

(De)Coding Hodgson's Kiranti Grammars and Verbal Paradigms

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Abstract This article presents the process, challenges and results of reconstructing hierarchised tables of contents for two grammar sketches written by B.H. Hodgson of the Vayu (1857) and Bahing (1858) languages. The process has involved making sense of the ontological systems used by Hodgson in organising his materials and analyses, and has been complicated by the dual factors of occasionally opaque terminological choices and of inconsistent physical presentation of the materials. The resulting tables of contents, presented in the appendix, make it possible to compare these sketches to others from the same time period and/or linguistic area.

Keywords Kiranti language descriptions. 19th century grammaticography. Describing a language 'on its own terms'. Hierarchised tables of contents. Verbal paradigms.

Summary 1 Introduction. – 2 Types of Interpretational Difficulties. – 2.1 Content. – 2.2 Physical Presentation of Materials. – 3 Discussion of Reconstructed Organisational Schemes. – 4 Conclusion.



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1 Introduction

Brian Houghton Hodgson was an officer of the East India Company and was stationed in Nepal for most of the period from 1824-43 (Waterhouse 2004a). A good general biography of his life is Hunter (1896), and a volume describing Hodgson's contributions to a number of scientific fields was edited by Waterhouse (2004b). Although Hodgson's movements were restricted by the Nepal government to the Kathmandu Valley, he was able to gain access to speakers of a number of Tibeto-Burman languages and to collect data on them.

Hodgson's most often-cited linguistic contributions are probably his sketches of two languages of the Kiranti group of Eastern Nepal, Vayu (now usually referred to as Hayu, as per Michailovsky (1988), or Wayu, as per Glottolog (Hammarström, Forkel, Haspelmath 2020) and Bahing, published in 1857 and 1858 respectively, in successive issues of the *Journal of the Asiatic Society of Bengal*. The two grammatical descriptions are of relatively similar length, of 57 and 50 pages respectively.

Their focus is on verbal morphology and they are largely made up of paradigms for the verb classes which Hodgson identifies for the two languages.¹ The main categories that the grammars are organised around are voice, mood and tense. The grammars also contain a brief overview of nominal and pronominal morphology, a specimen text and its translation.

The grammars, although they receive a cursory mention in most subsequent work on Kiranti languages, are rarely cited for their data.² This can probably be related to the challenges arising from the interpretation of, on the one hand, the linguistic content, which reflects the indexation of two arguments on transitive verbs and many verbal categories, described using the traditional terms that are inadequate considering the data, and, on the other hand, the material presentation of the data, which includes inconsistencies of various sorts (typographical, organisational) and ellipses. The result of these is that it is frequently difficult, in reading the grammars, to

¹ From a current-day typological perspective, one of the key features that characterise these languages is their complex verbal morphology: this involves indexation of both the subject and the object on transitive verbs; verb stem alternations; derivational morphology to express what is now often labelled Associated Motion, Aspect and Aktionsart, and valency changes (see, e.g., Michailovsky 2017).

² Exceptions are Grierson's *Linguistic Survey of India*, volume 3.1 of which bases a number of grammatical sketches on Hodgson's data (Grierson 1909), and Michailovsky's analyses and discussion of Hodgson's Limbu (2001) and Hayu paradigms (1988). Another notable exception is a recent article (Sims 2023) which makes use of Hodgson materials on 'Thochu' to better understand the historical phonology of Rma (of which Thochu is considered a variety) and in doing so presents a list of types of 'abstractions' needed to make use of the data.

understand what categories the data pertain to, a fact which is compounded by the absence of hierarchised tables of contents to guide the reader.

It is not as if there is no information allowing a reader to extract a hierarchised organisational scheme from the grammars: indeed, we find what are clearly headings for sections, as indicated by centring, indentation, with full capitalisation or italics, and sometimes even with number labels. The issue is that the inconsistency of these practices, coupled with an opaque ontological system for the verbal categories (which is likely due to the mismatch between the available categories and the linguistic data from these languages), results in a significant effort being necessary to map Hodgson's data onto modern descriptions of related languages.³

Figure 1 below is taken from the very beginning of the presentation of the section on verbal morphology in the Vayu grammar (1857) and shows a number of these headings and their typographical treatment (fig. 1). A fully capitalised "Vayu Verbs" is followed by a numbered "Conjugation of neuters, conjugated from the Sheer root. Verb *Phi* to come". This is followed by a number of headings, all centred and italicised: "*Infinitive Mood*"; "*Gerunds*"; "*Participles*"; "*Imperative Mood*"; "*Indicative Mood*"; "*Future tense, used also for the present*"; "*Preterite tense*". Other labels are also present, such as "*Singular*", "*Dual*", "*Plural*", but their position above sections of the presented paradigms suggests that these are not to be taken as sections of the grammar, but rather as labels for data. While the size of the font of some headings suggests a hierarchy – this is the case for "*Future tense*" and "*Preterite tense*" headings, both of smaller font than the "*Indicative Mood*" heading they are positioned under – this is not a consistent practice. It does not, for example, apply to the headings "*Gerunds*" and "*Participles*", both of which are subordinate to the "*Infinitive Mood*".

³ As a test of this, the reader is invited to study the central column of the tables in the appendix, which reproduce all the section headings in the grammars, without reference to the left-most column, and to attempt to get a sense of the organisation of the material.

VAYU VERBS.

1st.—Conjugation of neuters, conjugated from the Sheer root.

Verb *Phi* to come.

Infinitive Mood.

Affirmative.—Phit'mung to come or to have come, aoristic.*
 Negative.—Máng phit'mung, not to come, &c.

Gerunds.

Phit'he } Present. Coming { Phit'he with verbs in present tense.
 Phit'nung } { Phit'nung with verbs in preterite.
 Phit'hep'hit'he, or Phit'nung phit'nung, continuative present.
 Phit'phit'ha. Past, having come.
 Phit'singhe. Present or Future, when coming.
 Phit'khen. Past, after coming, after having come.

Participles.

Phit'vi. Present and future, who or what comes or will come. Also the comer
 substantival.
 Phis'ta. Past, who or what has come or came.

Phit'táng, } These forms expressing respectively *passive* futurity or fitness
 Verbal nouns, } or habit, and instrumentality, locality and time, are hardly
 Phit'chyang, } or not at all useable, save with verbs more or less transitive.
 Phit'lung, } See on to them in sequel.
 Phit'sing. }

N. B.—The medial t' and s' are merely enunciative, not formative.

Imperative Mood.

<i>Singular.</i>	<i>Dual.</i>	<i>Plural.</i>
Phí.	Phíchhe.	Phíne.
	<i>Negative.</i>	
Thá phí.	Thá phíchhe.	Thá phíne.

Indicative Mood.

Future tense, used also for present.

<i>Singular.</i>	<i>Dual.</i>	<i>Plural.</i>
1. Phígnom.	{ Phí chhokmi, excl.	{ Phík'okmi, excl.
	{ Phí chhikmi, incl.	{ Phík'em, incl.
2. Phími.	Phí chhikmi.	Phínem.
3. Phimi.	Phí chhikmi.	Phímém.
<i>Preterite tense.</i>		
1. Phísungmi.	{ Phí chhongmi, excl.	{ Phí kik'óngmi, excl.
	{ Phí chhingmi, incl.	{ Phí kikengmi, incl.
2. Phími.	Phí chhem.	Phínem.
3. Phími.	Phí chhem.	Phímém.

Figure 1 Extract from Vayu grammar: beginning of the section on verbal morphology (Hodgson 1857, 436)

It is for this reason that I feel there is value in providing a hierarchised table of contents for each of the two grammars. This not only makes it possible to use the linguistic data more easily, but to better understand the terminological and categorical choices made by Hodgson when confronted with these complex verbal paradigms. This initiative is also motivated by an ongoing project seeking to understand the grammaticographical models underlying linguistic descriptions, and which relies on hierarchised tables of contents for their comparison (Kelly, Lahaussais 2021; Lahaussais 2021).⁴

⁴ Within the framework of the project *Taxogram* (<https://taxogram.huma-num.fr/home.html>), we refer to the activity of inputting tables of contents into our database

The methodology that has been adopted in seeking to decipher the organisational scheme of the grammars is the following: any label which is centred on the page is considered to be the heading for a new section. (Labels which are indented, but not centred, are also considered as candidates, depending on the content.) In some cases, these headings also include numbering indicative of their place within the hierarchy of the table of contents, but this is an infrequent occurrence. These headings are all extracted (including 'subtitles' when relevant; this is typically the example verb used to illustrate a verb class, as in figure 1's "*Verb Phi to come*") and entered into a table, respecting capitalisation, italics, numbering and any additional typographical conventions. Page numbers for each new heading are recorded, as they can be used to calculate the relative size of the sections with respect to one another. An additional column holds a reconstructed numbering scheme which organises the material into a hierarchised table of contents, featuring a chapter level and multiple nested section levels.

While I generally consider as a section heading only material that is alone on its line and (usually) centre-aligned, this principle is challenged when superordinate sections are, presumably for reasons of space, presented in columns rather than centre-aligned on the page, as in figure 2: when taken in the context of the full description, it becomes apparent that "*Passive potential*" and "*Passive precative*" are both higher-level sections than "*Indicative present singular*" which they appear to be subsumed under, on the basis of the page layout. In this case, the indentation offers evidence of the organisational importance of these labels, in addition to other clues (such as italics), even though they are not centred (and alone) across the page.

as 'coding', hence the title for this article.

<i>Indicative present singular.</i>	
1. Háta nógnom. 2. Háta nónum. 3. Háta nómi.	{ And so on through the verb nó, to be—an irregular verb which is given in the sequel. <i>Remark.</i> —To this responds hávi nógnom of the active voice.
<i>Passive potential.</i> (I can be given).	
<i>Present singular.</i>	{ <i>Passive precative.</i> (That I may be given).
1. Há wón̄gnom. 2. Há wón̄mi. 3. Há wón̄num.	
<i>Preterite.</i>	{ <i>Present singular.</i>
1. Há wón̄sungmi. 2. Há wón̄mi. 3. Há wón̄num.	
<i>Preterite.</i>	{ <i>Preterite.</i>
1. Há wón̄sungyu. 2. Há wón̄mi. 3. Há wón̄num.	

Remark.—Observe that in the potential mood, as in the causal below, the expression of the passivity is transferred from the truncated main verb, which shows only its crude root, to the secondary verb.

Figure 2 Extract from Vayu grammar (Hodgson 1857, 446)

Figures 1 and 2 give the reader a sense of some of the difficulties in interpreting the grammars. In order to make the grammars more transparent to readers and ensure that the material can be compared with other grammars, I have reconstructed with hierarchised tables of contents. This article presents the process whereby I arrived at the organisational schemes provided in the Appendix. The structure of this article is as follows: section 2 details the types of issues I have encountered in attempting to reconstruct the hierarchised organisational schemes of the two grammars, which can be grouped into questions of content, including terminology, and questions of physical presentation. Section 3 presents a discussion of the principles and decisions that resulted in the reconstructed tables of contents (which are provided in the appendix). Section 4 offers a conclusion.

2 Types of Interpretational Difficulties

The difficulties in interpreting the underlying hierarchy of the descriptions can be grouped into types, which divide into content-related issues and presentation-related issues. Among the content-related issues are terminological choices and the hierarchies underlying the organisation; among the presentation-related issues are questions relating to typesetting and to missing headings.

2.1 Content

As the descriptions largely centre on the verbal morphology, the categories that I will primarily focus on are verbal. The organisation of the presentation of verbal morphology in both grammars is similar: the verbs of the language are grouped in verb classes, each verb class being illustrated by a single verb, which is presented through the categories of voice, mood and tense. Person and number inflection is marked in the paradigms, with number usually identified through a label over the relevant part of the paradigm ('singular', 'dual', 'plural') and person identified through a number ('first', 'second', 'third') and/or a gloss.

2.1.1 Terminological Choices

This section presents the terminology used for the categories of voice, mood and tense and their subcategories in the two grammars. They are presented according to the hierarchy found within the grammar, namely voice > mood > tense.

2.1.1.1 Voice

The three voice categories we find in Hodgson's descriptions are active, passive and middle (the latter is sometimes labelled "reflex transitive"). In a note in the Bahing grammar, Hodgson spells out his use of the different voice notions:

of the active voice of the transitive the object is him or her or it; of the middle voice the object is self; and of the passive voice the object is me, but that the order of arrangement of agent and object is reversed in the passive as compared with the active voice and so also in the indicative mood. This is done in conformity to the genius of the language which requires the attention to be primarily fixed on the agent in one voice, on the object in the other. (1858, 415)

Hodgson uses "passive voice" as a semantic notion, to describe verb forms for which a 3rd person agent is acting on a speech act participant.⁵ As a result, it is only transitive verbs that show voice distinctions, as these are the only ones with an object.⁶

⁵ Note that Kiranti languages are now considered to have a person hierarchy of 1st person > 2nd person > 3rd person. According to this hierarchy, transitive configurations where the agent is lower-ranked than the patient are currently referred to as 'inverse' (Cristofaro, Zúñiga 2018a; DeLancey 2018; Jacques, Antonov 2014), subsuming both Hodgson's passive and special forms (see § 2.1.1.1.1).

⁶ One interesting comment in the Errata for the grammars concerns the term 'passive': "Now turn to the passive voice and you will see the positions of these personal

Tables 1 and 2 present the use of voice terminology in section headings within the descriptions of the various verb classes across the two descriptions [tabs 1-2]. The verb classes are given the same labels (including number) as appear in the text. Table 1 shows that the transitive conjugations (which are grouped in the second column) are presented with an active-passive voice dichotomy (although the label ‘active’ does not always appear; see § 2.1.2.1) in the Vayu grammar, while intransitive or neutral verbs and irregulars (first column) are not described in terms of voice. (The verb ‘to eat’ in the first column is discussed in § 2.1.3 below.)

Table 1 Voice distinctions used in section headings across different verb classes in Vayu description

No voice labels	[active] ¹
	[passive]
<ul style="list-style-type: none">• 1st conjugation of neuters, conjugated from the Sheer root (p. 436 ff.)• 2nd conjugation of neuters with a conjunct guttural (p. 438 ff.)• 3rd conjugation of neutral with a conjunct labial (m or p) (p. 439 ff.)• 4th conjugation of neuters with conjunct dental (p. 440 ff.)• 5th conjugation of reflex or active intransitive verbs in <i>che</i>• 12th conjugation (of irregulars) (p. 469 ff.)• 13th conjugation (of Irregulars) (p. 470 ff.)• 14th and 15th conjugations (of irregulars) being those of the verb <i>lá</i> ‘to go’, as used in combination with other verbs (p. 470 ff.)• The verb <i>já</i> ‘to eat’ (p. 471 ff.)	<ul style="list-style-type: none">• 6th conjugation of transitives in <i>to</i> not having a precedent sibilant (p. 442 ff.)• 7th conjugation of verbs in <i>to</i> having a precedent sibilant [...] (p. 447 ff.)• 8th conjugation of transitives in <i>po</i>, not having a nasal (n, ng, m) before it (p. 453 ff.)• 9th conjugation of transitives in <i>po</i> having a nasal (m, n, ng) before it (p. 457 ff.)• 10th conjugation of transitives in <i>ko</i> not having any consonant between the sign and the root (p. 462 ff.)• 11th conjugation of transitives in <i>ko</i> having an abrupt tone (equal iterate sign) between the sign and the root (p. 467 ff.)

¹ The bracketing indicates that no such section heading exists in the grammar, but data is presented for the active voice; the category is thus present implicitly.

endings [of agent and object arguments] reversed, the starting point being the citation of the objects or patients whence the verb becomes passive, so far as that voice can be said to exist. [...] Passivity is denoted by the object: but so also is transitivity; and hence the many forms common to both voices” (Hodgson 1858, 13).

In similar fashion, table 2 shows the active-middle-passive voice distinction found for transitive verbs (first two columns) in the Bahing grammar, but not for intransitive or neuter verbs (third column). In table 2 as well, the labels for the verb classes are those in the text.

Table 2 Voice distinctions used in section headings in different verb classes in Bahing description

active	active	no voice labels	active
reflex transitive, or middle voice	middle		
passive	passive		
Paradigm of verbs transitive in <i>wo</i> : root <i>já</i> 'to eat'. Imperative <i>já-wo</i> (p. 407 ff.)	Paradigm of transitives in <i>to</i> , not changing the <i>t</i> into <i>d</i> (p. 421 ff.)	<ul style="list-style-type: none"> Paradigm of verbs intransitive or neuter. Not having the sibilant sign (p. 425 ff.) Paradigm of neuters in <i>to</i> (p. 426 ff.) [Periphrastic moods] (p. 427 ff.) 	Causal verbs (p. 437 ff.)

The differences in voice labels between tables 1 and 2 are not a matter of the different morphology of the languages, both of which would currently be described as having active and middle/reflexive forms but no passive forms.⁷ In the Bahing grammar, we find clear tripartite voice divisions for transitive verbs, with explicit sections for active, middle and passive, whereas in the Vayu grammar, only the term 'passive' was used explicitly (an 'active' category was implicit but there are no headings for it).

A subcategory within Hodgson's passive voice is labelled "special forms": forms involving two speech act participants as the arguments. As he puts it himself:

there are further special forms of the verb to denote the action which passes from me to thee and from thee to me. These are necessary complements of the passive voice in a language that makes the mention of agents and patients inseparable from that of the action. (Hodgson 1858, 415)

⁷ See Michailovsky 1988, 83 on Hodgson's use of passive.

The sections containing these forms are considered, as per the passage above, to be a subsection of the passive voice for each verb class. The internal organisation of the passive voice sections, however, does not always place the special forms immediately following the indicative mood as might be expected: they sometimes occur after all the other moods of the passive. For example, in the Vayu grammar's "6th. – Conjugation of transitives in 'to' not having a precedent sibilant", the special forms are presented at the end of sections on the passive voice's imperative, indicative, potential, precative, causal, and subjunctive moods, even though the special forms given in the paradigm are all indicative. This is perhaps in keeping with the 'special' label he gives them, indicating they are treated separately, but it does not help the reader to find the 'passive' indicative forms divided based on the arguments involved.

2.1.1.2 Mood

Mood divisions are numerous, and across the two grammars we find the following categories (in order of appearance): infinitive, imperative, indicative, subjunctive (sometimes also called conditional), interrogative, negative, potential, precative, optative, inchoative, finitive, causal, continuative, reciprocal, contingent, inceptive, iterative.

The mood labels are sometimes accompanied by glosses, examples, and explanatory remarks. We find the term *precative* accompanied by the following examples of metatext: "The first ordinary form of the precative may be best rendered in English by O! that I may or might come, &c." (1857, 437), "That I may give" (444), "That I may kill" (450). This is also the case for other mood levels, such as the *optative*: "Duty, necessity and propriety, as well as desire, are expressed by this mood..." (437), "Wish, desire" (432); the *subjunctive* or *conditional*: "If, or should, I come" (428); the *contingent*: "I may (perhaps) go" (429); the *Passive causal*: "I am caused to be given (or to give)" (446) and the *Passive subjunctive* "If I be given" (447).⁸ These definitions are important because the modal notions in the languages being described do not overlap with the English, and the glosses are a way to clarify their scope.

The order in which the moods are presented is not consistent across the various verb classes: some categories get reordered, and more and more are omitted as the Vayu grammar progresses. The decrease in the number of moods described per verb class suggests that the categories are not found to be entirely relevant for the language being

⁸ In one instance, instead of a mood label for Bahing, the heading for the section is just the gloss: "Duty, necessity; I must or ought" (1858, 431).

described. The changes in the mood categories and their order across the verb classes of the Vayu description are shown in table 3 [tab. 3]. Verb classes are identified in the column headers by their number and the full label for each class can be found in table 1; classes for which the moods are the same (number, type and order) and grouped together in the same column. The same colour shading is used for equivalent mood categories⁹ in order to make the reordering apparent.

This reveals that while the infinitive, imperative and indicative moods are always ordered in the same way, when all three are present, none of the other moods are ordered consistently from one verb class to another.

Table 3 Mood categories found in sections presenting the different verb classes in the Vayu description, colour coded to show changes in order of appearance

1st	2nd	3rd, 4th, 12th, já	5th	6th	7th	8th	9th	10th	11th	13th	14th and 15th
inf.	inf.	imp.	inf.	[inf.]	inf.	inf.	inf.	inf.	inf.	[ind.]	imp.
imp.	imp.	ind.	imp.	imp.	imp.	imp.	imp.	imp.	imp.		
ind.	ind.		[ind.]	ind.	[ind.]	[ind.]	ind.	ind.	ind.		
subj.				neg.	neg.	inter.	prec.	cont.	pass. imp.		
inter.				pot.	inter.	pot.	cont.	rec.	pass. ind.		
neg.				opt.	pot.	prec.	rec.	pass. imp.			
pot.				prec.	opt.	cont.	caus.	pass. ind.			
prec.				subj.	opt.	rec.	pass. imp.	pass. neg.			
opt.				cont.	subj.	caus.	pass. ind.	pass. opt.			
inch.				rec.	cont.	pass. imp.	pass. neg.	pass. inter.			
fin.				caus.	rec.	pass. ind.	pass. opt.	pass. subj.			
caus.				pass. imp.	caus.	pass. inter.	pass. inter.	pass. pot.			
cont.				pass. ind.	pass. imp.	pass. pot.	pass. subj.	pass. caus.			
rec.				pass. pot.	pass. [ind.]	pass. prec.	pass. pot.	pass. cont.			
				pass. prec.	2nd pass. inf.	pass. caus.	pass. prec.				
				pass. caus.	2nd pass. imp.		pass. caus.				
				pass. subj.	2nd pass. [ind.]						
					2nd pass. prec.						
					2nd pass. caus.						

⁹ For legibility, the labels in table 3 are abbreviated as follows: inf. = infinitive; imp. = imperative; ind. = indicative; subj. = subjunctive; inter. = interrogative; neg. = negative; pot. = potential; prec. = precative; opt. = optative; inch. = inchoative; fin. = finitive; caus. = causal; cont. = continuative; rec. = reciprocal; pass. = passive.

The use of mood in the Bahing description is more consistent and systematic than in the Vayu grammar. Table 4 reveals that the moods are presented in the same order across the different verb classes (the label for which heads each column): imperative, indicative, infinitive, replicated for each voice distinction across the verb classes identified for the language. The other moods are, for the most part, presented under a special section on periphrastically expressed moods, which treats them in the order subjunctive, contingent, potential, “duty, necessity”, optative, precative, interrogative, prohibitive and negative, inceptive, finitive, continuative, iterative. The decision to consider periphrastic forms as moods is stated expressly by Hodgson, who says that the “modifications, of course, have periphrastic means of expression, I shall call them moods” (Hodgson 1858, 427; also mentioned again on page 431).

Table 4 Mood categories across the different verb classes in the Bahing description

“Paradigm of verbs transitive in ‘wo’” (p. 407 ff.)	“Paradigm of transitives in ‘to’” (p. 421 ff.)	“Paradigm of verbs intransitive or neuter” (p. 425 ff.)	“Paradigm of neuters in ‘to’” (p. 426 ff.)	[Periphrastic moods] (p. 427 ff.)	“Causal verbs” (p. 437 ff.)
active imperative	active imperative	imperative	imperative	subjunctive	imperative
active indicative	active indicative	indicative	indicative	contingent	indicative
active infinitive	active infinitive	infinitive	infinitive	potential	infinitive
reflex imperative	passive imperative			duty, necessity	
reflex indicative	passive [indicative]			optative	
reflex infinitive	passive infinitive			precative	
passive imperative				interrogative	
passive indicative				prohibitive and negative	
passive infinitive				inceptive	
				finitive	
				continuative	
				iterative	

Several terms for moods are new in the 1858 Bahing description, not having appeared in the 1857 Vayu description: these are the contingent, the inceptive, the iterative.

The contingent mood receives a gloss: “I may (perhaps) go” (1858, 429). This mood is in fact made up of a sequence of an affirmative and negative form of the same verb: “I shall go, I shall not go”.

The inceptive mood is given a description very similar to that found for Vayu inchoative, and the terms thus appear to be interchangeable: compare, in the Vayu grammar, “this mood being constructed

from the root of the main verb and the reflex form of the verb to begin" (1857, 437) and, in the Bahing grammar, "Inceptive mood. It is formed by subjoining the ordinary infinitive for (cho) of the main verb, the subsidiary intransitive verb *prénso*, to begin, or the transitive *páwo*, to do, to make" (1858, 433)

The iterative mood is followed by a glossed verb form, "raise repeatedly" (Bahing 1858, 435), making it clear what the semantics of this mood are.

2.1.1.3 Tense

The tense divisions found in the two descriptions are more straightforward than the voice and mood categories, with a bipartite system of present and/or future, usually described as 'present and future', sometimes 'present or future' (e.g. Bahing 1858, 418; see also "*Future tense, used also for present*", 1857, 436) vs. preterite. Both notions in the dichotomy are usually present as paired headings for relevant sections in both grammars, although in the later part of the Vayu grammar (1857, 456 ff.), present/future tends to be treated as a default tense category, insofar as it is not labelled, while preterite is explicitly used as a section heading. The Bahing grammar is more consistent in this respect, with both members of the pair almost always present in the relevant sections.

As discussed by van Driem, past and non-past, found in a great many modern-day descriptions of Kiranti verb morphology,¹⁰ are not entirely appropriate labels for finite verb tenses; preterite vs. non-preterite are preferable, "because these tradition terms can be taken to suggest a distinction between a realised and a non-realised event or perception" (van Driem 2001, 657).

Other tense-related terms in Hodgson are 'past' and 'aoristic'. The term 'past' is found only with the infinitive mood, gerunds and passives. The term 'aoristic', on the other hand, appears in paradigms, where it is in contrast with forms identified as 'present tense' and 'preterite', as shown in figure 3 [fig. 3].

¹⁰ The division is largely between grammars by van Driem and his students, which use a preterite/non-preterite opposition, and all other grammars, which use past/non-past.

<i>Special forms.</i>		
Active or passive, = agento objective.		
1st.—I to thee.		
Hánum.	Give or gave to thee I only.	} Aoristic.
Hánochhem.	Give or gave to you two I only.	
Hánonem.	Give or gave to you all I only.	
2nd.—Thou to me.		
γHáguom.	Givest to me thou (or he).	} Present tense.
γHágnochem.	Give to me ye two (or they two)	
Hágnonem.	Give to me ye all only.	
γHásungmi.	Gavest to me thou.	} Preterite.*
γHasungchhem.	Gave to me ye two.	
Hásungnem.	Gave to me ye all.	

Figure 3 Extract from Vayu grammar (Hodgson 1857, 447)

These examples suggest that ‘aoristic’ is used by Hodgson for verbs with a single form for several tense/aspect distinctions: for the forms in the “I to thee” section, labelled as “Aoristic”, a single form receives both present and preterite glosses, where for the “Thou to me” section, distinct forms are found for each tense. A more explicit definition for the ‘aoristic’ is found in the following: “Háto, to give, being aoristic hátum, is equally present and preterite” (1857, 480).

2.1.2 Unclear Hierarchies

The materials discussed in this section concern practices which directly result in an unclear hierarchy in the organisation of materials. The various points which will be discussed are: the omission of section headings for default categories, and the recursivity found in the presentation of some verbal categories.

2.1.2.1 Omission of ‘Default’ Categories

In a number of situations, there are section headings that are missing from the grammars. The cases discussed here are those where the omission is the result of a category being assumed to be the default or basic category within a bi- or multipartite taxonomy.

An example is found on the very first page of the Vayu grammar (1857, 429): the section on pronouns has a subsection with a heading “*Personals. Singular*”, but with no mention (apart from the glosses) of the nature of the person – the first person – which the data pertain to. This can be seen in figure 4 [fig. 4].¹¹

¹¹ Note that the “1st of Pronouns” in figure 4 does not to the nature of the person but to pronouns being described before nouns.

VAYU DECLENSION.	
1st of Pronouns.	
Personals. Singular.	
N.	I, Gó.
G.	Of me, Ang, conjunct, = my.* Angmu, disjunct, = mine.
D.	to me } Gó. No sign.
Ac.	me }
L.	{ In, at } Ang be.
	{ into, me }
Ab.	from me, Ang khen.
Ins.	by me, G'há (go-ha).
Soc.	with me, Angnung.
Priv.	without me, Ang má nosa.†
Dual.	
N.	Gó nakpu, m. f. Gó nárgung, n.‡

Figure 4 The (unlabelled) first person singular pronouns in Vayu (Hodgson 1857, 429)

This is in opposition to headings, on the following page, which specify “Second person” and “Third Personal”, as in figure 5 [fig. 5].

Second person.	
N.	Gon.
G.	Ung, conjunct = Thy. Ungmu, disjunct. = Thine.
D. Ac.	Gon. No sign.
L.	Ung be.
Ab.	Ung khen.
Ins.	Gon ha.
S.	Ung nung.
Dual.	
N.	Gonchhe.
G.	Ungchhi, conj. Ungchhimn, disj.
D. Ac.	Gonchhe. No sign.
L.	Ungchhi be.
Ab.	Ungchhi khen.
Ins.	Gonchhe ha.
Soc.	Ungchhi nung.
Third Personal.	
N.	Wathi. All 3 genders.
G.	Wathim, conj. Wathimmu, disj.
D. Ac.	Wathi. No sign.
L.	Wathim be.
Ab.	Wathim khen.
Ins.	Wathi ha.
Soc.	Wathim nung.

Figure 5 The second and third person pronouns in Vayu (Hodgson 1857, 430)

There are two types of situations where we find omissions of this kind: when the heading is omitted outright, as in figure 4; and when a single heading combining elements from two different levels is found instead. An example is “Indicative present”, with a counterpart “Preterite”, with the former clearly a shortcut for Indicative Mood and Present [tense].

The most commonly found outright omissions among headings are the first member of the following sets: active/passive; indicative/infinite/imperative/et al.; present/preterite; singular/dual/plural. These happen to be the categories which are morphologically unmarked in the languages in question (apart from mood, as indicative, infinitive and imperative are all equivalently morphologically unmarked, in opposition to the other moods). They are also, possibly due to their morphological unmarkedness, the categories which are presented first in the grammar.

The missing headings, whatever their cause, result in some sections of the grammars not being labelled, with the interpretation of the content based on an implicit organisational scheme which is not always transparently accessible to the reader.

There are differences between the two grammars in terms of the omission of headings for default categories. In the Vayu grammar, the heading ‘active voice’ is often omitted, with its counterpart passive explicitly labelled; in the Bahing grammar, Active, Middle and Passive Voice tend to be presented in explicitly labelled sections.

In the 14 pages of errata, corrigenda and addenda provided by Hodgson for both descriptions, the majority concern Bahing and Vayu transcriptions, but occasional notes refer to omitted headings, such as “Page 449 after negative mood add of indicative singular” (Hodgson 1858, 13). There are only a handful of corrections of this type in the errata, but they do indicate that Hodgson too saw the omission of certain section headings as constituting errors and rendering the grammars less legible.

As for the second type of missing heading, where a heading combines elements from two different levels in the hierarchy, these are corrected for in the reconstructed table of contents in order to preserve the numbering hierarchy. By far the most common heading of this type is when we find ‘Indicative present’, between the headings ‘Imperative mood’ and ‘Preterite’. ‘Indicative present’ here is a shortcut heading combining a heading ‘indicative mood’ with a subsection on the ‘present’ (of the same hierarchical level as the following ‘preterite’). The neutralisation of hierarchical levels by combining them within the same heading can be problematic when one arrives at the following section heading, and is not sure what mood to subsume the data within.

2.1.2.2 Recursive Hierarchies

As seen in § 2.1.1.2, some of the mood categories in the two grammars are expressed through periphrastic forms,¹² involving a non-finite form of the main verb and an inflected auxiliary. The auxiliary can appear in different voices and moods, as part of its expression of these periphrastically constructed moods. This prompted Hodgson (1858, 431) to remark: “The precedent is given in full [...] because it demonstrates that these so-called moods are merely compound verbs which (like the case signs) can be multiplied ad infinitum”.

The result is that sections of the grammars on periphrastically expressed moods can include recursive hierarchies, with the full set of voice and mood categories of the auxiliary presented. An example of this is found in the Bahing grammar's section on Potential Mood (Hodgson 1858, 429 ff.), shown in table 5 [tab. 5]. This heading subsumes sections on the three voices (active, middle, passive) and on several moods (imperative, indicative, infinitive), all nested within the description of the potential mood.

Table 5 The Potential Mood in the Bahing grammar

Reconstructed section numbering	Headings (original)
3.5.3	POTENTIAL MOOD
3.5.3.1	[Active voice]
3.5.3.1.1	<i>Imperative</i>
3.5.3.1.2	[Indicative]
3.5.3.1.2.1	<i>Indicative present</i>
3.5.3.1.2.2	<i>Preterite</i>
3.5.3.1.3	INFINITIVE
3.5.3.1.3.1	<i>Participles</i>
3.5.3.1.3.2	<i>Gerunds</i>
3.5.3.2	<i>Middle voice</i>
3.5.3.3	PASSIVE VOICE
3.5.3.3.1	<i>Imperative mood</i>
3.5.3.3.2	[Indicative]
3.5.3.3.2.1	<i>Indicative present</i>
3.5.3.3.2.2	<i>Preterite</i>
3.5.3.3.3	<i>Infinitive</i>
3.5.3.3.3.1	<i>Participles</i>
3.5.3.3.3.2	<i>Gerunds</i>

¹² Analysing periphrastic forms as mood is something dating back to at least Lily's grammar (first edition, 1548-49; https://ctlf.huma-num.fr/n_fiche.php?n=327), according to van Auwera, Zamorano Aguilar 2016, 22.

Because the general organisation of the sections on verbal morphology adopts a hierarchy of voice > mood > tense, it is necessary to understand that these hierarchies can be recursive in order to be able to reconstruct a table of contents from the materials, and to not treat a heading referring to voice or another mood as a new (superordinate) section of the grammar.

2.1.3 Evolving Paradigm Organisation

In the previous sections, we have seen examples of Hodgson applying traditional linguistic terminology to verbal categories that in modern-day grammars receive different treatment: an example is the use of the passive voice to describe verb forms with a speech act participant as the object; another example is the use of 'aoristic' for verb forms which are undifferentiated with respect to tense. There is no doubt that Hodgson was keenly aware of how unique the verbal morphology of these languages was, and how this posed a challenge for the existing descriptive apparatus: this comes through strongly in the reorganisations that Hodgson makes to the verbal paradigms.

These reorganisations take two forms: the first is found *within* the Vayu description. After 34 pages (out of a total of 57 for the grammar) devoted to presenting verbal paradigms, Hodgson comments (1857, 470) that "It may now be of use to exhibit the whole matter of conjugation in another shape seemingly more accommodated to the genius of the language". He proceeds to present a completely reworked paradigm (referred to as 'diagram', p. 479) of the verb 'eat', in which the main structuring scheme is mood - imperative vs. indicative - and, for the indicative mood, a tense dichotomy - 'present and future' vs. preterite. Within these categories, the organisational principle is the number of the subject (singular, dual or plural), and the forms in each section are then listed according to the nature (person, number) of the object.

This very simple presentational device does away with voice, as well as with mood categories other than imperative and indicative. Forms formerly described as passive (including special forms) are integrated into the inflectional paradigm alongside other combinations of arguments; Reflexive forms are folded into the possible person/number inflections (with 'self' being one possibility for the object). The bipartite tense system means that notions such as aoristic and past also fall away, although this is in part because infinitives, participles and gerunds are not presented in the new paradigm.

The new organisation is such that only the morphologically significant verb forms and categories are captured, and to show all possible combinations of subject and object arguments. The result does not adhere to traditional grammar schemes, and shows an ingenious

adaptation to the realities of the language being described. A number of aspects of Hodgson's new paradigm are in fact still used by Kirantologists today, notably the relevant categories in presenting paradigmatic verbal data. This is presented in more detail in Lahaussais (2020).¹³

The second reorganisation we see is across the two grammars, with differences in the use of the categories of voice, as illustrated in tables 1 and 2, and of mood, as shown in tables 3 and 4. The changes from the 1857 to 1858 grammars result in greater readability, and many inconsistencies (see for example Section 2.1.2.1) are improved upon.

One interesting aspect of the change from one grammar to the next is that the improved presentational style for Vayu paradigm is not reprised in the 1858 Bahing grammar. It is however possible that the Bahing verbal paradigms, which are presented more consistently than the initial Vayu ones, benefitted from the process of distillation of verbal categories which the reorganised Vayu paradigm shows.

2.2 Physical Presentation of Materials

The physical presentation of the materials is another dimension, in addition to the conceptual, which opacifies the underlying organisation of the descriptions. The main aspects we examine here are those relating to typesetting (§ 2.2.1) and to the absence of expected headings indicating sections (§ 2.2.2). It is unsurprising to find these types of issues considering the material was provided to the editors in the form of a handwritten manuscript, and one presented in a state that elicited printed commentary from the publishers of the journal.¹⁴

2.2.1 Typesetting Practices

The typesetting practices adopted for the purposes of establishing the organisational scheme of the descriptions consist of all-capitals, italics, font size and indentation. Numbering is occasionally used. Both typesetting and numbering are marked by inconsistency, as can be seen in the Vayu sections illustrated below in table 6: the two

¹³ For more discussion of issues in organising paradigms based on more recent material from Khaling, a related Kiranti materials, see Lahaussais 2018.

¹⁴ A notice, inserted before the first page of Hodgson's article on Vayu in the 1857 issue of the *Journal of the Asiatic Society of Bengal*, reads: "The Secretaries wish to add that they cannot hold themselves responsible for any misprints in the earlier part of these Vocabularies, especially those in no. V. The MSS which Mr. Hodgson left with them, when he quitted India, were in such a confused state from ink and pencil interlineations that it was hopeless to avoid errors."

reproduced headings present pronouns, on the one hand, and nouns, on the other; they are both of the same hierarchical level, but make use of different typesetting and numbering practices [tab. 6].¹⁵

Table 6 Two same-level headings from the Vayu grammar

Headings (original)	Page number
1st of Pronouns	429
II. – DECLENSION OF NOUNS. <i>Substantive</i> .	433

Inconsistency in the typographical form of headings of the same hierarchical level is found throughout both grammars: in some cases, all-capitalised headings are superordinate to italicised headings; in other cases, the reverse is found.

Another example of these types of inconsistencies can be seen in figure 6. In the extract shown, one might assume that the highest-level headings are those in all-capitals (“GERUNDS” and “IMPERATIVE MOOD”), with the other centred material being subordinate. Instead, within the context of the rest of the grammar, it becomes clear that highest level heading is “Paradigm of verbs intransitive or neuter”, introducing a new verb class, which, while centred, is otherwise difficult to make out as a significant heading for a new section.

1858.]

Bāhing Vocabulary.

425

GERUNDS.

Impersonal of the past (none of present).

Bréso or Brésomami.

Ditto personated.

1st personated.	Bretina, &c.	} As before by “ná” added to the several forms of the tenses.
2nd ,,	Bréttina, &c.	
3rd ,,	Brétiko, &c.	
4th ,,	Bréttiko, &c.	

Paradigm of verbs intransitive or neuter.

Not having the silibant sign.

A neuter in “wo,” Pi-wo, come thou.

IMPERATIVE MOOD.

<i>Singular.</i>	<i>Dual.</i>	<i>Plural.</i>
Piwo.	Pise.	Pine.

Figure 6 Extract from the Bahing grammar (Hodgson 1858, 425)

¹⁵ The following are reproductions of the originals:

<i>1st of Pronouns.</i>	II.—DECLENSION OF NOUNS. <i>Substantive.</i>
-------------------------	---

The texts of both grammars are replete with typographical practices that obscure the underlying structure of the grammar and result in difficulties in parsing their organisation.

2.2.2 Missing Section Headings

A frequent occurrence across the two descriptions is the missing heading. This can be attributed to a variety of causes: a) the section heading has been turned to prose; b) the section heading is omitted because the category is seen as a default (this was discussed in § 2.1.2.1); c) it is unclear whether something is a section heading or instead a label on a paradigm.

An example of a) from the Vayu grammar (reconstructed as Section 2.5 in the appendix to this article) is seen in the passage below:

5th. – Conjugation of reflex or active intransitive verbs in che, that is, which have this (the only) reflex sign added to their root in the imperative which always strikes the key note to the several conjugations always having the formative affix whenever there is one. (1857, 441)

The material presents a new verb class, and even happens to have a number (which allows it to be aligned with other verb classes), and as such, one expects a heading but instead finds a prose passage.

This type of situation is a frequent occurrence in the descriptions – most often without the numbering that here allows it to be identified as a new section. Some non-numbered cases involve one-line paragraphs, which begin with the expected heading (on the basis of patterns established earlier in the grammar). Examples (all from the Vayu grammar, 1857, 459) include:

“Negative mood prefixed by má.”

“Optative mood by conjugation of the verb dák suffixed to the root (hom) of the main verb Hom dák gnom, &c.”

“Potential mood by conjugating the aoristic transitive wonto after the root hom.”

These have the appearance of notes Hodgson may have taken during fieldwork sessions, which he neither organised into sections with headings nor wrote out as full sentences. This type of material has not been included in the hierarchical schemes in the appendix, as the stipulation for inclusion was that headings be identified by centring or indentation on the page.

An example of c) – the situation where it is difficult to decide whether a centred title is a section heading or a paradigm label – can be seen in figure 7 [fig. 7]. “*Causal Mood*” is identified as a heading, on the basis of its centring on the page and capitalisation, and is as such integrated into the reconstructed hierarchy for the table of contents. It is less clear what to make of the status of “*Present*” and “*Preterite*”, under “*Causal Mood*”, as these both appear to be labels for the paradigms underneath them.

<i>Causal Mood.</i>		
<i>Present.</i>	<i>Preterite.</i>	
1. Phit' pingsungmi, 2. Phit' pingmi, 3. Phit' pingmi,	Phit' ping kungmi, Phit' ping kum, Phit' ping kum,	{ and so on for dual and plural throughout the verb pingko, which see. The root of the primary verb is prefixed.
<i>Continuative Mood.</i>		
	<i>Present Tense.</i>	
<i>Singular.</i>	<i>Dual.</i>	<i>Plural.</i>
1. Phína phit'nognom. 2. Phína phit'nonum. 3. Phína phit'nomi.	{ Phína phit'nochhokmi. Phína phit'nochhikmi. Phína phit'nochhikmi. Phína phit'nochhikmi.	{ Phína phit'nokokmi. Phína phit'nokem. Phína phit'nonem. Phína phit'nomem.

Figure 7 Extract from the Vayu grammar (Hodgson 1857, 438)

On the other hand, “*Present Tense*”, under “*Continuative Mood*” in the lower half of figure 7, is centred on the page, in the manner of a heading, and creates a section which encompasses several paradigms. This leads to two different interpretations for the presence within the organisational hierarchy of what is in fact material of the same level.

3 Discussion of Reconstructed Organisational Schemes

The tables of contents I have reconstructed for the grammars are provided in the appendix to this article. They include, in the right-most column, the pagination in the original 1857 and 1858 issues of the journal, and, in the central column, the original headings for sections (as defined by centring, and sometimes indenting, on the page; § 2.2 above discussed some challenges in using these criteria). Any numbering present in the original is also listed in the central column, along with the section heading. The numbers in the left-most column are those I have reconstructed in order to impose a hierarchised scheme onto the materials. Any headings not in the original have been added in square brackets: these are attempts to reinsert consistency into the hierarchy, when expected headings have been omitted (see § 2.1.2.1).

This discussion of the reconstruction of hierarchised tables of contents will address three main topics: the macro-structure of the

grammars, in other words their top-level organisation, which is relatively transparent in the published materials; decisions that I made about the lower-level organisation of sections within the tables of contents; and a discussion of section headings that were introduced into the table of contents, even though they were not present in the original materials.

The **macro-structure of the grammars** is very similar across the two grammars: both begin with a chapter¹⁶ on nominal and pronominal morphology. This is followed, in the Vayu grammar, by a chapter on verbal morphology, the main sections of which are individual verb classes. The Bahing grammar divides the discussion of verbal morphology into two chapters: chapter 2 presents the language's verb classes, with chapter 3 presenting the verb paradigms. A language specimen, accompanied by its translation, makes up the final chapter in each grammar: the third in the Vayu grammar and the fourth in the Bahing.

As was discussed in § 2.2 above, relying on the typography of the materials is not sufficient for the determination of the organisational hierarchy of the grammars. For the most part, however, the sections in the grammars that align with what I have assigned chapter-status, in other words the top-level of the table of contents, are in all-capitals in both grammars.

Table 7 Top-level chapters in the two grammars

Vayu grammar	Bahing grammar
Vayu declension ⁱ	Declension of Bahing pronouns and of nouns
Vayu verbs	Classification of Bahing verbs
A specimen of the Va'yu language	Conjugation of Bahing verbs Specimen of the Kiránti language (Báhing dialect)

ⁱ A number of other headings are also in all capitals, interestingly often the sections on the passive voice, but these are clearly subordinate to verb classes and I do not give them chapter status.

While the heading for the Bahing language specimen is in italics, and not in all-capitals, I nonetheless treat it, together with its translation, as a separate chapter, following the principle that a specimen is not a subsection of verbal morphology and on the basis of the all-capitals heading for the equivalent section of the Vayu grammar.

The reconfigured verb paradigm in the Vayu grammar (discussed in § 2.1.3 above), illustrated with the verb 'eat', is treated as

¹⁶ 'Chapter' here is the highest level of the hierarchy, signalled by a single number (1, 2, 3...).

a subsection of the 'Vayu verbs' chapter, at the same level as the other verb classes. It could have been assigned to its own chapter, on par with the text specimen – this would parallel the current practice among some Himalayanists of providing verb paradigms and text collections as appendices to a grammar (Lahaussais 2020). The decision to have this additional paradigm as a section matching other verb paradigms stems from the fact that I see it as constituting another aspect of the analysis of the verbal morphology of the language, albeit a new analysis, and not as a specimen.

Because the bulk of the two grammars discusses verbal morphology, most decisions in reconstructing the tables of contents involve understanding how Hodgson uses verbal categories. Looking carefully at his grammars makes it clear that a governing **principle for sub-level organisation** is, within each verb class, a hierarchy of voice, then mood, then tense.¹⁷

This hierarchy is not always as transparent, because there are limitations on the occurrence of certain categories: the category of voice is only present when the verb is transitive, on account of Hodgson's use of the notion of passive to describe inverse scenarios (those involving speech act participants as objects), and intransitive verbs are presented according to a mood > tense hierarchy. Furthermore, certain moods are not associated with tenses, such as the infinitive and imperative moods. The particularities of some verbal categories, which do not combine with others, obscures the voice > mood > tense hierarchy, but understanding this to be an underlying organisational principle to the presentation of verb forms makes it considerably easier to interpret the data, despite typographical inconsistencies.

My **introduction of new section headings** in the hierarchised tables of contents in the appendix is limited to sections with obvious omissions. These were identifiable by virtue of material being presented without a heading, or without a heading of the right level with respect to neighbouring content. The types of omission of headings were discussed in § 2.1.2.1. The headings which I have introduced are all bracketed in the tables of contents in the appendix, so they can be readily identified.

There are 34 headings introduced into the Vayu grammar, and 12 in the Bahing grammar, these numbers confirming the impression upon reading the two grammars that the organisation and presentation of the Bahing grammar is more consistent than the Vayu.

In the Vayu grammar, the headings which are most frequently omitted are, for nouns and pronouns, singular (whereas "Dual" and "Plural" are consistently present); for verb paradigms, "Active voice"

¹⁷ See, however, § 2.1.2.2 on recursive hierarchies which insert voice and mood sections within descriptions of moods.

(when the counterpart “Passive voice” is found later in the paradigm), “Indicative Mood”, and “Present tense”. Note that these are the categories which are morphologically unmarked in these languages with respect to their counterparts, and in this sense, it is understandable that they should be treated by Hodgson as default categories. Although the Bahing grammar is more consistent in assigning headings to all sections containing data, even those that describe morphologically unmarked categories, occasionally some of the same categories as for Vayu are missing section headings. The most significant decision regarding the Bahing grammar is my introduction of Section 3.5 and its heading “Periphrastic moods”, in order to group together all the material presenting moods which are expressed not through a formative but through periphrasis.

4 Conclusion

The exercise of reconstructing hierarchised tables of contents for Hodgson's grammars has made it possible to take stock of some of the problems that arise when making use of older grammatical descriptions. Hodgson's grammars of Vayu and Bahing, as the first descriptions of Kiranti languages, are of great importance not only for the record they represent of the nineteenth century state of two currently endangered languages but also for how they have contributed to the history of descriptive practices in the Himalayan region. Hodgson's grammars are almost universally present in the bibliographies of descriptive work on languages from the area through to the present day but the data is almost never cited. This is at least in part due to the difficulties in reading his grammars, which I have attempted to alleviate by reconstructing the hierarchy of the organisation principle underlying the two descriptions.

Throughout this process of reconstruction, I have sought to understand the organisation and content of Hodgson's two grammars. It is of particular interest that the grammars, even though published in two successive years, show strong evidence of the author's evolving ontological system. This can be inferred from changes that are apparent both within the first grammar and across the two grammars. Evidence comes from the choice of verbal categories that are presented and from how the material, essentially in the form of verbal paradigms, is organised. This appears to be a convincing example of describing the language on its own terms, with the transition to a presentation better adapted to the language data evident over the course of the two descriptions. This allows us insight into theoretical and practical aspects of language description at the time, especially for languages with complex verbal morphology for which there was not a widely circulating preestablished descriptive framework.

The main conclusion I draw from the work of decoding the hierarchies underlying the structures of the descriptions is that these grammars show the influence of a traditional grammatical framework with an overlay of innovative thinking about categories. This leaves a reader to ponder the change in the presentation of this data over the course of the two grammars: why did Hodgson not rewrite the grammars to only include the elegant adaptive solutions he came up with, rather than having data presented in different ways? One of the goals of the reconstruction of the tables of contents for these grammars was to outfit them with tools allowing for comparison with other grammars from the linguistic area and/or from the same time period – to ‘code’ them in the same way as we have done for others within the context of the Taxogram project –, and such comparison will perhaps uncover the answer to this question.

Appendix

In the reconstructed hierarchised tables of contents presented below, the titles of sections are those found in the manuscript, together with the typeset of the original (caps, italics, normal font), except where material is either bracketed or shows ellipses, both of which are explained below. The part of the table of contents which is reconstructed is the numbering scheme, which shows the hierarchy of how the sections that make up the grammars relate to one another. Any numbering present in the original is found as part of the section heading. (The unbracketed material in the section heading column thus represents what is originally found in Hodgson's grammars.) All the titles presented in the reconstructed tables of contents below are centred in the page, suggestive of their status as headings; this is in fact the principle that was used to determine that these are considered headings of sections. (The exceptions to this are discussed, and are found when the material is in two columns on the page, such as in the Vayu grammar on page 446, as shown in figure 8 [fig. 8]. The reason to make an exception is because equivalently-titled sections for other verb classes were centred.)

<i>Indicative present singular.</i>		
1. Háta nógnom. 2. Háta nónum. 3. Háta nómi.	{ And so on through dual and plural, the passive of wónto being conjugated like that of háto.	{ And so on through dual and plural, according to the passive forms of háto less the final mi, or m which is dropped, and the immutable verbal particle yú, subjoined.
<i>Passive potential.</i> (I can be given).		<i>Passive precative.</i> (That I may be given).
<i>Present singular.</i>		<i>Present singular.</i>
1. Há wónognom. 2. Há wónnum. 3. Há wónmum.		1. Hánoyu. 2. Háyu. 3. Hátoyu.
<i>Preterite.</i>		<i>Preterite.</i>
1. Há wónsungmi. 2. Há wónnumi. 3. Há wónmum.		1. Hásungyu. 2. Háyu. 3. Hátoyu.

Figure 8 Extract from the Vayu grammar
(Hodgson 1857, 446)

Vayu 1857 Reconstructed table of contents, with page numbers. [] = missing headings (content exists; heading is reconstructed); ... indicates a heading that is found as part of a prose sentence

Reconstructed numbering	Section headings	Page number
1	VAYU DECLENSION.	429
1.1	1st of Pronouns.	429
1.1.1	[First person]	
1.1.1.1	Personals. Singular.	429
1.1.1.2	Dual.	429
1.1.1.2.1	Conjunct.	430
1.1.1.2.2	Disjunct.	430
1.1.1.3	Plural.	430
1.1.1.3.1	Conjunct.	430
1.1.1.3.2	Disjunct.	430
1.1.2	Second person.	430
1.1.2.1	[Singular]	430
1.1.2.2	Dual.	430
1.1.3	Third Personal.	430
1.1.3.1	[Singular]	430
1.1.3.2	Dual.	430
1.1.3.3	Plural.	431
1.1.2	[Demonstratives]	431
1.1.2.1	Near demonstrative.	431
1.1.2.1.1	[Singular]	431
1.1.2.1.2	Dual.	431
1.1.2.1.3	Plural.	431

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