Towards a Modified Notation of Support Verbs
(Considerations on German material)

Robert Zangenfeind

CIS / Institute of Slavistic Philology – Ludwig-Maximilians-Universität
Oettingenstraße 67, 80538 München, Germany
robert.zangenfeind@slav.fak12.uni-muenchen.de

Abstract

The paraphrasing system of MTT makes use of lexical and syntactic rules, of which some of the latter are optional when paraphrasing support verb constructions. For a formal description of the conditions, whether or not an optional syntactic rule has to be applied for a certain paraphrase, it is necessary to have information available about the distribution of actants between the predicative noun and the support verb. To provide this information in a systematic way, we propose a modified notation of support verbs in particular government patterns or in terms of Oper$_{ij}$, instead of the traditional notation of Oper$_i$. The discussion is based on German material.

Keywords

German, paraphrase, paraphrasing system, lexical rule (LR), syntactic rule (SR), semantically full verb (FV), support verb (SV), support verb construction (SVC), predicative noun, Oper, syntactic actant, semantic actant, dependency, deep syntactic structure (DSyntS), surface syntactic structure (SSyntS), government pattern (GP), extended notation.

1 The problem with optional syntactic rules in the paraphrasing system of MTT

The paraphrasing system of MTT (cf. Mel’čuk, 1974, 149–176, Mel’čuk et al., 1992, 31–58, cf. also Apresjan, 1974, 316–345) describes a great variety of possibilities to paraphrase phrases in natural languages at a deep syntactic level. Most of the lexical rules (LRs) which give a formal description how a lexeme is paraphrased by another lexeme (or two or more other lexemes respectively) have to be accompanied by one or more syntactic rules (SRs) which have to be applied in addition to the LR to get the correct deep syntactic structure (DSyntS) of the paraphrased expression. Some of the SRs are optional (given in brackets), but there are no strict conditions given that specify whether or not an optional SR has to be used for a certain paraphrase. This only concerns LRs where support verb constructions (SVCs) are paraphrased by semantically full verbs (FVs) or by different SVCs. These SVCs are described by different kinds of support verbs (SVs), Oper$_i$, Func$_i$ and Labor$_{ij}$, in combination with predicative nouns.
The conditions whether to apply a SR or not, depend on the distribution of the various (semantic) actants of the situation described by the predicative noun in the SVC: the actants are either syntactically dependent on the noun or on the SV. Until now there is no systematic information within MTT about this distribution. According to the MTT framework, Oper, and Func explicitly describe the dependency of only one actant of the situation, e.g. Oper\(_1\)(apologies) = offer [\(\sim\)] (Mel’čuk et al., 1992, 33) without systematic regard to whether there are more actants in the given situation and, if so, what kind of dependency exists between those actants and the SVC. With Labor\(_{ij(k)}\) the situation is somewhat different: here, the connection of two or three actants with the SV is described. We will concentrate on SVCs with Oper\(_1\) here.

The problem of distributing actants between SV and noun of course always arises when the DSyntS of a SVC has to be constructed: when analysing a given text with a SVC this problem has to be solved during the transition from the surface syntactic structure (SSyntS) – where the distribution may be different – to the DSyntS. When synthesizing a text from a given meaning the problem has to be solved during the process of paraphrasing the DSyntS which contains a FV (because during the transition from the semantic structure, i.e. the meaning, to the DSyntS only FVs but no SVCs are synthesized directly). In this paper we will only consider the direction of synthesis, because the paraphrasing system very clearly shows the problem.\(^1\) Some examples to illustrate the problem:

The LR 18 in (Mel’čuk et al., 1992, 39), C\(_{0(V)}\Leftrightarrow\) S\(_0(C_0)\Leftrightarrow\) II– Oper\(_1\)(S\(_0(C_0)\)), is accompanied by two SRs: 1, (12),\(^2\) which means that SR 1 is obligatory and SR 12 is optional, i.e. has to be applied in some cases but not in some other cases. So, let us see what happens when the German phrase (1a) with a FV is paraphrased into the SVC (1b) using LR 18 and the information from the dictionary about S\(_0\)(beistehen [assist]\(^3\)) = Beistand [assistance] and Oper\(_1\)(Beistand) = leisten [perform]:

\[(1a)\] Karl stand ihr bei. [Karl assisted her.]

\[(1b)\] Karl leistete ihr Beistand. [Karl performed (‘provided’) her assistance.]

First of all the DSyntS (1c) of the phrase (1a) has to be built:

\[(1c)\] KARL ← I– BEISTEHEN –II→ SIE

Applying SR 1 (and syntactic meta rule 2, cf. Mel’čuk et al., 1992, 45f.) leads to DSyntS (1d):

\[(1d)\] KARL ← I– Oper\(_1\) –II→ BEISTAND –II→ SIE

---

\(^1\) The question what happens with the distribution of actants in SVCs during the transition from the DSyntS to the SSyntS will also not be dealt here, for which cf. e.g. (Reuther, 1989), where the problem of “raising” actants from a noun to the SV is discussed; cf. also (Alonso Ramos, 1998).

\(^2\) SR 1 describes the fission of one deep syntactic node (i.e. a FV) into two nodes (i.e. the SV and the noun of a SVC); SR 12 describes the transfer of a branch from one node to another; cf. (Mel’čuk et al., 1992, 46, 48) and the use of these SRs in example (1c, d, e). The arrow on SR 12, which indicates that the rule has to be applied from right to left, is missing in (Mel’čuk et al., 1992, 39) and has been added here by the author.

\(^3\) In square brackets we want to give a literal translation of German expressions.
Towards a Modified Notation of Support Verbs

The DSyntS (1d) is not a correct representation of phrase (1b) because the pronoun \textit{sie} [she] (in its dative form \textit{ih}r [her]) cannot depend on the predicative noun \textit{Beistand}. Only after applying SR 12 to this structure, we get the DSyntS (1e) which represents the phrase (1b):

\[(1e)\quad \text{KARL} \leftarrow \text{Oper}_1 \rightarrow \text{III} \rightarrow \text{SIE}
\]

\[\text{II} \quad \downarrow \quad \text{BEISTAND}\]

This is the deep syntactic representation of the fact, that the 2nd actant of the situation \textit{Beistand}, i.e. \textit{sie} in the phrase (1b) depends on the SV \textit{leisten} as its deep syntactic actant III as a noun in the dative case\(^4\) – something that is not obvious from the notation \textit{Oper}_1(\textit{Beistand}) = \textit{leisten}, a notation which only says that the 1st actant of the situation \textit{Beistand}, i.e. \textit{Karl} is connected with the SV \textit{leisten} as its deep syntactic actant I and the situation itself is connected with the SV as its deep syntactic actant II.

The lexeme \textit{leisten} that serves as SV \textit{Oper}_1 for \textit{Beistand} is also a value of \textit{Oper}_1 of the noun \textit{Beitrag} [contribution] (= \textit{S}_0(\textit{beitragen} [contribute])), so that (2a) can be paraphrased into (2b) with the aid of LR 18:

\[(2a)\quad \text{Charlotte trug zum Gelingen [des Festes] bei. [Charlotte contributed to the success.]}\]

\[(2b)\quad \text{Charlotte leistete einen Beitrag zum Gelingen [des Festes]. [Charlotte performed ('made') a contribution to the success.]}\]

The DSyntS of (2a) (without the complement in square brackets which is not important for our considerations) is (2c):

\[(2c)\quad \text{CHARLOTTE} \leftarrow \text{I-- BEITRAGEN --II} \rightarrow \text{GELINGEN}\]

Applying SR 1 leads to the DSyntS (2d):

\[(2d)\quad \text{CHARLOTTE} \leftarrow \text{I-- Oper}_1 --\text{II} \rightarrow \text{BEITRAG --II} \rightarrow \text{GELINGEN}\]

This DSyntS (2d) is the correct deep syntactic representation for phrase (2b), so that SR \(\text{SR}^{12}\) may not be applied in this paraphrase, in contrast to example (1). That means, that even with identical values of \textit{Oper}_1 (for different situations) in one case SR \(\text{SR}^{12}\) has to be applied whereas in another it may not be applied!

Let us take a look at a further example, using LR 18 and the information from the dictionary \textit{S}_0(\textit{sich widersetzen} [resist]) = \textit{Widerstand} [resistance] and \textit{Oper}_1(\textit{Widerstand}) = \textit{entgegen-}

\[\text{setzen} [oppose]:\]

\[(3a)\quad \text{Die Partisanen widersetzten sich den Faschisten. [The guerrillas resisted the fascists.]}\]

\(^4\) For a better differentiation between semantic actants of a situation and syntactic actants of a SV or a noun, we will use Arabic figures in the notation of semantic actants and Roman figures for syntactic actants, e.g. “1st actant” etc. for semantic actants and “actant I” etc. for syntactic actants.
Robert Zangenfeind

(3b) *Die Partisanen setzten den Faschisten Widerstand entgegen.* [The guerrillas opposed ('offered') the fascists resistance.]

The DSyntS of (3a) is the following:

\[(3c) \quad \text{PARTISANEN} \leftarrow \text{I} - \text{SICH WIDERSETZEN} - \text{II} \rightarrow \text{FASCHISTEN}\]

Applying SR 1 (and syntactic meta rule 2) leads to the DSyntS (3d):

\[(3d) \quad \text{PARTISANEN} \leftarrow \text{I} - \text{Oper}_1 - \text{II} \rightarrow \text{WIDERSTAND} - \text{II} \rightarrow \text{FASCHISTEN}\]

Now again, only after applying SR 12 to this structure, we get the final DSyntS (3e) which represents the phrase (3b):

\[(3e) \quad \text{PARTISANEN} \leftarrow \text{I} - \text{Oper}_1 - \text{III} \rightarrow \text{FASCHISTEN} \quad \downarrow \quad \text{WIDERSTAND}\]

Again, both actants of the situation are dependent on the SV: the 1\textsuperscript{st} actant (*die Partisanen*) as grammatical subject, i.e. a noun in the nominative case (as always with Oper\textsubscript{1}), the 2\textsuperscript{nd} actant (*die Faschisten*) as a noun in the dative case (*den Faschisten*).

However, there is another value of Oper\textsubscript{1}(*Widerstand*), namely *leisten* [perform], so that we can note Oper\textsubscript{1}(*Widerstand*) = *entgegensetzen*, *leisten*. This leads us to the alternative paraphrase (3f):

\[(3f) \quad \text{Die Partisanen leisteten Widerstand gegen die Faschisten.} \quad [\text{The guerrillas performed ('offered') resistance against the fascists.}]\]

The correct DSyntS for this phrase is given in (3d), because in a SVC with the SV *leisten* the 2\textsuperscript{nd} actant of *Widerstand* can be connected with *Widerstand* as it is known from the government pattern (GP) of the isolated noun, namely as a noun in the accusative case via the preposition *gegen* [against] (D2.1: *gegen* + N\textsubscript{acc}). So, the formal act of paraphrasing (3a) into (3f) with LR 18 only needs SR 1 whereas SR 12 is not necessary.

Another possibility to connect the 2\textsuperscript{nd} actant of *Widerstand* with the SVC in combination with *leisten* however is the one we already know from the connection of this actant with the SV *entgegensetzen*: as a noun in the dative case, cf. DSyntS (3e) and phrase (3g):

\[(3g) \quad \text{Die Partisanen leisteten den Faschisten Widerstand.} \quad [\text{The guerrillas performed ('offered') the fascists resistance.}]\]

So, here we have an astonishing example, where a SVC with a certain SV, namely *leisten*, has two different possibilities to connect the 2\textsuperscript{nd} actant – either with the SV (*leisteten den Faschisten* [performed ('offered') the fascists]) or via preposition with the noun (*Widerstand gegen die Faschisten* [resistance against the fascists.]). This, of course, cannot be foreseen from the notation Oper\textsubscript{1}(*Widerstand*) = *leisten*!

From these examples we can observe the following facts:
Towards a Modified Notation of Support Verbs

1. Whether an actant of a predicative noun in a SVC is connected directly with the noun or via the SV cannot be foreseen from the notation of Oper\textsubscript{i} – except the connection of the \textit{i\textsuperscript{th}} actant which is connected via the SV by definition of Oper\textsubscript{i} as grammatical subject of a phrase.

2. It is not always the case that in a SVC with a noun, which can be connected with a certain actant in an isolated situation (according to its GP, cf. e.g. \textit{Widerstand: D2.1: gegen + N\textsubscript{acc}}), this kind of connection must also be used in the SVC. In some cases, on the contrary, this is impossible, cf. \textit{*Die Partisanen setzten Widerstand gegen die Faschisten entgegen} [The guerrillas opposed (‘offered’) resistance against the fascists] (which would be represented by DSyntS given in (3d)).

3. On the other hand it is not always the case that in a SVC with a SV, which can be connected with a certain actant in a SVC (e.g. \textit{leisten + N\textsubscript{dat}} in combination with \textit{Widerstand}), this kind of connection necessarily must be used in the SVC, cf. the different use in (3f) \textit{Die Partisanen leisteten Widerstand gegen die Faschisten}.

4. For the construction of DSyntSs of SVCs – which are needed e.g. for paraphrases – it is necessary to know whether an actant of a predicative noun in a SVC is connected directly with the noun or via the SV.

To make this information available, it would be useful to have a notation which allows to explicitly state the possibilities of connecting actants with SVCs. There are some methods imaginable for such a notation.

2 Two proposals for modified notations of support verbs

2.1 Government patterns for support verbs

One way to explicitly describe the different kinds of connecting actants with a SVC is the notation in a particular GP for every SV\textsuperscript{5} in the dictionary entry of the predicative noun to which it belongs. In the dictionary entry of \textit{Widerstand [resistance]} there could be e.g. the GP for \textit{leisten} [perform (‘offer’)] as its Oper\textsubscript{1} in the form of (4).\textsuperscript{6}

The (deep syntactic) actant I of this SV is the 1\textsuperscript{st} actant of the situation \textit{Widerstand}. Since this is the definition of the SV Oper\textsubscript{1}, it could be omitted in the GP as well. It is shown here just for the purpose of completeness.

The actant II of Oper\textsubscript{1} (again by definition) is the situation \textit{Widerstand} itself. In the GP we get the information that this lexeme is in the accusative case – which is the case with most Oper\textsubscript{1}, but not always; cf. the SVC \textit{in Fehde liegen} [lie (‘be’) at feud] where the situation \textit{Fehde} [feud] is connected with the SV Oper\textsubscript{1}(\textit{Fehde} = \textit{liegen} [lie] via preposition \textit{in} and must be used in the dative case.

\textsuperscript{5} (Reuther, 1996, 201f.) also proposes GPs for SVs, cf. below.

\textsuperscript{6} A similar GP for the SV \textit{leisten} is described for a more general use by (Reuther, 2000, 85), cf. below. Tillmann Reuther kindly let me have the script of this unpublished PhD thesis for the final version of this paper.
Now, the most interesting part of the GP, the third column, shows that there are two possibilities how the 2\textsuperscript{nd} actant of the situation can be connected with the SVC *Widerstand leisten*: 1. as syntactic actant III of Oper\textsubscript{1} as a noun in the dative case; or 2. it is not connected with the SV (indicated by the dash) but with the situation as described in the GP of the isolated noun *Widerstand* (which describes the connection *Widerstand gegen* N\textsubscript{acc} [resistance against N\textsubscript{acc}]).

In the same dictionary entry we would find the GP for the second value of Oper\textsubscript{1}(*Widerstand*), i.e. *entgegensetzen* [oppose (‘offer’)]:

| (4) leisten (Oper\textsubscript{1}) |
|---|---|---|
| I [subject = 1\textsuperscript{st} actant of the sit.] | II [situation] | III [counter agent = 2\textsuperscript{nd} actant of the sit.] |
| N\text{nom} | *Widerstand*\textsubscript{acc} | 1. N\text{dat} |
|  |  | 2. – (cf. GP of *Widerstand*) |

Here, in the third column we only find one possibility of connecting the 2\textsuperscript{nd} actant of the situation with the SVC, namely the connection of this actant with the SV as a noun in the dative case.

The two values of Oper\textsubscript{1}(*Widerstand*) show some different properties concerning the 2\textsuperscript{nd} actant of the situation: with *entgegensetzen* the 2\textsuperscript{nd} actant of the situation is obligatory, i.e. must be realized in the phrase (cf. *Die Partisanen setzten Widerstand entgegen* [The guerrillas opposed (‘offered’) resistance.]), which is noted in the GP of *entgegensetzen*, whereas with *leisten* the 2\textsuperscript{nd} actant of the situation can be omitted (cf. *Die Partisanen leisteten Widerstand* [The guerrillas performed (‘offered’) resistance]).

GPs for SVs are also proposed by (Reuther, 1996 and 2000). He, however, suggests to use these GPs in separate dictionary entries for SVs.\textsuperscript{7} This means that GPs for SVs would not be found in the dictionary entry of the keyword to which the SV belongs – there we would find a reference to the dictionary entry of the SV, where the GP is not shown for the SV in combination with a certain keyword but for the SV in combination with any keyword. For SVs which have two different kinds of connecting actants, like e.g. *leisten*, this would have to be taken into consideration by giving two GPs for SV *leisten*:

---

\textsuperscript{7} On the discussion of dictionary entries for SVs cf. also (Reuther, 1994), (Mel’čuk, 1996, 79) and (Alonso Ramos, 1998, 150–167).
Towards a Modified Notation of Support Verbs

(4a) *leisten* [Oper$_1$] Mod 1

<table>
<thead>
<tr>
<th>I</th>
<th>II</th>
<th>III</th>
</tr>
</thead>
<tbody>
<tr>
<td>[subject = 1$^{\text{st}}$ actant of the sit.]</td>
<td>[situation]</td>
<td>[counter agent = 2$^{\text{nd}}$ actant of the sit.]</td>
</tr>
<tr>
<td>$N_{\text{nom}}$</td>
<td>$N_{\text{acc}}$</td>
<td>$N_{\text{dat}}$</td>
</tr>
</tbody>
</table>

*leisten* [Oper$_1$] Mod 2

<table>
<thead>
<tr>
<th>I</th>
<th>II</th>
</tr>
</thead>
<tbody>
<tr>
<td>[subject = 1$^{\text{st}}$ actant of the situation]</td>
<td>[situation]</td>
</tr>
<tr>
<td>$N_{\text{nom}}$</td>
<td>$N_{\text{acc}}$</td>
</tr>
</tbody>
</table>

In the dictionary entry of the keyword *Beistand* [assistance] and similar ones there should be a reference to the GP of *leisten* [Oper$_1$] Mod 1 to make clear that the 2$^{\text{nd}}$ actant of this situation can only be connected via the SV and not with the noun, the entry of *Beitrag* [contribution] and similar ones should refer to Mod 2 to make clear that the 2$^{\text{nd}}$ actant of this situation can only be connected with the noun and not via the SV and *Widerstand* [resistance] should refer to Mod 1 and Mod 2 as well.

### 2.2 Extended notation of support verbs

Another approach to the explicit description of the different ways of how to connect actants with a SVC is an extended notation of every SV. This approach simply uses the extension of the index of the SV, so that instead of Oper$_i$ we use Oper$_{ij}$ or Oper$_{ijk}$ etc.$^8$ In the dictionary entry of *Widerstand* this could look like in (6):

(6) \begin{align*}
\text{Oper}_{12}(\text{Widerstand}) &= N_{\text{dat}} [\text{obligatory}] [\sim_{\text{acc}}] \text{entgegensetzen, } N_{\text{dat}} [\sim_{\text{acc}}] \text{leisten; } \\
\text{Oper}_{i}(\text{Widerstand}) &= [\sim_{\text{acc}}] \text{leisten P2:GP}
\end{align*}

This new notation of Oper$_{ij}$ in the first line of (6) indicates that two actants of the situation (the $i^{\text{th}}$ and the $j^{\text{th}}$) can be connected with the SVC via the SV$^9$: in our example $i$ equals 1 (standing for the 1$^{\text{st}}$ actant of the situation) and $j$ equals 2 (standing for the 2$^{\text{nd}}$ actant of the

---

$^8$ Some similar proposals have already been made: (Apresjan, 2001, 35) and (Reuther, 2000, 87f.) suggest to radically revise the concept of the index of SVs, cf. below. (Alonso Ramos, 2007) proposes an extended notation of Oper very similar to ours which is based on Spanish material. The French dictionary DiCouèbe makes use of an extended notation of SVs to describe the surface syntactic possibilities of connecting actants with a SVC, cf. e.g. (Polguère, 2006).

$^9$ This notation of Oper$_{ij}$ is meant in the first place as a kind of hint for the reader. It does not indicate, however, that here we have a SV different from Oper$_i$ in principle. The essential information about the distribution of actants is found on the right hand side of the equation in (6) which could be given also in a notation with Oper$_i$ like e.g. Oper$_i(\text{Widerstand}) = P2:N_{\text{dat}} [\sim_{\text{acc}}] \text{entgegensetzen}$. So, it is not about how the information is given, the point is just that the information must be given, which can be done in a convenient way with the proposed notation.
situation). This means that the 1st actant of the situation is the syntactic actant I of the SV (i.e. the grammatical subject of the phrase – just like in the traditional notation of Oper₁), the situation itself is the syntactic actant II of the SV (i.e. the first complement in the phrase – according to the general definition of Oper) and the 2nd actant of the situation is a further syntactic actant of the SV, namely actant III (i.e. the second complement in the phrase) and it must be obligatorily realized, namely as a noun in the dative case with the SV entgegensetzen, and can also be (but not necessarily has to be) realized as a noun in the dative case with the SV leisten.

The notation of Operᵢ in the second line of (6) looks similar to the traditional notation in MTT. However, with only one figure in its index, it provides the explicit information here, that only one actant (the ᵢᵗʰ) is connected with the SVC via the SV; here, ᵰ equals 1, standing for the 1st actant of the situation, which is connected via the SV leisten. The 2nd actant (P2) of the situation Widerstand is not connected via the SV, but can be connected with the predicative noun. This connection can be realized according to the GP of the isolated noun (shown by “P2:GP”), so that it is not necessary to specify in the notation of the SV how this actant (via which preposition) is connected, because this information can be found in the GP of the noun (Widerstand gegen Nₐcc [resistance against Nₐcc]).

The predicative noun Versprechen [promise] has three actants (who – what – whom). The extended notation of its SV geben [give] is given in (7):

(7) Oper₁₃(Versprechen) = Nₐcc [das/ein/seiⁿ¹₀ ~ₐcc] geben P2:GP

Here again two actants of the situation can be connected with the SVC via the SV: in this example ᵰ equals 1 (standing for the 1st actant of the situation) and ᵶ equals 3 (standing for the 3rd actant of the situation). This means that the 1st actant of the situation is the syntactic actant I of the SV and the 3rd actant of the situation is the syntactic actant III of the SV, which is realized as a noun in the dative case. The 2nd actant of the situation Versprechen is not connected via the SV, but can be connected with the noun according to the GP of the isolated noun (which is Versprechen zu + inf / Versprechen, dass + subord. cl.).

The predicative noun Anweisung [instruction] has a similar structure of actants as Versprechen (who – what – whom). The possibilities of connecting actants to its SV geben [give] however are somewhat different:

(8) Oper₁₃(Anweisung) = Nₐcc [eine/die ~ₐcc] geben P2:GP;
    Oper₁(Anweisung) = [eine/die ~ₐcc] P₃:GP geben P2:GP

The first line of (8) can be read analogous to (7). The second line describes the fact, that the 3rd actant of Anweisung can also be connected with the noun in the SVC according to the GP of the isolated noun (which is Anweisung an Nₐcc [instruction to Nₐcc] like in the phrase Sie gab eine entsprechende Anweisung an ihre Mitarbeiter [She gave an appropriate instruction to her employees]).

¹⁰ Articles and possessive determiners referring to the 1st actant and doubling it are an interesting problem with SVCs but shall not be discussed here.
The need of an extended notation of SVs will mainly occur for the extension of the traditional Oper$_1$, as preliminary investigations make us expect, but it can be used of course also for the extension of e.g. Oper$_2$, cf. Oper$_{21}$(Interview) = N$_{dat}$ [ein $\sim$ acc] geben [give], or any other SV like Func$_{i}$ or Labor$_{ij}$ and for Lexical Functions of the Real type, cf. AntiReal$_{13}$(Geheimnis [secret]) = N$_{dat}$ [ein/das/sein $\sim$ acc] verraten [reveal] or AntiReal$_{21}$(Bitte [request]) = N$_{dat}$ [eine/die/seine $\sim$ acc] abschlagen [reject].

(Reuther, 2000, 87f.) suggests the possibility of introducing a new unified SV called SUPP. This SV could have an extended index representing the order of deep syntactic actants plus position of the keyword including the possibility of referring to two and more actants, similar to our proposal. So, e.g., our Oper$_{12}$ in Reuther’s notation would turn to SUPP$_{12}$ whereas Oper$_1$ would turn to SUPP$_{1}$, Func$_1$ to SUPP$_{S1}$ and Labor$_{12}$ to SUPP$_{12}$ etc. For technical applications, like machine translation, this could be a useful alternative, for human users of dictionaries, however, this might be rather abstract, so that there the traditional classification of Oper, Func and Labor should better be maintained. Nevertheless, the extension of the index, be it as Oper$_{12}$ or as SUPP$_{12}$ etc., can be an important feature for the correct construction of DSyntSs.

3 Conclusion

In order to construct correct DSyntSs of SVCs, it is necessary to have available the information about the distribution of actants between the predicative noun and the SV of the SVC. The traditional notation of Oper$_i$ (and Func$_i$) does not provide this information in a systematic way. With a modified notation of SVs this information can be made available. We proposed two kinds of such a modified notation: the notation of a particular GP for every SV, which, however, provides information in a somehow redundant and space consuming way. To reduce redundancy one could certainly omit the first column of the GP. We prefer an extended notation of every SV in terms of Oper$_{ij}$, because it provides all the information needed in a short and easily readable way: it explicitly describes whether an actant is syntactically dependent on the noun or on the SV and gives information about the details of the different kinds of connecting actants with a SV. When more than two actants are connected with the SV, the notation of the SV can be further extended without any problems to Oper$_{ijk}$, etc. These two kinds of modified notation can also be combined: the extended notation in terms of Oper$_{ij}$ could be used in the dictionary entry of the keyword to which the SV belongs (then with just the basic information like Oper$_{12}$(Beistand) = leisten), the GP with all explicit information could be noted in the dictionary entry of the SV, where instead of e.g. leisten [Oper$_1$] Mod 1, as in (4a), then the notation leisten [Oper$_{12}$] should be used.

Acknowledgements

I’d like to thank Sebastian Nagel and Franz Guenthner for reading this paper and for fruitful discussions on the topic, Tilmann Reuther and two anonymous reviewers for their comments on the first version of this paper, Igor’ A. Mel’čuk for an inspiring discussion about SVs at MTT 2007 and my teachers Jurij D. Apresjan and Leonid L. Iomdin for making me appreciate MTT.
Bibliography


