



Degrees of mirativity

Kalyanamalini Sahoo, Maarten Lemmens

► To cite this version:

Kalyanamalini Sahoo, Maarten Lemmens. Degrees of mirativity. Review of cognitive linguistics, 2017, 15 (2), pp.343-384. 10.1075/rcl.15.2.03sah . halshs-04292472

HAL Id: halshs-04292472

<https://shs.hal.science/halshs-04292472>

Submitted on 20 Nov 2023

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Distributed under a Creative Commons Attribution 4.0 International License

Degrees of mirativity

Kalyanamalini SAHOO & Maarten LEMMENS
Université de Lille & UMR 8163 STL, France

Abstract

This paper studies degrees of mirativity as grammaticalised in the Indo-Aryan language Odia by four light verb constructions, asymmetric complex predicates combining a lexical verb with a (partially) bleached light verb. As such, these light verb constructions can be considered non-parasitic expressions of mirativity. The present paper adds a number of important new insights to the discussion of mirativity. Firstly, we show that mirativity is a complex category which, next to the prototypical notion of surprise, also comprises the notion of “unsupposedness”. Secondly, we demonstrate that the four constructions vary in the degree of mirativity they express. These differences can be related to features of transitivity, such as volitionality or control and affectedness (as contextually realised by the process size, impact, force, or scope). This hypothesis is confirmed by two corpus studies: a collostructional analysis (based on verb types) and a comparison of contexts for constructional minimal pairs. [148 words]

Keywords: mirativity, light verb, collostructional analysis, completion, volitionality, affectedness

1. Odia light verbs: non-parasitic expressions of mirativity

Since DeLancey (1997), there has been a growing interest in how languages express unexpectedness or surprise, notions that have been grouped under the cover term ‘mirativity’. For example, in English, (explicit) exclamatives such as *You’re kidding!* *Oh my God*, or *No Way!* etc. express total unexpectedness of the event or complete surprise for the speaker. Idiomatic expressions like *out of the blue*, *knock your socks off*, *struck dumb*, etc. can also be used to describe someone’s surprise. In other languages, grammatical markings (notably evidential and perfective markers) can be exploited, usually via pragmatic inferencing, to express mirativity.¹ This paper discusses yet another type, i.e. the overt and grammaticalised expression of mirativity in the Indo-Aryan language Odia (earlier known as Oriya) via asymmetric complex predicates.

In these asymmetric complex predicates, a main verb is combined with a grammaticalised verb or a so called light verb (LV for short). While this light verb is form-identical with a main (lexical) verb in the language, it is “light” because of its semantic and grammatical bleaching: they have lost their original lexical content as well as their argument structure. Such LVs are also known as *vector verbs* (Hook 1993), *explicator compound verbs* (Abbi and Gopalakrishnan 1991), *complex predicates* (Butt 1995), or *asymmetric serial verb constructions* (Sahoo 2001). In this paper, we will use the term *light verb*, as

this is the term that is most commonly used in the literature. In addition, we will speak of LV *constructions* where we use the term *construction* in the sense of Construction Grammar, the overall framework in which our study is embedded (see, e.g. Goldberg 1995, 2006 or Hilpert 2014). Under this view, each LV is considered a construction in its own right, i.e. a form-meaning pair each with its own formal and semantic specifications, as will become clear from the study presented here.

The form of LV constructions in Odia is fixed: the lexical verb always precedes the light verb (except occasionally in poetic language) and they are always spelled as a single word, the two verbs being linked with a linker (LNK) *-i-*. LV constructions thus always take the form $V_{[\text{lexical}]}-i-V_{[\text{light}]}$, where the main verb occurs in its root form and the TAM marking occurs on the light verb. In fact, the light verb can take several morphemes carrying grammatical features like ASPECT, AUXiliary, Tense, AGREEMENT, etc.

Semantically, one way of grouping the Odia light verb constructions (Lemmens & Sahoo, 2017, p. 4) would be according to the LV's original lexical semantic value (which is, however, fully or partially bleached in these constructions) as follows:

- (1) MOTION verbs: *-jā* 'go', *-t/āl* 'walk', *-paḍ* 'fall', *-pakā* 'drop', *-u^h* 'rise', *-ās* 'come'
- (2) STATIVE verbs: *-bas* 'sit', *-rah* 'stay'
- (3) TRANSFER verbs: *-ḍe* 'give', *-ne* 'take'

Given their grammaticalized nature, such grouping is, however, of less relevance (even if we will come back to the original semantics below when dealing with some persistence effects). It is, in fact, more interesting to look at their grammaticalized meaning in these constructions. In general, light verbs encode some kind of "event modification", as observed by Butt & Lahiri (2002) and Butt & Geuder (2001) looking at the related language Urdu/Hindi. More specifically, for Odia, the light verbs *-bas* 'sit', *-rah* 'stay', *-ās* 'come', and *-t/āl* 'walk' express continuous or durative aspect; the light verb *-u^h* 'rise' expresses the onset of the event.

This paper will not be concerned with these, but exclusively focus on *-jā* 'go', *-paḍ* 'fall', *-de* 'give', and *-pakā* 'drop', that all four share a two-fold semantic modulation: (i) they express the **completion** of the event expressed by the main verb and (ii) they have a **mirative value**, expressing that this event (or its completion) is **unexpected** or is **not supposed** to have happened (for whatever reason).²

In Peterson's (2013; this volume) terms, these four Odia LV constructions can be regarded as non-parasitic formally marked expressions of mirativity, i.e. expressions whose sole function is to express mirativity, as opposed to parasitic expressions, where the mirative meaning is parasitic on other linguistic categories, such as the mirative use of evidentials or control marking. The Odia light verb constructions thus stand in a marked contrast with single verb constructions which are neutral to completion and do not express mirativity (see also below). Also the light verb *-u^h* 'rise' expresses mirativity, but for reasons of space and clarity, this will not be discussed here (Lemmens & Sahoo, ms.).

The term *mirativity* has been used in the descriptive literature to cover a variety of concepts, so it is warranted that we clarify what is at issue here. Mirativity, the linguistic realisation of surprise, can be regarded as the expression of a psychological-cognitive phenomenon (most likely universal) which arises from the discrepancy between what is expected (given the background of the speaker's or hearer's knowledge or assumptions) and what is observed. Dickinson (2000), who discusses mirativity marking in Tsafiki (Barbacoan), points out that in this language "events and states that cannot be easily assimilated are coded differently than those that easily fall in with the speaker's expectations" (Dickinson, 2000, p. 379). Building on this insight, Peterson (2015, p. 8) specifies that "the speaker's expectations may concern their past experiences of similar situations and his general knowledge [which] ranges from knowledge about purely physical interactions to assumptions based on cultural and social norms". It is precisely the latter which we will show to be relevant to Odia light verbs constructions that often express that the reported event is not *supposed* to have happened against the background of social or cultural norms.³ This may, but need not, express the speaker's surprise; for example, someone may be known (i.e. expected) to behave disrespectfully towards social conventions and the speaker's choice of a LV construction thus expresses this (expected) "unsupposedness". As such, a coding with a LV often implies the speaker's disapproval. This lines up with what Montaut (2006) –discussing the mirative readings of the aorist in Hindi/Urdu (genetically related to Odia)– calls the "argumentative and polemic extension" expressing a stronger disapproval of the situation.

Another point that can be made is that while the literature often talks about the *speaker's* surprise, our first definition given above clearly includes the hearer as well. For example, in telling a (mythical) story, a speaker –who clearly knows what is going to happen– may decide to code an event as being

surprising (unexpected or un-supposed) so as to highlight this for the listener. In sum, by using a LV construction, the speaker encodes (conceptualises) the situation in a certain way, which may be a genuine expression of his or her surprise, but which may also be targeted at the hearer.

In an earlier study (see Lemmens & Sahoo 2017) describing the two most frequent LV constructions in Odia, *V-jā* ‘V-go’ and *V-dā* ‘V-give’, we showed that the conflation of the notions of COMPLETION and MIRATIVITY can be motivated semantically.⁴ We will not reproduce the full argument here, but in a nutshell, it boils down to the idea that in Odia, the observed situation is accessed and/or evaluated via the **result** of the (completed) event which, however, does not correspond to what can be expected. In fact, this kind of reasoning is not unlike what has been observed in the literature on (parasitic) mirative readings of perfective or evidential markers where the sensory observation of a state or result of an action triggers inferences leading to a surprise reading. For example, Aksu-Koç and Slobin (1986) describe the pragmatic extension of the Turkish particle *-miş* to mark events as surprising and observe that “the inferences encoded by *-miş* can be based on any kind of sensory evidence of resultant state, with the provision that no aspect of the antecedent process itself has been present in the speaker’s consciousness (1986, p. 160). For similar observations on the link between result and mirativity see, among others, Peterson (2000) on Nepali, or Peterson (2015) on Gitksan.⁵ However, unlike in these cases in Odia the mirative reading is not the result of contextually triggered inferencing, but has been grammaticalised as part and parcel of the LV construction; hence, they can be characterised as non-parasitic expressions of mirativity.

By presenting a rigorous, corpus-based analysis of Odia light verbs, the present paper aspires to present an innovative contribution to the study of mirativity. More specifically, we not only argue that the four LV constructions under study are formal non-parasitic expressions of mirativity, we also present evidence that the four LVs vary in the degree of mirativity they express; as far as we know, this has not yet been described in the literature for any language. More particularly, we will relate this degree of mirativity to contextually realised scales that have to do with differences in volitionality (related to transitivity) as well as the extension of the process, that is, its size, impact, force, scope, etc. As we will argue, the latter features can also be related to volitionality and control as well as to affectedness. In addition to building semantic minimal pairs to prove the point, we also rely on a corpus-based analysis

to validate the hypothesis. One type of empirical study that we present here consists of a comparison (via a distinctive collostructional analysis) of the kinds of verbs that occur in these light verb constructions. In a second sweep, we compare the different contexts in which these constructions occur, especially for those cases where the same main verb can occur with different light verbs. The studies confirm the cline of mirativity for the four LV constructions under study.

This article is structured as follows. First, in section 2, we present the characteristics of these Odia light verb constructions, focussing on the notions of COMPLETION and MIRATIVITY (sections 2.1 and 2.2) and presenting the different degrees of mirativity they express (section 2.3). Next, in section 3, we present our corpus data and the method of analysis. Section 4 presents the corpus-based studies, starting with the collostructional analysis (section 4.1) and moving on to the contextual comparisons (section 4.2). In the conclusion, we sum up our major findings, discuss their theoretical implications, and present avenues for future work.

2. General properties of ‘V-go’, ‘V-fall’, ‘V-give’, and ‘V-drop’

2.1. The grammar of COMPLETION & MIRATIVITY

The four LV constructions at issue in this paper are *V-jā* ‘V-go’, *V-paḍ* ‘V-fall’, *V-ḍe* ‘V-give’, and *V-pakā* ‘V-drop’. As said above, the four light verbs express two main features: COMPLETION and MIRATIVITY. The verbs are distinguished syntactically by different transitivity constraints: (i) *-jā* ‘go’ and *-paḍ* ‘fall’ only combine with intransitive verbs (or intransitively used alternation verbs), *-ḍe* ‘give’ and *-pakā* ‘drop’ only combine with (di)transitive verbs. The difference between transitive and intransitive is not so crucial for the present paper, which focuses on the double semantic value that all four LVs share as well as to the degree with which they express that value. At the same time, within each transitivity pair, the degree of mirativity lines up with features that pertain to degrees of transitivity (in the sense of Hopper & Thompson 1980), such as agentivity, volitionality or control, or affectedness, features that can be argued to have persisted from the lexical origin of the different LVs.

By default, these two features COMPLETION and MIRATIVITY are simultaneously present in the four constructions and it is what distinguishes them from the single verb construction, as illustrated by the following contrastive pair⁶:

- (1) a. ମୁଁ ଗୋଟିଏ ସେଠ ଖାଇଲି
mũ goṭi-e seo k^hāili (kiṇṭu purāpuri nuhẽ) [single verb Cx]
 I CLF-ART apple ate (but completely be.NEG)
 'I ate an apple (but not completely).'
- b. ମୁଁ ଗୋଟିଏ ସେଠ ଖାଇଦେଲି
*mũ goṭi-e seo k^hā-i-deli (*kiṇṭu purāpuri nuhẽ)* [LV Cx]
 I CLF-ART apple eat-LNK-give.PST.1SG (*but completely be.NEG)
 'I (completely) ate an apple (*but not completely).'

The single verb construction in (1a) is neutral to whether the apple has been eaten completely or not, as shown by the possibility of adding a *but*-clause, whereas in (1b) the apple has been eaten completely and that can no longer be cancelled out. The contrastive pair confirms Peterson's view that "mirative utterances stand in a markedness relation with non-mirative utterances" (2013, p. 4). For a more elaborate discussion of the difference between single verb and LV constructions in Odia, we refer the reader to Lemmens & Sahoo (2017). What is essential to the present discussion is that while COMPLETION is always present in these four light verb constructions, MIRATIVITY is variable and depends on the context. There are two important contextual factors to be mentioned here: (i) if completion is expressed *lexically*, the MIRATIVITY interpretation disappears and (ii) the four light verbs differ in the *degree of mirativity* they express. We will briefly take up these points in turn.

2.2. Lexical versus grammatical expression of COMPLETION

As said, by default the four LV constructions express both COMPLETION and MIRATIVITY; for example, the eating of the apple expressed by the LV construction *k^hā-dē* 'eat-give' in (1b) above is both complete and unexpected or unsupposed. However, if an adverb like *purāpuri* 'completely' is added to the clause, as in (2a) below, the interpretation changes: in line with the semantics of the adverb, the LV construction becomes the obligatory coding (a single verb construction would be ungrammatical); however, the mirative interpretation disappears. Similarly, as shown in (2b), by adding the adverb expressing completion, the light verb construction becomes the only grammatically correct

possibility, a single verb construction is excluded, and again, the mirativity reading disappears (one could argue that the publishing of the book announces the end of the project).

- (2) a. ସେଓଟା ମୁଁ ପୁରାପୁରି ଖାଇଦେଇଛି/ *ଖାଇଛି
*seo-tā mũ purāpuri khā-i-ḍeitʰi / *khāitʰi*
 apple-CLF I completely eat-LNK-give.PRF.1SG / *eat.PRF.1SG
 'I have eaten the apple completely.' (no mirativity)
- b. ବହିଟା ଛାପିବା ପରେ ଏଇ ପ୍ରୋଜେକ୍ଟଟା ମୁଁ ସମ୍ପୂର୍ଣ୍ଣରୂପେ ବନ୍ଦ କରିଦେବି/ *କରିବି
bahi-tā tʰāpibā pare ei project-tā mũ sampurnarupe
 book-CLF publishing after this project-CLF I completely
*baṇḍ kar-i-ḍebi / *karibi*
 stop do-LNK-give.FUT.1SG / *do.FUT.1SG
 'After publishing the book, I'll stop this project completely.' (no mirativity)

A second way in which COMPLETION can be expressed overtly in Odia, is by using the semi-light verb *-sār* 'finish'. While formally identical to the other light verbs, *-sār* 'finish' is not really a light verb, for the following reasons:

- (i) it has retained its specific lexical meaning ('finish') whereas the other light verbs clearly have not;
- (ii) it is not subject to the transitivity constraint: the main V can be either intransitive (e.g., *mũ gāḍʰo-i-sārili* /I bathe-LNK-finish.PST.1SG/ 'I finished bathing') or transitive (e.g., *mũ (bʰāṭa) kʰā-i-sārili* /I (rice) eat-LNK-finish.PST.1SG/'I finished eating (rice)')⁷;
- (iii) *-sār* can be added to a LV construction with another light verb (even if these are marginal cases), e.g., *kʰāi-ḍei-sāri* /eat-give-finish/ 'having eaten', *gāḍʰoi-pakāi-sāri* /bathe-drop-finish/ 'having taken a bath' whereas this is impossible with other LVs (**mari-jāi-paḍi* / *die-go-fall/; **māri-ḍei-pakāi* / *kill-give-drop/);
- (iv) *V-i-sār* does not express mirativity.

In fact, the absence of a surprise reading is the main rationale for the existence of the *V-i-sār* construction, as it allows the expression of completion **without** mirativity. This is related to the disappearance of the mirative interpretation of the four LV constructions when completion is lexically expressed.

Unless contextually overruled, as illustrated above, the four light verb constructions under consideration all express MIRATIVITY. Evidence for the mirative interpretation can again be provided via adverbial modification, as in the examples below. In (3), the expected event (him always coming late) cannot be encoded in a LV construction, as this would be in conflict with the mirative interpretation of such a LV construction; his early leaving is, however, unexpected, and thus a LV construction is to be used.

- Similarly, in example (4), his sitting next to the speaker was unexpected (as indicated by *hat^hā_t* ‘suddenly’) and thus a coding with a LV is required. In (5), the speaker was unaware that the SIM card could also have been used by the addressee in a certain way, and this ignorance caused the speaker to give it away to somebody else instead (unsupposed, at least in retrospect).

- Notice that in all these examples COMPLETION is still expressed by the LV construction. This highlights an asymmetric situation in the opposition between grammatical and lexical expression of either feature: if COMPLETION is lexically expressed (adverbially or via *-sār* ‘finish’), the

Author-produced prepublication version. Please refer to and quote from the published version: Sahoo, K. & M. Lemmens (2017). Degrees of mirativity. *Review of Cognitive Linguistics* 15(2), 343-384.

MIRATIVITY disappears; however, when MIRATIVITY is lexically expressed, COMPLETION does not disappear.

This means that COMPLETION is more of a core feature of these LV constructions and that MIRATIVITY is sensitive to variation. This takes us to the central claim of this paper, *viz.* that the four light verb constructions differ in the *degree of mirativity* they express (yet also of completion, even if it never disappears completely). A first illustration of this difference is the contrastive pair below where *V-i-paḍ* ‘V-fall’ expresses a higher degree of unexpectedness (accidentally falling asleep) than *V-i-jā* ‘V-go’ where the agent (even if unlikely) deliberately falls asleep, for example, to annoy the teacher or as a sign of disrespect. The addition of *jāniḥuni* ‘deliberate’ is not possible for (6a).

- (6) a. ସେ କାଲି ଇତିହାସ କ୍ଲାସ୍ରେ ଶୋଇ ପଡ଼ିଲା।
se kālī iṭihāsa klās-re ṣo-i-paḍilā
 he yesterday history class-LOC sleep-LNK-fall.PST.3SG
 ‘He fell asleep in the history class yesterday.’
 b. ସେ କାଲି ଜାଣିଶୁଣି ଇତିହାସ କ୍ଲାସ୍ରେ ଶୋଇଗଲା।
se kālī jāniṣuni iṭihāsa klās-re ṣo-i-galā
 he yesterday knowingly history class-LOC sleep-LNK-go.PST.3SG
 ‘He deliberately slept in the history class yesterday.’

More specifically, the differences in the degree of mirativity (and completion) that we suggest can be summarized as in the schema below (*V-i-sār* ‘V-finish’ is added for the sake of completeness, but will not be considered any further in this paper).

SEMANTICS		FORM	
“event modulation”		<i>V-i-v</i>	
		intransitive	transitive
COMPLETION	UNEXPECTED (high)	<i>V-i-paḍ</i> (‘V-fall’)	<i>V-i-pakā</i> (‘V-drop’)
	UNEXPECTED (lower)	<i>V-i-jā</i> (‘V-go’)	<i>V-i-ḍe</i> (‘V-give’)
	EXPECTED / NEUTRAL	<i>V-i-sār</i> (‘V-finish’)	

Figure 1: Degrees of mirativity in Odia LV constructions

Our corpus-based study will provide empirical confirmation that, for the intransitives, ‘V-fall’ expresses a higher degree of mirativity than does ‘V-go’, and that, for the transitives, ‘V-drop’ expresses a higher degree of mirativity than ‘V-give’. This difference can be explained as a kind of persistence of

the original lexical verb: as far as intransitive motion is concerned, *fall* refers to a less controlled and thus more unexpected event than does *go*, which typically refers to voluntary intransitive motion; similarly, *drop* refers to a less controlled event than does *give* which typically takes a volitional Agent. In other words, the degree of mirativity can be related to a degree of agentivity and/or of volitionality that has persisted from the original lexical verb.⁸ This relationship is not unique to Odia. Dickinson (2000) mentions “lack of intention” as one of the features giving rise to mirativity interpretation in Tsafiki. Peterson (2013) points out that the feature of CONTROL can indeed play a role in the expression of mirativity and illustrates this with the “out-of-control” markings in the Salish languages that have become (parasitic) expressions of mirativity. Such out-of-control markings indicate that the agent does not have a choice or has no control over what is happening. Peterson observes that “[t]hese meanings can be used to implicate the surprise of the speaker, which is a wholly pragmatic byproduct of the accidental or sudden out-of-control event” (2013, p. 26). The Odia data give further support to the plausibility of such a semantic extension.

In the second part of this paper (section 4), we present two empirical studies that measure the degree of mirativity within each transitivity pair, i.e. intransitive ‘V-fall’ is compared to intransitive ‘V-go’ and transitive ‘V-give’ is compared to transitive ‘V-drop’. The first of these studies (section 4.1) is a (pair-wise) collostructional analysis of the kinds of verbs that occur with these light verb constructions; the second study (section 4.2) compares the contexts in which these constructions occur, especially for those cases where the same main verb can occur with either of the light verbs. However, before we turn to these studies, we briefly describe the corpus on which they are based and the method of analysis that we have used.

3. Corpus & analysis

Our study is based on the Odia texts that are included in the EMILLE-CIIL Monolingual Written Corpora (McEnery *et al.* 2003); the corpus, approximately 2,730,000 words, is a fairly heterogeneous collection of literary, legal, commercial, scientific, and newspaper texts, in Odia script.⁹ We extracted from these texts all occurrences of *jā* ‘go’, *ḍe* ‘give’, *paḍ* ‘fall’ and *paḱā* ‘drop’. As the light verbs are form-identical with their lexical origins, the extractions contained both light verbs and lexical verbs,

which necessitated laborious manual clean-up. To keep matters manageable, this was done as follows: each list of extractions was sorted randomly (using the Random-function in MS-Excel), the sentences with the lexical verbs were manually removed (by one of the authors, a native speaker of Odia). The resulting data sets were: 561 sentences for *V-dē* ‘V-give’, 560 for *V-jā* ‘V-go’, 383 for *V-paḍ* ‘V-fall’, and 311 for *V-pakā* ‘V-drop’.¹⁰ These sentences were subsequently manually glossed for the main verb and each of them was manually considered for the contextual features. As already indicated above, there are two ways in which we will explore the data with respect to the differences between the four light verb constructions: (i) a comparison of verb types (section 4.1) and (ii) a contextual comparison (section 4.2).

The rationale of the verb type comparison is that the events or activities expressed by these verbs may be different in terms of expectedness; it can therefore be interesting to see which verbs occur with which light verbs and whether there is a large overlap in choice of verb. To avoid conflation of (too) heterogeneous event types with respect to participant structure, this comparison is done pair-wise, i.e., it first compares the main verb types occurring with the intransitive LVs *V-jā* ‘V-go’ and *V-paḍ* ‘V-fall’ and subsequently those occurring with transitive *V-dē* ‘V-give’ and *V-pakā* ‘V-drop’ (cf. Figure 1). In addition to a standard type comparison, we will also run a collostructional analysis, and more particularly a *distinctive collexeme analysis* (see Gries & Stefanowitsch 2004; Stefanowitsch & Gries 2003, 2005), a method which, as explained in more detail below, allows us to measure the attraction (‘collocation’) of a particular verb (if any) to a particular light verb construction. From a Construction Grammar perspective, which assumes that constructions are inherently meaningful, the underlying idea of such a collostructional analysis is that the semantics of such attracted verbs can tell us something about the semantics of the light verb construction, since the meaning of the verb and that of the construction must be compatible.¹¹ To understand how the collostructional method works, consider the example in Figure 2 for the verb *lāg* ‘touch, get involved’ which occurs with both *V-jā* ‘V-go’ and *V-paḍ* ‘V-fall’. The table gives the four frequencies that are needed in this method: (i) the frequency of *lāg* with *V-jā* ‘V-go’, (ii) its frequency with *V-paḍ* ‘V-fall’, (iii) the frequency of all other verbs occurring with *V-jā* ‘V-go’, and (iv) that of all other verbs with *V-paḍ* ‘V-fall’. The latter two frequencies bring

Author-produced prepublication version. Please refer to and quote from the published version: Sahoo, K. & M. Lemmens (2017). Degrees of mirativity. *Review of Cognitive Linguistics* 15(2), 343-384.

in the statistical baseline, and consider the occurrence of *lāg* ‘touch, get involved’ in the two LV constructions in view of its competitors, i.e. all other verbs attested in either of the LV constructions. The cross-table allows us to run a standard statistical test (a two-tailed Fisher Exact test in this case¹²) to measure to which extent the distribution is significant; the p-value is converted via a logarithmic transformation which is then taken to be the indicator of collostructional strength.¹³ The reason for this conversion is that the p-values are often so small that their significance resides in the decimals; it is precisely these that are brought to the fore via the log-transformation. The significance levels for the values of the collostructional strength (CS) are as follows: $CS > 3 = p < 0.001$; $CS > 2 = p < 0.01$; $CS > 1.30103 = p < 0.05$.

Main verb	‘V-go’	‘V-fall’	TOTAL
<i>lāg</i> ('touch, get involved')	9 (expected = 15.98)	18 (expected = 11.02)	27
other verbs	551	365	916
TOTAL	560	383	943
Coll. strength	2.2732 ($p < 0.01$) (log-transf. Fisher exact 2-T: $p = 0.0085$)		

Figure 2. Example of distinctive collostructional analysis for *lāg* ‘touch, get involved’

How are these figures to be interpreted? The analysis shows that the distribution is significant ($p \leq 0.01$), which means that *lāg* ‘touch, get involved’ is significantly attracted to one of the two light verb constructions. To determine which of the two, one has to compare the observed frequencies with the expected frequencies; in this case, one sees that the verb *lāg* ‘touch, get involved’ occurs more often with ‘V-fall’ (18 times) than expected given the overall distribution in the corpus (11.02). The conclusion is thus that *lāg* ‘touch, get involved’ is significantly attracted to ‘V-fall’. This analysis is then repeated for each verb that occurs in either of these two LV constructions. The advantage of a collostructional analysis is that it provides a statistically reliable measure on an objective basis (verb types) without any (potentially biased) interpretation.

The second type of analysis that we carry out is a contextual comparison where we compare the contextual properties of those cases where the same main verb occurs with different light verbs to

determine what the differences in contexts of use are, if there are any. As with the verb types, we first compare intransitive *V-jā* ‘V-go’ and *V-paq* ‘V-fall’ and subsequently transitive *V-de* ‘V-give’ and *V-pakā* ‘V-drop’.

4. Corpus-based analysis of ‘V-go’, ‘V-fall’, ‘V-give’ and ‘V-drop’

4.1. Comparison of verb types

For each of the pairs, the comparison of verb types proceeds in two steps. First, we present the overall type and token distribution of the main verbs that occur with the light verbs in question; secondly, we present the results of the collostructional analysis.

4.1.1 Intransitive ‘-go’ and ‘-fall’

Main verb distribution

The distribution of the main verbs for the intransitive light verbs ‘-go’/‘-fall’ in the entire sample are presented in Tables 1 and 2 in the appendix. As shown in Table 3, for ‘V-fall’, the corpus contains 35 types and 383 tokens (TTR= 0.091 or 9.1%); for ‘V-go’: there are 93 types and 560 tokens (TTR = 1.66 or 16.6%). While only indicative, the TTR indicates that the light verb *-jā* ‘-go’ has a higher degree of lexical variation than ‘-fall’; differently put, this means that ‘-go’ is less selective with respect to the main verb it combines with. In addition, there are 35 *hapax legomena* (types that occur only once in the sample) for ‘V-go’, whereas ‘V-fall’ only has 10. Hapaxes can be taken as indications of the degree to which a construction is open to new uses (‘one off’ cases): the higher the number of hapaxes compared to the total number of tokens, the higher the productivity rate. We can use Hay & Plag’s (2004) calculation of productivity (P) based on the number of hapaxes ($P = \text{hapax frequency} / \text{token frequency}$), which gives 0.06 (35/560) for ‘V-go’ and 0.03 (10/383) for ‘V-fall’. The value of P does not mean all that much on its own (it is fairly low), but the difference between the two confirms that ‘V-go’ is more productive than ‘V-fall’ (twice the value).

Strikingly, for both light verbs, the (general) change of state verb *ho* ‘become’ tops the list, accounting for the lion’s share of the uses, amounting to 24.6% for ‘-go’ and almost up to about half (49.3%) for ‘-fall’. The reason is of course that this verb combines under its umbrella a host of different

change of state events further specified in the nominal or adjectival modifiers that occur with it (e.g., ‘become silent’, ‘become destruction’ (=destroy), ‘become pioneer’, etc.).

Collostructional analysis

A distinctive collexeme collostructional analysis measures the degree of attraction of a particular lexical item (here: the lexical verb) to a given construction (here: the LV-construction with either ‘-fall’ or ‘-go’). As such we hope to shed further light on the possibly different semantic specifics of the two constructional options.

The complete result of the computation is presented in Table 4; the top of the list presents the verbs that are attracted to ‘V-fall’ (sorted on their degree of collostructional strength); the middle of the list gives those attracted to ‘V-go’. Recall that a collostructional strength higher than 3 can be interpreted as indicating a significance level of $p < 0.001$; higher than 2 gives a level of $p < 0.01$ and higher than 1.30103 indicates $p < 0.05$; anything lower than 1.30103 is non-significant.

The verbs that are significantly attracted to ‘V-fall’ are the following (with a distinction between $p < 0.001$, $p < 0.01$ and $p < 0.05$, the latter being interpreted as less strong indicator verbs):

$p < 0.001$: *ho* ‘become’, *k^has* ‘slip’, *bāhār* ‘come out; get ready to leave’, *ḍeĩ* ‘jump’, *j^har* ‘spring forth’, *bas* ‘sit’, *b^husud* ‘collapse’, *fo* ‘sleep’

$p < 0.01$: *tfamak* ‘get frightened’, *olaṭ* ‘turn down’, *lāg* ‘touch, get involved’

$p < 0.05$: *b^hāng* ‘break’, *ḍ^hal* ‘spill (into)’, *olhā* ‘get down’, *ṭaḷi* ‘fall dying’

The verbs that are significantly attracted to ‘V-go’ (again with the same distinction):

$p < 0.001$: *ṭāl* ‘walk’, *paḍ* ‘fall’, *rah* ‘stay’, *pahantf* ‘arrive’, *ās* ‘come’,

$p < 0.01$: *ne* ‘take’, *biṭ* ‘pass’, *sar* ‘finish’, *baḍ^h* ‘increase’, *miḥ* ‘combine; adjoin’, *pā* ‘get’

$p < 0.05$: *mar* ‘die’, *paḷā* ‘flee’, *fuk^h* ‘dry’, *ub^h* ‘disappear’, *kāt* ‘cut’, *kheḷ* ‘play’, *miḷ* ‘get’, *paḥ* ‘enter’, *p^her* ‘return’, *uḍ* ‘fly’

There is no clear pattern that falls out of the analysis. A more general tendency that can be observed, also revealed by the overview of verb types given in Tables 1 and 2, is that the lexical verbs occurring with ‘V-go’ seem to be more general verbs: general motion verbs (e.g., ‘walk’, ‘arrive’, ‘come’, ‘flee’,

‘disappear’, ‘come out’, ‘enter’, ‘proceed’, ‘sink’, ‘spread’, ‘leave’, ‘turn’, etc.); general action verbs (e.g., ‘finish’, ‘grow’, ‘touch’, ‘get’, ‘play’, ‘change’, ‘happen’ etc.). ‘V-fall’ seems to combine with more specific verbs: a higher number of specific motion verbs (e.g., ‘spring forth’, ‘jump’, ‘overflow’, etc.), verbs that refer to events involving more energy or dynamicity (e.g., ‘burst’, ‘pierce’, ‘explode’, etc.), a higher degree of involvement, or a higher degree of uncontrolledness (‘sleep’, ‘fall dying’). While one should be careful to avoid in-reading, the intuition is that these events are more sudden, and thus in line with the higher mirativity suggested for ‘V-fall’.

4.1.2 Transitive ‘-drop’ & ‘-give’

Main verb distribution

The distribution of the main verbs for the intransitive light verbs ‘-go’/’-fall’ are presented in Tables 5 and 6. As shown in Table 7, for ‘V-drop’, the corpus contains 68 types and 311 tokens (TTR= 0.218 or 21.8%), 44 of which are hapaxes; for ‘V-give’: there are 154 types and 561 tokens (TTR = 0.274 or 27.4%), 89 of which are hapaxes. Following the same method as above, we can measure the difference of productivity by dividing the number of hapaxes by the total token frequency which gives $P=0.14$ for ‘V-drop’ and $P=0.16$ for ‘V-give’; in other words, there is not much difference between the two constructions.

Collostructional analysis

The complete results of the collostructional analysis are presented in Table 8; the top of the list presents the verbs that are attracted to ‘V-drop’ (sorted on their degree of collostructional strength); the middle of the list gives those attracted to ‘V-give’ ($CS>3 = p<0.001$; $CS>2 = p<0.01$; $CS>1.30103 = p<0.05$).

The verbs that are significantly attracted to ‘V-drop’ are the following (with a distinction between $p<0.001$, $p<0.01$ and $p<0.05$, the latter being interpreted as less strong indicator verbs):

$p<0.001$: $\dot{q}^h ar$ ‘catch’, $k\dot{a}t$ ‘chop’, kar ‘do’, $gi\dot{l}$ ‘swallow’, $kund^h$ ‘embrace’, $m\bar{a}r$ ‘hit, kill’

$p<0.01$: $k\bar{a}n\dot{q}$ ‘cry’

$p<0.05$: kah ‘say, tell’, $t/\tilde{a}t$ ‘lick’

The verbs that are significantly attracted to *V-give* (again with the same distinction):

$p < 0.001$: *jogā* ‘supply’, *tʃʰāq* ‘leave’, *jaŋ* ‘know’, *baqʰ* ‘increase’

$p < 0.01$: *āŋ* ‘bring’, *pakā* ‘drop’, *lagā* ‘touch, get involved’, *paʃʰā* ‘send’

$p < 0.05$: *pʰerā* ‘return’, *rakʰ* ‘keep’

Also here no clear pattern emerges; however, there is again the suggestion, confirmed also by the exhaustive list of verb types (see Tables 5 and 6), that the verbs that occur with ‘V-give’ tend to be more general verbs; those with ‘V-drop’ are slightly more specific. For example, ‘embrace’ is more specific than ‘touch’; ‘swallow’ and ‘lick’ are manner verbs that can be argued to be more specific than a verb like ‘supply’. However, this remains fairly impressionistic.

In sum, the comparison of the variation in verb types has confirmed the observation in Lemmens & Sahoo (2017) that ‘V-go’ is the most productive of the LV constructions; in terms of productivity, our data does not show any difference between ‘V-give’ and ‘V-drop’. The collostructional analysis does not reveal any conclusive patterns either (most likely because of the modest size of our corpus), even if there is a suggestion that ‘V-go’ and ‘V-give’ combine with more general verbs and ‘V-fall’ and ‘V-drop’ with verbs that refer to more specific, more energetic or more sudden events. These are suggestive tendencies, and should be interpreted with caution, as they are based on mere verb types and not on how these verbs are used in context. It is therefore warranted that we consider these contexts in more detail, which is done in the next two sections starting again with the intransitives, then moving on to the transitives.

4.2. Comparison of context types

4.2.1 Intransitive ‘-go’ & ‘-fall’

Strikingly, only a small set of 12 verbs are shared between ‘V-go’ and ‘V-fall’ (see Table 9) which represents 12.9% of the ‘V-go’ set (12 on 93 types) and 34.3% of the ‘V-fall’ set (12 on 35 types). The shared token frequency is 311 for ‘V-fall’ (represents 81.2% on the total set of 383 attestations) and 180 for ‘V-go’ (represents 32.1% on the total set of 560 attestations). In other words, the set of verbs occurring with ‘V-fall’ are largely (i.e., in 80% of the cases) comprised in the set occurring with ‘V-go’.

Comparing the different contexts in which the same verb can occur with either ‘-fall’ or ‘-go’ a certain pattern emerges: both LV constructions encode unexpected events (in general), but within an unexpected event or context something may be more expected.¹⁴ For example, accidents are (by definition) unexpected, but within the context of an accident, breaking a leg or an arm is something that can be expected or is likely to happen. Significantly, with body parts, the LV construction is always ‘break-go’, never ‘break-fall’. In other words, ‘V-go’ can be said to encode “the expected within the unexpected”. Recall also the contrastive pair ‘sleep-fall’ vs. ‘sleep-go’ in example (6) above where the expression ‘sleep-go’ was said to refer to a more deliberate falling asleep (e.g., to annoy the teacher); even if, strictly speaking, falling asleep remains a process that is uncontrollable and thus unexpected as well as unsupposed in the context of a lecture (hence, a coding with a light verb), within that context, ‘V-go’ indicates a lesser degree of unexpectedness since the Agent deliberately decided to sleep during the lecture, triggering also a comment of disapproval. The example below with the verb *fo* ‘sleep’ gives a three-way contrast between a single verb construction (planned & expected), *fo-jā* ‘sleep-go’ (somewhat planned), and *fo-paḍ* ‘sleep-fall’ (unexpected/unsupposed, example (6a) is repeated here):

- (7) a. ଆଜି ଭାରୀ ଗରମ, ମୁଁ ଛାତରେ ଶୋଇବି
āji b^hāri garama, mū tʃ^hātare foibi [EC]¹⁵
 today very hot, I roof top-LOC sleep.FUT.1SG
 ‘Today it is very hot, I’ll sleep on the roof top (= terrace) (of my house).’
 b. ତୁ ଏବେ ଶୋଇଯା, କାଲି ସକାଳୁ ଶୀଘ୍ର ଉଠିବାପାଇଁ ପଢିବ
tū ebe fo-i-jā, kāli sakālu ſig^hra uṭ^hibāpāi paḍiba [EC]
 you now sleep-LNK-go-IMP, tomorrow morning early waking.up have.to
 ‘Now you go to bed, you have to get up early in the morning tomorrow.’
 c. ସେ କାଲି ଇତିହାସ କ୍ଲାସରେ ଶୋଇ ପଡିଲା
se kāli iṭihāsa klāsre fo-i-paḍilā
 he yesterday history class-LOC sleep-LNK-fall.PST.3SG
 ‘He fell asleep in the history class yesterday.’

A context appropriate for the single verb construction in (7a) is for example the summer season when people plan to sleep on the roof top terrace to escape from the intense heat. *fo-jā* ‘sleep-go’ is used in a context where it basically means “going to bed” or “plan to sleep”, which makes this semi-planned, even if the falling asleep itself is still uncontrollable of course. The construction *fo-paḍ* ‘sleep-fall’ is actually the default encoding for this verb given that (unless one uses medication or drugs) sleeping is an

involuntary (uncontrolled) action or event and some degree of unexpectedness is thus inherently part of the verb's meaning.

Another contrastive context illustrating “the expected within the unexpected” is that of glasses or cups breaking ‘break-go’: clearly, this is unexpected, yet does often happen nevertheless since they are handled very often; windows in contrast are not expected to break at all, and such events would invariably be coded with ‘break-fall’. Or consider the pair below, contrasting the context of a pen falling on the ground ‘slip-fall’ in (8a) with that of a pen slipping from my hand while writing ‘slip-go’ in (8b) which is unexpected yet not unlikely to happen in this context.

- (8) a. ଏଇ କଲମଟାର ଖୋଳଟା କୁଆଡେ ଖସି ପଡ଼ିଲା
ei kalama-tā-ra k^ho[a-tā kuāḍe k^has-i-paḍilā
 This pen-CLF-GEN cap-CLF somewhere slip-LNK-fall.PST.3SG
 ‘The cap of this pen has fallen down somewhere.’
- b. କାଲି ଅଙ୍କ କଲାବେଳେ ମୋ ହାତରୁ କଲମଟା ବାରମ୍ବାର ଖସିଯାଉଥିଲା
kāli anka kalābe[le mo hāṭa-ru kalama-tā bārm̐bār k^has-i-jāuṭ^hilā
 [adapted from EC]
 yesterday math working.out my hand.ABL pen-CLF often slip-LNK-go.PROG.PST.3SG
 ‘Yesterday while working out the maths sums, the pen was slipping from my hand many times.’

Given that verbs such as *k^has* ‘slip’ or *paḍ* ‘fall’ refer to typically involuntary intransitive actions or events, some degree of unexpectedness is inherently part of the verbs’ semantics; the higher occurrence of, for example, *k^has-paḍ* ‘slip-fall’ in our data (19 occ.) than of *k^has-jā* ‘slip-go’ (1 occ.) is thus to be expected. The single verb construction, typically used to refer to a planned or expected event, is unlikely, even if this constraint, too, can be overruled as shown by the corpus example below.

- (9) a. ଏଥର ମୁଁ ସେଠି ଠିଆହୋଇ ଖେଳିବିନି, ସେଇ ଜାଗାଟା ଖସଡା, ଏବଂ ମୁଁ ସବୁବେଳେ ପଡ଼ୁଛି
eṭ^hara mū set^hi ṭ^hiā hoi k^heḷibini, sei jāgā-ṭā
 this time I there standing play.FUT.1SG.NEG, that place-CLF
k^hasaḍā, ebam mū sabube[le paḍut^hi [EC]
 slippery, and I always fall.PROG.1SG
 ‘This time I’ll not stand/go there for playing, as that place is slippery and I fall there every time / my foot slips there every time’
- b. ତାଳଗୁଡ଼ା ପାଚିଗଲାଣି, ଏଥର ଗୋଟିଏ ଗୋଟିଏ ତଳେ ପଡ଼ିବ
ṭāḷaguḍā pāt̐ḡgalāṇi, eṭ^hara goṭie goṭie ṭale paḍiba [EC]
 palms ripened, henceforth one one ground fall.FUT.3SG
 Palms have ripened, henceforth (they) will fall on the ground one by one.’

In both cases, the falling or slipping are highly expected or almost predictable to happen within the given context which sanctions the use of a single verb construction. Similar to the context of the pen slipping out of the hand while writing, *khas-jā* ‘slip-go’ is used in the context of the hands slipping while climbing a tree as in (constructed) example (10a), but not when the person slips (=falls) down from the tree on the ground (10b).

- (10) a. ନଡ଼ିଆଗଛ ଚଢ଼ିଲାବେଳେ ମଝିରେ ଗୋଟେଥର ମୋ ହାତଟା ଖସିଗଲା
naḍiā gatʰa-re tʃaḍʰilābe|e majhire goṭeṭʰara mo hāṭa-ṭā
khas-i-galā
 coconut tree-PP while.climbing in.between once my hand-CLF slip-LNK-go.PST.1SG
 ‘While climbing the coconut tree, my hand slipped once.’
 b. ନଡ଼ିଆଗଛରେ ଚଢ଼ିଲାବେଳେ ସେ ହଠାତ ଖସିପଡ଼ିଲା
naḍiā gatʰa-re tʃaḍʰilābe|e se haṭʰāṭ khas-i-paḍilā
 coconut tree-PP while.climbing he suddenly slip-LNK-fall.PST.3SG
 ‘While climbing the coconut tree, he suddenly fell down.’

This difference could be interpreted as a difference of size or effect: in (10a) it is only the hand that ‘slips down’, but the person remains in the tree, whereas in (10b) it is the whole person that falls down all the way. This difference of degree is also nicely illustrated by contexts where *kʰas-jā* ‘slip-go’ is used for assembled things falling apart, as in example (11). While the falling apart may still be unexpected, it is not implausible either for an assembled unit. In addition, the difference can be interpreted as a difference of degree of falling as well: the parts are not in their proper place, but are still ‘around’ somehow in the environment.

- (11) a. ମୋ ଚଷମାର କାଚଟା ଟିକେ ଖସି ଯାଇଛି, ତାକୁ ଟାଇଟ କରିବାକୁ ପଡ଼ିବ
mo tʃasamāra kātʃa-ṭā ṭike kʰas-i-jāitʃi, ṭāku tight karibāku
paḍiba [adapted from EC]
 my spectacles’s glass-CLF a bit slip-go.PRF.3SG, to.that tight do.INF have.to
 ‘The glass of my spectacles has become loose, I have to tighten that up.’

Similarly, the two sentences in (12) both refer to a tooth being lost, yet (12a) refers to its “coming apart” from the larger assembly, whereas (12b) refers to it having gone completely.

- (12) a. ମୋ ଦାନ୍ତଟା ଗୋଟେପଟେ ଟିକିଏ ଖସିଯାଇଛି
mo ḍāṇṭa-ṭā goṭepaṭe ṭikie kʰas-i-jāitʃi [EC]
 my tooth-CLF one.side a.little slip-LNK-go.PRF.3SG
 ‘My tooth has become loose on one side.’

b. ମୋ ଦାଢ଼ଟା ହଲୁଥିଲା, ଏବେ କୁଆଡ଼େ ଖସି ପଡ଼ିଲା

mo dāṇṭa-ṭā halu^hilā, ebe kuāḍe k^has-i-paḍilā [adapted from EC]

my tooth-CLF was shaking, now somewhere slip-LNK-fall.PST.3SG

‘My tooth was shaking, now has fallen down somewhere.’

Again, this can be interpreted as a difference of effect or impact: unexpectedly falling “apart” (still in the environment) vs. unexpectedly falling “away” (completely gone). In short, a higher degree of AFFECTEDNESS is also a feature contributing to degrees of mirativity (see also the discussion of ‘V-give’ and ‘V-drop’ below).

To simplify things we summarize below some of the contextual oppositions that we have found in the corpus data; all these contexts illustrate a difference of degree: the ‘V-fall’ construction encodes totally unexpected events, whereas ‘V-go’ encodes events that are unexpected, but for which some element in the context still makes them “somewhat expected” (because of the nature of things, the spatio-temporal setting, what is somewhat acceptable, etc.).

b^hāṇ ‘break’:

- glasses, cups and the like: breaking is not supposed to happen (always unexpected) but **can** happen and often does : ‘break-go’
- windows: really unexpected, not supposed to happen: ‘break-fall’

bas ‘sit’:

- unexpectedly high number of people sitting in a small hall [sitting is expected, there are chairs, etc. but high quantity is not]: ‘V-go’
- person who goes and sits on grass because he’s tired [sitting (on the ground) unexpected]

t^hāḍ ‘leave’:

- leave meeting for phone call and come back afterwards: ‘V-go’ (similarly: leave the dinner table to fetch something but come back)
- leave meeting and go home: ‘V-fall’ [leave dinner table because not hungry]

buli ‘turn’:

- fan is off, but wind made it turn [has potential to turn / be turned]: ‘V-go’
- the protesting crowd (unexpectedly) turned around: ‘V-fall’

maul ‘fade’ (‘disappear’):

- flowers fading after having blossomed [normal cycle, will return next day/season]: ‘V-go’
- plants becoming extinct [gone completely, will not return]: ‘V-fall’

kāṇḍ ‘cry’ (with tears):

- watching Titanic and crying [somewhat expected given the sad story/scenes]: ‘V-go’
- he was mocking me, and I uncontrollably started crying [unsupposed]: ‘V-fall’

In sum, intransitive ‘V-go’ and ‘V-fall’ both encode unexpected events, but differ in their degree of unexpectedness, where ‘V-go’ often refers to the expected within the unexpected which may also involve a difference of ‘size’. As we will show, such a difference in the degree of unexpectedness will also come back in the comparison of the two transitive LV-constructions, ‘V-drop’ and ‘V-give’ discussed next.

4.2.2. Transitive ‘-drop’ & ‘-give’

As indicated in Table 10, the two transitive light verbs ‘-drop’ and ‘-give’ share 34 verbs, which represents 22% of the V-give set (34 on 154 types) and 50% of the V-drop set (34 on 68 types). The shared token frequency is 545, of which 260 for V-drop (represents 83.6% of the total of 311 attestations), and 285 for V-give (represents 50.8% on a total of 561 attestations). In other words, there is a considerably higher degree of overlap between the two transitive light verbs ‘-drop’ and ‘-give’ than has been attested for intransitive ‘-fall’ and ‘-go’.

The degree of mirativity is higher with *pakā* ‘drop’ than with *ḍe* ‘give’, and the degree depends on various factors like difference of size of the object/event, and also the resulting impact it makes on the participants of the event. Consider the following examples, where the number or size, that is, ‘one tree’ vs. ‘all trees’, explains the use of ‘drop’ for an extended degree of mirativity and ‘give’ for a lesser degree.

- (13) a. ରାସ୍ତା ଡିଆରିକରିବାପାଇଁ ସେମାନେ ମୋ ନଡିଆ ଗଛଟା କାଟିଦେଲେ / ?କାଟିପକାଇଲେ
rāstā ḍiārikaribā pāi semāne mo naḍiā gatʰa-tā
kāt-i-ḍele / ?kāt-i-pakāile [EC]
 road make-doing for they my coconut tree-CLF
 cut-LNK-give.PST.3PL / ? cut-LNK-drop.PST.3PL

‘For making the road, they cut down my coconut tree.’

- b. ସ୍ଥାନାଭାବ ଯୋଗୁ ଲୋକେ ଗଛ କାଟି ପକାଉଛନ୍ତି /?? କାଟିଦେଉଛନ୍ତି

s ʰānābhāba jogu loke gatʰa kāt-i-pakāuchan ʈi / ?? kāt-i-ḍeʊʰan ʈi [adapted from EC]

lack of place for people tree cut-LNK-drop.PROG.3PL / ?? cut-LNK-give.PROG.3PL

‘Because of scarcity of space people are cutting down the trees.’

Similarly, the amount of impact created by the event influences the choice of the light verb. The following examples illustrate the resulting impact produced by swallowing a capsule (probably for one’s health benefit) vs. swallowing fire (by the Lord Krishna) thereby saving the lives of many people.

- (14) a. ସେ କ୍ୟାପସୁଲଟିକୁ ପାଟିରେ ରଖି ଗିଳିଦେଲା

se capsule-ʈiku pāṭi-re rakʰi giḷ-i-ḍelā
he capsule-CLF.ACC mouth-PP keep.PRF swallow-LNK-give.PST.3SG
‘He put the capsule in mouth and swallowed it.’

- b. ସମସ୍ତଙ୍କୁ ରକ୍ଷା କରିବାପାଇଁ କୃଷ୍ଣ ନିଆଁକୁ ଗିଳି ପକାଇଲେ

samastānku rakhyā karibā pāi krushna niā-ku giḷ-i-pakāile [EC]
to all save doing for Krishna fire-ACC swallow-LNK-drop-PST.3SG.HON
‘To save people from fire (Lord) Krishna swallowed the fire.’

Another example where a difference of both size and impact influences the choice of the light verb is given below, where ‘breaking the top of a palace’ (‘break-give’) is clearly less damaging than ‘breaking apart a big country’ (‘break-drop’).

- (15) a. ଶତ୍ରୁମାନେ ଆସି ନୂଆ ପ୍ରାସାଦର ଶିଖର ଭାଙ୍ଗିଦେଲେ

śa ʈrumāne āsi nuā prasāḍara śikʰara bhāṅ-i-ḍele [EC]
enemies come.PRF new palace’s top break-LNK-give.PST.3PL
‘Enemies came and broke away the top of the new palace.’

- b. ଏ ପ୍ରକାର ଆତଙ୍କ ବଡ଼ ଦେଶକୁ ଭାଙ୍ଗି ପକାଇବ, ବିଦୀରଣ କରିଦେବ

e prakāra āṭanka baḍa deśaku bhāṅ-i-pakāiba, biḍiraṇa
kar-i-ḍeba [EC]
this type terror big country-ACC break-LNK-drop.FUT.3SG, torn.apart
do-LNK-give.FUT.3SG
‘Such type of terror could break apart a big country and will tear apart.’

This difference is not restricted to concrete objects or situations, it can also be seen with abstract objects or events, like ‘saying a small thing’ vs. ‘speaking your mind’, as in the following example.

- (16) a. କାଲି ସକାଳୁ ଆସନ୍ତୁ, ମୁଁ କହିଦେବି

kāli sakāḷu āsan ʈu, mū kah-i-ḍebi
tomorrow morning come.HON.IMP, I say-LNK-give.FUT.1SG
‘Come tomorrow morning, I’ll tell you about it.’

b. ରାଜା ମନ୍ତ୍ରୀ ଜଣେ ଜଣକୁ ନିଜ ମନର କଥା କହି ପକାଇଲେ

rājā mantri jaṇe jaṇaku nija manara kaṭhā kah-i-pakāile [EC]
king minister one one.ACC self mind's story say-LNK-drop.PST.3PL
'The king and the minister exchanged ideas between each other' (lit. 'one to one')

Below we give a (non-exhaustive) list of some of the contextual oppositions that we have found in the corpus data; in line with what was explained above, the construction with 'V-drop' is much stronger with respect to size, force or impact which implies a higher degree of mirativity. These differences can either be related the feature of AFFECTEDNESS or to that of volitionality or control on behalf of the Agent. Following Hopper & Thompson (1980), both these features can be said to play a role in the degree of transitivity, which reinforces the link between mirativity and transitivity, as explained earlier.

q̣^hari 'hold':

- hold someone's bag ('V-give')
- courageously hold the reins of a horse ('V-drop')

k^hol 'open':

- The princess got up and opened the door ('V-give')
- what a shameless girl, she took off her clothes before everybody ('V-drop')

mod 'turn, twist':

- your son is so naughty! He twisted my hand ('V-give')
- he held both the teeth of the elephant and twisted them ('V-drop')

bānq̣^h 'tie':

- the police tie (= 'arrest') a thief ('V-give')
- the child monkey (the god Hanuman) jumped up to the moon and tied ('caught') it ('V-drop')

poḷ 'bury'

- bury (=sow) seeds ('V-give')
- burying garbage ('V-drop')

has 'laugh':

- little laugh or smile about a joke ('V-give')

- normal laugh with someone's foolishness ('V-drop')

k^hā 'eat':

- without thinking anything, he ate up all the sweets ('V-give')
- watch him or he will eat up all the sweets secretly ('V-drop')

pot^hi 'erase':

- Virgin Mary had erased her own marriage and love from her mind ('V-give')
- erase anything about revolution from your mind ('V-drop')

The higher impact implied by 'V-drop' need not always be physical, but can be moral, as in the case of the shameless girl opening her dress opposed to the opening of a door (still coded as unexpected here via a light verb construction, since it is unusual that it is done by someone of as high a rank as a princess). Similarly, what the Virgin Mary forgets is one element of her personal life (marriage and love), whereas a revolution can be argued to be of much grander scale. The difference can sometimes also pertain to careful vs. more brutal work: sowing seeds (one by one) is quite different from burying garbage (a big mass, more laborious, having a greater impact). Typically, the contexts with 'V-drop' have quantifiers or adverbs that express a high impact and/or extension of the process (such as 'all', 'everything', 'everywhere', etc.) as well as other adverbs that somehow relate to the intensity of the process ('in a hurry', 'courageously', 'loudly', etc.). In some cases, the difference pertains more to degrees of unsuspectedness, as in a person being distracted and eating all the sweets versus eating something secretly (highly unsuspected).

In sum, the contrastive corpus examples (with the same lexical verb) confirm the difference of the degree of mirativity between 'V-give' (lower) and 'V-drop' (highest) where this degree is realized via different contextualized scales (size, impact, strength, intensity, etc.). The degree of mirativity can be related to the (variable) result of an action discussed above as well as with that of volitionality and/or control: the higher the impact of an action or event (=result) or the higher the control required by the Agent to carry it out (=volitionality), the higher the degree of mirativity.

5. Conclusions

As has become clear from the above discussion, Odia has grammaticalized the expression of mirativity in four light verb constructions *V-jā* ‘V-go’, *V-paḍ* ‘V-fall’, *V-ḍe* ‘V-give’, and *V-pakā* ‘V-drop’. All four share two meanings: (i) they express the **completion** of the event expressed by the main verb and (ii) they have a **mirative value**, expressing that this event (or its completion) is **unexpected** or is **not supposed** to have happened. In this paper, we have furthermore argued that there is a cline of mirativity: intransitive *V-paḍ* ‘V-fall’ expresses a higher degree of mirativity than does intransitive *V-jā* ‘V-go’; similarly, transitive *V-pakā* ‘V-drop’ expresses a higher degree of mirativity than transitive *V-ḍe* ‘V-give’. A pair-wise collostructional analysis of our corpus attestations did reveal some possible tendencies in that direction, but did not provide any reliable confirmation. However, the pair-wise comparison of contexts in which the same lexical verb can occur with two different LV constructions, did show quite convincingly that there is a degree of mirativity within each transitivity pair. While it still encodes unexpectedness, intransitive *V-jā* ‘V-go’ was shown to express “the expected within the unexpected” (bones breaking in an accident or sitting in a hall with chairs) or events of lower ‘size’ (hand or foot slipping away, or assembled parts falling apart) as opposed to a coding with *V-paḍ* ‘V-fall’ referring to events that are more unexpected or of bigger size (windows breaking, human being falling down to the ground). Similarly, within the transitive pair *V-pakā* ‘V-drop’ was shown to invariably refer to events that involved a higher force a higher impact (of whatever kind) or a larger extension than *V-ḍe* ‘V-give’. The different degrees of mirativity can thus be related to the features that play a role in degrees of transitivity, as described in Hopper & Thompson (1980).

While this was confirmed for the majority of cases where the same verb was used with different light verbs, there were a few contexts where no such objective differences could be ascertained. At the same time, in these cases, the intuition is that there is a strong(er) negative stance or attitude of the speaker towards the event. The example of the bold/shameless girl opening her dress is a good illustration of this. Such a (pragmatically determined) reading may not (and often does not) show up in the form of contextual clues for higher mirativity (as were attested for most of the examples). It also explains why a light verb construction is still possible for a sentence like *We expect that he will eat all the rice*: even

if he is expected to act this way (no mirativity), such action may still be considered as unsupposed, against the background of social and/or cultural norms. While the speaker's disapproval may start out as a pragmatic meaning, repeated use may gradually make this an inherent part of the constructions in question especially for the light verbs higher up on the cline of mirativity, which often have such an additional value judgement of unsupposedness (and thus often inappropriateness), even if there may not be any overt contextual clues related to mirativity.¹⁶ In fact, the frequent use of these light verb constructions and the issue of mirativity could thus be related to the larger cultural importance that is given to what is appropriate and what is not. While our corpus-data has confirmed clear patterns of use and the different degrees of mirativity within each transitivity pair, further confirmation via acceptability judgements or controlled elicitation experiments is planned for future research.

Our study of Odia light verbs provides an answer to Peterson's observation that "cross-linguistically there are surprisingly few clear examples of non-parasitic grammatical miratives in the descriptive literature" (2013, p. 35). More importantly, however, our study sheds further light on the complex category that mirativity is. Confronted with a myriad of specialised meanings that have been subsumed under the label "mirativity" (such as 'surprise', 'immediate meaning', 'lack of awareness', 'unexpectedness', and 'new information' etc.), Peterson (2013), referring to Hill (2012), takes a strict point and claims that "there is one feature common to all of the descriptions – surprise – and this is what mirativity actually is." (2013, p. 51). Our study invites to a less strict view, as in Odia mirativity covers both unexpectedness (surprise) and unsupposedness (not necessarily surprise); in addition, the constructions expressing a higher degree of mirativity may acquire a further attitudinal value of disapproval. Within a cognitive perspective on categorization (see, e.g., Lemmens 2015) such a view on mirativity would be entirely coherent, as it would be regarded as a complex category with interrelated meanings (cf. also the four interrelated subcategories suggested by Montaut (2006) for the mirative readings of the aorist in Hindi/Urdu) that are structured around a prototype, in this case the notion 'surprise'. Whether or not that makes mirativity a universal grammatical category (i.e., a linguistic universal; see DeLancey 2012, Hill 2012, Peterson 2013) is still fairly much an *empirical* question that requires more careful research on a wide variety of languages. We hope that the methodology presented in this paper can provide interesting avenues for such work.

Abbreviations

ACC: accusative, AUX: auxiliary, ASP: aspectual marking, CAUS: causative marker, CLF: classifier, COMP: complementizer, DEF: definite, LNK: linker, EMPH: emphatic particle, FUT: future, GEN: genitive, HON: honorific, IMP: imperative, INDF: indefinite, INS: instrumental, LOC: locative, LV: light verb, NEG: negative marker, PASS: passive, PST: past, PRF: perfect, PL: plural, PP: postposition, PROG: progressive, SG: singular

Acknowledgements

The authors kindly thank Agnès Celle for the invitation to present this research at the workshop *Mirativity, Emotion and Cognition*, held at Université Paris Diderot, April 1, 2016. We also thank Dany Amiot, Bert Capelle, Cedric Patin, Fayssal Tayalati, Kristel Van Goethem, Patrick Caudal, and Tyler Peterson for their constructive comments. Finally we would like to thank the two anonymous reviewers for their excellent reviews of the earlier version of this paper. All remaining inaccuracies are of course our responsibility.

Notes

¹ See, for instance, Aksu-Koç & Slobin (1986) on Turkish, T. Peterson (2013) on Gitksan, Montaut on Hindi/Urdu, J. Peterson (2000) on Nepali, Bashir (2010) on Shina, or Napiorkowska (2016) on Neo-Arameic.

² See below for the difference between the notions UNEXPECTED and UNSUPPOSED which in Odia depends on the context in which the light verb is used.

³ It is this attitudinal value that leads Napiorkowska (2016) to consider mirativity to fall within the domain of modality: “If [...] we consider the expression of surprise as the core function of mirativity, we are then primarily concerned with the speaker’s attitude towards the proposition. In this light, mirativity would, by definition, still fall within the domain of modality” (2016:1-2).

⁴ For ease of reading, we will in the main text drop the linking element -i: *V-jā* ‘V-go’ is thus a shorthand for *V-i-jā* ‘V-LNK-go’; we will use the same short hand for specific instances, e.g., “*k^hā-de* eat-give” stands for “*k^hā-i-de* eat-LNK-give”.

⁵ As indicated, the combination of mirativity and onset also occurs in Odia, with the LV *-u^h* ‘rise’ not considered here. As rightly noted by Wiklund (2009), in the Swedish light verb constructions *gå och V* ‘go and V’ and *ta och V* ‘take and V’, it is also the onset of the event not its result which is responsible for the surprise.

⁶ Glossing is done following the Leipzig Glossing Rules (see <http://www.eva.mpg.de/lingua/resources/glossing-rules.php>). At the end of the article, we give an exhaustive list of glosses used in this article, including those not found in the Leipzig glossing rules (HON: honorific, LNK: linker, EMPH: emphatic particle, PP: postposition).

⁷ Importantly, it is the transitive lexical verb *sār* ‘finish_{TRANS}’ that is used in the V-finish construction, not the intransitive lexical counterpart *sar* ‘finish_{INTR}’. This suggests that the whole *V-i-sār* construction is transitive, where the main V (or the VP) is regarded, both semantically and syntactically, as the object of (transitive) *sār*. This is quite different from the situation with the other light verbs.

⁸ See Hopper and Thompson (1980) for a thorough discussion of degree of transitivity, in which the feature VOLITIONALITY plays a role as well in addition to others like AFFECTEDNESS, KINESIS, PUNCTUALITY, etc.

⁹ The Odia texts were originally gathered by the Institute of Applied Language Sciences, Bhubaneswar. The EMILLE corpus is available from the (European Language Resources Association (<http://www.elra.info/en/>) reference ELRA-W0037. The Odia script made it difficult to run extractions with some existing concordance software.

¹⁰ Given the high frequency of the light verbs *-jā* ‘-go’ and *-de* ‘-give’ the sets have been limited at 560 and 561 sentences respectively.

¹¹ While such semantic compatibility holds as a general requirement, it can be violated in cases of “coercion” as in *She giggled her way through the crowd* where the (intransitive) verb of laughter *giggle* is modified to (transitive) motion verb by the Caused Motion construction. Such cases are not relevant to the present discussion which considers verbs that are significantly attracted to, or repulsed by, a given construction.

¹² See Stefanowitsch & Gries 2005 for an argument in favour of using the Fisher Exact test.

¹³ These values are generated automatically by the R-script written by S. Gries, use of which is hereby kindly acknowledged.

¹⁴ Unfortunately (but expectedly), our data set does not often provide exact matching contrastive contexts; however, some of the examples do provide compelling illustration of the pattern observed and allow us to build contrastive examples. Some of the examples (or contexts) given below will thus be from the corpus, others are constructed examples to match these.

¹⁵ “EC” identifies the example as taken from the Emille Corpus; examples without such a code are constructed examples.

¹⁶ See Lemmens (2017) for a more theoretical discussion of such a process of semanticization of pragmatic meaning.

References

- Abbi, A. & Gopalakrishnan, D. (1991). Semantics of Explicator Compound Verbs in South-Asian Languages. *Language Sciences*, 13(2), 161-180.
- Aksu-Koç, A. & Slobin, D. I. (1986). A psychological account of the development and use of evidentials in Turkish. In W. Chafe & J. Nichols (eds.), *Evidentiality: The linguistic coding of epistemology. Advances in Discourse Processes XX*, 159-167. Norwood, N J: Ablex.
- Aikhenvald, A. Y. (2012). The essence of mirativity. *Linguistic Typology* 16(3). 435-486.
- McEnery, A.M., Baker, P. & Hardie, A. (2003). The EMILLE Corpus. <http://www.ling.lancs.ac.uk/corplang/emille>.
- Bashir, E. (2010). Traces of Mirativity in Shina. *Himalayan Linguistics*, 9(2), 1-55.
- Butt, M. (1995). *The Structure of Complex Predicates in Urdu*. Stanford, CA: CSLI Publications.
- Butt, M. & Geuder, W. (2001). On the (semi) lexical status of light verbs. In: N. Corver, & H. van Riemsdijk (eds.), *Semilexical Categories: On the Content of Function Words and the Function of Content Words* (pp. 323-370). Berlin: Mouton de Gruyter.
- Butt, M. & Lahiri, A. (2002). Historical Stability vs. Historical Change. Ms (available at <http://ling.uni-konstanz.de/pages/home/butt/>).
- DeLancey, S. (1997). Mirativity: The grammatical marking of unexpected information. *Linguistic Typology* 1, 33-52.
- DeLancey, S. (2012). Still mirative after all these years. *Linguistic Typology*, 16(3), 529-564.
- Dickinson, C. (2000). Mirativity in Tsafiki. *Studies in Language*, 24(2), 379-421.
- Goldberg, A. E. (1995). *Constructions: A Construction Grammar Approach to Argument Structure*. Chicago: Chicago University Press.
- Goldberg, A. E. (2006). *Constructions at Work. The nature of generalization in language*. Oxford: Oxford University Press.
- Gries, S. Th. (2007). Coll.analysis 3.2. A program for R for Windows 2.x.
- Gries, S. Th. & Stefanowitsch, A. (2004). Extending collostructional analysis. A corpus-based perspective on 'alternations'. *International Journal of Corpus Linguistics* 9, 97-129.
- Hay, J. & Plag, I. (2004). 'What constrains possible suffix combinations? On the interaction of grammatical and processing restrictions in derivational morphology', *Natural Language and Linguistic Theory*, 22, 565-596.
- Hill, N. W. (2012). "Mirativity" does not exist: *hdug* in "Lhasa" Tibetan and other suspects. *Linguistic Typology*, 16(3): 389-433.
- Hilpert, M. (2014). *Construction Grammar and its application to English*. Edinburgh: Edinburgh University Press.
- Hook, P. E. (1993). Aspectogenesis and the Compound Verb in Indo-Aryan. In: M. K. Verma (ed.), *Complex Predicates in South Asian Languages* (pp 97-113). New Delhi: Manohar Publication.
- Hopper, P. J. & Thompson, S. A. (1980). Transitivity in Grammar and Discourse. *Language*, 56(2), 251-299.
- Lazard, G. 1999 (2009). Mirativity, evidentiality, mediativity, or other? *Linguistic Typology*, 3(1), 91-109.
- Montaut, A. (2006). Mirative meanings as extensions of aorist in Hindi/Urdu. In: Singh, R. (Ed.) *The Yearbook of South-Asian Languages and Linguistics*, 71-86. Berlin: Mouton de Gruyter.
- Lemmens, M. (2017). A cognitive, usage-based view on lexical pragmatics. In: Depraetere, I. & Salkie, R. (Eds.) *Semantics and Pragmatics: Drawing a Line*. Springer, 101-114.
- Lemmens, M. (2015). Cognitive semantics. In: Riemer, N. (Ed.) *Routledge Handbook of Semantics*. (pp. 90-105). London & New York: Routledge.
- Lemmens, M. & Sahoo, K. (2017). *Something's gotta go, something's gotta give*: Completion, mirativity, and transitivity in Odia light verb constructions. *Studia Linguistica*.
- Lemmens, M. & Sahoo, K. (ms.). *Rise and be surprised*: Aspectual profiling and mirativity in Odia light verb constructions.
- Napiorkowska, L. (2016). Mirativity and the near deixis copula *dule* in Neo-Aramaic. *Journal of Pragmatics*, 98(1), 1-17.
- Peterson, J. (2000). Evidentials, inferentials and mirativity in Nepali. *Linguistics of the Tibeto-Burman Area*, 23(2), 13-37.

Author-produced prepublication version. Please refer to and quote from the published version: Sahoo, K. & M. Lemmens (2017). Degrees of mirativity. *Review of Cognitive Linguistics* 15(2), 343-384.

- Peterson, T. (2013). Rethinking mirativity: the implication and expression of surprise. http://semarch.linguistics.fas.nyu.edu/Archive/2FkYTg4O/Rethinking_Mirativity.pdf.
- Peterson, T. (2015). Mirativity as Surprise: Evidentiality, Information, and Deixis. *Journal of Psycholinguistic Research* 45(6), 1327-1357.
- Peterson, T. (this volume). Problematizing mirativity.
- Sahoo, K. (2001). *Oriya verb morphology and complex verb constructions*. Doctoral dissertation, Norwegian University of Science & Technology, Trondheim, Norway.
- Stefanowitsch, A. & Gries, S. Th. (2003). Collostructions: Investigating the interaction of words and constructions. *International Journal of Corpus Linguistics* 8, 209–243.
- Stefanowitsch, A. & Gries, S. Th. (2005). Covarying collexemes. *Corpus Linguistics and Linguistic Theory* 1(1), 1-43.
- Wiklund, A. (2009). The syntax of surprise. Unexpected event readings in complex predication. *Working Papers in Scandinavian Syntax*, 84, 181–224.

Appendix

Table 1. Frequencies ‘V-fall’

Verb	English gloss	Freq
<i>ho</i>	become	189
<i>bāhār</i>	get ready, come out	27
<i>k^has</i>	slip	19
<i>lag</i>	touch	18
<i>bas</i>	sit	17
<i>fo</i>	sleep	15
<i>b^hāṇ</i>	break	13
<i>deĩ</i>	jump	11
<i>j^har</i>	spring forth from	9
<i>b^husud</i>	collapse	8
<i>tʃamak</i>	get frightened/surprised	6
<i>olaṭ</i>	turn down	6
<i>d^haḷ</i>	lean	4
<i>olhā</i>	get down	4
<i>ṭaḷ</i>	fall dying	4
<i>uṭ^h</i>	wake up, get up	4
<i>boh</i>	flow	3
<i>gaḍ</i>	roll	3
<i>naĩ</i>	lean, bend, bow	3
<i>j^had</i>	fall down	2
<i>j^hul</i>	hang	2
<i>j^hunṭ</i>	stumble	2
<i>ohaḷ</i>	hang (on to)	2
<i>p^hāṭ</i>	burst	2
<i>baḷ</i>	leave out	1
<i>bul</i>	turn	1
<i>tʃāl</i>	walk	1
<i>d^has</i>	collapse, fall down	1
<i>gaḷ</i>	pierce	1
<i>j^hāmp</i>	cover (intr.)	1
<i>k^hāl</i>	become empty	1
<i>mauḷ</i>	fade	1
<i>p^huṭ</i>	explode, blossom	1
<i>uṭṭiṭ^huḷ</i>	overflow	1

Table: 2. Frequencies ‘V-go’

Verb	English gloss	Freq
<i>ho</i>	become	138
<i>tʃāl</i>	walk	52
<i>paḍ</i>	fall	30
<i>rah</i>	stay	18
<i>pahantʃ</i>	arrive	17
<i>ās</i>	come	16
<i>ne</i>	take	13
<i>biṭ</i>	pass (time)	11
<i>sar</i>	finish	10

Author-produced prepublication version. Please refer to and quote from the published version: Sahoo, K. & M. Lemmens (2017). Degrees of mirativity. *Review of Cognitive Linguistics* 15(2), 343-384.

<i>baq^h</i>	grow	9
<i>lag</i>	touch, burn	9
<i>miʃ</i>	combine, adjoin	9
<i>pā</i>	get, receive	9
<i>mar</i>	die	8
<i>b^hāṇ</i>	break	7
<i>pa ā</i>	flee	7
<i>fu^hk</i>	dry	7
<i>ub^h</i>	disappear	7
<i>bāhār</i>	get ready, come out	6
<i>kaʃ</i>	get cut, disappear (time)	6
<i>k^he </i>	play	6
<i>mi </i>	get, achieve	6
<i>paʃ</i>	enter	6
<i>p^her</i>	return	6
<i>uq</i>	fly	6
<i>bas</i>	sit	5
<i>g^her</i>	surround	5
<i>kah</i>	speak	5
<i>luʃ</i>	hide	5
<i>b^hul</i>	forget	4
<i>qar</i>	get frightened	4
<i>hār</i>	get defeated	4
<i>ja </i>	burn	4
<i>kar</i>	do	4
<i>pālaʃ</i>	change, turn into	4
<i>rāg</i>	get angry	4
<i>fo</i>	sleep	4
<i>uʃ^h</i>	wake up, get up	4
<i>āge</i>	proceed	3
<i>baqal</i>	change	3
<i>buq</i>	drown, sink	3
<i>byāp</i>	spread	3
<i>tʃ^hād</i>	leave	3
<i>gaq</i>	roll	3
<i>kam</i>	decrease	3
<i>k^hā</i>	eat	3
<i>lib^h</i>	extinguish	3
<i>fi^h</i>	boil	3
<i>b^har</i>	fill	2
<i>bu^hj</i>	understand	2
<i>tʃaq^h</i>	climb	2
<i>qab</i>	depress, become suppressed	2
<i>qe</i>	give	2
<i>g^hat</i>	happen	2
<i>haj</i>	lose	2
<i>k^hol</i>	open (alternating verb)	2
<i>mān</i>	obey	2
<i>p^hiʃ</i>	open (intr.)	2
<i>aʃak</i>	stop	1
<i>bāj</i>	touch, hit	1

Author-produced prepublication version. Please refer to and quote from the published version: Sahoo, K. & M. Lemmens (2017). Degrees of mirativity. *Review of Cognitive Linguistics* 15(2), 343-384.

<i>bah</i>	flow	1
<i>ba </i>	leave	1
<i>bantf</i>	become alive	1
<i>bart</i>	escape	1
<i>bul</i>	turn	1
<i>d^hāi</i>	run	1
<i>d^har</i>	catch	1
<i>ḍoud</i>	jump	1
<i>qub</i>	drown, engross	1
<i>ḍure</i>	go away	1
<i>g^hen</i>	come along, accompany (intr.)	1
<i>g^hoṭ</i>	spread out, scatter (intr.)	1
<i>jāṇ</i>	know	1
<i>j^hāun </i>	fade	1
<i>jiṭ</i>	win	1
<i>jod</i>	add; adjoin	1
<i>juṭ</i>	get together, coincide	1
<i>k^has</i>	slip	1
<i>lāk^h</i>	get stuck	1
<i>lek^h</i>	write	1
<i>māḍ</i>	rush	1
<i>mau </i>	fade	1
<i>mi ā</i>	dilute (formal)	1
<i>mile</i>	dilute (informal)	1
<i>ohar</i>	get away	1
<i>olhe</i>	get down	1
<i>pātṭ</i>	ripen	1
<i>poḍ</i>	burn, roast	1
<i>pur</i>	fill (intr.)	1
<i>rak^h</i>	keep	1
<i>ṣank</i>	shrink (metaph.)	1
<i>ṣik^h</i>	learn	1
<i>t^hak</i>	cheat	1
TOTAL		560

Table: 3. Comparison ‘V-go’ and ‘V-fall’

LV	Type	Token	TTR	# hapaxes	Hapax/Token
<i>V-go</i>	93	560	1.66	35	0.06
<i>V-fall</i>	35	383	0.091	10	0.03
TOTAL	128	943			

Table: 4. Collostructional analysis for V-go and V-fall

Words	obs.freq. 1	obs.freq. 2	exp.freq.1 <i>fall</i>	exp.freq.2 <i>go</i>	pref.occu r	delta.p.const r.to.word	delta.p.word. to.constr	coll.strengt h
<i>fall</i>		<i>go</i>						

Author-produced prepublication version. Please refer to and quote from the published version: Sahoo, K. & M. Lemmens (2017). Degrees of mirativity. *Review of Cognitive Linguistics* 15(2), 343-384.

ho	191	138	134.2431	194.7569	fall	0.2484	0.2645	14.5026
k ^h as	20	1	8.5687	12.4313	fall	0.05	0.5567	6.7986
bāhār	27	6	13.4651	19.5349	fall	0.0592	0.425	5.941
qein	11	0	4.4884	6.5116	fall	0.0285	0.5989	4.3194
j ^h ar	9	0	3.6723	5.3277	fall	0.0233	0.5977	3.528
bas	17	5	8.9767	13.0233	fall	0.0351	0.3734	3.3086
b ^h usud	8	0	3.2643	4.7357	fall	0.0207	0.597	3.1333
fo	15	4	7.7526	11.2474	fall	0.0317	0.3893	3.1326
tʃamak	6	0	2.4482	3.5518	fall	0.0155	0.5957	2.3459
olaʃ	6	0	2.4482	3.5518	fall	0.0155	0.5957	2.3459
lag	18	9	11.0169	15.9831	fall	0.0306	0.2662	2.2732
b ^h āṇ	13	7	8.1607	11.8393	fall	0.0212	0.2472	1.6216
q ^h al	4	0	1.6321	2.3679	fall	0.0104	0.5945	1.5612
olhā	4	0	1.6321	2.3679	fall	0.0104	0.5945	1.5612
taʃ	4	0	1.6321	2.3679	fall	0.0104	0.5945	1.5612
boh	3	0	1.2241	1.7759	fall	0.0078	0.5938	1.1699
naī	3	0	1.2241	1.7759	fall	0.0078	0.5938	1.1699
j ^h aq	2	0	0.8161	1.1839	fall	0.0052	0.5932	0.7793
j ^h ul	2	0	0.8161	1.1839	fall	0.0052	0.5932	0.7793
j ^h unʃ	2	0	0.8161	1.1839	fall	0.0052	0.5932	0.7793
ohaʃ	2	0	0.8161	1.1839	fall	0.0052	0.5932	0.7793
p ^h āʃ	2	0	0.8161	1.1839	fall	0.0052	0.5932	0.7793
tʃahal	1	0	0.408	0.592	fall	0.0026	0.5926	0.3893
d ^h as	1	0	0.408	0.592	fall	0.0026	0.5926	0.3893
gaʃ	1	0	0.408	0.592	fall	0.0026	0.5926	0.3893
j ^h āmp	1	0	0.408	0.592	fall	0.0026	0.5926	0.3893
k ^h āl	1	0	0.408	0.592	fall	0.0026	0.5926	0.3893
p ^h uʃ	1	0	0.408	0.592	fall	0.0026	0.5926	0.3893
utʃiʃuʃ	1	0	0.408	0.592	fall	0.0026	0.5926	0.3893
uʃh	4	4	3.2643	4.7357	fall	0.0032	0.0928	0.3722
gaq	3	3	2.4482	3.5518	fall	0.0024	0.0926	0.3257
baʃ	1	1	0.8161	1.1839	fall	8e-04	0.0922	0.1872
bul	1	1	0.8161	1.1839	fall	8e-04	0.0922	0.1872
mauʃ	1	1	0.8161	1.1839	fall	8e-04	0.0922	0.1872
tʃāl	0	52	21.2178	30.7822	go	-0.0929	-0.4318	12.2819
paq	0	30	12.241	17.759	go	-0.0536	-0.4214	6.9727
rah	0	18	7.3446	10.6554	go	-0.0321	-0.4159	4.1479
pahantʃ	0	17	6.9366	10.0634	go	-0.0304	-0.4155	3.9147
ās	0	16	6.5285	9.4715	go	-0.0286	-0.4151	3.6818
ne	0	13	5.3044	7.6956	go	-0.0232	-0.4137	2.9851
biʃ	0	11	4.4884	6.5116	go	-0.0196	-0.4128	2.5223
sar	0	10	4.0803	5.9197	go	-0.0179	-0.4124	2.2914
baq ^h	0	9	3.6723	5.3277	go	-0.0161	-0.412	2.0608
miʃ	0	9	3.6723	5.3277	go	-0.0161	-0.412	2.0608
pā	0	9	3.6723	5.3277	go	-0.0161	-0.412	2.0608
mar	0	8	3.2643	4.7357	go	-0.0143	-0.4115	1.8305
paʃā	0	7	2.8562	4.1438	go	-0.0125	-0.4111	1.6006
ʃuk ^h	0	7	2.8562	4.1438	go	-0.0125	-0.4111	1.6006
ub ^h	0	7	2.8562	4.1438	go	-0.0125	-0.4111	1.6006
kaʃ	0	6	2.4482	3.5518	go	-0.0107	-0.4106	1.371
k ^h eʃ	0	6	2.4482	3.5518	go	-0.0107	-0.4106	1.371
miʃ	0	6	2.4482	3.5518	go	-0.0107	-0.4106	1.371
paʃ	0	6	2.4482	3.5518	go	-0.0107	-0.4106	1.371
p ^h er	0	6	2.4482	3.5518	go	-0.0107	-0.4106	1.371
uq	0	6	2.4482	3.5518	go	-0.0107	-0.4106	1.371
g ^h er	0	5	2.0402	2.9598	go	-0.0089	-0.4102	1.1417
kah	0	5	2.0402	2.9598	go	-0.0089	-0.4102	1.1417
lutʃ	0	5	2.0402	2.9598	go	-0.0089	-0.4102	1.1417
b ^h ul	0	4	1.6321	2.3679	go	-0.0071	-0.4098	0.9127
qar	0	4	1.6321	2.3679	go	-0.0071	-0.4098	0.9127
hār	0	4	1.6321	2.3679	go	-0.0071	-0.4098	0.9127
jaʃ	0	4	1.6321	2.3679	go	-0.0071	-0.4098	0.9127
kar	0	4	1.6321	2.3679	go	-0.0071	-0.4098	0.9127

Author-produced prepublication version. Please refer to and quote from the published version: Sahoo, K. & M. Lemmens (2017). Degrees of mirativity. *Review of Cognitive Linguistics* 15(2), 343-384.

<i>pālaṭ</i>	0	4	1.6321	2.3679	go	-0.0071	-0.4098	0.9127
<i>rāg</i>	0	4	1.6321	2.3679	go	-0.0071	-0.4098	0.9127
<i>āge</i>	0	3	1.2241	1.7759	go	-0.0054	-0.4093	0.6841
<i>baḍaḷ</i>	0	3	1.2241	1.7759	go	-0.0054	-0.4093	0.6841
<i>buḍ</i>	0	3	1.2241	1.7759	go	-0.0054	-0.4093	0.6841
<i>byāp</i>	0	3	1.2241	1.7759	go	-0.0054	-0.4093	0.6841
<i>tʰāḍ</i>	0	3	1.2241	1.7759	go	-0.0054	-0.4093	0.6841
<i>kam</i>	0	3	1.2241	1.7759	go	-0.0054	-0.4093	0.6841
<i>kʰā</i>	0	3	1.2241	1.7759	go	-0.0054	-0.4093	0.6841
<i>libʰ</i>	0	3	1.2241	1.7759	go	-0.0054	-0.4093	0.6841
<i>sijʰ</i>	0	3	1.2241	1.7759	go	-0.0054	-0.4093	0.6841
<i>bʰar</i>	0	2	0.8161	1.1839	go	-0.0036	-0.4089	0.4557
<i>buḷʰ</i>	0	2	0.8161	1.1839	go	-0.0036	-0.4089	0.4557
<i>tʰaḍʰ</i>	0	2	0.8161	1.1839	go	-0.0036	-0.4089	0.4557
<i>ḍab</i>	0	2	0.8161	1.1839	go	-0.0036	-0.4089	0.4557
<i>ḍe</i>	0	2	0.8161	1.1839	go	-0.0036	-0.4089	0.4557
<i>gʰaṭ</i>	0	2	0.8161	1.1839	go	-0.0036	-0.4089	0.4557
<i>haj</i>	0	2	0.8161	1.1839	go	-0.0036	-0.4089	0.4557
<i>kʰol</i>	0	2	0.8161	1.1839	go	-0.0036	-0.4089	0.4557
<i>mān</i>	0	2	0.8161	1.1839	go	-0.0036	-0.4089	0.4557
<i>pʰiṭ</i>	0	2	0.8161	1.1839	go	-0.0036	-0.4089	0.4557
<i>aṭak</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>bāj</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>bah</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>bantʰ</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>barṭ</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>ḍʰāi</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>ḍʰar</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>ḍoud</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>ḍub</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>ḍure</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>gʰen</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>gʰoṭ</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>jāṇ</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>jʰāun</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>jṭ</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>joḍ</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>juṭ</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>lākʰ</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>lekʰ</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>māḍ</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>miḷā</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>mile</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>ohari</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>olhei</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>pātʰ</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>poḍ</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>pur</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>rakʰ</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>ṭank</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>ṭikʰ</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277
<i>ṭak</i>	0	1	0.408	0.592	go	-0.0018	-0.4085	0.2277

If your collocation strength is based on p-values, it can be interpreted as follows: Coll.strength>3 => p<0.001; coll.strength>2 => p<0.01; coll.strength>1.30103 => p<0.05.

Table: 5. Frequencies ‘V-give’

verb	English gloss	FREQ
<i>kar</i>	do	134

Author-produced prepublication version. Please refer to and quote from the published version: Sahoo, K. & M. Lemmens (2017). Degrees of mirativity. *Review of Cognitive Linguistics* 15(2), 343-384.

<i>t/hāḍ</i>	leave	30
<i>jog</i>	supply	27
<i>jaṇ</i>	know	18
<i>baḍh</i>	increase	16
<i>āṇ</i>	bring	15
<i>kah</i>	tell	14
<i>pakā</i>	drop	14
<i>lagā</i>	strike, apply, apply.fire	13
<i>paṭ^hā</i>	send	12
<i>ḍe</i>	give	11
<i>ḍek^h</i>	see	10
<i>mār</i>	kill	10
<i>p^herā</i>	return	10
<i>k^hol</i>	open, dig	9
<i>rak^h</i>	keep	9
<i>lek^h</i>	write	7
<i>b^hāṇ</i>	break	6
<i>ḍ^hāl</i>	pour	6
<i>kāṭ</i>	cut	6
<i>kam</i>	decrease	6
<i>k^hā</i>	eat	6
<i>p^hi ṇ</i>	throw	6
<i>bānd^h</i>	tie	5
<i>baḍaḷ</i>	change	5
<i>buṇ^h</i>	make understand	5
<i>miḥ</i>	coalesce, merge, add	5
<i>baṭā</i>	suggest, hint	4
<i>kāḍ^h</i>	take out	4
<i>poṭ</i>	bury	4
<i>uṭh</i>	raise, lift	4
<i>bas</i>	make.sit	3
<i>b^har</i>	fill	3
<i>bik</i>	sell	3
<i>eqā</i>	avoid	3
<i>has</i>	laugh	3
<i>laḍ</i>	load	3
<i>pot/h</i>	wipe	3
<i>tāṇ</i>	pull	3
<i>tol</i>	pluck	3
<i>uḍ</i>	make.fly	3
<i>bul</i>	turn	2
<i>tfamak</i>	surprise	2
<i>tīnh</i>	recognize, identify	2
<i>ḍ^har</i>	catch	2
<i>gaḍ</i>	roll	2
<i>g^has</i>	rob	2
<i>g^hoḍ</i>	cover	2
<i>gil</i>	swallow	2
<i>j^hāḍ</i>	shake	2
<i>kaṭ</i>	cut	2

Author-produced prepublication version. Please refer to and quote from the published version: Sahoo, K. & M. Lemmens (2017). Degrees of mirativity. *Review of Cognitive Linguistics* 15(2), 343-384.

<i>k^hel</i>	play	2
<i>k^hump</i>	nibble	2
<i>lambā</i>	lengthen, draw, put	2
<i>patfār</i>	ask	2
<i>p^hiṭā</i>	open	2
<i>p^hopāḍ</i>	throw	2
<i>p^hul</i>	swell, inflate	2
<i>pinḍ^h</i>	wear	2
<i>purā</i>	fill, let in	2
<i>ṣuḷ^h</i>	repay	2
<i>ṣuṇ</i>	hear	2
<i>āḍ</i>	avoid	1
<i>āuj</i>	lean	1
<i>aṭak</i>	stop	1
<i>bāḍ^h</i>	serve	1
<i>bāg</i>	modify	1
<i>b^hās</i>	float	1
<i>boḷ</i>	apply	1
<i>buj</i>	close	1
<i>tāhn</i>	want, look	1
<i>tāp</i>	press	1
<i>tāl</i>	filter	1
<i>tet</i>	warn	1
<i>t^hintf</i>	sprinkle	1
<i>t^hṭ</i>	touch	1
<i>t^huṭ</i>	start	1
<i>tīr</i>	tear	1
<i>ḍāk</i>	call	1
<i>ḍer</i>	keep in a leaning position	1
<i>ḍ^ho</i>	wash	1
<i>ḍohal</i>	shake, stir	1
<i>gaṇ</i>	count	1
<i>goḷ</i>	coalesce	1
<i>hāṇ</i>	chop, cut	1
<i>haj</i>	lose	1
<i>hal</i>	shake	1
<i>ho</i>	become	1
<i>jāl</i>	burn	1
<i>jam</i>	gather	1
<i>j^hink</i>	pull	1
<i>j^hul</i>	hang	1
<i>joḍ</i>	combine	1
<i>kāmuḍ bi ḍār</i>	bite, scratch	1
<i>katfāḍ</i>	throw with abnormal force	1
<i>k^huā</i>	feed	1
<i>kiḷ</i>	close	1
<i>kiṇ</i>	buy	1
<i>kunḍā</i>	scratch	1
<i>lib^h</i>	disappear	1
<i>maḍā</i>	put	1
<i>makatf</i>	stamp, crumble	1

Author-produced prepublication version. Please refer to and quote from the published version: Sahoo, K. & M. Lemmens (2017). Degrees of mirativity. *Review of Cognitive Linguistics* 15(2), 343-384.

<i>mel</i>	spread	1
<i>miḷ</i>	unite, combine	1
<i>moḍ</i>	turn	1
<i>ojāḍ</i>	pour	1
<i>olaṭā</i>	turn over	1
<i>pāfor</i>	forget	1
<i>pahantʃ</i>	make arrive, post	1
<i>p^hānk</i>	cheat	1
<i>pī</i>	drink	1
<i>saḍ^h</i>	make rotten	1
<i>saj</i>	decorate	1
<i>samarp</i>	donate, give	1
<i>sutʃ</i>	indicate	1
<i>ṭek</i>	lift	1
<i>ṭ^hel</i>	push	1
<i>ṭ^ho</i>	keep	1
<i>ṭip</i>	note, copy	1
<i>ṭulā</i>	manage	1
<i>upāḍ</i>	uproot	1
Total		560

Table: 6. Frequencies ‘V-drop’

Main verb	English gloss	Freq
<i>kar</i>	do	108
<i>d^har</i>	catch	23
<i>kāṭ</i>	cut, slit, dissect, shave	21
<i>mār</i>	hit, kill	20
<i>kah</i>	speak, tell	17
<i>giḷ</i>	swallow	12
<i>bāṇḍ^h</i>	tie	8
<i>kunḍ^h</i>	embrace	8
<i>kāṇḍ</i>	cry	6
<i>poṭ</i>	bury	6
<i>has</i>	laugh	5
<i>k^hā</i>	eat	5
<i>lek^h</i>	write	4
<i>ṭfāṭ</i>	lick	3
<i>g^hoḍ</i>	cover	3
<i>b^hāṇ</i>	break	2
<i>ṭf^hāḍ</i>	leave out	2
<i>ṭf^hinḍ</i>	sever, tear apart	2
<i>ḍe</i>	give	2
<i>hāṇ</i>	chop	2
<i>jāṇ</i>	know	2
<i>piṇḍ^h</i>	wear	2
<i>potf^h</i>	wipe out, take out	2
<i>ṣuṇ</i>	hear	2
<i>ānk</i>	draw	1
<i>anḍāl</i>	peek	1

Author-produced prepublication version. Please refer to and quote from the published version: Sahoo, K. & M. Lemmens (2017). Degrees of mirativity. *Review of Cognitive Linguistics* 15(2), 343-384.

<i>b^huss</i>	pierce	1
<i>t^hānt^h</i>	scrape	1
<i>t^hāṇ</i>	filter	1
<i>t^het^h</i>	pound, crush	1
<i>t^hint^h</i>	sprinkle	1
<i>t^hir</i>	tear	1
<i>t^hoss</i>	suck	1
<i>ḍeṭ</i>	jump	1
<i>de^hk^h</i>	see	1
<i>ḍ^hāl</i>	pour	1
<i>ḍ^hānk</i>	cover	1
<i>ḍ^ho</i>	wash	1
<i>ḍohal</i>	make shake	1
<i>ḍuhn</i>	milk	1
<i>g^hoss</i>	memorize	1
<i>gun^h</i>	hook (for fish)	1
<i>hal</i>	make shake, stir	1
<i>kāmud</i>	bite	1
<i>k^hol</i>	open	1
<i>k^hump</i>	nibble	1
<i>kuḍh</i>	gather	1
<i>māḍ</i>	stamp on	1
<i>makat^h</i>	stamp, crumble	1
<i>moḍ</i>	turn	1
<i>muṭ</i>	urinate	1
<i>nāt^h</i>	dance	1
<i>nāt^hikuḍ</i>	dance (jump, stamp)	1
<i>ne</i>	take	1
<i>nigāḍ</i>	emit, pour	1
<i>opāḍ</i>	uproot	1
<i>pālaṭ</i>	change (clothes)	1
<i>pāsor</i>	forget	1
<i>p^hing</i>	throw	1
<i>pi</i>	drink	1
<i>poḍ</i>	burn (food)	1
<i>rāṇḍ^h</i>	cook	1
<i>raḍ</i>	cry loudly	1
<i>sajā</i>	decorate	1
<i>tāḍ</i>	dig	1
<i>tāṇ</i>	pull	1
<i>uḍgār</i>	eject	1
<i>uṭṭār</i>	take out, change	1
Total		311

Table: 7. Comparison ‘V-drop’ and ‘V-give’

LV	Type	Token	TTR	# hapaxes	Hapax /Token
<i>V-give</i>	154	561	0.27	89	0.16
<i>V-drop</i>	68	311	0.22	44	0.14
TOTAL	222	872			

Author-produced prepublication version. Please refer to and quote from the published version: Sahoo, K. & M. Lemmens (2017). Degrees of mirativity. *Review of Cognitive Linguistics* 15(2), 343-384.

Table: 8. Collostructional analysis for V-give and V-drop

words	obs.freq. 1 drop	obs.freq.2 give	exp.freq.1 drop	exp.freq.2 give	pref.occur	delta.p.constr .to.word	delta.p.word d.to.constr	coll.stren gth
ḡ ^h ar	23	3	9.2836	16.7164	drop	0.0686	0.5438	7.62
kāṭ	21	6	9.6406	17.3594	drop	0.0568	0.4342	5.1424
kar	108	127	83.9093	151.0907	drop	0.1205	0.1404	4.0096
giḷ	12	2	4.9989	9.0011	drop	0.035	0.5083	3.8046
kundḡ ^h	8	0	2.8565	5.1435	drop	0.0257	0.6489	3.6035
mār	20	10	10.7118	19.2882	drop	0.0465	0.3207	3.3528
kāṇḡ	6	0	2.1424	3.8576	drop	0.0193	0.6474	2.6971
kah	17	14	11.0689	19.9311	drop	0.0297	0.1984	1.6812
t/āṭ	3	0	1.0712	1.9288	drop	0.0096	0.6452	1.3445
bāṇḡ ^h	8	5	4.6418	8.3582	drop	0.0168	0.2622	1.2962
poṭ	6	4	3.5706	6.4294	drop	0.0121	0.2458	0.9904
has	5	3	2.8565	5.1435	drop	0.0107	0.2704	0.9454
t/ḡ ^h ind	2	0	0.7141	1.2859	drop	0.0064	0.6444	0.8954
jāṇ	2	0	0.7141	1.2859	drop	0.0064	0.6444	0.8954
ḡ ^h oḡ	3	2	1.7853	3.2147	drop	0.0061	0.2443	0.6096
hāṇ	2	1	1.0712	1.9288	drop	0.0046	0.3107	0.5358
k ^h ā	5	6	3.9277	7.0723	drop	0.0054	0.0987	0.4564
ānk	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
andāḷ	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
b ^h uss	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
t/ānt/ḡ ^h	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
t/ḡ ^h āṇ	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
t/ḡ ^h etf	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
t/oss	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
ḡein	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
Dhānk	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
ḡuhn	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
ḡ ^h oss	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
gunṭ	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
kāmud	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
kuḡ ^h	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
māḡ	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
muṭ	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
nātf	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
nātfakuḡ	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
ne	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
nigāḡ	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
opāḡ	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
pālaṭ	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
pāsor	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
poḡ	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
rān ḡ ^h	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
raḡ	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
sajā	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
ṭāḡ	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
uḡḡār	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
uṭ ṭār	1	0	0.3571	0.6429	drop	0.0032	0.6437	0.4473
pingḡ ^h	2	2	1.4282	2.5718	drop	0.0029	0.1436	0.3472
fun	2	2	1.4282	2.5718	drop	0.0029	0.1436	0.3472
pot/ḡ ^h	2	3	1.7853	3.2147	drop	0.0011	0.0432	0.2324
t/ḡ ^h intf	1	1	0.7141	1.2859	drop	0.0014	0.1433	0.2314
t/ir	1	1	0.7141	1.2859	drop	0.0014	0.1433	0.2314
ḡ ^h o	1	1	0.7141	1.2859	drop	0.0014	0.1433	0.2314
ḡohal	1	1	0.7141	1.2859	drop	0.0014	0.1433	0.2314
hal	1	1	0.7141	1.2859	drop	0.0014	0.1433	0.2314
makatf	1	1	0.7141	1.2859	drop	0.0014	0.1433	0.2314
moḡ	1	1	0.7141	1.2859	drop	0.0014	0.1433	0.2314
pi	1	1	0.7141	1.2859	drop	0.0014	0.1433	0.2314

Author-produced prepublication version. Please refer to and quote from the published version: Sahoo, K. & M. Lemmens (2017). Degrees of mirativity. *Review of Cognitive Linguistics* 15(2), 343-384.

lek ^h	4	7	3.9277	7.0723	drop	4e-04	0.0067	0.2256
jog	0	27	9.6406	17.3594	give	-0.0482	-0.3685	5.2792
tʰāḍ	2	30	11.4259	20.5741	give	-0.0471	-0.3058	4.0007
jaṇ	0	18	6.4271	11.5729	give	-0.0321	-0.3646	3.496
baḍ ^h	0	16	5.713	10.287	give	-0.0286	-0.3637	3.103
āṇ	0	15	5.3559	9.6441	give	-0.0268	-0.3633	2.9069
pakā	0	14	4.9989	9.0011	give	-0.025	-0.3629	2.7112
lagā	0	13	4.6418	8.3582	give	-0.0232	-0.3625	2.5157
paḍ ^h ā	0	12	4.2847	7.7153	give	-0.0214	-0.362	2.3204
p ^h erā	0	10	3.5706	6.4294	give	-0.0179	-0.3612	1.9309
rak ^h	0	9	3.2135	5.7865	give	-0.0161	-0.3608	1.7365
ḍek ^h	1	10	3.9277	7.0723	give	-0.0146	-0.2696	1.267
kam	0	6	2.1424	3.8576	give	-0.0107	-0.3595	1.1552
ḍe	2	11	4.6418	8.3582	give	-0.0132	-0.2063	0.9923
badaḷ	0	5	1.7853	3.2147	give	-0.0089	-0.3591	0.9619
buj ^h	0	5	1.7853	3.2147	give	-0.0089	-0.3591	0.9619
mif	0	5	1.7853	3.2147	give	-0.0089	-0.3591	0.9619
kar	0	4	1.4282	2.5718	give	-0.0071	-0.3587	0.769
baṭ	0	4	1.4282	2.5718	give	-0.0071	-0.3587	0.769
kāḍ ^h	0	4	1.4282	2.5718	give	-0.0071	-0.3587	0.769
uḷ ^h	0	4	1.4282	2.5718	give	-0.0071	-0.3587	0.769
ḍ ^h āḷ	1	6	2.4994	4.5006	give	-0.0075	-0.2159	0.6559
k ^h ol	1	6	2.4994	4.5006	give	-0.0075	-0.2159	0.6559
p ^h iṇ	1	6	2.4994	4.5006	give	-0.0075	-0.2159	0.6559
bas	0	3	1.0712	1.9288	give	-0.0054	-0.3583	0.5763
b ^h ar	0	3	1.0712	1.9288	give	-0.0054	-0.3583	0.5763
bik	0	3	1.0712	1.9288	give	-0.0054	-0.3583	0.5763
eḍ	0	3	1.0712	1.9288	give	-0.0054	-0.3583	0.5763
k ^h ol	0	3	1.0712	1.9288	give	-0.0054	-0.3583	0.5763
laḍ	0	3	1.0712	1.9288	give	-0.0054	-0.3583	0.5763
ḷol	0	3	1.0712	1.9288	give	-0.0054	-0.3583	0.5763
uḍ	0	3	1.0712	1.9288	give	-0.0054	-0.3583	0.5763
b ^h āṅg	2	6	2.8565	5.1435	give	-0.0043	-0.1081	0.3868
bul	0	2	0.7141	1.2859	give	-0.0036	-0.3579	0.3839
tʰamāk	0	2	0.7141	1.2859	give	-0.0036	-0.3579	0.3839
tʰiṇh	0	2	0.7141	1.2859	give	-0.0036	-0.3579	0.3839
gaḍ	0	2	0.7141	1.2859	give	-0.0036	-0.3579	0.3839
g ^h as	0	2	0.7141	1.2859	give	-0.0036	-0.3579	0.3839
j ^h āḍ	0	2	0.7141	1.2859	give	-0.0036	-0.3579	0.3839
kaḍ	0	2	0.7141	1.2859	give	-0.0036	-0.3579	0.3839
k ^h eḷ	0	2	0.7141	1.2859	give	-0.0036	-0.3579	0.3839
lambā	0	2	0.7141	1.2859	give	-0.0036	-0.3579	0.3839
pat/ār	0	2	0.7141	1.2859	give	-0.0036	-0.3579	0.3839
p ^h iṭā	0	2	0.7141	1.2859	give	-0.0036	-0.3579	0.3839
p ^h opāḍ	0	2	0.7141	1.2859	give	-0.0036	-0.3579	0.3839
p ^h ul	0	2	0.7141	1.2859	give	-0.0036	-0.3579	0.3839
purā	0	2	0.7141	1.2859	give	-0.0036	-0.3579	0.3839
jūj ^h	0	2	0.7141	1.2859	give	-0.0036	-0.3579	0.3839
jāṇ	1	3	1.4282	2.5718	give	-0.0021	-0.1076	0.2593
āḍ	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
āuj	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
aḷak	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
bāḍ ^h	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
bag	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
b ^h ās	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
boḷ	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
buj	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
tʰāhn	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
tʰāp	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
tʰal	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
tʰet	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
tʰ	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
tʰuṭ	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
ḍāk	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918

Author-produced prepublication version. Please refer to and quote from the published version: Sahoo, K. & M. Lemmens (2017). Degrees of mirativity. *Review of Cognitive Linguistics* 15(2), 343-384.

<i>ḍer</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>gaṇ</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>goḷ</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>haj</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>ho</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>jāl</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>jam</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>j^hink</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>j^hul</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>joḍ</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>kāmuḍ bidār</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>kaṭṭāḍ</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>k^huā</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>kiḷ</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>kiṇ</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>kunḍā</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>lib^h</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>maḍā</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>meḷ</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>miḷ</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>oḷāḍ</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>olaṭā</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>pāfor</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>pahantf</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>p^hānk</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>saḍ^h</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>saj</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>samarp</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>sutf</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>tek</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>t^hel</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>t^ho</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>tip</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>ṭulā</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>upāḍ</i>	0	1	0.3571	0.6429	give	-0.0018	-0.3575	0.1918
<i>k^hump</i>	1	2	1.0712	1.9288	give	-4e-04	-0.0238	0.1495

If your collocation strength is based on p-values, it can be interpreted as follows: Coll.strength>3 => p<0.001; coll.strength>2 => p<0.01; coll.strength>1.30103 => p<0.05.

Author-produced prepublication version. Please refer to and quote from the published version: Sahoo, K. & M. Lemmens (2017). Degrees of mirativity. *Review of Cognitive Linguistics* 15(2), 343-384.

Table: 9. Verbs shared by ‘V-go’ and ‘V-fall’

	Main verb	English gloss	-fall	-go
1.	<i>ho</i>	become	191	138
2.	<i>k^has</i>	slip, fall	20	1
3.	<i>bāhār</i>	get ready, come out	27	6
4.	<i>bas</i>	sit	17	5
5.	<i>fo</i>	sleep	15	4
6.	<i>lāg</i>	touch	18	9
7.	<i>b^hāṇ</i>	break	13	7
8.	<i>u^h</i>	wake up; get up	4	4
9.	<i>gaḍ</i>	roll	3	3
10.	<i>baḷ</i>	leave out	1	1
11.	<i>bul</i>	turn	1	1
12.	<i>mauḷ</i>	fade	1	1
	TOTAL		311	180

Table: 10. Verbs shared by ‘V-drop’ and ‘V-give’

	Main verb	English gloss	-drop	-give
1.	<i>d^har</i>	catch	23	3
2.	<i>kāṭ</i>	cut, slit, dissect, shave	21	6
3.	<i>kar</i>	do	108	127
4.	<i>giḷ</i>	swallow	12	2
5.	<i>mār</i>	hit, kill	20	10
6.	<i>kah</i>	speak, tell	17	14
7.	<i>bāṇḍ^h</i>	tie	8	5
8.	<i>poṭ</i>	bury	6	4
9.	<i>has</i>	laugh	5	3
10.	<i>g^hoḍ</i>	cover	3	2
11.	<i>hāṇ</i>	chop	2	1
12.	<i>k^hā</i>	eat	5	6
13.	<i>piṇḍ^h</i>	wear	2	2
14.	<i>fuṇ</i>	hear	2	2
15.	<i>pot^h</i>	wipe out, take out	2	3
16.	<i>t^hint^f</i>	sever, tear apart	1	1
17.	<i>t^hir</i>	tear	1	1
18.	<i>ḍ^ho</i>	wash	1	1
19.	<i>ḍohal</i>	shake/stir	1	1
20.	<i>hal</i>	shake	1	1
21.	<i>makat^f</i>	stamp, crumble	1	1
22.	<i>moḍ</i>	turn	1	1
23.	<i>pi</i>	drink	1	1
24.	<i>lek^h</i>	write	4	7
25.	<i>t^hāḍ</i>	leave out	2	30
26.	<i>ḍek^h</i>	see	1	10
27.	<i>ḍe</i>	give	2	11
28.	<i>ḍ^hāl</i>	pour	1	6
29.	<i>k^hol</i>	open	1	6

Author-produced prepublication version. Please refer to and quote from the published version: Sahoo, K. & M. Lemmens (2017). Degrees of mirativity. *Review of Cognitive Linguistics* 15(2), 343-384.

30.	$p^hi\eta$	throw	1	6
31.	$b^h\bar{a}\eta$	break	2	6
32.	$t\bar{a}\eta$	pull	1	3
33.	k^hump	nibble	1	2
	TOTAL		260	285