



# International Journal of Linguistics & Computing Research

Journal Homepage: <http://cphfs.in/research.php>



## Classification of Polar Verbs in Maithili

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### 1. INTRODUCTION

The problem of defining and identifying the functions of a set of verbs known as VECTOR verbs (or call them 'aspectual', 'auxiliary', 'operators' or 'explicators', if you may) has been tackled on both formal and functional grounds by many with varying degree of success. However, there are certain other aspects of the 'problems of COMPOUND VERB' which have not been paid much attention to. This paper deals with some such relatively less explored areas of compound verb studies with special reference to Maithili, an eastern NIA language. In particular, the following aspects have been looked into:

- i. What is the relative frequency of occurrence of vector verbs in Maithili?
- ii. Which verbs cannot function as polar verbs no matter what follows as the vector?
- iii. Can polar verbs be classified depending on which vectors they combine with, and on how many they can occur with?
- iv. Do polar verbs show at least some sort of (partial) complementary distribution as regards to their selection of particular vectors?

### 2.1. POLARS AND PROBABLE VECTORS SELECTED

To provide an answer to each of these questions, it was obligatory for one to look into polar + vector combinations in Maithili on a larger scale. For this purpose in all about 200 polar verbs and 19 more which could act as both polar and vector verbs were selected. This made the total number of verbs selected for polar slot 219. The 19 verbs that were selected as 'possible' vectors were those that in languages related to Maithili functioned as 'vectors'. One could easily eliminate non-vectors from this list if one found out (i) that no

verb could act as a polar member if a particular 'probable' vector was used, or (ii) that if one or more compound verb tests (which would include DO-insertion, Verb interrogation, Negation, By-the- time, Until, Phrasal verb, Apprehension, Compound verb reduction, Contradiction, and Incompletion [1] tests) failed a particular verb in its bid to 'vector'-ship. Probably, one should also suspect if a particular 'probable' vector turned out to be able to occur with all the polars. One could guess that in such a case, it was acting as a regular function marking aspect of some kind. The probable vectors that were taken in the present study included the following: *le* 'take', *de* 'give', *jaa* 'go', *mar* 'die', *uTh* 'get up', *bais* 'sit', *aa* 'come', *paR* 'fall', *rakh* 'keep', *cal* 'move', *paThaa* 'send', *dekh* 'see', *maar* 'kill', *nikal* 'come out', *dhar* 'place, hold', *nikaal* 'bring out', *aan* 'bring', *phe<sup>n</sup>k* 'throw' (cp. Bengali *phEl* 'throw'), and *khas* 'fall'. A list of 219 main verbs is given in the appendix along with gloss, and hence the meaning of these will not be repeated in the frequency and co-occurrence matrices in the text.

### 2.2. FREQUENCY OF OCCURRENCE OF 19 PROBABLE VECTORS

Having taken into account all possible permutations and combinations that would involve 219 polar and 19 'probable' vectors, and by separating the acceptable compound verb combinations from the unacceptable, a few things could be observed quite clearly. First, the list of polars contained at least two verbs which did not participate in such combinations at all, no matter which of the 'probable' vectors was selected, and these included *caah* 'want' and *aan* 'bring'. Hook (1978: 144) noted that in Hindi too there were some such verbs, and that they included *caah* 'want', *rakh* 'possess, have' and *kahlaa* 'be called'. In Maithili, *aan* – V combination, wherever possible, would give a verbal compound reading. Therefore, these two verbs could be excluded from the list of 219 for the purposes of calculation. Secondly, of the 217 verbs, *phe<sup>n</sup>k* and

*khas* could not occur with any polar verb. This would be clear from the table I which gives an account of the number of polars a particular probable vector can occur with:

Table 1: Frequency of occurrence of 19 'probable' vectors with 217 verbs used as polars

| Vectors            | Gloss     | Number of Occurrence | Percentage (%) |
|--------------------|-----------|----------------------|----------------|
| le                 | Take      | 128                  | 58.99          |
| de                 | Give      | 119                  | 54.84          |
| jaa                | Go        | 104                  | 47.93          |
| mar                | Die       | 66                   | 30.41          |
| uTh                | Get up    | 55                   | 25.34          |
| bais               | Sit       | 44                   | 20.28          |
| aa                 | Come      | 26                   | 11.98          |
| paR                | Fall      | 23                   | 10.69          |
| rakh               | Keep      | 18                   | 8.29           |
| cal                | Move      | 13                   | 5.99           |
| paThaa             | Send      | 11                   | 5.07           |
| dekh               | See       | 8                    | 3.69           |
| maar               | Kill      | 6                    | 2.76           |
| nikal              | Come out  | 5                    | 2.3            |
| dhar               | Hold      | 5                    | 2.3            |
| nikaal             | Bring out | 5                    | 2.3            |
| aan                | Bring     | 2                    | 0.92           |
| phe <sup>n</sup> k | Throw     | 0                    | 0.00           |
| khas               | Fall      | 0                    | 0.00           |

This table would thus clearly show that the last two 'probable' vectors must be dropped from the list of vectors, thereby making the total 17 instead of 19. Notice that the percentage calculation in Table 1 was done for each vector from a total of 217, and hence the last column would not add up to 100.00.

### 2.3. MONO-VECTOR POLAR VERBS IN MAITHILI

Table 1 also shows that the major vector verbs in Maithili are the following: *le*, *de*, *jaa*, *mar*, *uTh*, *bais*, *aa* and *paR*. These occur with more than 10% of the polar stems. Now if one looks for verbs which can occur with only 'one' of the vectors, and not with any other, one would find out that there are 38 such verbs in this list of 217. If these eight vectors are the commonest in Maithili one would expect that all the 38 'mono-vector' polar verbs (i.e., those that can select one and only one vector) should select vectors only from this list of eight. It turns out to be true when we find out that they occur with only the following:

Table 2: Mono-Vector Polar Verbs in Maithili (38, in total) and Their Vector-Selection:

| Vectors | Number | Polars                  |
|---------|--------|-------------------------|
| le      | 2      | aj <sup>2</sup> maa; 10 |

|     |    |                                                                                                                                                                                                                                                                        |
|-----|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| de  | 2  | ugar; jhaTak                                                                                                                                                                                                                                                           |
| mar | 2  | daug; phaa <sup>s</sup>                                                                                                                                                                                                                                                |
| paR | 1  | khas                                                                                                                                                                                                                                                                   |
| Jaa | 31 | a <sup>n</sup> Tak; a <sup>n</sup> T; aR; aa; upaj; utar; unaT/ulaT; kaT; Kasaa; ghaT; ghasak; chiTak; chuuT; juRaa; Jhul; TuuT; Duub; Dhak; Dhah; pac; paak; Pasar; paab; pha <sup>n</sup> s; phaT; phaaT; phuut; bac; Baraa; ba <sup>n</sup> T; ba <sup>n</sup> Taa. |

These two tables together would help us classify 17 vectors into three broad types depending on their frequency of occurrence: (I) Very frequent: *le*, *de*, *jaa*, *mar*, *paR*; (II) More or less frequent: *uTh*, *bais*, *aa*, *rakh*, *cal*, *paThaa*; (III) Infrequent vectors: *dekh*, *maar*, *nikal*, *dhar*, *nikaal* and *aan*. Towards the end of this paper, more evidences in support of the above frequency-based arrangement of vectors will be presented.

### 3.1. HOOK'S CLASSIFICATION OF POLAR VERBS IN HINDI AND LOGICAL POSSIBILITIES OF POLAR-TYPES IN MAITHILI

Coming to the question of classification of polar verbs on the basis of their co-occurrence (restrictions) with the vectors, one has to admit that the only serious attempt to classify polar verbs depending on this criterion that has come to light recently is that of Hook (1978) where he summarizes the findings of Hook (1974), and tries to go beyond the latter work. In this paper, Hook (1978: 144) suggested the following classification of polar verbs in Hindi:

Table 3: Classification of polar verbs in Hindi (cf. Hook, 1978):

| Classes          | Nature               | Vectors taken | Polars                                                                                                  |
|------------------|----------------------|---------------|---------------------------------------------------------------------------------------------------------|
| <i>Huwaadi</i>   | Intransitive         | jaa           | <i>ho</i> 'become', <i>bETH</i> 'sit', <i>uTH</i> 'get up'                                              |
| <i>ruwaadi</i>   | Intransitive         | de            | <i>ro</i> 'cry', <i>ha<sup>n</sup>s</i> 'laugh', <i>cal</i> 'set out', <i>muskaraa</i> 'smile', etc     |
| <i>samjhaadi</i> | Transitive           | jaa, le       | <i>samajh</i> 'understand', <i>jaan</i> 'find out', <i>maan</i> 'accept', admit                         |
| <i>Liyaadi</i>   | Transitive Reflexive | le            | <i>le</i> , 'take', <i>khaa</i> 'eat', <i>dekh</i> 'see', <i>chin</i> 'grab', etc.                      |
| <i>Diyaadi</i>   | Transitive           | de            | <i>de</i> 'give', <i>nikal</i> 'eject', <i>phe<sup>n</sup>k</i> 'throw', <i>choR</i> 'let go off', etc. |
| <i>Karaadi</i>   | Transitive           | le, de        | <i>kar</i> 'do', <i>karaa</i> 'have (someone) do', <i>rakh</i>                                          |

|         |             |      |                                                                                                               |
|---------|-------------|------|---------------------------------------------------------------------------------------------------------------|
|         |             |      | 'put, set' etc.                                                                                               |
| Jaadi   | Exceptional | --   | <i>jaa</i> 'go', <i>bhuul</i> (-jaa) 'forget', <i>le</i> (-aa) 'bring', <i>Bajaa</i> (-laa) 'carry out', etc. |
| Cahaadi | Stative     | None | <i>caah</i> 'want', <i>rakh</i> 'possess have', <i>kahlaa</i> 'be Called', etc.                               |

The author of this typology had himself noted that 'this classification' of the main verbs in Hindi is highly approximative if not actually misleading (Hook, 1978: 144)). In fact, it is both approximative and misleading. In the first place, it gives an impression that Hook somehow tries to force the PaaNinian classification of Sanskrit verbs into Hindi polar verbs. There is nothing objectionable if such a classification works in this case but the fact is that it does not. Since Hook has about 22 vectors in his study of Hindi compound verbs, one would expect him to use all of them in such a classification. But he concentrates only on three vectors: *jaa*, *de* and *le*. Secondly, *jaadi* seems to be a storehouse for exceptions and irregularities. Thirdly, if one takes up the logical possibilities of combination one will probably guess that the higher the number of probable vectors in a language, the greater is the number of (polar) verb-types. In that case an eight-way classification as in table 3 is bound to look very simplistic. [Hook in personal communication told me later that the purpose of this classification was not to be exhaustive and that was why out of 22 vectors only a few were used (of table 3).]

The last point needs a little more elaboration. Let us take up the case of Maithili where the probable vectors are 17 number. Now some polars are found to be occurring with only one of the 17 vectors and not with others. Such verbs were called mono-vector polar. It was also noted that they were 38 in number. Similarly, one would expect some polars to allow only two of the 17 vectors to occur with them. This would make logically possible 'Two-Vector Combinations' 136 in total. One can, thus, go on calculating the possibilities for mono-vector to those instances where some polars could hypothetically take all the 17 vectors. Such a computation would give rise to the following table:

Table 4: Logical possibilities of polar-types based on their occurrence with *n*-number of vectors (out of a total of 17) *r*-at a time:

| Types of Combinations | Maximum Possibilities |
|-----------------------|-----------------------|
| a. Mono-Vector        | 17                    |
| b. Two-Vector         | 136                   |
| c. Three-Vector       | 680                   |
| d. Four-Vector        | 2380                  |
| e. Five-Vector        | 6188                  |
| f. Six-Vector         | 12376                 |
| g. Seven-Vector       | 19448                 |
| h. Eight-Vector       | 24310                 |
| i. Nine-Vector        | 24310                 |

|                                  |        |
|----------------------------------|--------|
| j. Ten-Vector                    | 19448  |
| k. Eleven-Vector                 | 12376  |
| l. Twelve-Vector                 | 6188   |
| m. Thirteen-Vector               | 2380   |
| n. Fourteen-Vector               | 680    |
| o. Fifteen-Vector                | 136    |
| p. Sixteen-Vector                | 17     |
| q. Seventeen-Vector              | 1      |
| Total number of polar verb-types | 131071 |

To this total of 131071, one could probably add one more type which has verbs that do not take any vector. Now, this total would increase if a language has more than 17 vectors-a language such as Hindi. Therefore, this again goes on to prove that a classification such as in table 3 is only impressionistic.

### 3.2. GRAMMATICALLY POSSIBLE POLAR-TYPES IN MAITHILI

If one considered all the 217 verbs to find out as to how many of these logical possibilities as noted in table 4 were grammatically possible the result would be the following:

Table 5: Grammatically possible polar-types as compared to the logical possibilities in table 4:

| Types of combinations            | Grammatical Possibilities |
|----------------------------------|---------------------------|
| a. Mono-Vector                   | 5                         |
| b. Two-Vector                    | 15                        |
| c. Three-Vector                  | 20                        |
| d. Four-Vector                   | 18                        |
| e. Five-Vector                   | 11                        |
| f. Six-Vector                    | 7                         |
| g. Seven-Vector                  | 3                         |
| h. Eight-Vector                  | 4                         |
| i. Nine to Seventeen-Vector      | None                      |
| Total number of polar verb-types | 83                        |

Table 5 suggests that there are probably 83 types of verbs that 'can' function as polars in compound verb formation. One can, however, talk of eight broad 'generalized' classes of polars depending on how many vectors a particular polar can occur with. The mono-vector polars have already been listed earlier. In the following section all other combinations are explored into.

### 3.3. DISTRIBUTION OF POLARS IN DIFFERENT VECTOR-COMBINATIONS: A SUMMARY

As noted in table 5, there are about 15 two vector combinations and they include mainly four possible sub-types; (i) *le* and another vector (ii) *de* and another vector (iii) *jaa* and another vector, and (iv) *aa* and *rakh* forming a class by themselves. In all, there are 59 verbs that fall into two-vector category distributed over these 15 sub-types. Similarly, one can try to find out how many of these 217 verbs fall in one of these eight broad combination-types. This will give rise to the following table:

Table 6: Distribution of polars in different vector-combinations (out of a total of 217 polars)

| Vector Combinations | Number of polars opting for it | Percentage (%) |
|---------------------|--------------------------------|----------------|
| a. Mono-Vector      | 38                             | 17.51          |
| b. Two-Vector       | 59                             | 27.19          |
| c. Three-Vector     | 63                             | 29.03          |
| d. Four-Vector      | 27                             | 12.44          |
| e. Five-Vector      | 15                             | 6.91           |
| f. Six-Vector       | 8                              | 3.69           |
| g. Seven-Vector     | 3                              | 1.38           |
| h. Eight-Vector     | 4                              | 1.84           |

Now it would be natural to expect that in the 83 grammatically possible vector-combinations(cf. Table 5), more frequent vectors would participate comparatively in a greater number of instances than the less frequent or the infrequent ones. Thus, if one prepares a frequency-table on the basis of occurrence of 17 vectors one can test whether the general frequency table 1 in 1.2. is correct. In all 17 vectors are selected 317 times in the 83 vector-combinations. This gives rise to the following table:

Table 7: Frequency of occurrence of 17 vectors in 83 vector-combinations where they occur 317 Times:

| Vectors | Number of occurrence | Percentage (%) |
|---------|----------------------|----------------|
| le      | 50                   | 15.77          |
| le      | 50                   | 15.77          |
| jaa     | 39                   | 12.30          |
| mar     | 37                   | 11.67          |
| paR     | 14                   | 4.42           |
| uTh     | 28                   | 8.83           |
| bais    | 32                   | 10.09          |
| aa      | 12                   | 3.79           |
| rakh    | 14                   | 4.42           |
| cal     | 10                   | 3.15           |
| paThaa  | 7                    | 2.21           |
| dekh    | 6                    | 1.89           |
| maar    | 5                    | 1.58           |
| nikal   | 2                    | 0.63           |
| dhar    | 5                    | 1.58           |
| nikaal  | 4                    | 1.26           |
| aan     | 2                    | 0.63           |

A comparison of tables 1 and 7 will establish beyond doubt that the three-way Classification of vectors (into frequent, more or less frequent and infrequent) as in 1.3 stands out to be correct.

### 3.4. OCCURRENCE OF 17 VECTORS IN DIFFERENT COMBINATIONS

In this section the detailed frequency of occurrence of 17 vectors in Mono-Vector to Eight-Vector combinations will be looked into first. After this combinatory possibilities will be analysed in detail. The following table showing a detailed frequency is yet another proof in favour of frequency-based

arrangement of vectors talked about in the earlier section (cf. Tables 1 and 7):

Table 8: The detailed frequency-based table showing occurrence of 17 vectors in different Combinations (where the total number of vectors occurring in a particular combination-Type is indicated in parentheses) is given in Appendix.

It can be very clearly seen from the frequency Table 8 given in the appendix that there are more gaps in case of the vectors which have been rated low independently. More-over in this table the higher one goes, the greater is the percentage-wise frequency of occurrence.

### 3.5. DETAILED DISTRIBUTION OF 217 POLARS IN DIFFERENT VECTOR COMBINATIONS

Now one could probably go into the detailed distribution of 217 polars into different vector-combination types. This will lead one to a more generalized classification of these verbs than simply grouping them into 83 types. Leaving aside the 38 polars that can participate only in Mono-Vector combination, we will now look into the rest of the verbs. The following 59 verbs can participate in Two-Vector combinations of the following types:

Table 9: 59 polar verbs as distributed in 15 Two-Vector combinations:

|              |                                                                                                                                                                                                                                                                 |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| le & de:     | au <sup>n</sup> s; ukhaaR; oRhaa; kaaT; katar; kuuT; khaT; khurac; kheh; ghas <sup>n</sup> kaa; chap <sup>a</sup> waa; jiitaa; tyaag; thamh; thop; dhuus; pa;aT; pha <sup>n</sup> saa; bhaR <sup>a</sup> kaa; bhuuj; ochaa; Taar; Tiip; Thak; bacaa; rakh; maar |
| le & jaa:    | suut; uTh; bais                                                                                                                                                                                                                                                 |
| le & rakh:   | dekh                                                                                                                                                                                                                                                            |
| le & dhar    | oRh                                                                                                                                                                                                                                                             |
| de & jaa:    | it <sup>a</sup> raa                                                                                                                                                                                                                                             |
| de & mar:    | phe <sup>n</sup> k                                                                                                                                                                                                                                              |
| de & bais:   | paThaa                                                                                                                                                                                                                                                          |
| jaa & mar:   | aghaa; tiit                                                                                                                                                                                                                                                     |
| jaa & paR:   | cuuw; dhas; paR                                                                                                                                                                                                                                                 |
| jaa & uTh:   | gaR; jaag; jhalak; Dar; Dol; thaak; bhaRak                                                                                                                                                                                                                      |
| jaa & bais:  | a <sup>n</sup> eTh; dab                                                                                                                                                                                                                                         |
| jaa & aa:    | odar; kam; khul; khap; juR                                                                                                                                                                                                                                      |
| jaa & cal:   | baj                                                                                                                                                                                                                                                             |
| jaa & nikal: | chap; tar; phar                                                                                                                                                                                                                                                 |
| aa & rakh:   | gher                                                                                                                                                                                                                                                            |

The Three-Vector combinations have 20 possible triads which are selected by about 63 polars, and this fact could again be tabularly presented in the following manner:

Table 10: 63 polar verbs as distributed in 20 Three-Vector Combinations:

|               |                                                                                                         |
|---------------|---------------------------------------------------------------------------------------------------------|
| le, de & jaa: | utaar; unTaa; chiRiaa;jhar <sup>a</sup> kaa; saj; jhal <sup>a</sup> kaa; Tap; dabaa; baa <sup>n</sup> c |
|---------------|---------------------------------------------------------------------------------------------------------|

|                  |                                                                                                                                                      |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| le, de & mar:    | khodh; khol; gaaR; gan; guu <sup>n</sup> th; chant;<br>jap; jaa <sup>n</sup> t; joR; Taa <sup>n</sup> k; Thuus; Thel;<br>Thok; Dho; daab; duuh; naap |
| le, de & uTh:    | aa <sup>n</sup> c; kaan; Thaan; DaanT; dhop; baar                                                                                                    |
| le, de & bais    | gala; ghaTaa; choR; nikaal                                                                                                                           |
| le, de & rakh:   | paRh                                                                                                                                                 |
| le, de & paThaa: | mang <sup>a</sup> waa                                                                                                                                |
| le, de & dekh:   | ciikh; cobh                                                                                                                                          |
| le, de & maar:   | Daraa; anThaa                                                                                                                                        |
| le, de & dhar:   | pasaar                                                                                                                                               |
| le, de & nikal:  | taak                                                                                                                                                 |
| le, jaa & mar:   | mar                                                                                                                                                  |
| le, jaa & paR:   | leT                                                                                                                                                  |
| jaa, mar & paR:  | ruuk                                                                                                                                                 |
| jaa, mar & uTh:  | jharak; lag                                                                                                                                          |
| jaa, uTh & paR:  | cau <sup>n</sup> k; bar                                                                                                                              |
| jaa, uTh & bais: | akhaR                                                                                                                                                |
| jaa, uTh & aa:   | kas; jam; phur; saR                                                                                                                                  |
| jaa, paR & aa:   | ukhaR; gal; jhuk; nikal                                                                                                                              |
| uTh, bais & aa:  | ucar                                                                                                                                                 |
| uTh, mar & maar: | aunaa; jhapaT                                                                                                                                        |

In case of Four-Vector combinations we find as noted earlier only 27 polars to be occurring. The number of such accepted combinations is 18 as the following table would indicate:

Table 11: 27 polar verbs as distributed in 18 Four-Vector combinations:

|                           |                                           |
|---------------------------|-------------------------------------------|
| le, de, jaa & mar:        | uR                                        |
| le, de, jaa & bais:       | jiit                                      |
| le, de, mar & uTh:        | naac; niip; haa <sup>n</sup> k            |
| le, de, mar & bais:       | thakuc; pakaa; phaaR;<br>phoR; kiin; gijj |
| le, de, mar & dekh:       | gab; cabaa                                |
| le, de, mar & aan:        | gaRh                                      |
| le, de, uTh & paThaa:     | bajaa                                     |
| le, de, bais & dhar:      | odaar                                     |
| le, de, aa & nikaal:      | chaap                                     |
| le, jaa, mar & bais:      | giiR                                      |
| le, de, bais & maar:      | khii <sup>n</sup> c                       |
| de, mar, bais & rakh:     | khuaa                                     |
| de, bais, rakh & paThaa   | de                                        |
| de, jaa, mar & aa:        | aguaa                                     |
| jaa, mar uTh & aa:        | jar, khisiaa                              |
| jaa, mar, cal & nikal:    | bhaag                                     |
| jaa, bais, rakh & paThaa: | jaa                                       |

|                       |       |
|-----------------------|-------|
| mar, uTh, rakh & cal: | cikar |
|-----------------------|-------|

Five-Vector combinations number 11, and 15 out of 217 verbs opt for them as the following table would show:

Table 12: 15 polar verbs as distributed in 11 Five-Vector combinations:

|                               |                                                      |
|-------------------------------|------------------------------------------------------|
| Le, de, jaa, uTh & aa:        | bhar                                                 |
| Le, de, jaa, bais & dekh:     | khaa                                                 |
| Le, de, jaa, mar & bais:      | lep; luuT                                            |
| le, de, mar, uTh & bais:      | phaa <sup>n</sup> k; baa <sup>n</sup> T; noc;<br>rok |
| le, de, mar, uTh & rakh:      | Tok                                                  |
| le, de, mar, bais & rakh:     | jot                                                  |
| le, de, mar, bais, & pfThaa:  | maang                                                |
| le, de, bais, dekh & aan:     | kamaa                                                |
| le, de, uTh, bais & cal:      | toR                                                  |
| le, de, uTh, paThaa & nikaal: | aa <sup>n</sup> k                                    |
| le, de, mar, paR & cal:       | ha <sup>n</sup> T                                    |

There are fewer verbs, in all 8, that opt for Six-Vector combination, and they are as follows:

Table 13: 8 polar verbs as distributed in 7 Six-Vector combinations:

|                                 |                     |
|---------------------------------|---------------------|
| Le, de, jaa, uTh, bais & dekh:  | kO (~ kar)          |
| Le, de, mar, paR, uTh & bais:   | jhagaR; phaana      |
| Le, de, mar, paR, uTh & cal:    | ha <sup>n</sup> s   |
| Le, de, mar, paR, uTh & dekh:   | baaj                |
| Le, de, mar, bais, rakh & dhar: | dhO (~ dhar)        |
| Le, jaa, mar, paR, uTh & bais:  | rah                 |
| de, jaa, mar, uTh, bais & maar: | ag <sup>u</sup> taa |

Only 3 polars opt for Seven-Vector combinations such as follows:

Table 14: 3 polar verbs as distributed in 3 Seven-Vector combinations:

|                                       |      |
|---------------------------------------|------|
| Le, de, jaa, mar, uTh, bais & rakh:   | piib |
| Le, de, jaa, paR, bais, aa & rakh:    | jaan |
| jaa, mar, uTh, bais, aa, cal & nikal: | ug   |

Of the 217 polars that we looked into, only 4 selected 4-types of Eight-Vector combinations, and they include the following:

Table 15: 4 polar verbs as distributed in 4 Eight-Vector combinations:

|                                              |      |
|----------------------------------------------|------|
| Le, de, jaa, mar, paR, uTh, bais & cal:      | ruus |
| Le, de, jaa, mar, bais, rakh, cal & dhar:    | raT  |
| Le, de, mar, uTh, bais, rakh, paThaa & maar: | kah  |
| de, jaa, mar, paR, uTh, bais, aa & cal:      | cal  |

### 3.6. THE GENERALIZED VECTOR-COMBINATION-TYPES

In the preceding section the following questions were considered in detail: which vectors are selected in forming different combinations, and how many polars opt for a particular combination. By tracing the commonalities in the vector-combination patterns, 83 combination-types could be reduced into the following 35 generalized types:

Table 16: The generalized vector-combination-types:

|                               |                                                                                                                                                                                                                                                                                      |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| a. Mono-Vector Combinations:  | (1) With le, (2) With de, (3) With jaa, (4) With mar, (5) With paR;                                                                                                                                                                                                                  |
| b. Two-Vector Combinations:   | (6) With le and another vector, (7) With de and another vector, (8) With jaa and another vector, (9) With aa and rakh;                                                                                                                                                               |
| c. Three-Vector Combinations: | (10) With le, de and another vector, (11) With le, jaa and another vector, (12) With jaa, paR and another vector, (13) With jaa, uTh and another vector, (14) With uTh, bais and aa, (15) With uTh, mar and maar;                                                                    |
| d. Four-Vector Combinations:  | (16) With le, de, mar and another vector, (17) With le, de, bais and another vector, (18) With jaa, mar, and two other vectors, (19) With de, bais, rakh and another vector, (20) With le, de and two other vectors, (21) With jaa or mar and three 'more or less frequent' vectors; |
| e. Five-Vector Combinations:  | (22) le, de, jaa and two other vectors, (23) le, de, mar and two other vectors, (24) le, de, uTh and two other vectors, (25) le, de, bais and two other vectors, (26) Four 'very frequent' vectors with another vector;                                                              |
| f. Six-Vector Combinations:   | (27) With le, de, mar, paR, uTh and another vector, (28) With jaa, mar, uTh, bais and two other vectors, (29) With le, de, bais, and three other vectors;                                                                                                                            |
| g. Seven-Vector Combinations: | (30) With le, de, jaa, bais, rakh and two other vectors, (31) With jaa, mar, uTh, bais, aa, cal and nikal;                                                                                                                                                                           |

|                               |                           |
|-------------------------------|---------------------------|
| h. Eight-Vector Combinations: | (32)-(35) As in Table 15. |
|-------------------------------|---------------------------|

### 4. CONCLUSIONS

In the proceeding paragraphs the problem of selectional restrictions on the polar verbs in terms of taking or rejecting a particular vector was looked into from a new angle. First, 219 polar verbs were taken from Maithili lexicon to pair with 'probable' vectors and it turned out that only 17 verbs could function as true vector in this language. These vectors were classified into three broad types depending on their frequency of occurrence in general (table 1) and in different vector combinations (tables 7 & 8). Secondly a recent attempt at classification of polar verbs (Hook, 1978) was evaluated. Thirdly, it was shown that although logically there could be a large number of polar-types if the classification of polars depended on which vectors they took and how many they could occur with (table 4), grammatical possibilities were only 83 (table 5). Fourthly, it was suggested that there were only eight broad vector-combinations in Maithili starting from Mono-Vector to Eight-Vector types and that a polar verb in Maithili could not occur with more than eight vectors. Languages could differ in respect of this uppermost limit as is shown in another study of polar-vector combination of seven Indian languages (cf Singh, Subbarao and Bandyopadhyay, 1983). Fifthly, a very elaborate distribution of 217 Maithili polar verbs into 83 different vector-combinations was presented (tables 9 through 15), and finally, a list of generalized vector-combination-types was reached (table 16).

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**APPENDIX**

Note that abbreviations *I* and *Tr* stand for *Intransitive* and *Transitive*, respectively. Raised vowels are half-short phonetically and a raised n indicates nasalisation of the preceding vowel. The cerebral consonants have been transcribed as T, Th, D, Dh, N, R and Rh. Infinitive marker *-ab* has been dropped in each case. The order followed in this list is the same as in *devanaagari* writing system.

| <b>Verbs</b>             | <b>Gloss</b>     | <b>Verbs</b>               | <b>Gloss</b>  |
|--------------------------|------------------|----------------------------|---------------|
| akhaR (I)                | seem improper    | kiin (Tr)                  | buy           |
| aguaa (I)                | move forward     | kuut (Tr)                  | mince         |
| ag <sup>u</sup> taa (I)  | hasten           | khat (I)                   | work for      |
| aghaa (I)                | be content/bored | khap (I)                   | fit in        |
| aj <sup>a</sup> maa (Tr) | test             | khas (I)                   | fall          |
| a <sup>n</sup> T (I)     | be accommodated  | khaa (Tr)                  | eat           |
| a <sup>n</sup> Tak (I)   | get stuck        | khii <sup>n</sup> c (Tr)   | drag          |
| anThaa (Tr)              | avoid, slacken   | khisiaa (I)                | cold          |
| aR (I)                   | stiffen          | khuaa (Tr)                 | feed          |
| aa (I)                   | come             | khurac (Tr)                | scrape        |
| aa <sup>n</sup> k (Tr)   | draw, paint      | khul (I)                   | open up       |
| aa <sup>n</sup> c (Tr)   | light a stove    | kheh (Tr)                  | row           |
| aan (Tr)                 | bring            | khodh (Tr)                 | dig out       |
| It <sup>a</sup> raa (I)  | vulgarise        | khoh (Tr)                  | open          |
| ukhaR (I)                | be uprooted      | gan (Tr)                   | count         |
| ukhaaR                   | uproot           | gaR (I)                    | prick         |
| ug (I)                   | rise             | gaRh (tr)                  | concoct       |
| ugar (Tr)                | vomit, disclose  | gal (I)                    | melt          |
| ucar (I)                 | seem, caw        | galaa (Tr)                 | melt          |
| uTh (I)                  | get up           | gaa (b) (Tr)               | sing          |
| utar (I)                 | descend          | gaaR (Tr)                  | bury under    |
| utaar (Tr)               | bring down       | giiij (Tr)                 | mix, spoil    |
| unaT/ulaT (I)            | turn upside down | giiR (Tr)                  | swallow       |
| unTaa (Tr)               | reverse          | guu <sup>n</sup> th (Tr)   | wreathe       |
| upaj (I)                 | grow             | ghat (I)                   | be less       |
| uR (I)                   | fly              | ghaTaa (Tr)                | subtract      |
| a <sup>n</sup> eTh (I)   | be obstinate     | ghasak (I)                 | go off        |
| ochaa (Tr)               | prepare bed      | ghasakaa (Tr)              | dislodge      |
| odar (I)                 | Be shaven off    | gher (Tr)                  | encircle      |
| odaar (Tr)               | uproot           | cabaa (Tr)                 | chew          |
| oRh (Tr)                 | cover (oneself)  | cal (I)                    | proceed       |
| oRhaa (Tr)               | cover (someone)  | caah (Tr)                  | want          |
| aunaa (I)                | be vexed         | cikar (I)                  | shout         |
| a <sup>n</sup> us (Tr)   | smear            | ciikh (Tr)                 | taste         |
| kaT (I)                  | cut              | cuu (b)                    | leak out      |
| Katar (Tr)               | scissor up       | cobh (Tr)                  | lick          |
| kam (I)                  | be less          | ca <sup>n</sup> uk (I)     | shudder       |
| kamaa (Tr)               | earn             | chap (I)                   | printed       |
| kar (Tr)                 | do               | chap <sup>2</sup> waa (Tr) | get published |
| kas (Tr)                 | tighten          | Chaa <sup>n</sup> T (I)    | sort out      |
| kasaa (I)                | get tightened    | chaap (Tr)                 | publish       |
| kah (Tr)                 | say              | chiTak (I)                 | splash        |
| kaaT (Tr)                | cut              | chiRiaa (I/Tr)             | scatter       |
| kaan (I)                 | weep             | chuuT (I)                  | get past      |
| choR (Tr)                | leave            | toR (Tr)                   | break         |
| jap (Tr)                 | pray             | tyaag (Tr)                 | relinquish    |
| jam (I)                  | accrue, freeze   | thakuc (Tr)                | trample       |
| jar (I)                  | burn             | thamh (Tr)                 | support       |
| jaa (I)                  | go               | thaak (I)                  | be tired      |
| jaag (I)                 | be awake         | thop (Tr)                  | lay upon      |

|                            |                   |                           |                      |
|----------------------------|-------------------|---------------------------|----------------------|
| jaa <sup>n</sup> t (Tr)    | massage           | dab (I)                   | be under             |
| jaan (Tr)                  | know              | dabaa (I)                 | be under             |
| jiit (Tr)                  | win               | daab (Tr)                 | trample under        |
| jiitaa (Tr)                | help win          | duuh (Tr)                 | milk                 |
| juR (I)                    | be glued          | de (Tr)                   | give                 |
| juRaa (Tr)                 | be glued          | dekh (Tr)                 | see                  |
| jot (Tr)                   | yoke, plough      | daug (I)                  | run                  |
| joR (Tr)                   | join              | dhar (Tr)                 | keep, hold           |
| jhagaR (I)                 | quarrel           | dhas (I)                  | crumble down         |
| jhaTak (Tr)                | throw             | dhuus (Tr)                | scorn, beat          |
| jhapaT (I)                 | stir              | dhop (Tr)                 | child                |
| jharak (I)                 | be roasted        | naac (I)                  | dance                |
| jhar <sup>2</sup> kaa (Tr) | roast             | naap (Tr)                 | measure              |
| jhalak (I)                 | show up           | nikal (I)                 | come out             |
| jhal <sup>4</sup> kaa (Tr) | be shown up       | Nikaal (Tr)               | throughout           |
| Jhuk (I)                   | bend down         | niip (Tr)                 | annoint              |
| jhuul (I)                  | hang              | noc (Tr)                  | scratch              |
| Tap (Tr)                   | overtake          | pakaa (Tr)                | cook                 |
| Taa <sup>n</sup> k (Tr)    | stick, tack       | pac (I)                   | be digested          |
| Taar (Tr)                  | avoid             | paThaa (Tr)               | send                 |
| Tiip (Tr)                  | knead, wink       | paR (Tr)                  | fall                 |
| TuuT (I)                   | break             | paRh (Tr)                 | study                |
| Tok (Tr)                   | interrupt         | palaT (I)                 | turn back            |
| Thak (Tr)                  | cheat             | pasar (I)                 | spread               |
| Thaan (Tr)                 | be adamant        | pasaar (Tr)               | spread out           |
| Thuus (Tr)                 | fill, insert      | paak (I)                  | be cooked/ scorched  |
| Thel (Tr)                  | push              | paa(b) (Tr)               | get                  |
| Thok (Tr)                  | tap, beat         | paii(b) (Tr)              | drink                |
| Dar (I)                    | fear              | phaT (I)                  | be torn              |
| Daraa (Tr)                 | frighten          | phar (I)                  | bear fruit           |
| Daa <sup>n</sup> T (Tr)    | abuse             | pha <sup>n</sup> s (I)    | be trapped           |
| Duub (I)                   | drown             | pha <sup>n</sup> saa (Tr) | trap (indirectly)    |
| Dol (I)                    | swing             | phaa <sup>n</sup> k (Tr)  | throw eatables/ gulp |
| Dhak (I)                   | cover             | phaaT (I)                 | be torn              |
| Dhah (I)                   | crumble           | Phaan (Tr)                | jump                 |
| Dho (Tr)                   | carry             | phaaR (Tr)                | tear off             |
| tar (I)                    | cross             | phaa <sup>n</sup> s (Tr)  | trap (directly)      |
| taal (Tr)                  | look for          | phur (I)                  | strike in mind       |
| tiit (I)                   | get wet           | phuuT (I)                 | be broken            |
| phe <sup>n</sup> k (Tr)    | throw             | mar (I)                   | be killed            |
| Pho (Tr)                   | break, dissolve   | Maang (Tr)                | demand, ask for      |
| Bac (I)                    | be saved          | maar (Tr)                 | kill                 |
| bacaa (Tr)                 | save              | rakh/raakh (Tr)           | keep                 |
| baj (I)                    | ring              | raT (Tr)                  | memorize             |
| bajaa (Tr)                 | call              | rah (I)                   | remain, stay         |
| ba <sup>n</sup> T (I)      | be distributed    | ruuk (I)                  | stop                 |
| ba <sup>n</sup> Taa (I)    | be distributed    | ruus (I)                  | be piqued            |
| bar (I)                    | be lit            | rok (Tr)                  | stop                 |
| baraa (I)                  | be lit up         | laag (I)                  | touch at, feel       |
| baa <sup>n</sup> c (I)     | be saved          | luuT (Tr)                 | loot                 |
| baaj (Tr)                  | speak out         | le (Tr)                   | take                 |
| baa <sup>n</sup> T (Tr)    | distribute        | leT (I)                   | lie down             |
| baar (Tr)                  | light             | lep (Tr)                  | plaster              |
| bais (I)                   | sit               | Saj (I)                   | dress up             |
| bhar (Tr)                  | fill              | saR (I)                   | rot                  |
| bhaRak (I)                 | be unnerved       | suut (I)                  | sleep                |
| bhaag (I)                  | run away          | ha <sup>n</sup> T (I)     | withdraw             |
| bhuuj (Tr)                 | fry               | ha <sup>n</sup> s (I)     | laugh                |
| mangwaa (Tr)               | get someone bring | haa <sup>n</sup> k (Tr)   | shout                |

**Table 8:** The detailed frequency-based table showing occurrence of 17 vectors in different Combinations (where the total number of vectors occurring in a particular combination-Type is indicated in parentheses):

| VECTORS | MONO<br>(5) | TWO<br>(30) | THREE<br>(60) | FOUR<br>(72) | FIVE<br>(55) | SIX<br>(42) | SEVEN<br>(21) | EIGHT<br>(32) |
|---------|-------------|-------------|---------------|--------------|--------------|-------------|---------------|---------------|
| le      | 20.00       | 13.33       | 20.00         | 15.28        | 20.00        | 14.29       | 9.52          | 9.38          |
| de      | 20.00       | 13.33       | 16.66         | 18.06        | 18.18        | 14.29       | 9.52          | 12.50         |
| jaa     | 20.00       | 30.00       | 15.00         | 8.72         | 7.27         | 7.14        | 14.29         | 9.38          |
| mar     | 20.00       | 6.66        | 8.33          | 15.28        | 10.90        | 14.29       | 9.52          | 12.50         |
| paR     | 20.00       | 3.33        | 6.66          | --           | 1.82         | 9.52        | 4.76          | 6.25          |
| uTh     | --          | 3.33        | 11.66         | 5.56         | 9.09         | 14.29       | 9.92          | 9.38          |
| bais    | --          | 6.66        | 5.00          | 11.11        | 12.73        | 11.90       | 14.29         | 12.50         |
| aa      | --          | 6.66        | 5.00          | 4.17         | 1.82         | --          | 9.52          | 3.13          |
| rakh    | --          | 6.66        | 1.66          | 5.56         | 3.64         | 2.38        | 9.52          | 6.25          |
| cal     | --          | 3.33        | --            | 2.78         | 3.64         | 2.38        | 4.76          | 9.38          |
| paThaa  | --          | --          | 1.66          | 4.17         | 3.64         | --          | --            | 3.13          |
| dekh    | --          | --          | 1.66          | 1.39         | 3.64         | 4.76        | --            | --            |
| maar    | --          | --          | 3.33          | 1.39         | --           | 2.38        | --            | 3.13          |
| nikal   | --          | 3.33        | --            | 1.39         | --           | --          | 4.76          | --            |
| Dhar    | --          | 3.33        | 1.66          | 1.39         | --           | 2.38        | --            | 3.13          |
| nikaal  | --          | --          | 1.66          | 1.39         | 1.82         | --          | --            | --            |
| aan     | --          | --          | --            | 1.39         | 1.82         | --          | --            | --            |

NOTE: An earlier version of this paper was presented in the Seminar on Lexicography at the Central Institute of Hindi, Agra (10-22 December, 1979), and was published as 1983. Dictionary-representation of polar verbs on the basis of combinability with vectors in Maithili, in Suresh Kumar, ed. *KoshanirmaaNa : Siddhaanta aor paramparaa*. Agra: Kendriya Hindi Sansthan. 67-86. The present version was published as 1983. Classification of polar verbs in Maithili. *Journal of Asian Studies* (Tokyo), 44.1-4 : 75-81. I am grateful to K.V. Subbarao, Peter Hook, Prem Singh, R.N. Srivastava, Gopal Sharma, B.G. Misra, E. Annamalai, and Sudhir Mathur for comments and criticisms.