactic properties of DSyntA-slots. Roughly speaking, DSyntA-slots(L) are numbered in the order of decreasing syntactic obliqueness with respect to L. The degree of obliqueness of a DSyntA is determined from that of the corresponding SSyntA. The latter reflects the HIERARCHY of SSyntAs, which is established through the analysis of their observable behavior (Keenan and Comrie 1977; Iordanskaja and Mel'čuk 2000; Van Valin 2001: 33ff.).

When L is a verb, the degree of obliqueness of its dependents is more or less intuitively felt. If L is not a verb, we have to think of the semantically closest verbal expression (for instance, with the copula [*to*] BE) and to reason based on it. Thus, for the preposition UNDER, one must consider the expression *X is under Y*; for the noun TRUCK, *X transports Y from one place to another in a truck*; etc. Cf. the remarks of Raxilina (2000: 311–316) concerning “the in-built functional predicate” in the meaning of the nouns that denote artifacts.

NB: Recall that semantically empty SSynt-elements (i.e. dummy subjects and objects, governed prepositions and conjunctions) are not represented at the DSynt-level and thus do not correspond to any DSyntAs. There are also other SSyntAs that do not correspond to any DSyntAs of

L: see below, Section 6.4. On empty SSynt-elements in different languages, see Kathman (1993).

DSynt-actants are denoted by Roman numbers, which specify DSynt-relations that subordinate DSyntAs to their governors. In sharp contrast to semantic numbers (= pure distinguishers), the DSynt-numbers are meaningful: each of them corresponds to a family of concrete surface-syntactic constructions brought together because their dependent members fulfill similar roles from the viewpoint of expressing the SemAs of the LU under consideration. Thus:

- DSyntA I corresponds to:
 - What is on the surface a SSynt-subject (and all its transforms):
 - JOHN ←I— SLEEP_V (*John is sleeping*), JOHN ←I— SLEEP_N (*John's sleep*)
 - JOHN ←I— SEND A LETTER TO MARY (*John sends a letter to Mary*)
 - JOHN ←I— LETTER TO MARY (*John's letter to Mary*)
 - JOHN ←I— ARRIVAL (*John's arrival*), YOU ←I— LOVE_N (*your love*)
 - USA ←I— INTERVENTION (*USA intervention = American intervention*)
 - Different nominal complements, especially those that express the “part ~ whole,” “set ~ element,” and “container ~ content” relation:
 - JOHN ←I— LEGS (*John's legs*)
 - ROOF —I→ HOUSE (*roof of the house*)
 - (These representations are due to the verbalizations of the type *John has legs*, *The house has a roof*, etc., where *John* and *house* are SSynt-subjects.)
 - MAJORITY —I→ POPULATION (*the majority of the population*)
 - BAG —I→ TOMATOES (*a bag of tomatoes*)
 - CUP —I→ TEA (*a cup of tea*)
- DSyntA II corresponds to:
 - What is on the surface a direct object of L (and all its transforms):
 - JOHN ←II— LOVE_V ([*Someone*] *loves John*)
 - JOHN ←II— LOVE_N ([*Mary's*] *love for John*)
 - What is on the surface the most important indirect object or complement of L — if there is no direct object (and all its transforms):
 - BELONG —II→ JOHN (*belong to John*),
 - BELONGINGS —II→ JOHN (*John's belongings*),
 - FAITHFUL —II→ JOHN (*faithful to John*)

- What are on the surface complements of prepositions and conjunctions:
 - UNDER —II→ BED (*under the bed*)
 - AND —II→ JOHN (*and John*)
- What are on the surface nominal complements of all kinds that do not correspond to a transform of a SSynt-subject:
 - FATHER —II→ MARY (*the father of Mary, Mary's father*; the possible verbalization is *X is Mary's father*)
 - MINISTER —II→ FINANCE (*the finance minister*)
- What is on the surface the agentive complement (AgCo):
 - WRITTEN —II→ JOHN (*written by John*)
- DSyntA III corresponds to what is on the surface an indirect/oblique object (in case there is a DirO as well):
 - JOHN ←III— SEND ([*Someone*] *sends* [*a letter*] *to John* ~ ... *sends John* [*a letter*])
 - NOSE ←III— PUNCH ([*Someone*] *punched* [*John*] *on the nose*)
- DSyntAs IV–VI correspond to what are on the surface even more oblique, or prepositional, objects:
 - 300 DOLLARS ←IV— RENT (*rented for \$300*)
 - TWO WEEKS ←V— RENT (*rented for two weeks*)

Semantic properties of DSyntAs. However, different surface-syntactic constructions are subsumed under one DSynt-relation not only because of the similarity of their syntactic properties and behavior, but also as a function of the similarity of their relationships to semantic actants. Therefore, for instance, the fact that an AgCo is more oblique than an IndirO does not interfere with my treating the AgCo as DSyntA II, while the IndirO is DSyntA III (cf. Kahane 1998: 327, where this fact is mentioned as a problem): the AgCo reflects the conversion of SemAs, it still is semantically the actor.

Important conventions. It is required that in the lexical entry of a given LU L, that is, in its government pattern (GP), DSyntA-slots be numbered as follows:

1. Consecutively (= without gaps): I+II+III, etc.; the GPs with such numberings as *I+III or *I+II+IV are disallowed.⁵
2. Beginning with I or II — or having no DSyntAs at all; the GPs with such numberings as *III+IV are disallowed.⁶
3. Without repetitions: the GPs with such numberings as *I+I or *I+II+II are disallowed.

Let it be emphasized that requirements 1 and 2 concern the numbering itself, not the linear order in which L's DSyntAs appear in its GP or in the sentence.

4.3. *DSynt-actants: two problematic cases of DSyntA-slot numbering*

To better illustrate the concept of DSyntA, I will consider two problematic cases: DSyntAs of nouns denoting parameters and those of nouns denoting sets.

DSyntAs of nouns denoting parameters. What DSyntA of SPEED is CAR in the phrase *the speed of the car*? The corresponding verbal expressions are *The car has a top speed of 75 km/h*, *The car is going at the speed of 75 km/h* or *This car makes 75 km/h*; they indicate that CAR is the DSyntA I of SPEED. Our conclusion is buttressed by such cases as the following ones:

The bag ←I— *weighs 30 kg* ~ *The weight* —I→ *of the bag is 30 kg*
The stick ←I— *measures 30 cm* ~ *The length* —I→ *of the stick is 30 cm*
John ←I— *stands 165 cm* ~ *The height* —I→ *of John is 165 cm*
The stick ←I— *costs \$30* ~ *The price* —I→ *of the stick is \$30*
John ←I— *is 65 years old* ~ *John's* ←I— *age is 65 years*

Therefore, the name of the object characterized by a parameter is taken — in English — to be the DSyntA I of the name of the parameter; its Sem-role is “Characterized” (the DSyntA II being “Value”). Thus, the phrase [*to determine the*] *quantity of particles* appears as

QUANTITY —I→ PARTICLES.

DSyntAs of nouns denoting sets. Now, what about *a set of particles*? What is the DSynt-relation between SET and PARTICLES, that is, more precisely, PARTICLES being a DSyntA of SET, what is the number of this actant? The answer is not straightforward; I will give it in several steps.

- Semantically, ‘set’ is correlative with ‘element’, and the noun ELEMENT has obvious DSyntAs:

$X \leftarrow I - \text{Oper}_1 \text{ —II—} \text{ELEMENT —II—} Y \equiv$
X is an element of (the set) Y;

we deal here with a binary semantic relation ‘X is an element of Y’. The noun SET, however, has no corresponding inverse expression: **Y is the set of element X* is meaningless; we need either *Y is the set of elements X_i*, with *elements X_i* in the plural, or *Y contains the element X*. Moreover, it is difficult to predicate ‘is the set of Xs’ of something referential. Sentences of the type *The paradigm of a noun is the set of all its number-case forms* are rather METalinguistic: they introduce a name (‘Let’s call *paradigm* such and such a set’) rather than make a statement. The sentence *John is a member of the Linguistic Society* cannot be easily inverted: ??*The Linguistic Society has John as a*

member is unnatural. (However, *The Linguistic Society has many Belgian professors as members* or *This club accepts women as members* are perfectly okay.⁷) The semantic asymmetry between SET and ELEMENT was pointed out to me by A. Polguère; as soon as I realized the importance of this fact, I started treating 'set' as a one-place predicate. As a result, the noun SET and all its "semantic heirs" have only one DSyntA, which is I:

SET —I→ PARTICLES (*set of particles*)
 HUNDREDS —I→ WORKERS (*hundreds of workers*)
 HERD —I→ COWS (*cow herd/herd of n cows*)

In other words, I propose to describe the DSyntA-role of the name of elements of a set in the expressions such as (NAME OF A) SET → (NAME OF ITS) ELEMENTS as DSyntA I of the name of the set. This proposal easily generalizes on the expressions with LF figur, where we have metaphorical "sets," or "collections:"

GRAPES —I→ WRATH (*grapes of wrath*)
 HAIL —I→ 'AUTOMATIC FIRE'¹ (*hail of automatic fire*)

(also: *flow of information, wall of rain, wave of terror acts, firestorm of controversy*, etc.). By analogy, the same convention is applied to measure units:

TON —I→ DEBRIS (*tons of debris, three tons of debris*)
 LITER —I→ MILK (*two and a half liters of milk*)

- A 'set of suffixes' is roughly 'suffixes', a 'crowd of students' is 'students', and 'tons of debris' are of course 'debris'. Therefore, in the sentences *Suffixes form a set* or *Students gather in a crowd*, the "elements" are the DSyntA I of the support verb (= [to] FORM, [to] GATHER) and consequently, the DSyntA I of the "set." These support verbs are Oper₁ of SET, CROWD, etc. Some other support verbs that illustrate the DSynt-actantial role of the 'elements' are:

Oper₁(SET) = *belong* (*Some oblique forms belong to the set W*)
 Func₁(SET) = *include* (*The set W includes some oblique forms*)
 Caus₁Oper₁(PARTY) = *join* (*Alain joined the Labor party*)
 Caus₁Oper₁(CROWD) = *join* (*Alain joined the crowd —I→ of angry dockers*)

- In Russian, the "elements" DSyntA can often be expressed as an adjective:

'herd of pigs' STADO —I→ SVIN'I ~ *svinoe stado*
 'crowd of students' TOLPA —I→ STUDENTY ~ *studenčeskaja tolpa*
 'wall of fire' STENA —I→ OGON' ~ *ognennaja stena*

Such an adjectival expression is characteristic of the DSyntA I, but is rather rare for the DSyntA II.

Thus, it seems reasonable to treat the name of elements N_1 depending on the name of the corresponding set N_2 as the DSyntA I of N_2 .⁸

4.4. Restrictions on the surface realization of DSyntA-slots

A DSyntA-slot i of L can be subject to four types of restriction:

1. The DSyntA $_i(L)$ can never be expressed in the sentence as a direct dependent of L : *blocking* of DSyntA $_i(L)$.

2. The DSyntA $_i(L)$ cannot be expressed in the sentence in the presence of the expression of another DSyntA $_j(L)$ or of a particular surface realization of another DSyntA $_j(L)$: *incompatibility* of two DSyntA(L)s.

3. The DSyntA $_i(L)$ cannot be expressed in the sentence in the absence of (a particular form of) the expression of another DSyntA $_j(L)$: *inseparability* of two DSyntAs(L).⁹

4. The DSyntA $_i(L)$ must be expressed in the sentence: *obligatoriness* of DSyntA $_i(L)$.

Blocking of DSyntA-slots. Blocking of a DSyntA-slots corresponds to the case where a SemA-slot of L cannot be expressed on the surface as an immediate dependent of L : absolute blocking; the examples have been given in Part I of this article (Subsection 3.7), and I will not return to them.

Incompatibility of two DSyntAs(L). Here, two subcases have to be distinguished:

1. two DSyntAs of L cannot be simultaneously expressed under any condition: these two DSyntAs are incompatible as such;

2. two DSyntAs of L cannot be simultaneously expressed under particular surface conditions: these two DSyntAs are compatible, but only if some particular surface realizations are selected.

Incompatibility of two DSyntAs as such

Here are two examples from Russian.

- (39) a. *Na něm ležit vina za katastrofu [= II(VINA)]* (Apresjan 1974: 151),
lit. 'The responsibility for the catastrophe lies on him',
and

- Na nĕm ležit vina pered kollektivom* [= III(VINA)],
lit. 'The responsibility with respect to the collective lies on him',
but not
Na nĕm ležit ??vina za katastrofu pered kollektivom,
lit. 'The responsibility for the catastrophe with respect to the collectivity lies on him'.
- (39) b. *orkestr strunnyx instrumentov* [= II] (Plungjan and Raxilina 1998: 109),
lit. 'orchestra of cords',
and
orkestr klasičeskoj muzyki [= III],
lit. 'orchestra of classical music',
but not
**orkestr strunnyx instrumentov klasičeskoj muzyki*

A different type of example is given in Grimshaw (1990: 180) for English:

- (40) a. *The mere thought that Alan is here* [= II] ... ~ *John's* [= I]
thought,
but not
**John's thought that Alan is here* ...
- b. *The knowledge that ...* [= II] ~ *John's* [= I] *knowledge*,
but not
**John's knowledge that ...*

(The grammaticality judgments are Grimshaw's; native speakers diverge as to the degree of acceptability of the expressions of the type *Your thought that Alan might be here*, etc.)

There is an interesting complication related to split variables, which we have seen in Part I of this article, Subsection 3.4.2.2. Suppose that a SIT(L) has two variable participants Ψ' and Ψ'' such that their expressions are always incompatible, no matter under what surface form. We face then two cases:

- Ψ' and Ψ'' are linked by a semanteme of a metonymic character: 'is-part.of' or 'is.localized.on' (one of these participants is part of the other or is on it); then Ψ' and Ψ'' give rise to one Sem-actant slot say, Y, specified by split variables Y^1 and Y^2 (see Part I, Subsection 3.4.2).
- Ψ' and Ψ'' are not linked by a semanteme of a metonymic character; then Ψ' and Ψ'' give rise to two Sem-actant slots, say, Y and Z (see examples [39] and [40]).

Incompatibility of particular surface realizations of two DSyntAs
 We have in Korean (O'Grady 1991: 226–227):

- (41) *John+i Seoul+ul ttena+ss +ta*
 NOM ACC leave PAST DECL(arative)
 'John left Seoul'.
 but not
*John+i *Seoul+ul Honolulu+lo ttena+ss +ta*
 NOM ACC ALL leave PAST DECL
 'John left Seoul for Honolulu'.
 The correct expression is
John+i Seoul+eyse Honolulu+lo ttena+ss +ta
 NOM DAT ALL leave PAST DECL
 'John left Seoul for Honolulu'.

The accusative marking the expression of DSyntA II (= Starting point) is not compatible with the allative expression of DSyntA III (= End point), but the dative of the DSyntA II is.

Similar situations are found in many languages, especially if the two DSyntAs are expressed by the same SSynt-means. Here are two examples from Russian:

- (42) a. *On prizval naselenie [= II] k spokojstvu [= III],*
 lit. 'He appealed the population to calmness'.
 vs.
ego prizyv k naseleniju [= II] 'his appeal to the population'
 or
ego prizyv k spokojstvu [= III] 'his appeal to calmness'
 but not
 **ego prizyv k naseleniju k spokojstvu.*

However, if different forms of expression are used, no incompatibility arises:

- (42) b. *On prizval naselenie [= II] soxranjat' [= III] spokojstvie,*
 lit. 'He appealed the population to keep calmness'.
 and
ego prizyv k naseleniju [= II] soxranjat' [= III] spokojstvie,
 lit. 'his appeal to the population to keep calmness'
- (43) *On pomešal Alenu [= III, N_{dat}] v vypolnenii [= II] zadači,*
 lit. 'He impeded Alain in fulfilling the task'.
 or
On pomešal Alenu [= III, N_{dat}] vypolnit' [= II, V_{inf}] zadaču,
 lit. 'He impeded Alain to-fulfill the task'.

vs.

On pomešal vypolneniju [= II, N_{dat}] zadači Alenom,
lit. 'He impeded to fulfilling of the task by Alain'.

but not

**On pomešal Alenu [= III, N_{dat}] vypolneniju [= II, N_{dat}] zadači,*

where both DSyntAs are implemented by nouns in the dative.

Inseparability of DSyntAs(L). A DSyntA-slot(L) may be expressible only if another DSyntA-slot(L) is actually expressed. Here again two subcases have to be distinguished:

1) a DSyntA of L can be expressed only if another DSyntA is expressed, no matter how: these DSyntAs are inseparable as such;

2) a DSyntA of L can be expressed — perhaps in a particular form — only if another DSyntA is expressed in a particular form: these two DSyntAs are inseparable only if some particular surface realizations are selected.

Inseparability of two DSyntAs as such

(44) *The destruction of the city [= II] by the enemy [= I] was complete*
and

The destruction was complete,

but not

**The destruction by the enemy [= I] was complete.*

This is the prototypical case of inseparability: the DSyntA I cannot be expressed with the noun DESTRUCTION if the DSyntA II is not. Such a situation is characteristic of many deverbal (\approx action) nouns in many languages. (But not of all such nouns and not in all the contexts: *The translation by Rilke still remains the best; The destruction by the enemy is preferable to surrender.*)

See Wechsler (1995: 63ff.) for some regularities concerning the inseparability of DSyntAs(L); thus, often the DSyntA *j* of a verb cannot be expressed if the DSyntA *i* is not expressed, $i < j$; cf. (45):

(45) *Avoid smearing the drawing [i = II] with charcoal [j = III]. ~*

Avoid smearing the drawing [= II]. ~

Avoid smearing,

but not

**Avoid smearing with charcoal [= III].*

Inseparability of two DSyntAs in a particular surface form

- (46) a. *Ěto pomešalo vypoľnit'* [= II] *zadaču/vypoľneniju* [= II] *zadači*,
lit. 'This impeded to-fulfill the task/to-fulfilling of-the-task',
but not
**Ěto pomešalo v vypoľnenii* [= II] *zadači*,
lit. 'This impeded in fulfillment of the task'.

The expression of the DSyntA II by the prepositional phrase V + N_{prep} is quite grammatical, but, requires the expression of the DSyntA III (which is itself not obligatory) to be present:

- (46) b. *Ěto pomešalo nam* [= III] *v vypoľnenii* [= II] *zadači*,
lit. 'This impeded to us in fulfillment of the task'.

Obligatoriness of DSyntAs. It is well known that some complements (and modifiers, for that matter) are obligatorily expressed; what is important for us here is that this property accrues to some particular DSyntAs of some Ls, for instance:

- (47) a. *This idea is WORTH pondering* <*discussing, analyzing, ...*>,
but not
**This idea is worth.*
b. *You can RELY on Leo* <*on his opinion, on your health, on me, ...*>,
but not
**You can rely.*

(Similar examples: **It consists.*, **He tells.*, **He relates.*, ...)

The situation is actually more complex: there can be degrees of obligatoriness; obligatoriness may depend on the form of L (e.g. a DSyntA is more obligatory with the finite form of the verb L than with the infinitive); it can also depend on the context (a DSyntA may be less obligatory if it is retrievable from the context); etc. But in this article, I need not to go in all these details.

All four aspects — blocking, incompatibility, inseparability, and obligatoriness of DSyntAs — are easily taken care of: by restrictions accompanying the government pattern of L.

4.5. *Changing the active DSynt-valence of L*

The active DSynt-valence of a lexical unit L can be changed without affecting the Sem-valence of L; namely, the active DSynt-valence of L can

be increased or decreased. An increase of the active DSynt-valence of L is possible because L can have a DSyntA which does not correspond to any of its SemA-slots; a decrease is equally possible because L can have a SemA-slot that does not correspond to any DSyntA-slot.

Increasing the active DSynt-valence of L can be done by standard syntactic operations available in language \mathcal{L} , such that they give L a new DSyntA that does not correspond to any SemA-slot of L. A typical example is as follows: consider a DSyntA $L(^{\circ}Y)$ of a semantically two-actant lexeme L that has its own DSyntA $L(^{\circ}Z)$: $L(^{\circ}Y) \rightarrow_i L(^{\circ}Z)$; this configuration can be equivalent to another configuration with $L(^{\circ}Z)$ “transferred” — in the DSynt-structure — from $L(^{\circ}Y)$ to L, “being raised,” as it were, to a higher level of syntactic hierarchy, cf. Figure 1. In this way, L receives an additional DSyntA, namely the DSyntA III, although it has only two SemA-slots. In most cases, the “raised” DSyntA $L(^{\circ}Z)$ is a “possessor” (in a very large sense); therefore, this phenomenon is known as *possessor raising*.

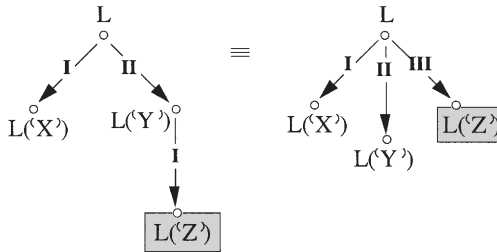


Figure 1. *Possessor raising*

Possessor raising is widespread in French, especially in the construction with a body part possessor (= $L(^{\circ}Z)$); under some specific conditions, it is obligatory. Thus, in order to express the meaning ‘I washed **his** head’ one has to say (48):

(48) Fr. *Je lui ai lavé la tête*, lit. ‘I **to-him** have washed the head’

rather than **J’ai lavé sa tête* ‘I have washed his head’, as English has it. In the Surface-SyntS, the raised possessor is an actant — an IndirO; as a consequence, it has to be a DSyntA as well.

The same phenomenon is observed in Russian (where it is, however, more restricted than in French):

(49) a. *Oni razbili **Petiny** ← očki* ≡ *Oni razbili → **Pete** očki*,
lit. ‘They broke Pete’s glasses’. ‘They broke to-Pete [the] glasses’.

The first sentence in (49a) implies that at the moment of breaking, the glasses were not on Pete's nose, while the second sentence implies exactly the opposite: Pete was wearing glasses at this moment.

- (49) b. *Petiny* ← *očki razbilis'* ≡ *U Peti* ← *razbilis' očki*,
 'Pete's glasses got broken'. lit. 'By Pete [the] glasses got broken'.

The surface-syntactic status of the $U + N_{\text{gen}}$ phrase is not quite clear. It might be a special SSynt-circumstantial depending on the main verb, and in many cases, it probably is. But, on the other hand, this phrase can alternate with the dative complement: *Oni razbili u Peti = Pete očki*; there are also constructions where the $U + N_{\text{gen}}$ phrase is an indisputable SSynt-actant — an oblique object: *U Peti bolit golova*, lit. 'At Pete aches the head'. Therefore, I prefer describing the $U + N_{\text{gen}}$ phrase in this paper as an indirect object.

- (49) c. *On povesil kartinu v Petinu* ← *komnatu* ≡
Kartinu on povesil → *k Pete* <= *Pete*> *v komnatu*,
 lit. 'He hanged the painting in Pete's room' = '... to Pete in the room'.

For a detailed survey of syntactic phenomena of the possessor raising type, see König and Haspelmath (1998).

Decreasing the active DSynt-valence of L can be done also by standard morphological operations available in language \mathcal{L} , namely — by grammatical voices, more precisely suppressives of all types; these operations have been characterized in Part I of this article, Subsection 3.7.1.

5. Surface-syntactic actants

The main problem that has preoccupied practically everyone in this domain, beginning with Tesnière,¹⁰ is the differentiation between (syntactic) actants and (syntactic) circumstantials; for criteria of this differentiation, see, among others, Panevová (1974, 1975), Engel (1977: 98–103, 158–179), Matthews (1981: 121ff.), Somers (1987: 12–18), Helbig (1992: 74ff.), and Bonami (1999). (This opposition is also known under other names: complements vs. adjuncts or terms vs. non-terms.)

There are two questions to answer in connection with the problem. Firstly, is the division of sentence elements depending on L into L's actants and L's circumstantials/modifiers a partition? In other words, are there "intermediate" sentence elements, something in between actants and circumstantials/modifiers? I do not think so: for me, the division under consideration is a partition, so no intermediate elements exist. More

precisely, let us put aside the elements involved in coordination (parts of conjoined strings) and the “ancillary” elements of all types (markers of grammemes in analytical forms, components of phraseologized constructions, and the like). Then whatever remains in a sentence is a result of one or the other of two major syntactic operations: complementation or modification. Elements introduced by complementation are SSynt-actants of L; they are foreseen in the lexicographic description of L. Elements introduced by modification are SSynt-circumstantial/SSynt-modifiers of L; generally speaking, they are not foreseen by L. Theoretically this is a strict dichotomy, although in practice it is often difficult, perhaps even impossible, to convincingly include a given sentence element into one or the other set. (When a researcher tries to define intermediate major types of sentence elements — as, for instance, Somers 1984 does, what is actually found are subtypes of SSyntAs and SSynt-circumstantials, not something in between them.)

The second question is: how does one distinguish between SSynt-actants and SSynt-circumstantials? All sorts of operational tests have been proposed: omissibility, repeatability, frequency, linear position, morphological behavior of governors/dependents, etc. But not even one, to my knowledge, turned out to be necessary and sufficient. (However, all of them, at least to some extent, have played an important role as heuristic means attracting the researchers' attention to “difficult” cases; see, among other works, Bonami 1999: 21–42, which shows that neither omissibility nor repeatability can be used as defining properties of SSyntAs vs. SSynt-circumstantials.) The most reliable criterion, however, seems to be so-called DO so test (Lakoff and Ross 1976; Somers 1984: 516–520, 1987: 17; Bonami 1999: 69ff.).

The do so test for SSynt-actantial status of a sentence element. The DO so test is carried out in three steps:

– Step 1: take a clause C of the form “subject + P + X” (*John cuts a log with a saw on the veranda*), where X is the element which we want to test (here, X = *on the veranda*), and P is the main verb with all its dependents — minus, of course, the subject and X (here, P = *cuts a log with a saw*);

– Step 2: construct another clause, C', of the form “subject' + DO so + X'” (*Mary does so in the bedroom*), where P is replaced with DO so, while the subject and the tested element X are replaced with convenient expressions;

– Step 3: conjoin C' to C, to obtain a sentence of the form “C and C'” (*John cuts a log with a saw on the veranda, and Mary does so in the bedroom*).

If the resulting sentence is incorrect — because the sentence element X' cannot appear after *do so* and thus contrast with X, dependent of the MV in P, X (and X') is a SSynt-actant; if the resulting sentence is correct, X (and X') is not a SSynt-actant, but a SSynt-circumstantial.

In our example, *on the veranda* is identified by the test as a SSynt-circumstantial, which is correct. Here are some more illustrations (after Somers 1987: 18):

- (50) a. *I live **in Manchester** and Jock does so ***in Salford**. ~
I have lived in Manchester since 1995 and Jock has done so since 1999.*
- b. *I drive **a Volkswagen** and Jock does so ***a Lancia**. ~
I drive a Volkswagen for the director and Jock does so for the minister.*
- c. *The news lasts **for 15 minutes** and the weather report does so ***for 5**. ~
The news lasts for 15 minutes on Monday and the weather report does so on Tuesday.*
- d. *Jock bought a car **for £200** and Kieran did so ***for £300**. ~
Jock bought a car for £200 with stolen money and Kieran did so with my gift.*
- e. *Jock found **a penny** and Kieran did so ***a pound**. ~
Jock found a penny **in his pocket** and Kieran did so ***on the floor**. ~
Jock found the penny in his pocket immediately, while Kieran did so only after groping desperately through the junk he always keeps there.*
- f. *Jock sent a letter **to his father** and Kieran did so ***to his mother**. ~
Jock sweeps the floor for his father, and Kieran does so for his mother.*

According to the DO SO test, the boldfaced phrases are SSynt-actants, and boxed phrases SSynt-circumstantials.

As we see, at least on some occasions, the DO SO test nicely distinguishes between a SSyntA and a circumstantial.¹¹ The same type of test has been proposed for French, German, Japanese, etc. (Somers 1984: 518; Bonami 1999).

The DO SO test is very useful, but it is difficult to conclude that it always gives the intuitively expected results (pending a serious investigation). Its main drawback is its non-universality:

- The DO SO test is not applicable for stative and event verbs nor for nonverbal predicative lexemes, while it is exactly these two groups of

lexemes that mostly need an operational test for the distinction between actants and circumstantials.

- It is not equally acceptable in all languages. Thus, in Russian, sentences with *sdelat' èto* (the equivalent of *do so*) are in many cases so cumbersome that the intuition of speakers balks and no reliable judgments can be obtained.¹²
- The test identifies only those SSynt-actants of L that belong to L's active syntactic valence. However, suppose that we want to admit "free" SSynt-actants, that is, elements that are not lexically controlled by L but still are considered as L's SSynt-actants rather than L's SSynt-circumstantials (cf. Section 6.4); then it is not clear how the DO SO test will perform.

Therefore, I prefer to base the distinction between actants and circumstantials on their SYNTACTIC properties. Roughly speaking, SSyntAs are sentence elements whose SSynt-behavior is similar to that of MAJOR SSyntAs: the subject, the DirO and the IndirO (also known as *terms*: for instance, Van Valin 2001). In other words, less obvious SSyntAs can be defined inductively, or recursively, as cluster notions, based on their similarity with a few previously established obvious SSyntAs; for the latter the SSynt-actant status is postulated. The main tool for isolating and characterizing SSyntAs is then a LIST OF SYNTACTIC PROPERTIES, which are, of course, language-specific. These properties can be grouped into three sets (Keenan 1976):

- *Semantico-syntactic properties* of sentence elements \mathcal{P}_i : \mathcal{P} 's SEMANTIC abilities (e.g. \mathcal{P} can/cannot express the Causer, etc.), COMMUNICATIVE abilities (e.g. \mathcal{P} can/cannot be focalized), and REFERENTIAL abilities (e.g. \mathcal{P} can/cannot be referentially definite).
- *Purely syntactic properties* of sentence elements \mathcal{P}_i :
 - obligatory presence in any clause;
 - possibility of multiple presence (= repeatability);
 - special linear position;
 - control of reflexivization;
 - control of gerunds;
 - possibility of relativization;
 - possibility of gapping;
 - possibility of pronominalization;
 - participation in valence-changing operations/constructions;
 - etc.

These are SSynt-properties that are relevant for many languages; there are, however, many more further, language-specific properties. Thus, for instance, in English, an important SSynt-property of a N is its ability to admit a dangling preposition. Thus, *Which bed did you*

sleep in in New York? vs. **Which city did you sleep in her bed in?* (the phrase *in a bed* is more of an actant of [*to*] *sleep* than the phrase *in a city*; cf. Part I of this article, Subsection 3.4.1). In French, an important SSynt-property of a clause element is its ability to be cliticized; etc.¹³ It goes without saying that, in actual practice, the researcher must have recourse to all such properties when defining sentence elements in \mathcal{L} .

- *Morpho-syntactic* properties of sentence elements \mathcal{P}_i (which are not present in all languages): imposition of AGREEMENT and GOVERNMENT. (For more on syntactic properties that serve to identify Synt-actants, see Plank 1984, 1990; Lazard 1994: 68ff.; Iordanskaja and Mel'čuk 2000; Van Valin 2001: 33ff.; a general review of SSyntAs in languages of Europe is given in Lazard 1998. An in-depth analysis of syntactic properties of French circumstantials is found in Bonami 1999: 43–68, where the author establishes four sufficient conditions for the circumstantial status, based on linear position and semantic scope.)

Taken globally, SSyntAs are characterized by their syntactic ACTIVE-NESS: they interact with the main verb and with each other, and have perceptible impact on the overall syntactic organization of the sentence. In a sharp contrast, SSynt-circumstantials are characterized by their syntactic PASSIVENESS; generally speaking, there is little or no interaction between them and the rest of the sentence.

Although lists of relevant syntactic properties are language-specific, the definition of SSyntA is universal; it is inductive.

Definition 11: Surface-syntactic actant

1. The subject and the objects of L are (prototypical) SSyntAs of L [= the BASE of induction].
2. An LU \mathcal{P} that syntactically depends on L is a SSyntA of L in \mathcal{U} if and only if \mathcal{P} possesses a sufficient number of common SSynt-properties with a SSyntA [= the STEP of induction].

The subject is defined as the most privileged sentence element: it is characterized by a set of properties, which are exclusive to it. The DirO is the second most privileged sentence element: it possesses another set of properties, some of which are shared by the subject, but by no other sentence elements; and so forth. Subject and objects (which are sometimes quite infelicitously called *grammatical relations/functions* or *terms*) are characterized by very high syntactic activeness: they impose agreement on the main verb, occupy privileged linear position, admit of relativization and/or of raising, control reflexivization and gerunds, etc. These SSyntAs constitute the base of induction. Other sentence elements can be compared to them according to previously established properties: a sentence

element sharing a sufficient number of properties with a SSyntA is also a SSyntA.

NB: As is always the case with distinctions in natural language, the borderline between SSyntAs and SSynt-circumstantials can be blurred. Thus, in some languages, a prototypical circumstantial, for example, a locative expression, can be promoted by passivization to become the subject. Cf. in Kalagan (a Philippino language; Hagège 1983: 113) and in English; the promoted circumstantial is boxed:

- (51) a. *k +um +amang aku sa tubig na lata*
 draw ACT draw I.SUBJ OBL water INSTR can
ati hardin
 LOC garden
 'I draw water in the garden with a can'.
 vs.
kamang+an ku ya hardin sa tubig
 draw LOC.PASS I.INSTR SUBJ garden OBL water
na lata
 INSTR can
 lit. 'The garden was-drawn-in water by-me with a can'.
 b. *These cars are designed in such a way that people can sleep in them.*~
These cars *are designed to be slept in.*

In some other languages (e.g. Bantu), a circumstantial can impose agreement on the main verb:

- (52) Kirundi (the controller circumstantial is boxed)
A+ba+ntu ba+ha +bi +zi+her+a mu ru+go
 II man II XIX VIII X give IND in XIX pen
i+ bi+ gori i+n+ka
 VIII corn X cow
 'Men give corn to cows in [the] pen' [the verb form shows agreement with the locative circumstantial by a class prefix ha-; roman numerals indicate nominal classes]

It is possible that in such a language, a locative phrase should be considered a "free" SSyntA (see Section 6 below), rather than a circumstantial.

Be it as it may, I think that the existence of difficult cases does not undermine my main postulate: sentence elements are strictly partitioned into SSyntAs and SSynt-circumstantials.¹⁴

Having characterized SemA, DSyntAs, and SSyntAs separately, I can now switch to correspondences between them.

6. Correspondence between actant slots of L

In the prototypical case, a SemA-slot(L) corresponds to a DSyntA-slot(L), which, in turn, corresponds to a SSyntA-slot(L). But in practice, it often happens that there is no one-to-one correspondence between these three types of actant slots. Thus, a SemA-slot(L) does not always correspond to a DSyntA-slot(L): see the remarks on “modifying parts of speech” Part I of this article, Subsections 3.2.3 and 3.7.1, Case 1; the inverse is also true: there can be a DSyntA-slot(L) that does not correspond to a SemA-slot(L) — Case 2. Moreover, a DSyntA-slot of L does not always correspond to a SSyntA-slot of L, either: it can correspond to a circumstantial or a modifier — Case 3. And inversely, there can be a SSyntA of L that does not correspond to a DSyntA-slot of L (and of course not to a SemA-slot(L) — Case 4. As a result, we obtain the following table, with one prototypical case and four cases¹⁵ of discrepancy between SemA-, DSyntA-, and SSyntA-slots of a lexical unit:

Table 1. *Correspondences between SemA-, DSyntA-, and SSyntA-slots of an LU*

		Cases of discrepancy			
		1	2	3	4
Sem-Actant	SemA	SemA	—	SemA	—
DSynt-Actant	DSyntA	—	DSyntA	DSyntA	—
SSynt-Actant	SSyntA	—	SSyntA	—	SSyntA

The absence of one-to-one correspondence between semantic and syntactic actants of L is studied in detail in Boguslavskij (1996). On the one hand, the book offers many interesting examples supplied with profound analyses. Thus, in the phrase *my most favorite painter* the meaning ‘I’ is a SemA of the meaning ‘most favorite’, while the syntactic link between MY and (MOST) FAVORITE is not obvious; in any event, it is not a Synt-actantial dependency. On the other hand, Boguslavskij introduces the notion of “*action sphere*” [= Rus. *sfera dejstvija*], or scope, of L, which generalizes the concept of Synt-actant: the *action sphere of L* is any fragment of the SSynt-structure whose meaning fills in the corresponding SemA-slot of L (Boguslavskij 1996: 43–44). Unfortunately, the complexity and length of the present paper prevents me from taking this promising concept into account.

6.1. A SemA of L does not correspond to a DSyntA of L

This situation can be illustrated with LUs that are “inherent modifiers.” As indicated in Part I of this article, Subsection 3.7.1, Case 1, the SemA-

slot 1 in the lexicographic description of an LU L of a “modifying” part of speech (the adjective, the adverb, the preposition, ...) does not have a corresponding DSyntA-slot 1, because the SemA 1 of such an LU is always — by definition — the Synt-governor of L.

6.2. A DSyntA of L does not correspond to a SemA of L

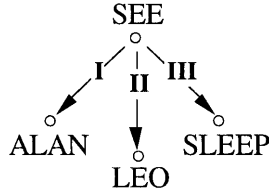
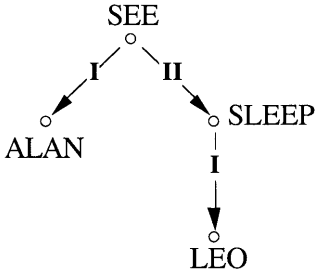
A DSyntA(L) does not correspond to a SemA(L), although it does to a SSyntA(L), in the following three subcases:

- Displaced DSynt-actants;
- Split DSynt-actants;
- DSynt-actants with support verbs.

All such DSyntAs(L) have the following important property: although they do not directly correspond to a SemA-slot(L), they correspond to a SemA-slot of a different LU that is semantically linked to L or correspond to a SemA-slot(L) indirectly. This feature distinguishes Case 2 from Case 4 — “free” SSyntAs, which correspond to no DSyntA and no SemA at all.

6.2.1. *Displaced DSynt-actants.* A DSyntA(L) can be the result of the application of a general syntactic rule, which turns a DSynt-actant of a DSynt-actant of L into L's own DSyntA — for instance, possessor raising, see Subsection 4.5 above. Such a DSyntA(L), which does not correspond to any SemA-slot(L), can be called a “displaced actant.” A displaced DSyntA(L) does not have a corresponding slot in the lexicographic entry for L; however, its presence and form are controlled by L — semantically, syntactically, or lexically. Thus, in the Russian examples in (49), we see the opposition between the IndirO N_{dat} in (49a) and the OblO $U + N_{\text{gen}}$ in (49b), which are distributed according to the type of the governing verb: roughly speaking, the displaced actant (shown in boldface) must be realized by an IndirO (= a noun in the dative) if the governing verb is transitive, and by an OblO (= a prepositional phrase with U ‘at/by’) if it is intransitive.

6.2.2. *Split DSynt-actants.* Consider the sentences *Alan saw that Leo was sleeping* and *Alan saw Leo sleep*. In both we have the verb [*to*] SEE, which has two SemAs: *X sees Y*. (For simplicity's sake, I do not mention here the third — restricted — SemA: ‘eyes’, see Part I, Subsection 3.2.3 of this article, as in *She sees it **with** her left eye only*.) However, in the DSyntS, the first SEE has two DSyntAs, while the second has three:



This is the phenomenon of “splitting” a Sem-actant. It closely corresponds to what Apresjan (1974: 153–155) called a “split valence:” one SemA-slot of L is implemented by two L’s DSyntAs, each of them picking up, so to speak, a part of the SemA, the latter being a situation with its participants. Thus, in the first sentence above, the DSyntA II denotes the whole situation that is seen: the fact together with the entity involved; in the second sentence, the DSyntA II denotes only the entity, and the DSyntA III only the fact. *Par abus de langage*, the DSyntAs resulting from a split of a SemA are called “split DSyntAs.” To describe split DSynt-actants in the lexical entry of SEE, an additional government pattern (GP; on GP, see below, Section 7) is used:

[to] SEE, GP 1

X = I	Y = II
N	that CLAUSE

[to] SEE, GP 2

X = I	Y = II	P(Y) = III
N	N	V _{inf}

The notation “P(Y)” in the heading of GP 2 means that the DSyntA III of SEE corresponds semantically to the predicate stated about the SemA Y of SEE — when the latter is only the entity, that is, a part of the situation.

Split DSyntAs can of course appear only when the corresponding SemA is instantiated by a fact, which has its own SemAs. Split DSyntAs(L) have their own DSyntA-slots, although these slots do not correspond to SemA-slots(L) in a direct way. This technique is used for all cases when one has to deal with split DSyntAs: *I see that the exam is approaching* ~ *I see the exam approaching* (and Accusativus cum Infinitivo constructions, like the famous Lat. *Caeterum puto Carthaginem delendam esse*, lit. ‘Besides I-believe Carthage to-be-destroyable to-be’), *I find that he is intelligent* ~ *I find him intelligent*, *I believe that he is in Singapore* ~ *I believe him to be in Singapore*, etc.

The case of *John kissed Mary on the left cheek* is different: [to] KISS ≡ ‘human X kisses living being Y on Y’s body part Z’ has three SemA-slots (Y and Z being related by a metonymic link), so that here

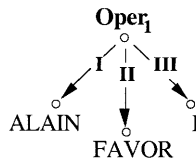
each DSyntA-slot corresponds to its own SemA-slot, and no split DSynt-actant appears.

NB: The adjective *split* in *split DSyntAs* does not have the same meaning as the adjective *split* in *split variables*, term introduced in Part I, Subsection 3.4.2.2 of this article ($Y = Y^1/Y^2$). I would like by all means to avoid such a polysemy in terminology, but I was unable to find a good term to replace *split* in one of its usages.

Interestingly, the splitting of a SemA has an inverse counterpart: the *fusion* of two SemAs, when one DSyntA of L corresponds to two of its SemAs. Here are two examples:

- In *John and Mary are kissing* the conjoined string *John and Mary* is the DSyntA I of the verb [*to*] KISS, but expresses its both SemAs: 'John ← kiss → Mary'.
- In *The authorities punished the thief of the car* the noun *thief* is the DSyntA II of the verb [*to*] PUNISH, which expresses two of its SemAs: 'punish somebody for theft'.

6.2.3. *DSynt-actants with support verbs.* Strictly speaking, support verbs (or, more generally, verbs that are elements of the value of a particular LF) do not have their own full-fledged definition: they do not have their own SemA-slots. Therefore, a DSyntA of a support verb V_{supp} does not correspond to a SemA-slot(V_{supp}), but to a SemA-slot(L). Thus, in *Alain did me a favor* the verb [*to*] DO is $\text{Oper}_1(\text{FAVOR})$, which has three DSyntAs:



The DSyntA I of this Oper_1 corresponds to SemA-slot 'X' of 'favor', the DSyntA II to the LU FAVOR itself, and the DSyntA III to the SemA-slot 'Y' of 'favor' ('X's favor to Y'). The verb [*to*] DO as such, that is, as an element of the value of $\text{Oper}_1(\text{FAVOR})$ appears only in the SSyntS, where there are no more DSyntAs. (For a discussion of the GPs in the lexicographic descriptions of lexico-functional support verbs, see Alonso Ramos 1998: Ch. 6, 2 and Alonso Ramos 2001.)

In some languages, collocations involving support verbs are more central and more complex than in English, French, German, or Russian. Thus, in Persian (Lazard 1994: 93–95), the role of a verb is played, most of the time, by a phrase "support verb V_{supp} + (semantically deverbal) noun S_0 ," with lesser or greater degree of phraseologization. Here are a

few such constructions — “ $V_{\text{supp}} + S_0$ ” collocations, currently known as “complex verbs” — that correspond to transitive verbs (“[N-rā]” stands for their DirO, -rā being a postposition that obligatorily marks a definite DirO):

‘[to] end [N]’	=	<i>tamam kardan</i>	[N-rā], lit. ‘ending	do [N]’
‘[to] begin [N]’	=	<i>āgāz kardan</i>	[N-rā], lit. ‘beginning	do [N]’
‘[to] light up [N]’	=	<i>āteš kardan</i>	[N-rā], lit. ‘fire	do [N]’
‘[to] beat [N]’	=	<i>kotāk zādan</i>	[N-rā], lit. ‘beating	hit [N]’
‘[to] show [N]’	=	<i>nešan dādan</i>	[N-rā], lit. ‘sign	give [N]’
‘[to] learn [N]’	=	<i>yād gereftan</i>	[N-rā], lit. ‘memory	take [N]’
‘[to] congratulate	=	<i>tābrik goftan</i>	[N-rā], lit. ‘congratulation say	[N]’

For instance: *Nowruz-rā be šomā tābrik miguyam*, lit. ‘New-Year [= DirO] on you congratulation I-say’ = ‘I wish you a Happy New Year’.

Within a construction of such a type, S_0 is a SSyntA of V_{supp} — namely, its quasi-DirO. The “real” DirO, that is, N-rā, corresponds to the DSyntA II of V_{supp} . What is the DSynt-role of S_0 ? I think that this S_0 is the DSyntA III of V_{supp} , so that the latter is the value of $\text{Labor}_{12}(S_0)$. We find in this construction quite an exotic diathesis of V_{supp} : its DSyntA III corresponds to the SSyntA quasi-DirO, but does not correspond to a SemA, because V_{supp} , being empty, does not have any.¹⁶

6.3. A DSyntA-slot of L does not correspond to a SSyntA-slot of L

A DSynt-actant of L can be expressed on the surface not by a SSyntA, but by a modifier, an attribute, a circumstantial, a part of a compound, or a conjunct of L. Cf.:

(53)	INVASION —II→	CENTRAL AMERICA	⇔	<i>Central American</i> ←modif—	<i>invasion</i>
	BEHAVE —II→	GOOD	⇔	<i>behave</i> —attrib→	<i>well</i>
	EXAMINATION —II→	PATIENT	⇔	<i>patient’s</i> ←possess—	<i>examination</i>
	SMELL —II→	GOOD	⇔	<i>[It] smells</i> —circumst→	<i>good</i>
	ACCESS —II→	INTERNET	⇔	<i>Internet</i> ←compos—	<i>access</i>
	TRY —II→	COME	⇔	<i>try</i> —coordin→	<i>and</i> —conjunct→
					<i>come</i>

A DSyntA that is not expressed by a SSyntA necessarily corresponds to a SemA; this follows from the definition of DSyntA (it is defined by its correspondence either to a SemA or to a SSyntA of L).

A clear example of a DSyntA that is not expressed by a SSyntA, but rather by a SSynt-circumstantial, is provided by location adverbials used with location verbs; cf. French examples (54) quoted by Lazard (1998: 68):

- (54) a. *Il habite à la campagne en Bourgogne dans une maison isolée*
 'He lives in the country in Burgundy in an isolated house'.
 b. *Je me rends en ville chez mes parents* 'I go to town to my parents'.

In (54a) and (54b), we see a group of quasi-conjunctively linked SSynt-circumstantials expressing one DSyntA (Lazard proposes for such circumstantials the term "adstants"). Thus, for (54a), the DSynt-subtree of Figure 2 depends on the verb HABITER '[to] live' in the DSyntS as the DSyntA II, and in the SSyntS the SSynt-image of this subtree appears as a locative circumstantial of the same verb:

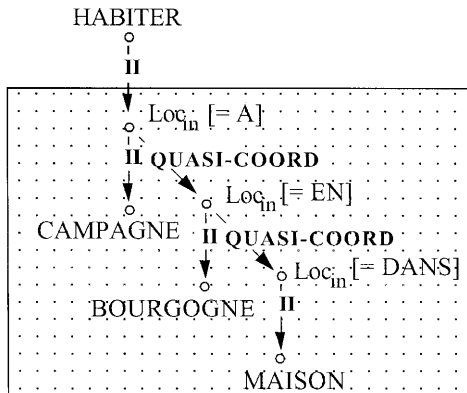


Figure 2. The partial DSyntS of sentence (54a)

NB: To represent such syntactic constructions (*à la campagne* → *en Bourgogne* → *dans une maison*) at the DSynt-level, a special DSyntRel — QUASI-COORDINATIVE — is needed, since the coordination of this type does not admit of a normal way of expression — for example, using the conjunction ET 'and'. See Section 4.1 above.

More examples of this discrepancy between DSyntA- and SSyntA-slots are found in Apresjan 1979 (Rus. *Kak ego zovut?*, lit. 'How do [they] call him?' = 'What's his name?', *On otlično vyšel na fotografii*, lit. 'He came out perfectly on the photo', *On tak velel*, lit. 'He ordered so', etc.) and Boguslavskij 1996: 27ff.

6.4. A SSyntA of L does not correspond to a DSyntA-slot of L

Four major types of SSyntAs(L) can be indicated that do not correspond to DSyntAs(L) and, as a consequence, do not correspond to the SemA-slots(L):

- Dummy surface-syntactic sentence elements, that is, empty subjects and DirOs (\approx “impersonal” pronouns);
- “Free” SSyntAs, in particular, “free datives,” which are not controlled by L’s active Sem-valence or by the active Sem-valence of L’s actants (these are particular types of IndirOs);
- Cognate actants;
- SSynt-actants within full phrasemes (= idiomatic expressions) controlled by L.

6.4.1. *Dummy subjects and dummy DirOs.* A language can require, at least in some constructions, the use of semantically empty elements, called impersonal pronouns, to fill the SSynt-role of subject and sometimes of DirO. Such is the “meteorological” IT (*It is raining*; with subject-to-object raising: *Did you hear it thundering?*) or the expletive IT (*It seems that Alan is crazy*; *This theory has it that the electron may have any spin*). Similar phenomena are known in many languages: for instance, Fr. *Il pleut* ‘It rains’, *Il a été passé trois lois importantes*, lit. ‘It has been passed three important laws’. In some languages (such as Spanish or Russian) this impersonal pronoun may be zero: Sp. \emptyset_{3SG} *llueve* ‘It rains’ or Rus. $\emptyset_{NEU.3SG}$ *svetaet* ‘It dawns’; in some others, an impersonal pronoun (non-zero or zero) appears with various forms of what is loosely known as impersonal passive: Germ. *Es wird getanzt*, lit. ‘It becomes danced’ = ‘People dance’; Sp. \emptyset_{3SG} *se vende autos nuevos*, lit. ‘It sells itself new cars [= DirO]’ = ‘New cars are sold [here]’; Ukr. $\emptyset_{NEU.3SG}$ *mnoju cju sumu bulo splaćeno*, lit. ‘It was paid by-me this sum [= DirO = ACC]’ = ‘I paid this sum’. (In our terms, these are different types of suppressives).

In all such cases, the dummy element is not reflected in the definition of L and does not participate in L’s diathesis. However, it is indicated in L’s GP — in a cell which has no name in the heading. Cf., for instance, the GP of the phraseme ‘IT DAWNS [upon X that Y]’ (as in *It dawned upon me that ...*):

‘IT DAWNS’

	X = I	Y = II
IT	1. <i>that</i> CLAUSE	1. <i>upon</i> N

(In the SSyntS, the THAT clause depends on [to] DAWN via the quasi-subjectival SSyntRel, and the UPON phrase is an OblO.)

The GP of the Russian verb TOŠNIT', lit. [to nauseate' = '[to] have nausea' (as in Ø_{NEU.3SG} *menja tošnit*, lit. '[It] nauseates me'), where the Experiencer is realized as a DirO in the accusative appears as follows:

TOŠNIT'

	X = II
Ø _{NEU.3SG}	1. N _{acc}

Thus, these dummy SSyntAs have their SSyntA-slots in the corresponding lexical entries, but they do not correspond to any Sem- or DSyntAs.

6.4.2. "Free datives". It is not quite clear at this point whether the existence of "free" SSyntAs, that is, SSyntAs not controlled by the LU's active Sem-valence, should be accepted. I am inclined to admit them, because — I think — they are not similar enough to SSynt-circumstantials. Among other things, word order rules for them (in corresponding languages) put these elements closer to SSyntAs than to SSynt-circumstantials. And even if only for methodological reasons, it is preferable to admit first more variegated types of elements and to see what techniques are needed to deal with them; this might throw additional light on the problem.

Here is a sufficiently clear example of what I think is a "free" SSyntA: Russian phrase ZA + Num + money N (*za 100 rubelej* 'for 100 roubles'), which means 'being paid Num N'. Practically, any action verb can take this dependent: *On napišet tebe adres za 5 rubelej* 'He'll write you the address for five roubles', *Obed dostavljaetsja za 5 rubelej* 'The dinner is delivered for five roubles', *On budet spat' dva časa za 5 rubelej* 'He will sleep two hours for five roubles', etc. There are of course many other phrases of this type. It is clear that they are not controlled by the active valency of the verb; but are they SSynt-actants or SSynt-circumstantials? I think they are SSyntAs, although a special study is needed to prove this.

The best-known sentence elements that can claim the status of "free" SSyntAs without being related to DSyntAs/SemAs are so-called "free datives." The three major types of free datives of which I am aware are the Beneficiary, the Concerned, and the *dativus ethicus* (see Abraham 1973; Leclère 1979; Herslund 1988; Belle and Langendonck 1996; Langendonck and Belle 1999). On semantic configurations expressed by free datives, see Wierzbicka (1986, 1988: 359–387).

Beneficiary. The sentence element referred to as Beneficiary is a kind of IndirO; here is an example (Somers 1987: 25):

(55) a. *The gamekeeper shot **the squire** a rabbit.*

The boldfaced Beneficiary is an IndirO that does not correspond to any Sem- or DSyntA-slot of [*to*] SHOOT. In the DSyntS, it has to be represented as a prepositional phrase with a fictitious preposition, for instance «FOR» (≈ ‘for the benefit of ...’, semantically different from “real” FOR ≈ ‘to be received by ...’); (fictitious lexical nodes are explained in Section 4.1); thus, at the DSynt-level, a Beneficiary is not an actant, but a circumstantial. Cf.:

(55) b. *The gamekeeper gave **the squire** a rabbit. ~*
*The gamekeeper gave a rabbit **to the squire**;*
but
*The gamekeeper shot **the squire** a rabbit. ~*
*The gamekeeper shot a rabbit ***to the squire**.*

A Beneficiary object can co-occur with a FOR-phrase, which demonstrates the difference of their meanings:

(55) c. *The gamekeeper shot **the squire** a rabbit **for his friend Leo**.*

The Beneficiary’s linear position and co-occurrence restrictions on its use qualify it as an IndirO: its SSynt-behavior is simply indistinguishable from that of the IndirO with [*to*] GIVE or [*to*] SEND. (Wechsler 1995: 84ff. argues in favor of the FOR-phrase being a SSynt-circumstantial. However, the DO SO test [cf. Section 5] treats this phrase as an actant: **John shot a rabbit for the squire, and Alain did so for his friend* [D. Beck]. If this is so, the FOR-phrase could be another type of “free” SSyntA.)

Concerned. The Concerned is a different kind of IndirO — with the meaning ‘X is affected by L’, which could be both positively or negatively:

(56) a. *Alain got **me** the spider out of the bath,*
 where *me* does not mean ‘for me’ = ‘so that I receive the spider’: it means that I am somehow concerned by the situation (for instance, it avoids me getting the spider out myself, which corresponds to another sense of FOR).

b. Rus. *U neě lampočka peregorela,*
 lit. ‘At her [a] bulb has-blown-out’,
 where *u neě* ‘at her’ means that she is affected by the blown-out bulb.

In the DSyntS, such an X must be introduced by the fictitious preposition «CONCERNING» (and is thus an ATTR).

Two more examples (French; Leclère 1979: 124–125):

- (57) a. *Paul a cassé ces trois verres à Marie*
 'Paul has broken these three glasses on Mary'.
 b. *Paul a fait une bronchite à sa mère*
 'Paul has caught a bronchitis on his mother'.

For an interesting discussion of the distinction between actantial and nonactantial [= "free"] datives, see Rooryck (1988).

Dativus ethicus. Finally, *dativus ethicus* is a personal pronoun (of 1st or 2nd person singular, that is, 'to me' or 'to you_{SG}'), carrying a very complex meaning: ≈ 'I/you_{SG} being emotionally implicated [in the fact]'.

- (58) a. Germ. *Liebe mir nur keinen Hippie* (Abraham 1973: 16),
 lit. 'Don't you ever love me a hippie!' = 'Don't you ever love
 a hippie on me!'
 b. Fr. *Paul te lui fabriquera une table (à Marie) en vingt minutes*
 (Leclère 1979: 134)
 'Paul could make her a table (for Mary) in twenty minutes,
 d'ya see!'
 c. Fr. *Paul te lui a donné une de ces gifles (à Marie) !* (Leclère
 1979: 143)
 'Paul has given her (to Mary) one of those slaps, d'ya see!'
 d. Fr. *Paul te m'a donné une de ces gifles !* (Leclère 1979: 144)
 'Paul has given me one of those slaps, d'ya see!'

Dativus ethicus has two important properties: 1) it can be only the 1st or 2nd person singular pronoun (no noun in the dative is possible in this role), and 2) it can co-occur with other IndirOs, while the latter cannot co-occur with each other. Therefore, in the SSyntS, this sentence element has to be described by a particular SSyntRel, for instance, *dat.etic.-objectival*. In the DSyntS, another fictitious preposition —«ETHIC.DAT»—is needed to represent it (so that, in the DSyntS, *dativus ethicus* is again an ATTR).

6.4.3. *Cognate actants*. Another type of a SSyntA(L) that corresponds to no DSyntA(L) and to no SemA-slot at all is a cognate actant (generally called *cognate object*; note, however, that this latter term covers more than our *cognate actant*):

- (59) a. *He laughed a hearty laugh.*
 b. *He smiled a wide smile.*
 c. *He sighed a deep sigh.*
 d. *He slept a good long sleep.*
 e. *He died a terrible death.*

From the viewpoint of its form, a cognate actant is a deverbal noun $S_0(V)$ that appears as a $SSyntA$, in this case — as a $DirO$ with the intransitive verb V which otherwise cannot have a $DirO$; most often, this $S_0(V)$ has the same radical as V . Usually, a cognate actant supports an adjectival modification that semantically bears on V , as in (59). Being a $DirO$, a cognate actant has to be treated as a $SSyntA$ of the corresponding verb. However, $[a]$ LAUGH in (59a) does not correspond to a $SemA$ -slot of $[to]$ LAUGH (nor of any other lexeme linked to LAUGH), and there is no reason to associate it to a $DSynt$ -actant. As a result, a cognate actant should not be foreseen in the GP of the verb $[to]$ LAUGH — although it might be necessary to specify the possibility of a cognate actant in the lexical entry of $[to]$ LAUGH; it can be done by an LF (Magn, Bon or else a nonstandard one). At the $DSynt$ -level, a cognate $SSyntA$ is represented as a modifier (as before, by the $DSyntRel$ ATTR):¹⁷

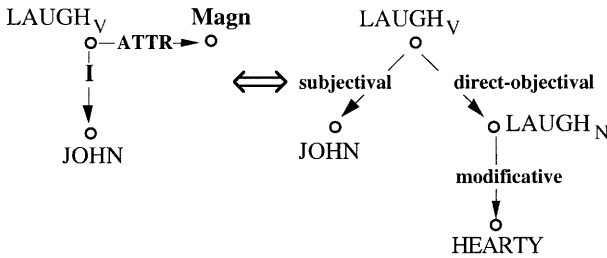


Figure 3. The $DSyntS$ and $SSyntS$ of the sentence John laughed a hearty laugh

6.4.4. *SSynt-actants within full phrasemes.* Consider the notorious full phraseme, or idiom, $[to]$ 「KICK THE BUCKET」 \approx «[to] die». It is an LU of English; in the $DSyntS$, it is represented by one node and has only one $DSyntA$: I, the designation of the person who dies. But in the $SSyntS$, it appears as KICK —direct-objectival→ [THE] BUCKET. As a result, we have a $DirO$ that does not correspond to any $DSyntA$ of this phraseme and, consequently, does not correspond to a $SemA$ -slot. That is exactly what happens with every full phraseme that includes “internal” $SSyntAs$.

Phraseological $SSynt$ -actants manifest an interesting particular case: a dummy pronoun. We find it, for example, in German idioms *Ich habe es eilig*, lit. ‘I have it urgent’ = ‘I am in a hurry’, *Er wird es in der Sprachwissenschaft weit bringen* ‘He will be very successful in linguistics’, etc., and in French idioms *la bailler belle* [à N], lit. ‘[to] give her [to N] beautiful’ = ‘[to] try to deceive [N]’, *se la couler douce*, lit. ‘[to] pass her to oneself sweet’ = ‘[to] have a life without complications’, etc.

7. Government pattern of L

As indicated above, the correlation between all three types of actants of L and their surface (= SSynt-/DMorph-) implementation¹⁸ is specified in the government pattern of L: GP(L).

In terms of its role, the GP of L corresponds to what is known as “subcategorization frame” in other linguistic approaches.¹⁹

A GP is written as a table of m columns and n rows, where m is the number of DSyntA-slots(L), and n , the maximal number of different SSynt-/DMorph-realizations possible for a DSynt-actant of L. In each column we have in the headline of the table the correspondence between SemA-slots and DSyntA-slots. This correspondence is called the *diathesis* of L. It can be of one of the following three types: 1) $X \Leftrightarrow \text{I}$, $Y \Leftrightarrow \text{III}$; 2) $X + Y \Leftrightarrow \text{I}$; 3) $\text{SemA}_1(Y) \Leftrightarrow \text{III}$.

The expressions of the form “ $X \Leftrightarrow \text{I}$,” “ $Y \Leftrightarrow \text{III}$,” etc. illustrate the prototypical correspondences. “ $X + Y \Leftrightarrow \text{I}$ ” means that the two SemA-slots taken together correspond to one DSyntA, as in *Alain [= X] and Helen [= Y] kissed passionately*, where the coordinated phrase *Alain and Helen* constitutes one DSyntA I of the reciprocal verb [to] KISS. “ $\text{SemA}_1(Y) \Leftrightarrow \text{III}$ ” means that the DSyntA III corresponds to the SemA-slot I of Y(L), not to a SemA-slot(L), as in Fr. *Alain [= X \Leftrightarrow I] baise la main [= Y \Leftrightarrow II] à la dame [= SemA₁(Y) \Leftrightarrow III]*, lit. ‘Alain kisses the hand to the lady’, where ‘lady’ is the DSyntA III of BAISER ‘[to] kiss’ and corresponds to the SemA-slot I of ‘hand’ (= the Owner of a body part).

Thus, a DSyntA-slot of L can correspond 1) to one SemA-slot(L), 2) to a union of two SemA-slots(L), and 3) to a SemA-slot of a SemA of L. A cell in the heading of a GP can also be empty, if the corresponding cell in the body of the table contains a semantically empty expression, that is, a dummy SSynt-element.

In the table proper, each cell manifests one of the three possibilities:

- The cell corresponds to a DSyntA_{*i*} of L (the standard case). In this case, either a) the cell contains the list of SSynt-elements that can realize the DSyntA_{*i*}, with a full specification of the DMorph-means of their surface implementation. For each element, we indicate the corresponding surface-syntactic relation. For instance:

—subj → N _{gen}	[subject in the genitive]
—prepos.obj → on + N	[prepositional object introduced by on, as in <i>depend on</i>]
—apposit.1 → N _{nom}	[non-agreeing apposition in the nominative]
—adverbial → ADV	[invariable adverbial]

NB: Recall that the expression of a DSyntA is not necessarily a SSyntA—it can be a modifier. At the same time, the cell *i* contains the indication of the obligatory character of the DSyntA_{*i*}: **oblig**. The absence of this indication means by default that the DSyntA_{*i*} is optional (except for the DSyntA **I**, which is in principle always obligatory).

or b) the cell is empty (technically, it is filled with a blank), which means that the DSyntA_{*i*}-slot cannot be expressed in utterance *U* (this slot is, so to speak, “dormant:” it can be expressed indirectly — via an LF, etc., see Part I, Section 3.2.3). The DSyntA_{*i*}-slot is “blocked,” which simply means that the corresponding SemA-slot is blocked.

- The cell does not correspond to a DSyntA_{*i*}-slot of L (the special case). This is possible only if one of the SSyntAs of L is a dummy: a dummy subject of the type IT in *It rains* or *It seems that John is sick*, or a dummy DirO of the type *The latest theory has it that this virus is not lethal* or Germ. *Er schafft es, die Arbeit zu beenden*, lit. ‘He manages it to finish the work’.

As an illustration, let me show a column of the GP for three English

verbs that have an IndirO:

[to] GIVE	[to] CONTRIBUTE	[to] ENVY
Z = III	Z = III	Z = III
1. —indir-obj→ to N 2. —indir-obj→ N	1. —indir-obj→ to N	1. —indir-obj→ N

For [to] GIVE, the GP allows both *He gives an apple to Mary* and *He gives Mary an apple*; for [to] CONTRIBUTE, only *He contributed \$100 to the committee* is possible < **He contributed the committee \$100* >, while the GP of [to] ENVY admits only *He envies Mary her wealth* < **He envies her wealth to Mary* >.

And now, the full GPs for the verbs [to] ACCUSE and [to] BLAME:

[to] ACCUSE		
X = I	Y = II	Z = III
1. —subj→ N	1. —dir-obj→ N	1. —obl-obj→ of N 2. —obl-obj→ of V _{ger}

John [= I] accused the minister [= II] of fraud [= III] <of not doing his duty [= III]>.

[to] BLAME, GP 1

X = I	Y = II	Z = III
1. —subj→ N	1. —dir-obj→ N	1. —obl-obj→ for N 2. —obl-obj→ for V _{ger}

*John [= I] blamed the minister [= II] for the deficit [= III]
 <for having forgotten his duty [= III]>.*

[to] BLAME, GP 2

X = I	Z = II	Y = III
1. —subj→ N	1. —dir-obj→ N	1. —obl-obj→ on N

John [= I] blamed the deficit [= II] on the minister [= III].

As we see, semantically close verbs may have different government patterns; on the other hand, one verb may have more than one GP.

The GP(L) is supplied with a list of constraints that specify the incompatibility/the inseparability of DSyntAs of L and indicate the conditions for that (C stands for “column,” that is, for a DSyntA-slot; a Roman numeral refers to the column, and an Arabic number indicates the cell, that is, a particular surface means of expression). For instance:

- Impossible: C_{II} + C_{III}
 [DSyntAs II and III can never be both expressed as direct dependents of L]
- Impossible: C_{II} without C_{III}
 [DSyntA II can never be expressed as a direct dependent of L without DSyntA III being also expressed]
- Impossible: C_{II.3} + C_{III.1}
 [DSyntA II cannot be implemented by means number 3 if the DSyntA III is implemented by means number 1, and vice versa]

For a detailed description of government pattern, see Apresjan (1974: 133ff.).

Here I can let the curtain fall on the little drama of actants. At least a few things are now clearer than they have been before, although many problems remain not only unanswered, but not even properly stated. *Faciant meliora potentes!*

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Notes

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1. The number six has nothing mysterious in it; it was empirically established (Apresjan 1974: 137), based on such cases as Rus. KOMANDIROVAT' '[to] send on a (business) mission': X[i] sends Y[ii] from Z[iii] to W[iv] to do P[v] for the period T[vi]. In some languages, the number of possible DSyntAs can be lower; but it is not impossible that some other languages have verbs with a higher number of DSyntAs. This, however, will not affect the proposed system of DSyntAs: all respective rules are stated for a DSyntA *i*, with *i* = I, II, ... For this reason, the DSyntAs must be numbered rather than given "lexical" names; below we will see other cases for which the numbering of actants is crucial.
 2. A very small percentage of collocations must be described by the government pattern.
 3. I have to say "more or less [sufficient]" because there still is a serious amount of collocations covered by nonstandard LFs (while the paraphrasing rules are written in terms of standard LFs) and by government patterns, as indicated above. These formulas, or rules, being universal does not mean that all languages necessarily use the corresponding constructions/transformations, but only that IF a language has necessary lexical units, THEN these formulas are valid.
 4. I do not consider here still another logical possibility: postulating another sense of RASSERDIT'SJA, that is, something like '[to] say angrily'. The paper Iordanskaja and Mel'cuk (1981) analyzes in detail the unacceptable consequences of such a solution; let me mention here just two: 1) this would require adding the corresponding sense to all Russian verbal lexemes denoting emotions and brusque actions, such as 'become amazed', 'start crying', 'stand up', 'spit', etc. — that is, to thousands of verbs; 2) there will be a formal problem with the "inherent" DSyntAs of the verbs involved, because a new DSyntA has to be added — the direct speech expression.
 5. Dummy syntactic elements do not interfere with this principle: as just stated, they do not appear on the DSynt-level and therefore are not counted. Thus, consider the Spanish idiom *diñársela a N*, lit. '[to] give-itself-IT to N' = '[to] swindle N', while *DIÑAR* = '[to] give' [coll.]. In the SSyntS, LA (= 3sg feminine pronoun in the accusative) is the DirO of *DIÑAR*, but this is only a dummy DirO: it does not appear at all in the DSyntS, where the DSyntA II of *DIÑÁRSELA* is the phrase 'a N': *DIÑÁRSELA* —II→ *a N*. — In an actual DSyntS actantial "gaps" are of course possible, because of the nonexpression of some DSyntA-slots: *John [= I] rented his apartment [= II] for a year [= v]*.
 6. *Verbs and verblike expressions without the DSyntA-slot I*
Several verbs and verblike expressions have no DSyntA-slot I (but some still can have DSyntA-slot II). I will quote five types of such verbs.
L has no DSyntA-slots at all
 1. Meteorological verbs: *It is raining* or Fr. *Il fait beau*, lit. 'It does beautiful' = 'The weather is fine'. The DSyntSs of the above sentences are then as follows:

RAIN_{(V)pres, ind, progr} ◦, 「FAIRE BEAU」_{(V)ind, pres} ◦

[the symbols «◦» represent here and below nodes in the DSyntS; raised semi-brackets enclose idioms]

In other words, in the DSyntS, these verbs do not have actants.

L has DSyntA-slot II, but no DSyntA-slot I

2. Some monoactantial verbs of sensations and feelings: Rus. TOŠNIT', lit. '[to] nauseate N'; Lat. PUDERE, lit. '[to] shame N'; Fr. FALLOIR, lit. '[to] need $V_{inf}/N^?$ '; or Germ. FRIEREN, lit. '[to] freeze N'. Their DSyntS is as follows:

TOŠNIT'(V)_{ind, pres} ◦—II→◦ L(Y) [*Menja_{ACC} tošnit* 'I have nausea']
 PUDERE(V)_{ind, pres} ◦—II→◦ L(Y) [*Pudet me_{ACC}* 'I am ashamed'], *taedet me_{ACC}* 'I am disgusted', *piget me_{ACC}* 'I am bored', *poenitet me_{ACC}* N_{gen} 'I repent N']
 FALLOIR(V)_{ind, pres} ◦—II→◦ L(Y) [*Il faut travailler*, lit. 'It needs to work', *Il faut des livres*, lit. 'It needs some books']
 FRIEREN(V)_{ind, pres} ◦—II→◦ L(Y) [*Es friert mich_{ACC}*, lit. 'It freezes me' = 'I am cold']

This situation, which is rather exotic in Indo-European, is very typical for numerous languages that have static verbs governing the name of the experiencer as a DirO.

3. The idioms that contain their own syntactic subject, for instance:

The cat's got Y's tongue ⇔
 「THE CAT HAS GOT TONGUE」◦—II→◦ L(Y)
 Fr. *Que le diable emporte Y!* ⇔
 「QUE LE DIABLE EMPORTE」◦—II→◦ L(Y)
 lit. 'Let the devil take Y!'
 Fr. *La moutarde monte au nez à Y* ⇔
 「LA MOUTARDE MONTE AU NEZ」◦—II→◦ L(Y)
 lit. 'The mustard goes-up to-Y to the nose' = 'Y flares up'.
 Fr. *Le torchon brûle entre Y et Z* ⇔
 「LE TORCHON BRÛLE」◦—II→◦ L(Y) —COORD→◦ ET —II→◦ L(Z)
 lit. 'The rag is burning between Y and Z' = 'There is a running battle going on between Y and Z'.

At the DSynt-level, such an idiom is represented by one node, and no branch numbered I leaves it.

4. Interjections of the type *Down with Y!*: 「DOWN [with N]」◦—II→◦ L(Y).
 5. Any verb in the form of subjectless suppressive (in a language where this voice exists):

Fr. *Il se vend des Y*, with the DSyntS VENDRE_[subj-suppl]_{ind, pres} ◦—II→◦ L(Y).

These examples show that one can have diatheses in which the numbering of DSyntAs does not begin with I, but with II.

7. Cf. as well: "I wouldn't belong to any club that would have me for a member" [Groucho Marx]; thanks to D. Beck for this quotation.
 8. Encoding the name of elements as the DSyntA I of the name of the set is not without problems. Thus, Russian says:

- (i) a. *Oni obrušili na atakujuščix grad* —I→ *pul'*,
 lit. 'They dropped on the attackers a hail of bullets'.

In this sentence, OBRUŠIT' '[to] drop' is an Oper₁ of the noun GRAD 'hail' taken in this collocation (see Figure 4a below).

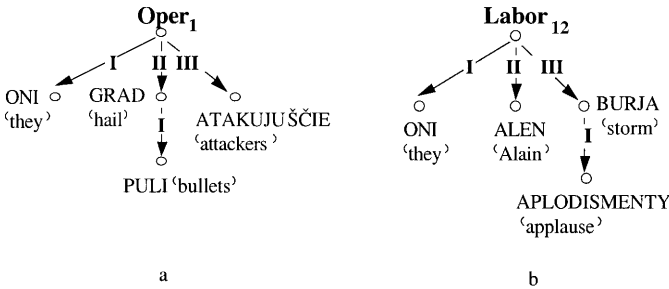


Figure 4. *DSynt-structures of sentences (i)*

Similarly, the sentence

- (i) b. *Oni vstretili Alena burej* —I→ *aplodimentov*,
lit. 'They met Alain with a storm of applause',

has the DSyntS where *VSTRETI'* '[to] meet [with N]' is a *Labor*₁₂ of *BURJA* 'storm' (again, in this collocation); see Figure 4b.

In both sentences, *ONI* is the DSyntA I of the support verb and, therefore, it must correspond to the DSyntA I of *GRAD* and *BURJA*. This is, however, impossible — since these nouns already have a different DSyntA I (= the name of the "elements" that constitute *GRAD/BURJA*). To solve the contradiction, we have to postulate that with nouns of the type *GRAD/BURJA* a support verb has as its DSyntA I not the DSyntA I of its keyword (as in the standard case) but the DSyntA I of the DSyntA I of its keyword. More research and reflection are needed to make this description fully convincing.

9. The concepts of actant incompatibility and inseparability were introduced in Iordanskaja (1961).
10. Strangely enough, Tesnière himself, who had introduced the distinction, drew the line between actants and circumstantials in a wrong way (Tesnière 1959: 127–129), treating as circumstantials, for instance, any phrase introduced by the preposition *DE*: *dépendre de N* '[to] depend on N', *changer de N* '[to] change one's N', etc.
11. Herslund (1988: 31ff.) rightly indicates the reason for the *DO SO* test to be relatively successful: it directly corresponds to the defining property of actants, namely — to their representing obligatory participants of the *SIT(L)*. Based on this feature, Herslund proposes an additional test of his own: replace the element *X* that depends on the *MV* with a general negation (*nobody, nothing*); if this entails the negation of the *MV* (and of the denoted fact itself), *X* is an actant; otherwise *X* is a circumstantial. Thus, *He spoke to nobody* entails that *He did not speak at all*; *to+N* is an actant of *[to] SPEAK*. But *He sang to nobody* does not entail *He did not sing at all*: he could sing alone; *to+N* is a circumstantial of *[to] SING*. However, this test, as well as the "standard" *DO SO* test, is not free of drawbacks. It does not distinguish between actants and location/time circumstantials, since they are logically always obligatory: *He never sang* and *He sang nowhere* both entail *He did not sing at all*. Also, the test does not work for optional actants or for "free" actants, see 6.4.2.
12. Even in English the test does not always produce clear-cut results. For instance, D. Beck, when asked whether he can say

- (i) *John cut the board with a knife, and David did so with a saw,*

answered (a bit enigmatically): "I can write it (I can't say it). My father concurs as well, though I am a tad uncomfortable with it for some reason."

13. Thus, in French, a "genitive" complement of a DirO (i.e. a "DE+N" phrase depending on a DirO) can be cliticized by EN, while a "genitive" complement of a subject cannot:

- (i) *J'aime la forme de ce fruit* 'I love the form of this fruit'. ~
J'en aime la forme 'I love its form'.
 vs.
La forme de ce fruit me plaît, lit. 'The form of this fruit pleases me'. ~
**La forme m'en plaît* 'Its form pleases me'.
- (ii) *J'ai vu la moitié de ces gens* 'I have seen half of these people'. ~
J'en ai vu la moitié 'I have seen half of them'.
 vs.
La moitié de ces gens vient, lit. 'Half of these people is coming'. ~
**La moitié en vient* 'Half of them are coming'.

14. The main fallacy concerning circumstantials: one hears fairly often that there is no clear borderline between actants and circumstantials, because in principle circumstantials are restricted in the co-occurrence with their governors roughly in the same way as actants are. Typical examples include pairs of sentences like the following ones:

- (i) Rus. *On bežal s knjigov v rukax* 'He was running with a book in his hands'.
 vs.
**On mstil s knjigov v rukax* 'He was avenging himself with a book in his hands'.
- (ii) Rus. *On medlenno podnimalsja* 'He was going up slowly'.
 vs.
**On medlenno spal* 'He was sleeping slowly'.
- (iii) Rus. *On s trudom podnjaj čemodan* 'He lifted the suitcase with difficulty'.
 vs.
**On s trudom podymet čemodan* 'He will lift the suitcase with difficulty'.

However, all such examples are irrelevant to our topic: they concern impossible combinations of meanings, not those of lexical units. Such semantic configurations as *'sleep slowly' should be banned at the level of the starting Sem-structure, so that the linguistic model as such does not need to be able to detect or to eliminate them. Cf. Note 8 in Part I of this article.

15. Logically, three types of elements — SemAs, DSyntAs, and SSyntAs — admit eight combinations (since each of the types can be present or absent, we have $2^3 = 8$). However, one combination is trivial (no actants at all) and two are impossible according to our definitions: *[SemA — SSyntA], i.e. a SemA and a SSyntA are impossible without a corresponding DSyntA, and *[- DSyntA —] (just a DSyntA, without the corresponding SemA and SSyntA, is impossible). Thus, our schema covers all five possible cases of correspondence between SemAs, DSyntAs, and SSyntAs of an LU L.
16. Persian has several other types of "complex verbs." First, a "complex verb" may contain a noun that is not a deverbal noun S_0 , but the name of a body part or of an artifact (e.g. *dast zadan* '[to] hit hand' = '[to] touch' or *rang zadan* '[to] hit paint_N' = '[to] paint'); in these "complex verbs" the auxiliary verb is not an empty ("light") support verb, but a semantically full accomplishment verb — the LF Real_i or Labreal_j.

Second, the syntactic relations inside a "complex verb" may be different from those we have presented. Thus, both (i) and (ii) are possible:

- (i) *Omid divār+rā rang zad* ‘Omid painted [the] wall’
= lit. ‘Omid paint-hit the wall’,

where DIVĀR ‘wall’ is the DirO, and RANG ‘paint_N’ is a quasi-DirO of ZADAN ‘[to] hit’; ZADAN is here a value of Labreal₁₃(RANG), so that at the DSynt-level we have
DIVĀR ←II— Labreal₁₃(RANG) —III→ RANG.

- (ii) *Omid in rang+rā be divār zad* ‘Omid painted [the] wall with this paint’
(lit. ‘Omid hit this paint on-the-wall’),

where DIVĀR ‘wall’ is an ObLO with the preposition BE ≈ ‘on’, and RANG ‘paint_N’ is the DirO; in this case, ZADAN is a value of Real₁(RANG), and at the DSynt-level, we have
DIVĀR ←III— Real₁(RANG) —II→ (RANG).

(For a detailed analysis of “complex verbs” in Persian, see Samvelian 2001.)

17. The notion of cognate object calls for two remarks.

1) A cognate object is not necessarily a SSynt-actant. Thus, in French and Russian, cognate objects are rather circumstantials: Fr. *Il a ri d’un gros rire*, lit. ‘He laughed with a big laugh’, *Il est mort d’une mort terrible*, lit. ‘He died with a terrible death’, Rus. *On rassmejsja gromkim smexom* [= INSTR], lit. ‘He laughed with a loud laugh’, *On umer užasnoj smert’ju* [= INSTR], lit. ‘He died with a terrible death’. Arabic has a regular syntactic construction, known as *mašdar muṭlaq* ‘absolute masdar’: to express a circumstantial of manner with a verb, Arabic uses a deverbal noun of this verb (= *mašdar*) with an adjective — a typical cognate object, putting it in the accusative, the form most Arabic circumstantials have; the result is something like *Ḍaraba+nī ḍarb+an šadīd+an* ‘[He] beat-me [with] a strong BEATING’ or *Dafaṣa+nī dafṣat+an kabīrat+an* ‘[He] pushed-me [with] a big PUSH’.

2) Even in English one has an alternative way to describe the sentences in (59). We can say that the verbs are values of the LF Oper₁ of the nouns LAUGH, SMILE, SLEEP, etc.; as such, these verbs will be transitive and will admit DirOs legitimately as their actants. However, the problem of the correspondence “SemAs ~ DSyntAs” remains, because support verbs do not have SemAs in the strict sense, see 6.2.3.

18. The SSynt-/DMorph-implementations of SSyntAs include:

In the SSyntS

- governed prepositions and conjunctions ([to] *depend on* N, [to] *quarrel over* N, [to] *ask whether* N, . . .);
- some derivatememes (action nominal, relational adjective, . . .);
- some grammemes (infinitive, gerund, adverbial, . . .).

In the DMorphS

- case of nouns;
- mood and tense of finite verbs;
- gender, number and case of adjectives;
- forms of clauses (negative, interrogative, . . .).

19. Thus, for instance, Wechsler (1995: 2) says: “The lexical entry specifies which argument slots are to be filled by (the interpretation of) which complements.” For a detailed description of subcategorization in head-driven phrase structure grammar, see Sag and Pollard (1989).

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